

# Second annual report on regional progress and challenges in relation to the 2030 Agenda for **Sustainable Development** in Latin America and the Caribbean

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Forum of the Countries  
of Latin America and  
the Caribbean on  
**SUSTAINABLE  
DEVELOPMENT**

Santiago  
18 - 20 April **2018**



UNITED NATIONS

**ECLAC**



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18 - 20 April **2018**



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# CONTENTS

Foreword .....	9
<b>CHAPTER I</b>	
<b>The Sustainable Development Goals in the regional context .....</b>	<b>11</b>
Introduction .....	13
A. Economic and social context of Latin America and the Caribbean .....	13
1. Trends in the regional and global economies: recovery and the persistence of uncertainty .....	14
2. Progress with social indicators came to a halt .....	15
B. The region's first efforts to implement the 2030 Agenda .....	17
C. Structure of the report.....	19
Bibliography.....	20
<b>CHAPTER II</b>	
<b>The shift towards sustainable and resilient societies: the social, economic and environmental dimensions.....</b>	<b>21</b>
Introduction .....	23
A. The sustainable use of natural resources.....	24
1. Natural resources and ecosystems .....	24
2. Desertification and soil degradation.....	25
3. Ecosystem protections.....	29
4. Remaining water resource management challenges .....	29
5. Pathways to sustainability: neutral land degradation, the bioeconomy and sustainable water management .....	34
B. The dynamics of human settlements .....	37
1. A highly urban region .....	37
2. Urban inequality and informality.....	38
3. Infrastructure and public transport .....	39
4. Waste .....	43
5. Vulnerable human settlements and climate-related events .....	44
6. The New Urban Agenda .....	45
C. Energy development, production and consumption.....	46
1. Access to energy .....	46
2. Clean and sustainable energy .....	47
3. The shift to renewable energies .....	49
4. Opportunity to achieve greater material efficiency .....	51
5. Changes in production and consumption patterns .....	51
D. Some interrelationships among and opportunities created by Goals 6, 7, 11, 12 and 15 .....	53
Bibliography.....	57
<b>CHAPTER III</b>	
<b>Means of implementation of the 2030 Agenda for Sustainable Development .....</b>	<b>61</b>
Introduction .....	63
A. Tax evasion and avoidance, illicit flows and resource mobilization .....	63
1. Administrative changes and improvements in structural factors .....	64
2. Avoidance mechanisms.....	65
3. International cooperation at the global, regional and national levels .....	66
4. The importance of private flows .....	67
5. Mobilization of public and private funds.....	68
6. Greater mobilization of external resources.....	69

## Economic Commission for Latin America and the Caribbean (ECLAC)

B. Trade: a regional challenge of the 2030 Agenda for Sustainable Development in Latin America and the Caribbean .....	71
1. The situation in Latin America and the Caribbean .....	72
2. Regional integration .....	76
C. Technology and innovation .....	78
1. Digital infrastructure and skills .....	79
2. Innovation .....	82
Bibliography .....	86
<b>CHAPTER IV</b>	
<b>Latin American and Caribbean countries' progress with developing institutional frameworks and tools for implementing the 2030 Agenda for Sustainable Development .....</b>	<b>89</b>
Introduction .....	91
A. Update of institutional coordination mechanisms .....	91
B. National planning systems .....	98
1. National development plans and the 2030 Agenda .....	99
2. The most frequent themes in development plans and in Sustainable Development Goals and their targets .....	100
3. Some noteworthy experiences .....	101
C. Changes in budgetary, fiscal and financial systems .....	107
D. Partnerships with the private sector .....	112
E. Conclusions .....	118
Bibliography .....	118
<b>CHAPTER V</b>	
<b>Regional progress in the statistical monitoring of the Sustainable Development Goals .....</b>	<b>119</b>
A. Summary of the statistical process at the global and regional levels .....	121
1. Global level .....	121
2. Regional level .....	123
3. Updating the diagnostic of the availability of information for producing the global indicators .....	123
B. National progress in the statistical monitoring of the Sustainable Development Goals .....	125
1. Progress with statistical institutions .....	126
2. Development of national frameworks for follow-up to the Sustainable Development Goals .....	128
3. Progress in metrics for the 2030 Agenda at the national level .....	134
C. Towards a regional indicator framework for monitoring the core areas for sustainable development in Latin America and the Caribbean .....	140
1. Statistical institution-building in the region .....	140
2. Conceptualization and methodology of the initial proposal for the discussion and development of a regional framework .....	141
3. The roadmap towards the regional framework in 2018 .....	144
D. Status of the integration of statistical and geospatial data in Latin America and the Caribbean .....	145
1. Goals and scope of the regional consultation .....	146
2. Summary of the results of the regional survey .....	146
E. Reflections on progress made and pending challenges in measuring the Sustainable Development Goals in Latin America and the Caribbean .....	157
Bibliography .....	158
Annex V.A1 .....	161
<b>Concluding remarks .....</b>	<b>163</b>

## Second annual report on regional progress and challenges in relation to the 2030 Agenda...

## Tables

II.1	Latin America and the Caribbean (10 countries): desertification .....	26
II.2	Sanitation, 2000 and 2015 .....	33
II.3	Latin America and the Caribbean: total energy use, 1971-2013 .....	47
III.1	Trade-related targets and indicators under Goal 17 of the 2030 Agenda for Sustainable Development: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development .....	72
III.2	Latin America and the Caribbean: goods exports to selected markets and average most favoured nation tariff, 2016.....	74
III.3	Internet use by region.....	79
V.1	Number of indicators in the global indicator framework for follow-up to the Sustainable Development Goals .....	122
V.2	Sustainable Development Goals dissemination systems at the national level.....	134
V.3	Number of indicators —complementary, proxy or from the global framework— included in the proposal of a regional framework of indicators for monitoring the Sustainable Development Goals, by core areas for sustainable development in Latin America and the Caribbean.....	141

## Figures

II.1	Latin America and the Caribbean: loss of forested area and expansion of agricultural area, 1990-2014 .....	25
II.2	Latin America and the Caribbean (10 countries): loss of soil organic carbon in top 30 cm, 2000-2010 .....	27
II.3	Intensity of fertilizer and pesticide use .....	27
II.4	Decline in land productivity, 1999-2013 .....	28
II.5	Latin America (17 countries): differences in drinking water coverage between the highest income and lowest income households, 2014-2015.....	30
II.6	Latin America (17 countries): differences in sanitation coverage between the highest income and the lowest income households.....	31
II.7	Latin America and the Caribbean: national, rural and urban drinking water service levels, 2000 and 2015 .....	32
II.8	Brazil: avoided emissions and soil carbon storage thanks to the low-carbon agriculture (ABC) plan, 2012-2023 .....	35
II.9	Brazil: productivity by sector of the low-carbon agriculture (ABC) plan, 2015 .....	35
II.10	Latin America and the Caribbean (21 countries): composition of exports by country, by importance to the bioeconomy, 2010-2015.....	36
II.11	Latin America (26 cities): urban area and urban density of the built-up area, 1990, 2000 and 2015 .....	37
II.12	Percentage of the total urban population living in a slum, 1990-2014.....	38
II.13	Concentration of coarse particulate material (PM10) and fine particulate material (PM2.5) in 14 selected cities, 2014.....	39
II.14	Share of public transport in four cities, 2007 and 2015.....	40
II.15	Latin America: energy use in urban areas, by main mode of transport, 2014.....	41
II.16	Motorization rate and GDP per capita, 2005-2015 .....	41
II.17	Brazil: energy use and emission of pollutants per trip in cities with more than 60,000 inhabitants, 2014.....	42
II.18	Latin America and the Caribbean: giving higher priority to cyclists and buses, 2007-2014 .....	43
II.19	Latin America and the Caribbean: urban solid waste production, 2012 and 2025.....	44
II.20	Latin America and the Caribbean: extreme weather events related to climate change, 1961-2015.....	45
II.21	Latin America and the Caribbean: population with access to electricity and total population, 1990-2014 .....	46
II.22	Latin America and the Caribbean: household energy budget share and composition by expenditure decile .....	47
II.23	Latin America and the Caribbean: carbon and energy intensity, 2000-2014.....	48
II.24	Latin America and the Caribbean (5 countries): levelized costs of thermoelectric plants with fossil fuels and renewable energy auction prices .....	50
II.25	Brazil, Mexico and Chile: imports of equipment for wind energy production from China, Germany, Spain and the United States, 2012-2015 .....	50
II.26	Latin America and the Caribbean: total domestic extraction and material intensity of GDP, 1970-2010 .....	51
II.27	Latin America and the Caribbean: energy subsidies before tax, 2011-2013.....	52
III.1	Latin America: tax collection and estimated tax evasion, 2015.....	64
III.2	Latin America and the Caribbean: gross illicit financial outflows owing to trade misinvoicing, 2000-2015.....	66

## Economic Commission for Latin America and the Caribbean (ECLAC)

III.3	Latin America and the Caribbean: official development assistance, 1961-2015 .....	67
III.4	Latin America and the Caribbean: main external financing flows, 1980-2016 .....	68
III.5	Latin America and the Caribbean (selected countries): relative importance of selected external financing sources .....	69
III.6	Selected groupings and Latin America and the Caribbean: share of global goods and services exports .....	73
III.7	Selected countries and groupings: average most-favoured-nation tariffs applied to agricultural and non-agricultural products, 2016 .....	75
III.8	Latin America and the Caribbean: products exported to selected destinations, 2016.....	77
III.9	Latin America and the Caribbean (selected countries): share of total manufacture exports to markets within the region, 2016 .....	77
III.10	Latin America (selected countries) and the Organization for Economic Cooperation and Development (OECD): broadband connection speeds.....	80
V.1	Number of Sustainable Development Goal indicators by tiers of data availability, 15 December 2017 .....	122
V.2	Latin America and the Caribbean (25 countries): Sustainable Development Goal indicators, by level of production, by country, 2017 .....	124
V.3	Latin America and the Caribbean: Sustainable Development Goal indicators by level of production, by Goal, 2017 .....	125
V.4	Latin America and the Caribbean (11 countries): Sustainable Development Goal indicators at the national level, by country .....	131
V.5	Latin America and the Caribbean (13 countries): baselines for producing the Sustainable Development Goal indicators, by country, 2000-2030 .....	132
V.6	Latin America and the Caribbean (14 countries): average coverage of the Sustainable Development Goals by the targets prioritized at the national level.....	135
V.7	Latin America and the Caribbean (14 countries): average coverage of each Sustainable Development Goal and countries that have included targets from the global framework in their national priorities .....	136
V.8	Latin America and the Caribbean (27 countries): existence of spatial data infrastructures (SDIs).....	148
V.9	Latin America and the Caribbean (27 countries): status of statistical and geospatial information integration with respect to the existence of spatial data infrastructures (SDIs) .....	148
V.10	Latin America and the Caribbean (19 countries): conduct of statistical and geospatial information integration with respect to the existence of spatial data infrastructures (SDIs).....	149
V.11	Latin America and the Caribbean (19 countries): hierarchical levels of geospatial information management in national statistical offices.....	150
V.12	Latin America and the Caribbean (18 countries): stage of statistical and geospatial information integration with respect to the hierarchical levels of geospatial information management in national statistical offices .....	150
V.13	Latin America and the Caribbean (15 countries): conduct of statistical and geospatial information integration with respect to the hierarchical levels of geospatial information management within national statistical offices .....	151
V.14	Latin America and the Caribbean (24 countries): availability of basic data for statistical and geospatial information integration, with respect to the existence of national spatial data infrastructure.....	153
V.15	Latin America and the Caribbean (24 countries): access to basic data for statistical and geospatial information integration with respect to the existence of spatial data infrastructures (SDIs) .....	154
V.16	Latin America and the Caribbean (19 countries): use of geospatial information to produce statistics, by dimension.....	155
V.17	Latin America and the Caribbean (19 countries): use of geospatial inputs for producing statistics, by type of input and statistics .....	156
V.18	Latin America and the Caribbean (19 countries): use of geospatial technology for dissemination of statistics.....	156
<b>Boxes</b>		
II.1	Information, education and participation as drivers of change in production and consumption patterns.....	53
IV.1	The National Strategic Plan with a State Vision "Panama 2030" .....	102
IV.2	Belize's Growth and Sustainable Development Strategy 2016-2019.....	102
IV.3	Tax microsimulation in Guatemala.....	108
IV.4	Linking budget allocations and the Sustainable Development Goals in Mexico .....	110
IV.5	Budgeting and monitoring of national expenditure on Sustainable Development Goals in Panama .....	111
IV.6	Dialogue for a Sustainable Chile.....	113

## Second annual report on regional progress and challenges in relation to the 2030 Agenda...

IV.7	Colombia: innovation through use of the SDG Compass tool of the Global Reporting Initiative.....	114
IV.8	Argentina: companies' contribution to the Sustainable Development Goals.....	114
IV.9	Civil society mobilized for the 2030 Agenda for Sustainable Development and the Sustainable Development Goals .....	115
IV.10	United Nations Global Compact: actions in Latin America and the Caribbean .....	117
V.1	Prioritizing Sustainable Development Goal indicators in the Caribbean Community (CARICOM) .....	130
V.2	Political and administrative division mapping .....	152
V.3	Mapping of georeferenced postal addresses .....	152
V.4	Land, property or cadastral mapping.....	152

**Diagrams**

IV.1	Honduras: coordination mechanism for implementing the 2030 Agenda for Sustainable Development .....	94
IV.2	Uruguay: coordination mechanism for implementing the 2030 Agenda for Sustainable Development .....	95
IV.3	Peru: coordination mechanism for implementing the 2030 Agenda for Sustainable Development .....	95
IV.4	Brazil: coordination mechanism for implementing the 2030 Agenda for Sustainable Development.....	97
IV.5	Latin America and the Caribbean (19 countries): long-term development plans .....	99
IV.6	Latin America and the Caribbean (33 countries): national development plans and the 2030 Agenda for Sustainable Development.....	100
IV.7	Latin America and the Caribbean (25 countries): lexicometric analysis of key concepts present in national development plans .....	101
IV.8	Trinidad and Tobago: priority entry points for the 2030 Agenda for Sustainable Development.....	104
IV.9	Trinidad and Tobago: combination of interventions for the entry point for optimizing the performance of the social protection system .....	104
IV.10	Trinidad and Tobago: Sustainable Development Goals associated with the combo of interventions for the entry point for optimizing the performance of the social protection system.....	105
IV.11	Colombia: structure of the High-level Inter-Agency Commission for the Preparation and Effective Implementation of the Post-2015 Development Agenda and its Sustainable Development Goals .....	106
V.1	Strategy for implementing the Sustainable Development Goals at the national level.....	127
V.2	Dimensions and indicators included in the proposal of a regional framework of indicators for monitoring the Sustainable Development Goals for the critical area of innovation for development .....	142
V.3	Latin America and the Caribbean: responses to the survey on institutional and technical aspects of statistical and geospatial data management .....	146

**Maps**

IV.1	Latin America and the Caribbean (20 countries): coordination mechanisms for implementation of the 2030 Agenda for Sustainable Development.....	92
IV.2	Colombia: regional approach to the National Development Plan 2014-2018 .....	106



## Foreword

The 2030 Agenda for Sustainable Development and the Paris Agreement on climate change are a response from the international community aimed at changing the current pattern of development and building peaceful, fairer, more supportive and inclusive societies, in which human rights, the planet and its natural resources are all protected.

In pursuing the path to a new development pattern, political perspective and endeavour are needed to define a clear direction and change the conversation between the State, the market and society, among other things. The Forum of the Countries of Latin America and the Caribbean on Sustainable Development is the result of the leadership and political commitment shown by the countries of the region towards the 2030 Agenda and its 17 Sustainable Development Goals (SDGs). The Forum offers useful opportunities for discussing common targets and their implementation, through the exchange of good practices and peer learning.

A multilateral, open and robust system is the cornerstone of a new development pattern, since proper implementation of the 2030 Agenda requires new coalitions and institutions to promote global, regional, national and local policies. The Forum of the Countries of Latin America and the Caribbean on Sustainable Development enables the region to speak with its own voice in the global discussions on implementing the 2030 Agenda. This voice conveys the common will, without denying regional heterogeneity, and it can offer different perspectives, such as those of landlocked developing countries, the small island developing States of the Caribbean and middle-income countries, among many others.

The region of Latin America and the Caribbean has been working for two years within the Forum framework to forge a regional approach, shared among the countries and aimed at setting its own course for implementing the 2030 Agenda. This annual report on regional progress and challenges explores the theme of the current cycle of the high-level political forum on sustainable development, “Transformation towards sustainable and resilient societies”, and focuses on the SDGs to be considered in 2018 (Goals 6, 7, 11, 12 and 15), in addition to Goal 17 which is reviewed annually. The report, inter alia, sets out regional progress made in the implementation of the 2030 Agenda, assesses trends, advances and gaps in each country, and identifies critical links for realizing the Agenda.

The annual report shows that the region is making headway. Twenty of the 33 Latin American and Caribbean countries have high-level intersectoral institutions to coordinate the implementation of the 2030 Agenda, while other countries will create mechanisms in the first half of 2018 that will become operational in the ensuing months. The countries have also recognized the need for all sectors of society to participate in efforts to attain the SDGs to ensure greater ownership of the 2030 Agenda, and they have taken steps in that direction. Fourteen countries submitted their voluntary national reports to the high-level political forum in New York between 2016 and 2017, while another eight are planning to do so in 2018.

One of the challenges to achieving the 2030 Agenda that the region faces, is the need to have information available to produce the global SDG indicators. The availability of indicators still varies widely among countries and among subregions in Latin America and the Caribbean. In terms of indicators that are already produced at the national level or could be produced with the available information, production remains around 45%, on average. The Caribbean countries are still lagging well behind the rest of the region in this regard.

At the first meeting of the Forum of the Countries of Latin America and the Caribbean on Sustainable Development, held in Mexico City in April 2017, six pillars were defined for action and cooperation around the 2030 Agenda, namely the creation of an inter-institutional and intersectoral architecture at the

highest level in each country; the incorporation of SDGs into national budgets and development plans; the strengthening of national statistical capacities; the need to prioritize the means of implementation (financing, technology, trade and accountability); the strengthening of regional architecture; and the promotion of dialogue between government, the private sector and citizens, fostering coordination with the United Nations system, regional organizations and development banks.

This report reiterates the importance of global, regional and national coordination for achieving the Goals of the 2030 Agenda. It refers to the means of implementation, specifically trade, technology and financing. Trade can have a positive impact on economic growth and poverty reduction, and is linked —through the set of rules and institutional arrangements that govern it— to sustainable development. The report also highlights the potential of technology and innovation to accelerate human progress, facilitate access to information and solve complex problems in critical areas for development, such as productivity, through more sustainable production models. Lastly, it notes that public and private resources will have to be mobilized to achieve the SDGs. Just as the region's countries must increase and restructure their tax burdens and reduce tax evasion, steps must also be taken at the global, regional and national levels to improve international cooperation to combat tax evasion and avoidance and illicit financial flows.

Among other measures, Latin America and the Caribbean must strengthen intraregional trade; attract foreign direct investment in non-extractive sectors that foster links with local and regional suppliers; promote a trade facilitation agenda; nurture industrialization and innovation by increasing local and regional content in exports; promote women's economic autonomy; coordinate fiscal and monetary policies regionally; combat tax evasion and avoidance, illicit financial flows and corruption; and work together to build better global and regional fiscal governance.

The 2030 Agenda is a governance plan for the creation of global public goods. ECLAC remains committed to the 2030 Agenda and the Sustainable Development Goals to contribute to peace, equality, climate security and global financial stability, from Latin America and the Caribbean.

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# CHAPTER I

## The Sustainable Development Goals in the regional context

Introduction

A. Economic and social context of Latin America and the Caribbean

B. The region's first efforts to implement the 2030 Agenda

C. Structure of the report

Bibliography



## Introduction

In 2015, the international community reached a series of landmark agreements, intended to respond to the urgent and grave challenges it faced in the realms of stability, peace and development. Inequality and rising tensions in many parts of the world, widening gaps in income and productivity and the risks to future development posed by climate change fuelled discussions and agreements to guide the consensus and policies for the coming years. Those took shape in the 2030 Agenda for Sustainable Development, the Paris Agreement under the United Nations Framework Convention on Climate Change and the Addis Ababa Action Agenda of the Third International Conference on Financing for Development.

The 2030 Agenda, with its pledge to leave no one behind, is particularly ambitious. Transformative and inclusive by design, it sets commitments for the entire international community and demands national, regional and international policy actions. To follow up on and review the implementation of the 2030 Agenda for Sustainable Development, including the Sustainable Development Goals (SDGs) and their targets, their means of implementation and the Addis Ababa Action Agenda, the countries of Latin America and the Caribbean —by means of resolution 700(XXXVI), adopted by the member States of the Economic Commission for Latin America and the Caribbean (ECLAC) in Mexico City in May 2016, on the occasion of the Commission's thirty-sixth session— established a regional mechanism called the Forum on Sustainable Development. The United Nations Economic and Social Council subsequently endorsed the establishment of the Forum in its resolution 2016/12. The Forum offers a venue for peer learning based on voluntary reviews, the sharing of best practices and the discussion of shared targets. The first meeting of the Forum, chaired by Mexico, was held in April 2017. It was attended by 31 of the Forum's 33 member countries and more than 750 participants, including more than 200 government representatives, more than 150 delegates from 27 United Nations agencies, funds and programmes, representatives of almost 200 non-governmental organizations and representatives of the private sector and academia.

The conclusions and recommendations agreed upon by the participating Governments at the first meeting of the Forum reaffirmed the region's commitment to the 2030 Agenda for Sustainable Development, recognized the primary responsibility of governments in implementing the 2030 Agenda, welcomed the many contributions made by the United Nations system and other international organizations and applauded the format and organization of work of the first meeting, as well as the opportunity it had offered for numerous different stakeholders to participate.<sup>1</sup>

### A. Economic and social context of Latin America and the Caribbean

The implementation of the 2030 Agenda and progress towards the SDGs are necessarily taking place at a time of international uncertainty. On the one hand, there are signs that the global economy is recovering, which allows a degree of optimism about the prospects for growth in Latin America's economies over the coming years. On the other is the threat of a return to protectionist policies and reduced international cooperation as current account imbalances persist in some key economies (with China and Germany running large surpluses) and high levels of global debt. This is compounded by the non-linear flow of the technological revolution and by problems relating to the environmental sustainability of growth, which further exacerbates the uncertainty. All those factors increase the urgency of the region's policy responses under the 2030 Agenda.

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<sup>1</sup> See ECLAC (2017c).

## 1. Trends in the regional and global economies: recovery and the persistence of uncertainty

In 2017, the global economy posted better indicators than in 2016 and grew at a rate of 2.9%, up from 2.4% in 2016. The uptick was enjoyed by both the developed economies (growth of 2.1%, compared to 1.6% in 2016) and the emerging economies (4.5%, compared to 4.0% in 2016) (ECLAC, 2018b, p. 9). The global economic situation had a positive impact in Latin America and the Caribbean through commodity prices: while they had fallen by 4% in 2016, in 2017 commodity prices were on average 13% higher. The largest increases were seen in energy products and in metals and minerals. In contrast, prices for agricultural product prices rose slightly. In 2018, commodity prices are expected to remain, on average, at levels similar to their 2017 values (ECLAC, 2018b, p. 9).

The higher economic growth in Latin America and the Caribbean in 2017 led to a rise in both imports (up around 8% over 2016) and exports, which rose by almost 11% after declining for four consecutive years. The region's export performance may be explained by higher commodity prices and the recovery of trade in both the global and intraregional markets (ECLAC, 2018b, p. 9).

The recovery in the prices of the region's main exports in 2017 boosted the terms of trade by an average of almost 3% over 2016 levels, the first increase after five years of decline. Hydrocarbon-exporting countries benefited the most, with a 12% increase in their terms of trade, followed by the exporters of mining products, which posted an increase of 6%. Meanwhile, trends in agricultural goods prices have been less favourable and point to a 1% decline in exporters' terms of trade in 2017 (ECLAC, 2018b, p. 10).

Across the region, all the countries have seen their exports grow. In the first nine months of 2017, exports of iron ore and oil derivatives soared by 62% and 100%, respectively. These improvements are primarily the result of the price increases described above. Those countries whose exports comprise mainly minerals and hydrocarbons will experience sharp increases—of 15% and 12%, respectively—in their foreign sales (ECLAC, 2018b, p. 10). Soybean exports also climbed sharply (20%) thanks to improved harvests, while exports of manufactured products, including automobiles and heavy goods vehicles, received a boost from the recovery in global demand.

This positive economic context is expected to continue in 2018, with forecasts indicating global economic growth of around 3%. Developed economies will continue to grow at around 2%, while growth in emerging economies will accelerate to 4.8% (ECLAC, 2018b, p. 9). The GDP of Latin America and the Caribbean is expected to grow by 2.2% in 2018, outstripping the 1.3% posted in 2017. More robust economic growth in Brazil (2.0%) will be one of the factors behind this upturn. In addition, economic activity is expected to strengthen in a number of countries that have been growing at moderate rates up to now, including Chile (2.8%), Colombia (2.6%) and Peru (3.5%). Panama will be the Latin American country with the highest growth rate (5.5%), followed by the Dominican Republic (5.1%) and Nicaragua (5.0%). With a few exceptions, the remaining Latin American economies will grow at rates of between 2% and 4% (ECLAC, 2018b, pp. 13-14).

At the subregional level, the South American economies are expected to post stronger growth in 2018, at 2.0%, up from 0.9% in 2017. The economies of Central America, Cuba, the Dominican Republic and Haiti are projected to attain a growth rate of 3.6%, slightly above their 2017 result of 3.3%. The average growth rate for the English- and Dutch-speaking Caribbean is projected at 1.5% for 2018, fostered by reconstruction spending in the aftermath of Hurricane Irma and Hurricane Maria in some of the subregion's countries, among other factors (ECLAC, 2018b, p. 14).

These trends suggest that there is room for optimism about the region's prospects for growth over the next few years. But this must not blind it to the fact that the international recovery is still at risk. The

tensions that have arisen in international trade agreements, the upswing in economic nationalism in many countries and persistent commercial and financial imbalances in the global economy indicate that those risks cannot be ignored.

## 2. Progress with social indicators came to a halt

Over recent decades, Latin America and the Caribbean have made significant improvements in a series of economic and social variables for which indicators and metrics are included in the 2030 Agenda. Between 2002 and 2014, the region grew at a simple average rate of 3.32% a year while, at the same time, it implemented a range of social policies. The combination of those two factors had a major impact on well-being across the region, as the number of poor people fell from 233 million to 168 million and the number of extremely poor people dropped from 63 million to 48 million. Since 2015, however, the region's figures report increases in overall levels of poverty and extreme poverty: in 2017, more than 187 million people were still living in poverty and 62 million in extreme poverty (ECLAC, 2018a, p. 81). The incidence of poverty is slightly higher among women of working age (in the 15-29 and 30-59-year age brackets) than that among men in the same age groups (ECLAC, 2018a, p.93). Those numbers should set off an alarm regarding the region's ability to meet Goal 1, namely to end poverty in all its forms everywhere.

The region managed to lift 65 million people out of poverty and to extricate a further 15 million from extreme poverty over a period of 12 years thanks to a relatively high growth rate and its favourable effects on employment and wages. Over the coming years, with the uncertainties that still exist regarding the performance of the global economy and in light of the region's recent low levels of dynamism (growth rates currently stand at around 1%), meeting the Sustainable Development Goals will be more of a challenge. Industrial and technological policies to stimulate low-carbon growth will be needed, but so will significant efforts in the areas of tax collection, redistribution, strengthened institutions and innovations in public policies for addressing social issues.

The progress made with reducing inequality seen in most of the countries after 2002 came to a halt in 2015 and, in some cases, the gains have been lost. The slower growth of employment partially explains that change. Although the region has returned to growth after two years of economic contraction, that growth has occurred alongside a higher unemployment rate, which reached 9.4% in urban areas (ECLAC, 2017b, p. 13). This increase means that 7 million more people were unemployed between 2014 and 2017, bringing the regional total to 22.8 million unemployed in 2017 (ECLAC, 2018b, p. 11), with women and young people accounting for the bulk of that figure. In 2016, the region's urban unemployment rate was 7.9% for men and 10.2% for women (ECLAC, 2018b, p. 66).

In addition to the impact of changes in the employment rate, inequality is exacerbated by a series of factors related to the various forms of discrimination that restrict opportunities, in particular those of indigenous people and Afrodescendants. In all those cases, the groups affected by discrimination report lower indicators of well-being than those that are not discriminated against, both in terms of income and of access to health or education, which has a negative effect on their productivity and possibilities for insertion into production processes. In Latin America, there are 46 million indigenous people and 826 officially recognized indigenous peoples, while the Afrodescendent population is estimated to include at least 130 million people. These figures indicate that any significant effort to reduce inequality will require the elimination of all forms of discrimination. Another manifestation of inequality and lack of opportunities is the fact that nearly 30 million people from Latin America and the Caribbean reside outside the country of their birth (according to data from 2010), up from 26 million recorded in the 2000 census round. This figure is equivalent to 4% of the region's total population (ECLAC, 2017b, pp. 28-29).

With regard to gender gaps, the agreements adopted at the different sessions of the Regional Conference on Women in Latin America and the Caribbean, especially the Montevideo Strategy for Implementation of the Regional Gender Agenda within the Sustainable Development Framework by 2030, have drawn attention to the structural challenges of the inequalities between women and men, which include socioeconomic inequality and the persistence of poverty; discriminatory, violent and patriarchal cultural patterns and the predominance of a culture of privilege; the sexual division of labour and unfair social organization of care; and the concentration of power and hierarchical relations in the public sphere (ECLAC, 2017d).

These challenges can be seen, for example, in women's lack of economic autonomy. On average 29% of women aged over 15 in Latin America have no income of their own, while the figure for men is 12.5% (ECLAC, 2016a). Meanwhile, 11% of women are employed in domestic service, a sector where working conditions are still precarious (low wages, long working hours and higher levels of informality). A gender wage gap also persists, since women in urban areas receive salaries that are 16.1% lower than those of men with the same characteristics. The gap is even wider for women who have more years of schooling (ECLAC, 2016a, p. 61).

In the field of work, it should be noted that women spend between one fifth and on third of their time each day or each week on unpaid domestic and care work, while men spend about 10% of their time on this work (ECLAC, 2017e, p. 29). With regard to women's autonomy in decision-making, as a regional average, women do not hold more than 30% of positions in any of the three branches of government or at the different levels of government. Moreover, although substantial progress has been made in the region with regard to legislation criminalizing violence against women, levels of gender-based violence remain critical, with femicide the most dramatic expression of that violence (ECLAC, 2015b). There is also evidence of the interrelationship between ethnic or racial inequalities and gender inequalities in Latin America and the Caribbean, as indigenous and Afrodescendent women report the worst social well-being indicators and suffer the highest levels of discrimination in the labour market (ECLAC, 2016b).

Finally, the return to growth—which is a vitally necessary support in the fight against inequality and poverty—cannot be built on the unsustainable patterns of the past (see chapter II); instead, it must observe the constraints of environmental conservation. Those constraints are increasingly noticeable and they underscore the urgency of the 2030 Agenda's environmental goals. The Latin American and Caribbean region is particularly vulnerable to the effects of climate change because of its geography, socioeconomic structures and demographics, and because its natural assets, such as its forests and biodiversity, are acutely sensitive to climate variability. Within the region, the small island developing States (SIDS) of the Caribbean are the most vulnerable because of rising sea levels, the increasing frequency and intensity of storms, increased rainfall and the bleaching of coral reefs. It has been estimated that the economic costs of climate change in Latin America and the Caribbean over 40 years, as of 2050, will amount to between 1.5% and 5% of the region's GDP. Its impacts are not linear, however: they affect different regions differently at different times and, in some cases, they can also have positive effects (ECLAC, 2015a).<sup>2</sup>

Chapter II contains a detailed discussion of how the prevailing patterns of production and consumption impact the environment and how they interconnect with other Sustainable Development Goals, particularly the reduction of inequality. It also proposes policies for attaining a happier balance, in which the different Sustainable Development Goals mutually reinforce each other. There are various experiences in Latin America and the Caribbean that allow for optimism about the feasibility and impact of policies that explore the complementarities between the Goals. While the task is extremely complex and requires mobilizing both the public and private sectors in pursuit of the objectives that have been set, the region is already taking steps in that direction, as discussed in section I.B.

<sup>2</sup> There is a high level of uncertainty in these results because they cover only some sectors and do not include all the potential effects, feedback processes or climate change adaptation efforts.

## B. The region's first efforts to implement the 2030 Agenda

The 2030 Agenda is a paradigm shift that aims to complete the unfinished business of the Millennium Development Goals (MDGs) and reaffirms the importance, in achieving sustainable development, of effective institutions, adequate financing and partnerships. The 2030 Agenda has brought together forces from all levels of government and civil society, including academic institutions, the scientific community and the full spread of the private sector, from microenterprises to multinationals. The 2030 Agenda demands a global partnership in which countries, the United Nations and other international institutions work together to mobilize the available resources in pursuit of the Sustainable Development Goals. Each country must find its own way to achieve them, in accordance with its national priorities, needs, institutional structure and available sources of funding.

In adopting the 2030 Agenda for Sustainable Development, the countries of Latin America and the Caribbean agreed to work to produce ambitious national responses. As part of their commitment to the 2030 Agenda, the region's Governments assumed the obligation to conduct follow-up and review processes, through regular, open, inclusive, participatory and transparent analyses of the global, regional, national and subnational progress made with the Goals and their targets.

In 2016, three countries from the Latin American and Caribbean region (Bolivarian Republic of Venezuela, Colombia and Mexico) joined another 19 from elsewhere in the world in conducting and presenting their voluntary national reviews to the high-level political forum on sustainable development. In 2017, 11 of the region's countries (Argentina, Belize, Brazil, Chile, Costa Rica, El Salvador, Guatemala, Honduras, Panama, Peru and Uruguay) were among the 43 that presented their voluntary national reviews. For the 2018 high-level political forum, eight of the region's countries have undertaken to participate in the process: Bahamas, Colombia, Dominican Republic, Ecuador, Jamaica, Mexico, Paraguay and Uruguay.<sup>3</sup>

The 14 Latin American and Caribbean voluntary national reviews already presented to the high-level political forum highlight the broad range of actions and measures taken to implement and monitor the Sustainable Development Goals. They also provide a general perspective of how the region's countries have been addressing the SDGs and their targets over the early years of the 2030 Agenda for Sustainable Development implementation period.

The countries of Latin America and the Caribbean have agreed to adopt the 2030 Agenda as a State policy, to establish institutional frameworks for its implementation, follow-up and review and, in parallel, to deploy efforts to mainstream the SDGs into their national development plans and policies and to align their national, local and sectoral budgets with them. Of the 14 countries of the region that have submitted national voluntary reviews, 11 have national development plans that are aligned with the 2030 Agenda. They have appointed institutions to follow up on the SDGs and, in some cases, have enacted legislation to create new bodies with that specific purpose: Brazil has its National Commission for the Sustainable Development Goals; Chile has the National Council for the Implementation of the 2030 Agenda for Sustainable Development; El Salvador created the National Sustainable Development Council; Mexico has its National Council for the 2030 Agenda for Sustainable Development; and Panama has the Inter-Agency and Civil Society Commission for the Support and Follow-up of the Sustainable Development Goals.

Second, all 14 countries, regardless of whether they are unitary or federal States, have embarked on a series of complex institutional coordination efforts at the national and subnational levels, with the corresponding forging of partnerships and consensus-building among stakeholders from every sector involved. For Latin America and the Caribbean, the integrated, multistakeholder implementation of the 2030 Agenda is a complex institutional challenge, on account of institutional architectures that are

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<sup>3</sup> Colombia, Mexico and Uruguay will present their voluntary national reviews for the second time.

fragmented and —despite the need to serve vast territories— frequently centralized. The countries that have presented voluntary national reviews attach great importance to ongoing cooperation between actors at the national and subnational levels, especially in light of the enormous territorial, ethnic, and linguistic diversity that characterizes some of the region's countries.

The countries have explicitly acknowledged the need to involve all sectors of society in the implementation of the Sustainable Development Goals, in order to ensure greater ownership of the 2030 Agenda, especially in view of the enormous territorial, ethnic, and linguistic diversity that exists in Latin America and the Caribbean. The vast majority of the countries have expressed their intent to involve civil society and academia in the process of socializing, monitoring and implementing their national development plans.<sup>4</sup> All the national processes have brought the private sector on board, and about one third of the countries have also involved their legislatures and local governments.<sup>5</sup>

Considering that between 2018 and 2030 the region's countries will, on average, go to the polls to elect presidents on four occasions and for numerous legislative and local elections, it is increasingly clear that sustaining the State commitments entered into by the governments requires that the 2030 Agenda and the Sustainable Development Goals be known, embraced and appreciated by non-governmental actors: civil society, academia and the private sector.

The region's countries are also making their very best efforts to measure, monitor and assess their progress with the Sustainable Development Goals and their targets. This has entailed embarking on the improvement and modernization of national statistical and information systems. Most countries have conducted assessments of their ability and capacity to report information for the global indicators.

Although the 2030 Agenda is indivisible, the countries of Latin America and the Caribbean have identified certain SDGs as priorities in their voluntary national reviews. Goal 1 (end poverty in all its forms everywhere) and Goal 3 (ensure healthy lives and promote well-being for all at all ages) were highlighted by 13 out of the 14 countries; these were followed by Goal 5 (achieve gender equality and empower all women and girls), which was cited by 11 countries, and Goal 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture), with 10 mentions. Finally, Goal 9 (build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation) and Goal 14 (conserve and sustainably use the oceans, seas and marine resources for sustainable development) were identified as priorities by eight countries each.

Finally, one key issue for the region's countries is mobilizing financial resources for the implementation of the 2030 Agenda. In their reports, all 14 countries spoke of mechanisms for allocating budgets to

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<sup>4</sup> Paragraph 11 of resolution 700(XXXVI), which created the Forum of the Countries of Latin America and the Caribbean on Sustainable Development, "highlights the participatory and inclusive character of the 2030 Agenda for Sustainable Development, which encourages the participation of all relevant stakeholders, including civil society organizations, academia and the private sector, and in this regard encourages the Forum of the Countries of Latin America and the Caribbean on Sustainable Development to ensure institutionalized multistakeholder participation following the relevant provisions of the 2030 Agenda for Sustainable Development, the Addis Ababa Action Agenda and the Economic and Social Council". The different normative instruments shaping the 2030 Agenda for Sustainable Development and regulating its implementation, both globally and regionally, call for the follow-up and review processes to be open, inclusive, participatory and transparent for all and to support coordinated, comprehensive action among governments and all relevant stakeholders in society. There is particular recognition of the important role to be played by civil society in the 2030 Agenda and the need for all social stakeholders to have the opportunity to participate actively in promoting sustainable development.

<sup>5</sup> As with civil society, the private sector —from microenterprises, small and medium-sized businesses and sectoral business groups to the largest companies and multinational corporations— are playing an increasingly crucial role in pursuing the targets of the Sustainable Development Goals. The process recognizes the private sector's part in implementing the 2030 Agenda, especially as regards the contributions it could make to the creation and reproduction of more sustainable patterns of production, distribution and consumption. The private sector's transformative potential and its commitment to sustainability must be motivated by the promise of increased competitiveness and value creation in line with the SDGs. One major challenge facing the 2030 Agenda is that of identifying the incentives needed to guide companies' decisions in areas such as strategic planning, capital increases, adoption of cutting-edge technology, choice of appropriate logistics and personnel policies, and best use of resources. The private sector should not approach its commitments towards the 2030 Agenda solely from the viewpoint of corporate social responsibility; instead, it must embrace its SDG commitments as an opportunity for adapting its business models.

different programmes and objectives. Two countries spoke of international public financing, eight referred to aligning private investment with public finances, and 11 outlined strategies for channelling international cooperation into national development priorities. A third of the countries also spoke of South-South and triangular cooperation.

## C. Structure of the report

This second report represents a contribution by ECLAC to efforts by the region's governments and multiple stakeholders to implement, follow up and evaluate policies and strategies for the 2030 Agenda and the achievement of the Sustainable Development Goals. It is not possible, in a single document, to fully address the complex range of challenges that undertaking implies, or to give full account of the progress made since the Forum held its first meeting in Mexico City in April 2017. This report is therefore limited to four main areas of focus: (i) the region's progress with producing the framework of indicators for monitoring the SDGs, (ii) the Latin American countries' progress with developing institutional frameworks and tools for implementing the 2030 Agenda, (iii) the current status of and outlook for the Agenda's social, economic and environmental dimensions, and (iv) an analysis of the means of implementation, highlighting resource mobilization and the potential offered and challenges posed by regional trade and by technology and innovation.

Chapter II, "Evolving towards sustainable and resilient societies: the social, economic and environmental dimension", is the analytical core of the document. It addresses the imbalances that human activity produces within ecosystems, together with its impact on the global economy in general and on the economies of the region in particular. It recognizes that there is no universal panacea and that the viability of the development sought depends on each country and region of the world making efforts to transform their production and consumption patterns, in accordance with their possibilities and through international cooperation that positions environmental concerns on a par with development and the reduction of asymmetries. The chapter focuses on ensuring availability and sustainable management of water and sanitation for all (Goal 6), ensuring access to affordable, reliable, sustainable and modern energy for all (Goal 7), making cities and human settlements inclusive, safe, resilient and sustainable (Goal 11), ensuring sustainable consumption and production patterns (Goal 12) and protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably managing forests, combating desertification, and halting and reversing land degradation and halting biodiversity loss (Goal 15). It aims to build a comprehensive understanding of how economics, technology and ecosystems are intertwined in the development process: interconnections that stand at the heart of the proposal made by ECLAC (2016c) calling for an environmental big push as a new development strategy.

Chapter III, "Means of implementation for the 2030 Agenda for Sustainable Development", is divided into three sections. The first describes the major regional effort required to mobilize resources for the 2030 Agenda. At the domestic level, it speaks of fiscal measures, improved tax systems and increased private investment. In connection with the mobilization of external resources, it describes the advent of new actors and sources of development finance, notably private capital, worker remittances and private contributions. The section also identifies the changes in financing, organization and resource allocation needed in the region. The second section highlights trade as one of the means of implementation of the 2030 Agenda, in that it allows countries to secure efficiency gains, through scaling up and learning. It also stresses the importance of the governance of trade, in which efforts must be made to uphold States' ability to implement regional development policies. The third section deals with the importance of the commitment towards regional cooperation on science, technology and innovation, information and communication technologies (ICTs) and the development of environmentally sound technologies.

Chapter IV, “Latin American countries’ progress with developing institutional frameworks and tools for implementing the 2030 Agenda”, provides an update on the various institutional mechanisms and the norms and instruments that the region’s countries have established for pursuing the SDG targets and for monitoring and evaluating their progress with them. It also contains important information on the efforts that several countries have made to interconnect the 2030 Agenda with their national development plans and national budgets, and it gives an overview of the citizen participation mechanisms that certain countries have put into place to ensure the multistakeholder approach that the 2030 Agenda calls for. Valuable inputs for this chapter were furnished by the United Nations Development Programme (UNDP) and the ECLAC Regional Observatory on Planning for Development in Latin America and the Caribbean.

Chapter V, “The region’s progress with the statistical monitoring of the Sustainable Development Goals”, offers a summary of the statistical work carried out to date, at both the global and regional levels. It also identifies the national progress made, in Latin America and the Caribbean, with the statistical monitoring of the Sustainable Development Goals: assessment of the availability of information for producing global indicators; progress with the institutional framework for statistics; development of national frameworks for SDG monitoring; and progress with metrics at the national level. Chapter V also provides information on the progress made towards the adoption of a regional framework of indicators for monitoring the critical nodes of the region’s sustainable development. Finally, it provides an update on the status of efforts to integrate statistical and geospatial data in Latin America and the Caribbean.

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# CHAPTER II

## The shift towards sustainable and resilient societies: the social, economic and environmental dimensions

Introduction

A. The sustainable use of natural resources

B. The dynamics of human settlements

C. Energy development, production and consumption

D. Some interrelationships among and opportunities created by Goals 6, 7, 11, 12 and 15

Bibliography



## Introduction

The 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), which the United Nations General Assembly adopted unanimously in September 2015 (United Nations, 2015a), outlines a desirable future of global development, based on a world free of hunger and poverty, that has inclusive and environmentally sustainable economic growth, and in which no one is left behind. The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) also clearly traces a path towards a shift in production and consumption patterns to reduce greenhouse gas emissions and maintain the global climate balance. The two agreements clearly recognize the impact that economic activities have on the biosphere, as well as the interrelationship between the environmental, economic and social dimensions, and the consequences for the survival of humankind. They also propose an incremental path towards sustainable development.

Contemporary society is faced with the challenge of understanding the economic, social and environmental benefits of achieving the SDGs and preventing climate change. A comprehensive understanding of the interrelationships between the economy, technology, jobs, ecosystem functioning and human development is needed as a matter of urgency, and that understanding must be translated into effective policies and plans. New paths must be found, because there are limits to the cumulative effect that human activities can have on the biosphere, which has affected its ability to continue to provide environmental services essential to the functioning of the economy.

There is, in that regard, no universal solution. The viability of sustainable development in the short, medium and long term depends on each country and region of the world following their own path in that direction. The SDGs serve as a general road map and model for a fair and inclusive economy. One of the basic requirements of this process is to ensure that the use of physical and biological resources is decoupled from economic and social progress. In addition to local and traditional knowledge, modern technology, applied to agriculture, water management, infrastructure development, urban planning and industrial processes, will play a critical role in strengthening regional and local resilience, transforming production systems and adapting to environmental changes.

Thus, the SDGs and their respective targets, which underpin this new universal, integrated and indivisible Agenda, recognize the urgent need to promote the shift towards a new development paradigm. The Agenda is the product of decades of efforts and discussions at the various social and environmental conferences and at the major development summits, from the United Nations Conference on the Human Environment held in Stockholm in 1972, to the United Nations Conference on Sustainable Development (Rio+20), which took place in 2012. A sense of urgency still needs to be created in society to promote economic development within ecosystems' limits and potential. Reversing the imbalances in natural systems must be considered an ethical and economic imperative: prosperity, democracy, security and well-being depend on forging a harmonious systemic relationship between development and the environment. It clearly falls to political leaders to take steps, rooted in modern science, to overcome the barriers that are preventing that shift.

In Latin America and the Caribbean, the much-needed shift towards a more sustainable development pattern has specific characteristics. In recent years, the Economic Commission for Latin America and the Caribbean (ECLAC) has analysed extensively the constraints on the region's economic, institutional and social development, and the urgent need for a leap towards sustainability (ECLAC, 2010, 2012, 2014 and 2016a). To make that leap, ECLAC has proposed progressive structural change based on an environmental big push, without which it will be impossible to attain sustainable development with equality (ECLAC, 2016a). This proposal is consistent with the vision of the future outlined in the 2030 Agenda, which should guide development efforts over the next 15 years (ECLAC, 2018a). However, the extent of progress and success will depend on the actions, public policies and investment decisions that are taken now. Latin American and Caribbean governments have a responsibility to act in a coordinated manner to create the right conditions for the advancement of the 2030 Agenda. In fact, they are the only ones that can do it.

## A. The sustainable use of natural resources

### 1. Natural resources and ecosystems

Latin America and the Caribbean have great natural wealth, with abundant and varied natural resources and ecosystems. The region is home to 8 of the world's 17 megadiverse countries, located in the Andes-Amazon basin (the Bolivarian Republic of Venezuela, Brazil, Colombia, Ecuador, Peru and the Plurinational State of Bolivia) and in Mesoamerica (Costa Rica and Mexico). It is also home to unique ecosystems, such as the Amazon, the desert of northern Chile and southern Peru, the Argentine Pampas, the Patagonia region of Argentina and Chile, and the little-known marine biodiversity found in the Pacific, Caribbean and Atlantic. That rich biodiversity meant that two centres of origin of agriculture developed in the region: the Central American centre and the South American centre (Mazoyer and Roudart, 2006).

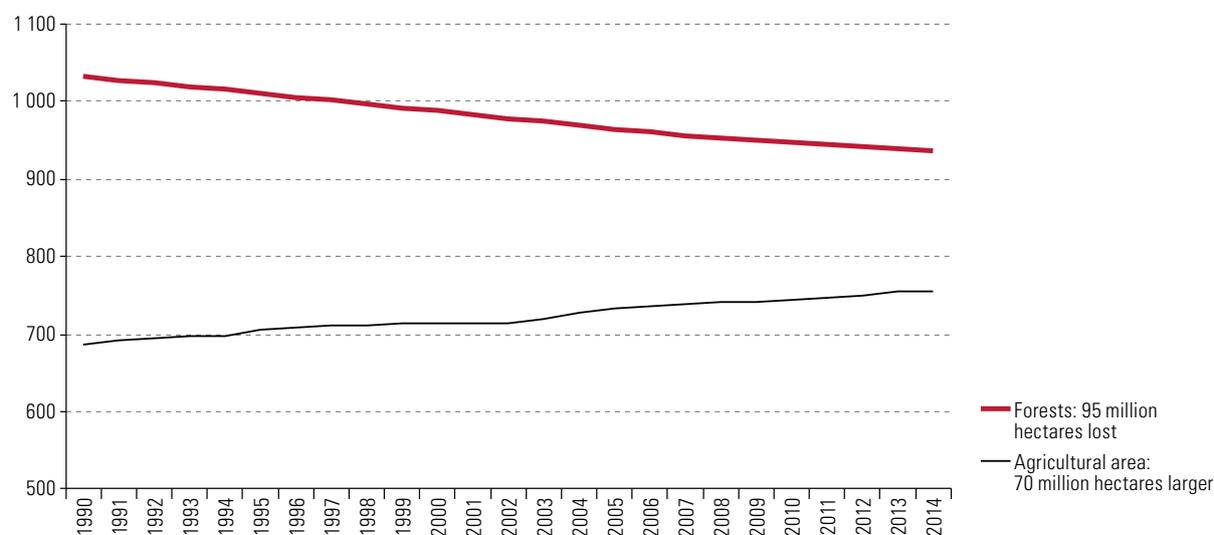
However, there are significant differences in the sustainable use and development of resources within the region. Since 1990, Latin America and the Caribbean has lost 9.4% of its forested areas (UNEP, 2016b). In South America, where important ecosystems such as the Amazon are located, forest cover went from 52.2% in 1990 to 47.7% in 2015 (ECLAC, 2016c). Forest cover continues to be lost as a result of land-use changes and agriculture, which are responsible for 42% of greenhouse gas emissions in Latin America and the Caribbean, compared to 18% globally (Sánchez, 2017). In the region, most of the nationally determined contributions (NDCs), which are the fundamental pillars of the Paris Agreement, are associated with land-use changes.<sup>1</sup>

Land-use changes have far-reaching consequences on the water balance, as the effect of large-scale evapotranspiration is lost, which has led to longer droughts and a growing scarcity of water resources that have profound production and social implications, affecting some urban areas in Latin America and the Caribbean.

Given that the expansion of agricultural areas is the main cause of forest cover loss, more modern agricultural and livestock farming processes would increase production and continue to offer income-generating and employment opportunities, while limiting environmental impacts. There is a real risk that agricultural exports from the region—which in 2016 represented 26% of total value of exports— will follow historical patterns and increase at the expense of diverse forest ecosystems (see figure II.1). Therefore, to work towards various development goals, including food security, priority must be given to changing the existing agricultural production paradigm, restoring ecosystems and soil, and managing water resources efficiently.

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<sup>1</sup> At the global level, nationally determined contributions (NDCs) cover approximately one third of the emissions reductions needed to stay on the pathway for the goal of staying well below 2°C (UNEP, 2017). However, the gap between the reductions needed and the national pledges is alarmingly high. Even if all NDCs are fully implemented, the carbon budget for limiting global warming to below 2°C will be about 80% depleted by 2030, and the available carbon budget estimates for the 1.5°C target will already be well depleted.

**Figure II.1****Latin America and the Caribbean: loss of forested area and expansion of agricultural area, 1990-2014***(Millions of hectares)*

**Source:** Food and Agriculture Organization of the United Nations (FAO), Corporate Database for Substantive Statistical Data (FAOSTAT), Rome [online] <http://www.fao.org/faostat/en/>.

## 2. Desertification and soil degradation

The desertification and degradation of agricultural land erodes the foundations of many economies in the region (in terms of gross domestic product (GDP)<sup>2</sup> and jobs)<sup>3</sup> and has a significant impact on the resilience of low-income rural economies, increasing poverty levels among and the vulnerability of broad sectors of society. Table II.1 shows the areas with high rates of desertification or that are now desert in selected countries, expressed as a percentage of the territory and in hectares. UNDP/EU (2015) estimates that, in Latin America and the Caribbean, approximately 60% land is arid and more than 300 million hectares of agricultural land are desert, approximately 20% of the arable land. IFAD (2010) estimates that 50% of agricultural land in the region will be subject to desertification by 2050.

<sup>2</sup> Between 1970 and 2012, agricultural value added in Latin America and the Caribbean grew at a rate of 2.3%, while average annual GDP growth was 3.0%. In the last 10 years, agricultural sector growth slowed to 2.1%, while the economy grew by 3.4%, widening the gap between growth in the agricultural sector and in the economy as a whole (ECLAC/FAO/IICA, 2015).

<sup>3</sup> During the period 2000-2010, the proportion of the rural economically active population employed in agriculture fell in 11 countries, most notably in Costa Rica, Chile, Mexico, Brazil, the Plurinational State of Bolivia, the Dominican Republic and Paraguay. However, rural employment in primary sectors remained higher than 60% in countries such as Brazil, Colombia, Ecuador, Honduras, Nicaragua, Peru and the Plurinational State of Bolivia (Rodríguez, 2016).

**Table II.1**  
Latin America and the Caribbean (10 countries): desertification

Country	Percentage of the territory that is desert or subject to desertification and number of inhabitants affected	Hectares that are desert or subject to desertification
Argentina (2011)	–21% of the territory subject to medium to severe erosion –81.5% of arid and semi-arid lands are subject to degrees of desertification –11 million people affected	–60 million hectares affected by moderate and severe erosion (with more affected every year) –An additional 650,000 hectares affected by varying degrees of erosion
Bolivia (Plurinational State of) (2012)	–41% of the territory is subject to desertification	–45.1 million hectares affected
Brazil (2004)	–15.7% of the territory subject to desertification –31.6 million people affected (18.6% of the population)	–133.8 million hectares susceptible to desertification
Colombia (2010)	–17% of the territory affected by desertification –80% of the Andean region affected –over 16.9 million people affected	–19.3 million hectares affected
Cuba (2006)	–14% of the territory affected by desertification –71% of agricultural land has very low organic matter content –44% of soil affected by low fertility, 43% by water erosion, 40% by poor drainage, 40% by acidity, 24% by compaction and 15% by salinity	–1.5 million hectares affected
Dominican Republic (2010)	–70% of the territory is completely or partially affected by desertification	
Ecuador (2005)	–15% of the territory affected by desertification –28% of the national territory is susceptible to desertification	
Guatemala (2014)	–12% of the territory faces the threat of desertification –1.4 million people affected	–1.3 million hectares affected
Mexico (2012)	–85% of the territory is affected by erosion and/or desertification –45% of the territory has chemically, physically or biologically degraded soils –70% of the soil has less than 1% of organic matter	–166.4 million hectares are affected by erosion, of which 88 million hectares are subject to desertification as a result of chemical, wind and water erosion
Peru (2010)	–27% of the territory is desert or faces the threat of desertification –8.8 million people affected	–34 million hectares affected

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of European Union/Food and Agriculture Organization of the United Nations (FAO), *Soil Atlas of Latin America and the Caribbean*, Luxembourg, 2014; United Nations Convention to Combat Desertification (UNCCD), *Country Profiles: Latin America and the Caribbean Region*, Bonn, 2015.

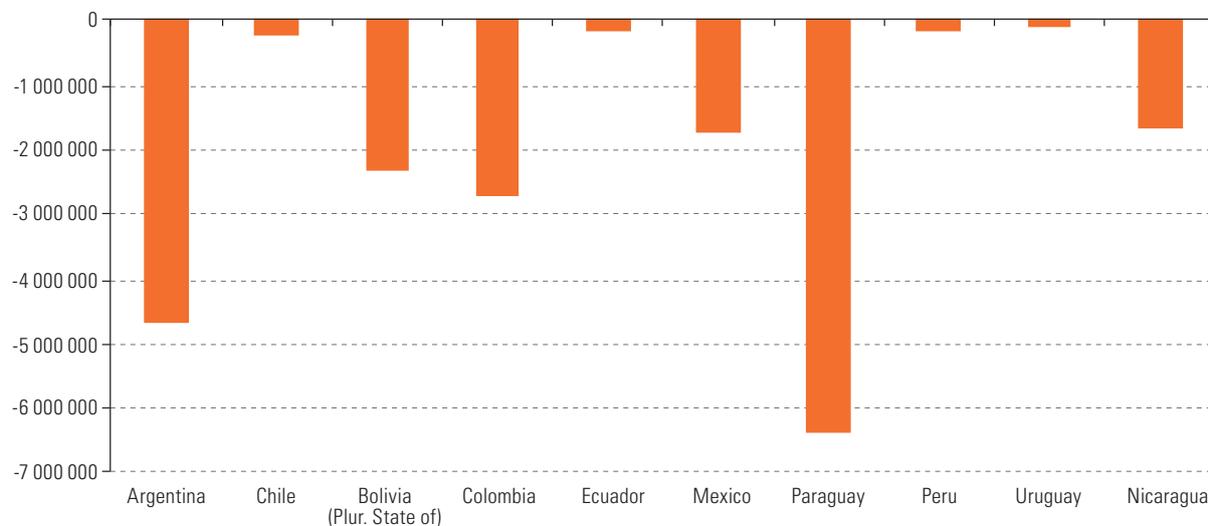
One common factor to all forms of land degradation is the depletion of soil organic carbon (see figure II.2). Soil contains less organic matter and is used inappropriately, destroying its structure and reducing biodiversity, which causes the progressive erosion of the non-renewable mineral fraction of soil that, once degraded, is difficult to recover in the near future. Most mineral fractions of soils take more than 10,000 years to develop, as the solid rock was weathered into more biologically useful particle sizes (UNCCD, 2016a).

At the same time as soil is being degraded, fertilizer use per hectare has intensified (see figure II.3A), in an effort to maintain or improve crop productivity, which does not always happen. For example, soybean productivity in Brazil is approximately 3 tons per hectare (EMBRAPA, 2017) and has been at that level for the past 15 years (Aprosoja Brasil, 2016). At the same time, there has been a dramatic increase in the intensive use of pesticides, such as fungicides, herbicides and insecticides, which pose a threat to public health, the environment and environment-related services (see figure II.3B).

**Figure II.2**

Latin America and the Caribbean (10 countries): loss of soil organic carbon in top 30 cm, 2000-2010

(Tons)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Convention to Combat Desertification (UNCCD), Land Degradation Neutrality Target Setting Programme.

**Figure II.3**

Intensity of fertilizer and pesticide use

(Kilograms per hectare)

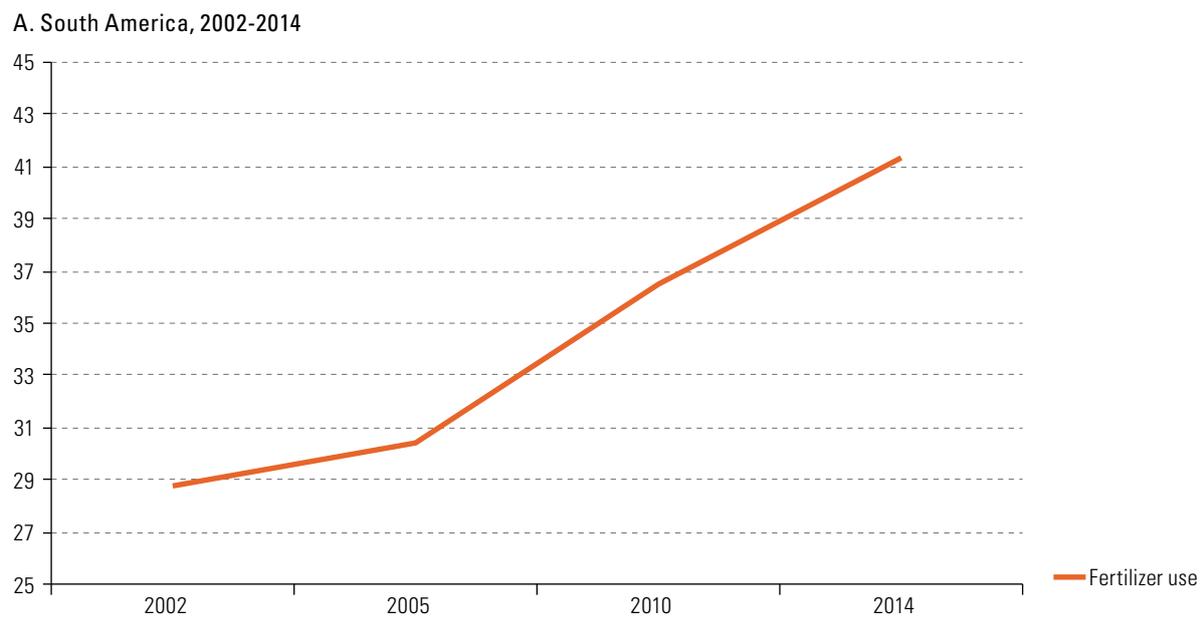
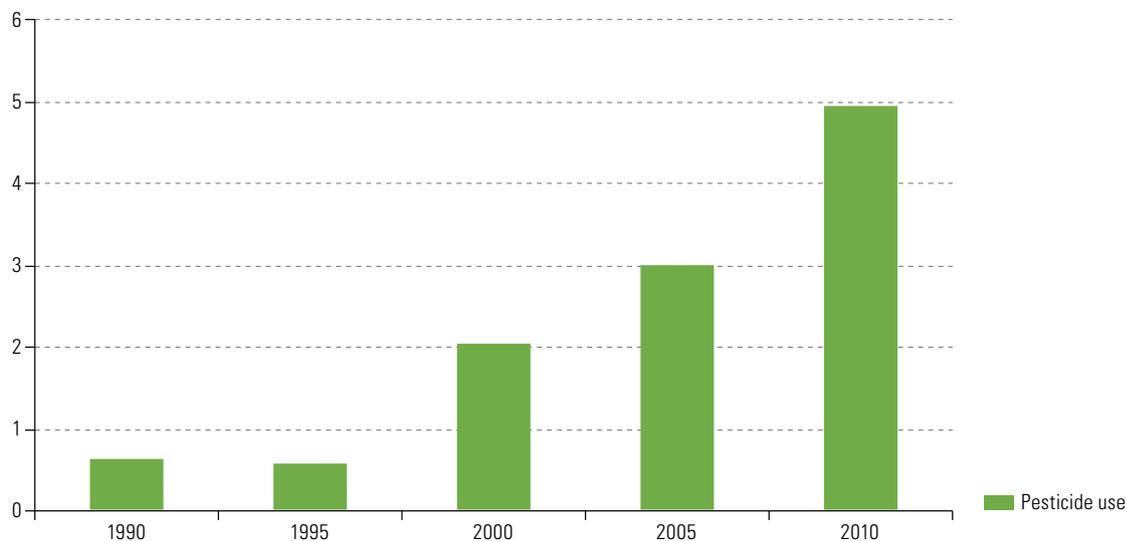


Figure II.3 (concluded)

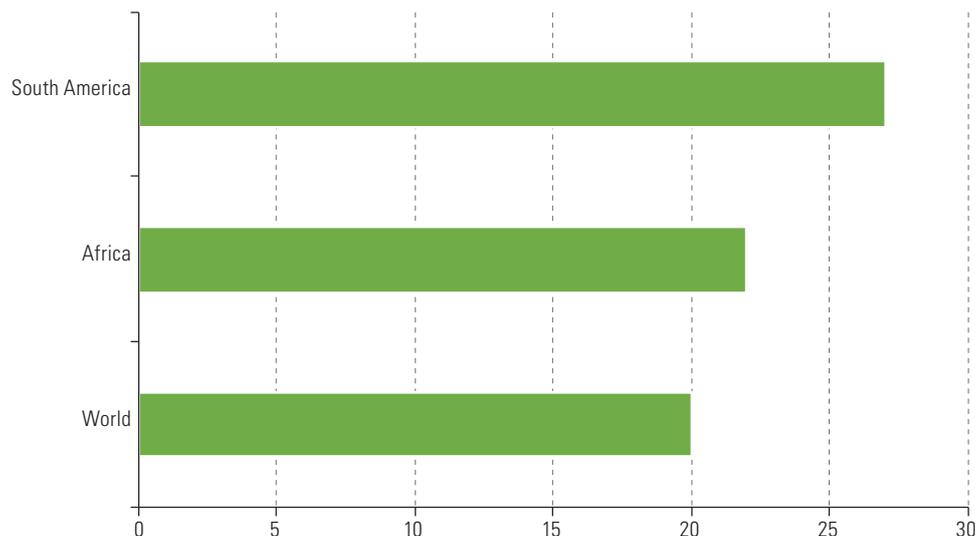
**B. Latin America, 1990-2010**

**Source:** Food and Agriculture Organization of the United Nations (FAO), Corporate Database for Substantive Statistical Data (FAOSTAT), Rome [online] <http://www.fao.org/faostat/en/>; Economic Commission for Latin America and the Caribbean (ECLAC), CEPALSTAT [online database] <http://estadisticas.cepal.org/cepalstat/Portada.html?idioma=english>.

The *Global Land Outlook* (UNCCD, 2017) notes that approximately 20% of the Earth's vegetated surface shows signs of declining productivity or of being stressed. South America and Africa are the regions most affected by productivity declines in absolute terms, with 27% and 22%, respectively (see figure II.4). Land productivity dynamics reflect the overall quality of the soil that is the product of environmental conditions and land resource use or management. Thus, persistent declines in land productivity point to a long-term alteration in the health and productive capacity of the land. These declines have a direct and indirect impact on practically all terrestrial ecosystem services.

**Figure II.4****Decline in land productivity, 1999-2013**

(Percentages of stressed areas, with moderate losses and declining vegetation cover)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Convention to Combat Desertification (UNCCD), *The Global Land Outlook*, Bonn, 2017.

The negative land productivity trend affected all of land-use classes in South America to a much greater extent than the world average (UNCCD, 2017). One of the main anomalies in declining global productivity is the vast, semi-arid Gran Chaco plain, in the border region between Argentina, Brazil and Paraguay. The spatial distribution of declining productivity areas generally correlates with the rapid expansion of livestock and crop production, at the expense of ecologically high-value primary dry forests.

### 3. Ecosystem protections

Attention should be drawn to the role played by protected areas in efforts to preserve land and biodiversity. According to *Protected Planet Report 2016: how protected areas contribute to achieving global targets for biodiversity* (UNEP/IUCN, 2016), protected areas in the Brazilian Amazon have deforestation rates that are four times lower than non-protected areas, even when highly accessible. In Mexico and Brazil, sustainable use parks (those that allow timber production) are more effective at preventing deforestation than strictly protected areas. This would indicate that a sustainable management strategy for natural resources and economic production in the region should be adopted. In Latin America and the Caribbean, 4.85 million km<sup>2</sup> of land is protected, equivalent to 24% of the region, of which 2.47 million km<sup>2</sup> are in Brazil. It is the largest regional network of terrestrial protected areas in the world, which contrasts with the low proportion of coastal and marine areas under protection, around 3.1% (United Nations, 2016b). Under target 11 of the Aichi Biodiversity Targets of the Convention on Biological Diversity, at least 17% of terrestrial areas and 10% of coastal and marine areas should be conserved.

In addition, protected areas account for 20% of the carbon sequestered by all land ecosystems (UNEP/IUCN, 2016) and maintain key water systems for human and economic use. However, only 17.5% of the world's countries have achieved at least 60% of the protected area management effectiveness assessment targets, as recommended by the Convention on Biological Diversity (UNEP/IUCN, 2016). There is a significant shortfall in the effective implementation of protected areas in Latin America and the Caribbean.

Directly related to the issues of desertification, soil degradation and ecosystem protection is the availability and efficient management of water. By 2050, at least one in four people will live in a country affected by chronic or recurring shortages of fresh water (UN-Water, 2017). With its abundant water resources, Latin America and the Caribbean is a region of contrasts, as it also has areas with high levels of aridity. The agricultural sector is the main user of water resources in the region, using an average of 70% of the total, followed by households (17%) and industry (13%).

### 4. Remaining water resource management challenges

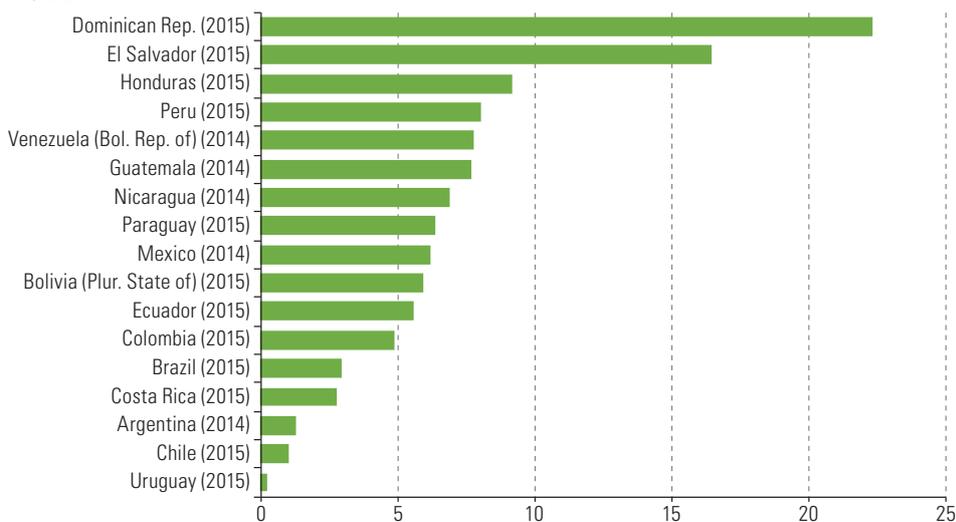
Pressure on water and sanitation services has increased due to the region's urbanization (WWAP, 2017). In urban areas of the Dominican Republic, Haiti and Peru at least one in 10 people still do not have access to safe drinking water (WHO-UNICEF, 2017). Differences in drinking water and sanitation coverage are substantially wider in rural areas (see figures II.5 and II.6).

**Figure II.5**

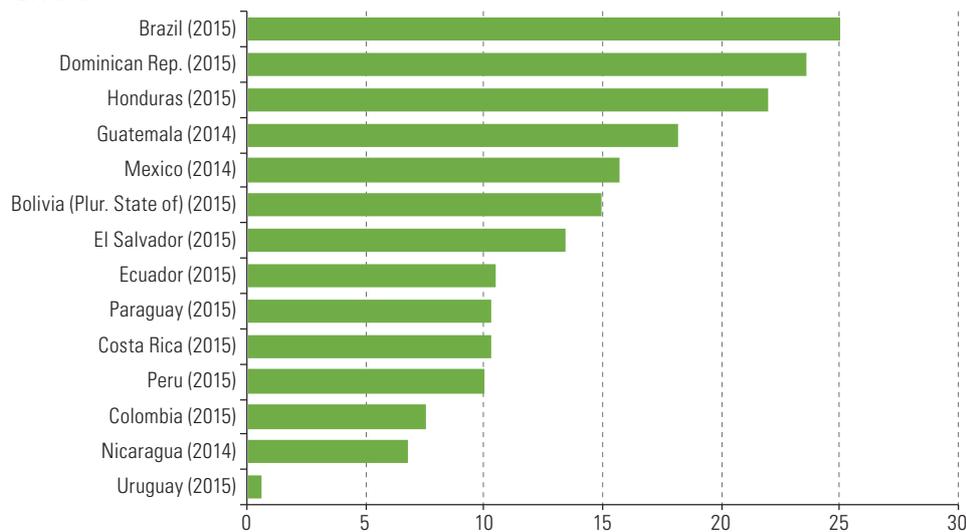
Latin America (17 countries): differences in drinking water coverage between the highest income and lowest income households, 2014-2015

(Percentage points)

#### A. Urban



#### B. Rural



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Household Survey Data Bank (BADEHOG).

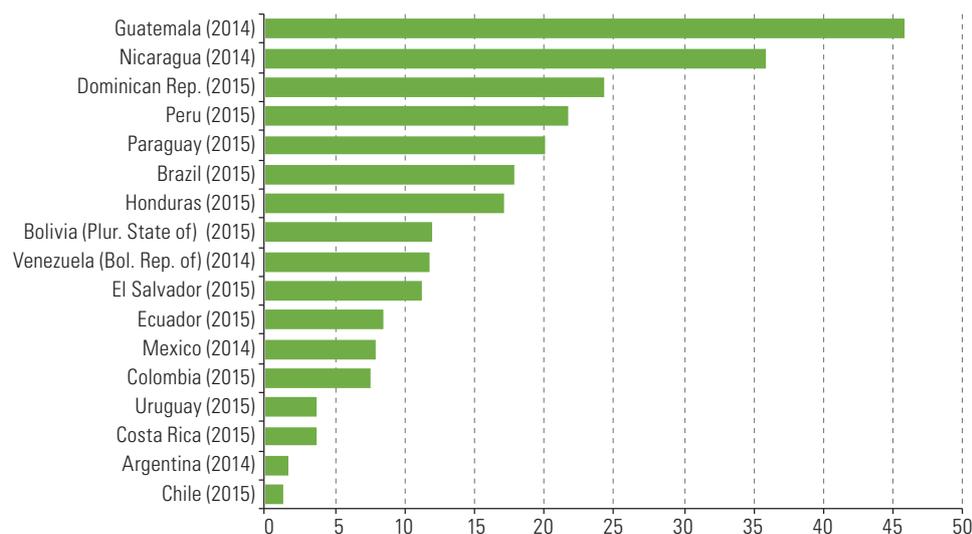
**Note:** The figure is the difference between the percentages of drinking water coverage among households in the highest income quintile and among households in the lowest income quintile.

**Figure II.6**

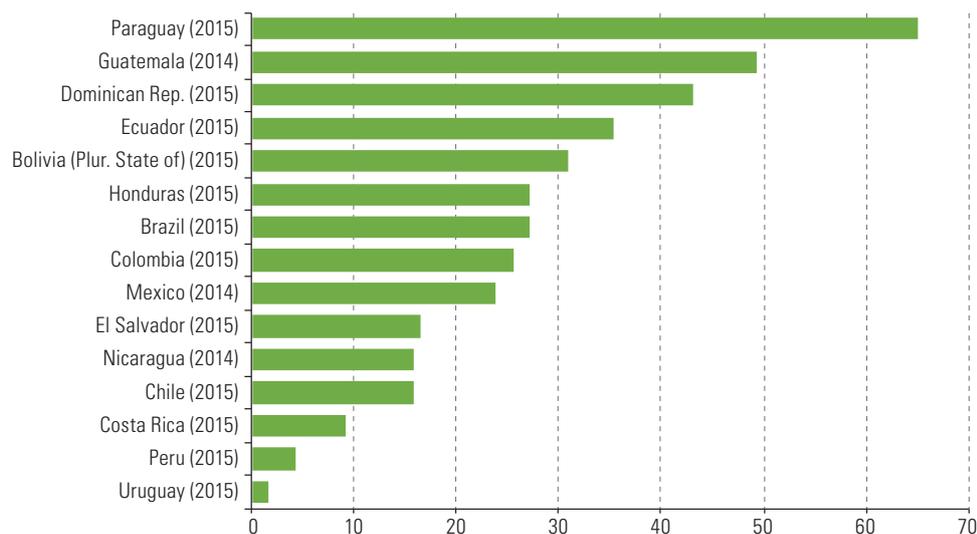
Latin America (17 countries): differences in sanitation coverage between the highest income and the lowest income households

(Percentage points)

#### A. Urban



#### B. Rural



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Household Survey Data Bank (BADEHOG).

**Note:** The figure is the difference between the percentages of sanitation coverage among households in the highest income quintile and among households in the lowest income quintile.

Gaps in access to these services exacerbate income inequalities, disparities in the ability to access water freely and gaps between rural and urban areas. Drinking water coverage is higher among households in the highest income quintile compared to those in the lowest income quintile (see figure II.5). The difference is even greater with regard to sanitation (see figure II.6). However, internal gaps have narrowed over time, almost twice as fast in drinking water coverage (by 1.0% per year) than in sanitation (0.6% per year).

The gaps can also be considered qualitative (see figure II.7). Among lower-income households, access is provided in some cases through technological solutions that do not ensure a service of a quality comparable to that provided to higher-income households. For example, lower-income households may have to get water from a well, a delivery truck or a pool or public water source some distance from their home and have to use a latrine or septic tank, while higher-income households have drinking water and sewage networks with home connections. Access is often intermittent and vulnerable to disruptions (owing to drought and other reasons), control over the quality of the water supplied is limited and, moreover, the water provided is not always properly disinfected. This clearly has consequences for the health of the population, in particular for the healthy development of children. In addition, several systems are in a poor state of repair and are not properly maintained, leading to significant losses (ECLAC, 2017b).

**Figure II.7**

Latin America and the Caribbean: national, rural and urban drinking water service levels, 2000 and 2015

(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Health Organization/United Nations Children's Fund (WHO/UNICEF), "SDG regions. Latin America and the Caribbean: service levels", Geneva, 2017 [online] <https://washdata.org/data#/dashboard/522>.

Health services remain a major challenge for the region. In 2015, 88% of the urban population had access to improved sanitation facilities (WHO/UNICEF, 2017). Urban sanitation is still one of the main challenges facing the region's governments, because wastewater treatment facilities have not expanded in line with population growth in the region in recent decades (WWAP, 2017). As table II.2 shows, there are still about 20 million people in Latin America and the Caribbean who continue to practice open defecation, a practice that is even more widespread in rural areas.

**Table II.2**  
Sanitation, 2000 and 2015  
(Percentages)

Year	Urban population	National						Rural						Urban					
		At least basic service	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic service	At least basic service	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic service	At least basic service	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic service			
Latin America and the Caribbean	2000	75	4	11	10	0.70	47	3	20	29	1.41	84	4	8	3	0.38			
	2015	80	5	6	3		68	5	15	11		90	5	4	1				
North America and Europe	2000	73	1	4	0	0.10	89	1	10	0	0.32	98	1	1	0	0.01			
	2015	76	1	2	0		94	1	5	0		98	1	1	0				
World	2000	47	5	16	20	0.63	40	4	23	34	0.71	80	7	8	4	0.20			
	2015	54	8	12	12		50	7	19	24		83	9	5	2				

**Source:** World Health Organization/United Nations Children's Fund (WHO/UNICEF), *Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baselines*, Geneva, 2017.

**Note:** Estimates for safely managed sanitation services from 84 countries (representing 48% of the world's population).

The financing and policy responses of the region's governments to improve water and sanitation infrastructure are important, but have not been sufficient. It is estimated that every year developing countries lose between 1% and 2% of their annual GDP owing to the lack of good quality water and sanitation services in rural areas (World Bank, 2008). Based on that figure, the Development Bank of Latin America (CAF) estimated that annual losses in Latin America and the Caribbean resulting from a lack of basic services could be more than US\$ 29 billion, considering that a 0.5% decrease in regional GDP in 2011 was equivalent to US\$ 5.9 trillion per year (Mejía, Castillo and Vera, 2016).

## 5. Pathways to sustainability: neutral land degradation, the bioeconomy and sustainable water management

In the context of Goal 15, soil loss and land degradation are a threat to the future of the regional economy and inclusive social development, in particular protecting the livelihoods of people living in poverty. Target 15.3 of the 2030 Agenda is to combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world by 2030 (United Nations, 2015a). Land degradation neutrality, which is a key concept for reversing degradation, is defined as "a state where the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems" (UNCCD, 2016a). Considering the data presented, addressing land degradation processes should be a priority for the countries of the region, since the food security of Latin America and the Caribbean undoubtedly requires a rethink of the current agricultural production paradigm and the development of policies to restore ecosystems.

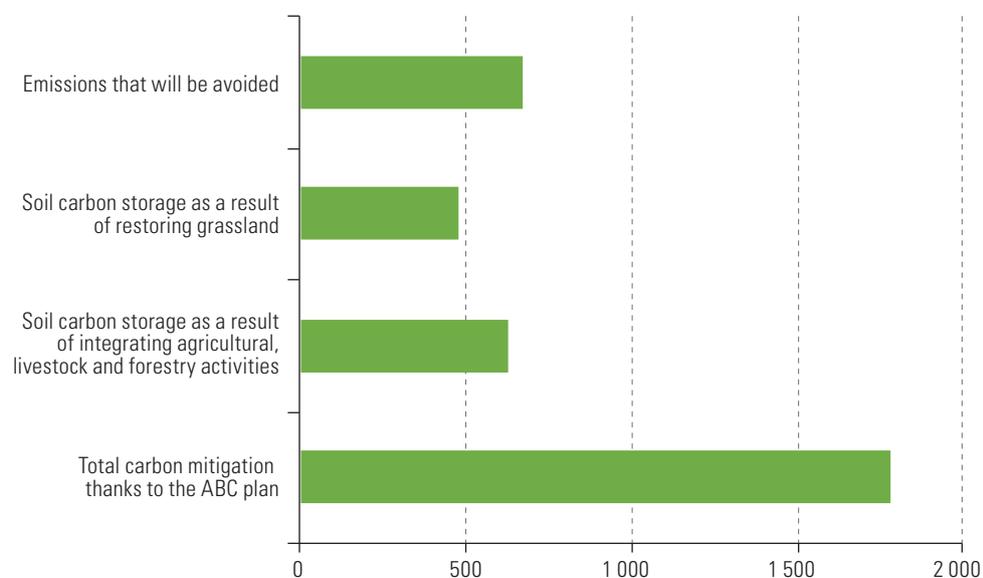
In that regard, one example from the region is the low-carbon agriculture (ABC) plan of Brazil which seeks to reduce agricultural greenhouse gas emissions and improve degraded grazing areas by 2020. At the heart of the plan is a line of credit to finance low-carbon technologies. It also links together policies and financing to reduce deforestation, mitigate emissions and improve soil productivity. According to Gurgel and Costa (2015), between 2012 and 2023, it is anticipated that approximately 1.8 billion tons of carbon dioxide equivalent (CO<sub>2</sub>eq) will be mitigated (see figure II.8), thanks to avoided emissions, increased soil carbon storage by restoring grassland and the integration of agricultural, livestock and forestry activities. The ABC plan showed that sectors can increase their productivity by avoiding deforestation while at the same time reducing emissions, which makes livestock farming more efficient in terms of production and emissions (see figure II.9). The recent interest rate rise and the decline in financial contributions to the plan will limit its effectiveness (Mendonça, 2017).

Given the wealth of natural resources in Latin America and the Caribbean, developing the potential of the bioeconomy sectors that provide the greatest value added, where the export of sustainably managed resources is of strategic importance and provides an opportunity to combine growth, social development and environmental protection. However, while countries such as Uruguay, Paraguay, Argentina, Honduras and Nicaragua have biobased exports that make up more than 50% of total exports (see figure II.10), those associated with the high value-added bioeconomy are still very low.

**Figure II.8**

Brazil: avoided emissions and soil carbon storage thanks to the low-carbon agriculture (ABC) plan, 2012-2023

(Millions of tons of CO<sub>2</sub>eq)

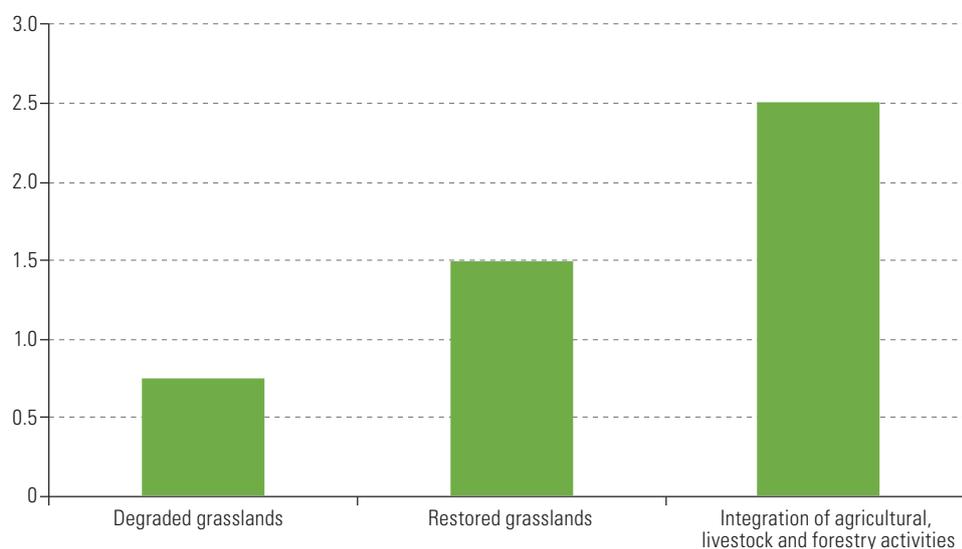


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Á. Gurgel and C. Costa, "Invertendo o sinal de carbono da agropecuária brasileira: uma estimativa do potencial de mitigação de tecnologias do Plano ABC de 2012 a 2023", São Paulo, Observatorio ABC, 2015 [online] <http://bibliotecadigital.fgv.br/dspace/handle/10438/15313>.

**Figure II.9**

Brazil: productivity by sector of the low-carbon agriculture (ABC) plan, 2015

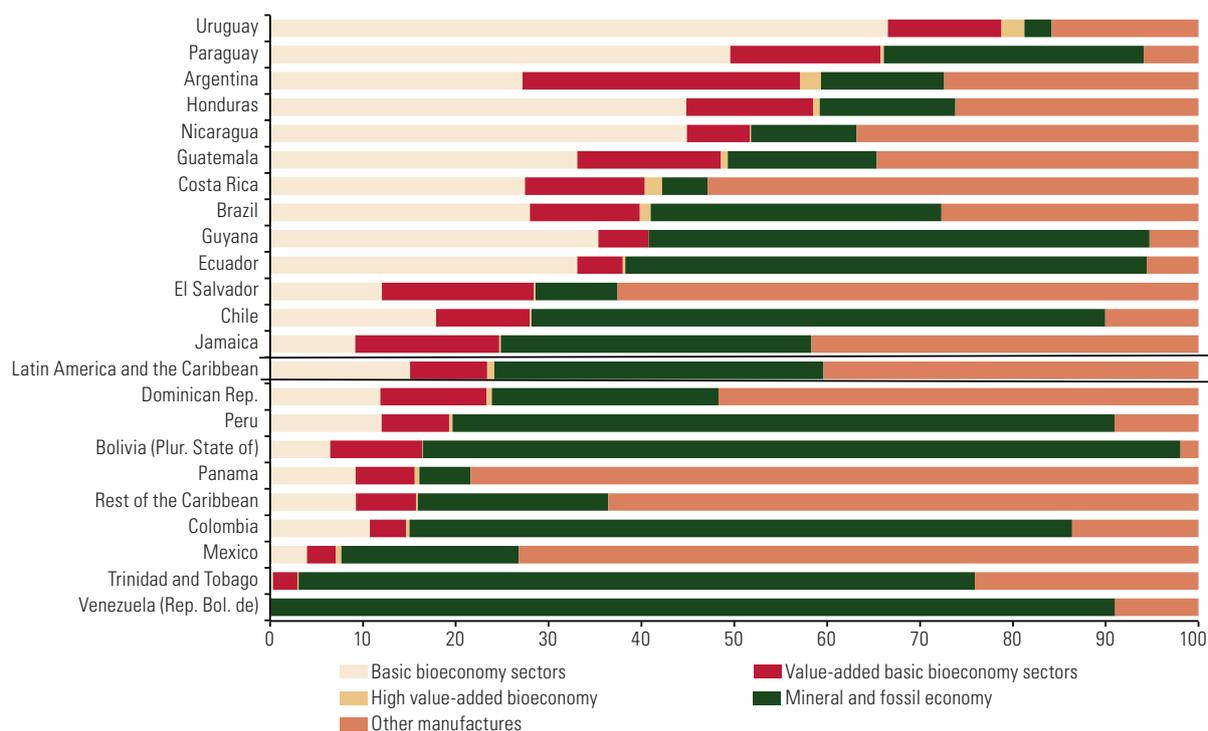
(Number of animals per hectare)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Á. Gurgel and C. Costa, "Invertendo o sinal de carbono da agropecuária brasileira: uma estimativa do potencial de mitigação de tecnologias do Plano ABC de 2012 a 2023", São Paulo, Observatorio ABC, 2015 [online] <http://bibliotecadigital.fgv.br/dspace/handle/10438/15313>.

**Nota:** The data show comparison in current productivity between areas included in the ABC plan (degraded grasslands) and restored grasslands, as well as the integration of agricultural, livestock and forestry activities.

**Figure II.10**  
Latin America and the Caribbean (21 countries): composition of exports by country,  
by importance to the bioeconomy, 2010-2015  
(Percentages)



**Source:** A. Rodríguez, A. Mondaini and M. Hitschfeld, "Bioeconomía en América Latina y el Caribe: contexto global, regional y perspectivas", *Production Development series*, No. 215 (LC/TS.2017/96), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2017.

To meet future demands and achieve the targets under Goal 6, Ballesteros and others (2015) estimate that an average annual investment of US\$ 12.5 billion (0.3% of regional GDP in 2010) will be required between 2010 and 2030. Thus, a total of US\$ 250 billion should be raised to make services universal by 2030. This calculation is based on the achievement of the following targets: expanding wastewater treatment coverage, improving storm drainage infrastructure, optimizing and increasing water sources' capacity, standardizing services in marginal urban areas (where the greatest investment gaps are) and renewing existing assets.

To reduce poverty and inequality, steps must be taken to protect, restore and promote sustainable use of terrestrial ecosystems, manage forests sustainably, combat desertification, halt and reverse the degradation of land and water resources, and curb biodiversity loss. The economic productivity of ecosystems requires policies that allow the environment and natural resources to be managed sustainably.

## B. The dynamics of human settlements

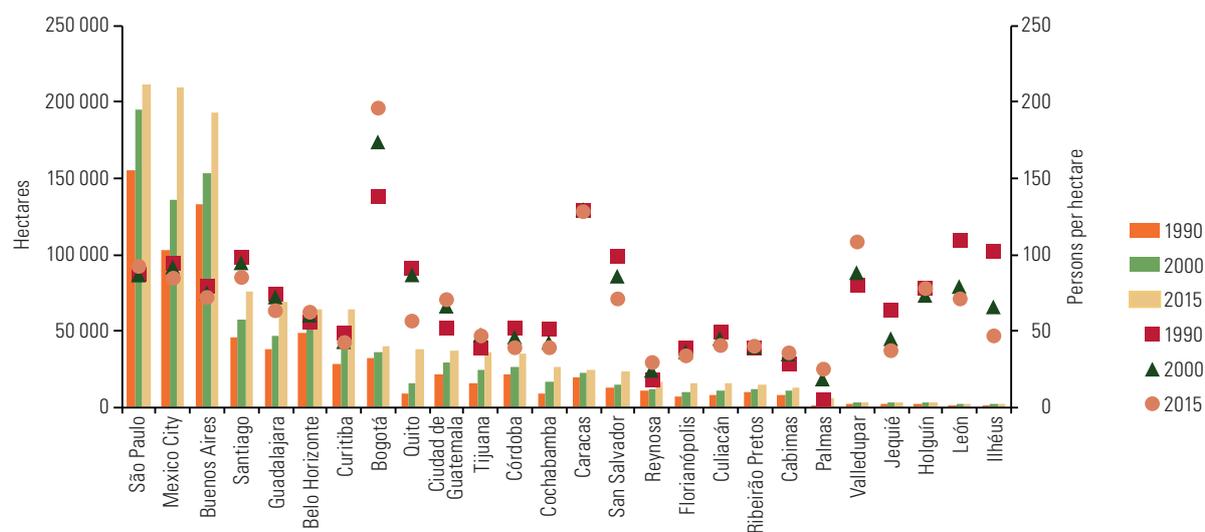
### 1. A highly urban region

Goal 11 —to make cities and human settlements inclusive, safe, resilient and able— was included in the 2030 Agenda in response to the huge global impact of urbanization and provides an opportunity to address many of the fundamental sustainable development challenges through urban policies and interventions. This is even more true in Latin America and the Caribbean, where more than 80% of the region's population live in urban areas (United Nations, 2015b) and where economic, political and administrative power is concentrated in cities. Unlike other developing regions, rural-urban migration is slowing down and migration between cities is increasingly important (Jordán, Riffo and Prado, 2017; Rodríguez, 2017).

Megacities (more than 10 million inhabitants) and large cities (between 5 and 10 million inhabitants) still account for a significant percentage of the region's population and even more of regional GDP (ECLAC, 2015c). However, the percentage of the population living in such cities has stagnated and today medium-sized cities, many of them linked to megacities, are emerging as poles of growth (Jordán, Riffo and Prado, 2017). In addition, the high levels of urbanization coincide with the ageing population, which is why a dual urban and demographic shift is needed. Proper planning is required to address these trends simultaneously, in a manner consistent with sustainable development (ECLAC, 2017b). Meanwhile, urbanization has occurred rather spontaneously, influenced by market forces, and urban areas have emerged with fragile economies, high levels of inequality and worrying levels of environmental degradation.

Seen from the perspective of cities' territorial expansion, a pattern of ever-growing cities emerges, which, with few exceptions, coincides with a reduction in urban density (see figure II.11). The expanding urban sprawl, in addition to its environmental impact, drives up the per capita costs of infrastructure (such as water, electricity, transport, communication and road networks) as the covered population density declines (ECLAC, 2017b). Urban planning, urban land policies and new incentives and regulations should reduce urban segregation and the economic and environmental costs of services.

**Figure II.11**  
Latin America (26 cities): urban area and urban density of the built-up area, 1990, 2000 and 2015  
(Hectares and persons per hectare)



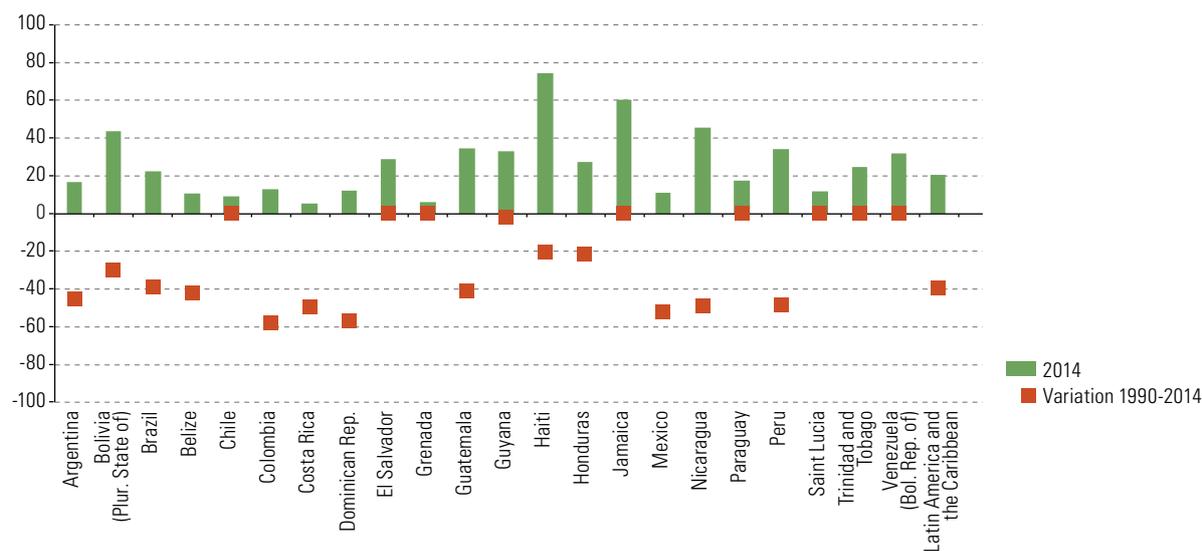
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of S. Angel and others, *Atlas of Urban Expansion. The 2016 Edition. Volume One: Areas and Densities*, New York University/United Nations Human Settlements Programme (UN-Habitat)/Lincoln Institute of Land Policy, 2016.

## 2. Urban inequality and informality

Latin American and Caribbean cities are characterized by high levels of inequality, both in terms of income and the gaps in urban quality and access to services, mobility and infrastructure. According to ECLAC household survey data, income distribution, as measured by the Gini coefficient, was 0.466 in urban areas of Latin America in 2014. However, income distribution is more unequal in many capital or major cities (Jordán, Riffo and Prado, 2017, p. 172). Likewise, after falling for a decade, urban poverty and extreme poverty rates began to rise again in 2014, reaching 26.8% and 7.2%, respectively, among the urban population of Latin America in 2016 (ECLAC, 2018b).

In recent decades, many countries of the region have been able to reduce the quantitative housing deficit, mainly by applying subsidy policies to demand. However, locating social housing in peripheral areas where land is cheaper, has driven urban expansion and deepened socioeconomic residential segregation (ECLAC/UN-Habitat/MINURVI, 2018). Despite the differences among countries, the proportion of the urban population living in slums has also fallen in recent decades from 34% in 1990 to 21% in 2014, largely thanks to the efforts of the countries and municipalities to urbanize and regularize informal settlements (see figure II.12). However, more than 100 million people still live in urban slums and, in absolute terms, only 2 million have moved away from this type of settlement since 1990. Some countries have sought to address informality by adopting a strategy of granting legal titles to land without the comprehensive development of settlements, but this does not automatically guarantee that access to services will improve and may, in fact, lead to the establishment of new informal settlements (Fernandes, 2011).

**Figure II.12**  
Percentage of the total urban population living in slums, 1990-2014  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Statistics Division.

**Note:** Variation data are not shown for some countries because the database only has information for one year of the period under consideration. The years being compared in the case of Belize are 2007 and 2014; and in the case of the Bolivarian Republic of Venezuela Costa Rica, El Salvador, Grenada, Guyana, Paraguay, Saint Lucia and Trinidad and Tobago are 2005 and 2014. Only data from 2005 are considered in the case of Chile and Jamaica, because there was no information available for another year.

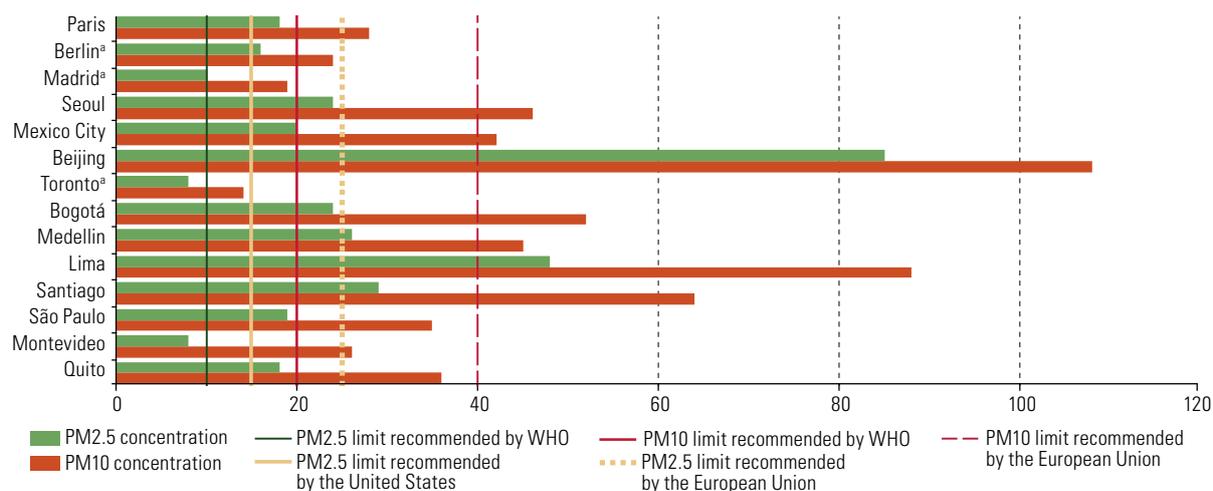
Some countries in the region (notably Colombia, Brazil and recently Ecuador) have made significant progress in their urban regulations in recent decades, which has led to the application of land planning and management tools to improve low-income households' access to land and housing. The regulations also capture the value added generated by urban land-use changes, which is used to finance inclusive urban investments at the local level (Bonomo, Brain and Simioni, 2015). However, even in the countries that have made the most regulatory progress, the implementation of these instruments has been inconsistent.

### 3. Infrastructure and public transport

To make sustainable cities a reality, more inclusive investments are needed in services and infrastructure, particularly those that will give rise to mobility patterns in line with targets 11.2 and 11.6. However, the bias towards private transport has made it increasingly inefficient. The steady increase in the vehicle fleet has contributed to the growing congestion in cities, pushing up travel times and energy consumption.

In addition to reducing productivity and well-being, the resulting air pollution has a significant impact on mortality and morbidity rates. Air pollution is one of the most important human health problems in cities (see figure II.13). Every year in the region, it is estimated that there are up to 93,000 deaths from cardiopulmonary diseases, 13,000 deaths from lung cancer and 560,000 disability-adjusted life years lost, due to air pollution (ECLAC, 2017b).

**Figure II.13**  
Concentration of coarse particulate material (PM10) and fine particulate material (PM2.5) in 14 selected cities, 2014  
( $\mu\text{g}/\text{m}^3$ )



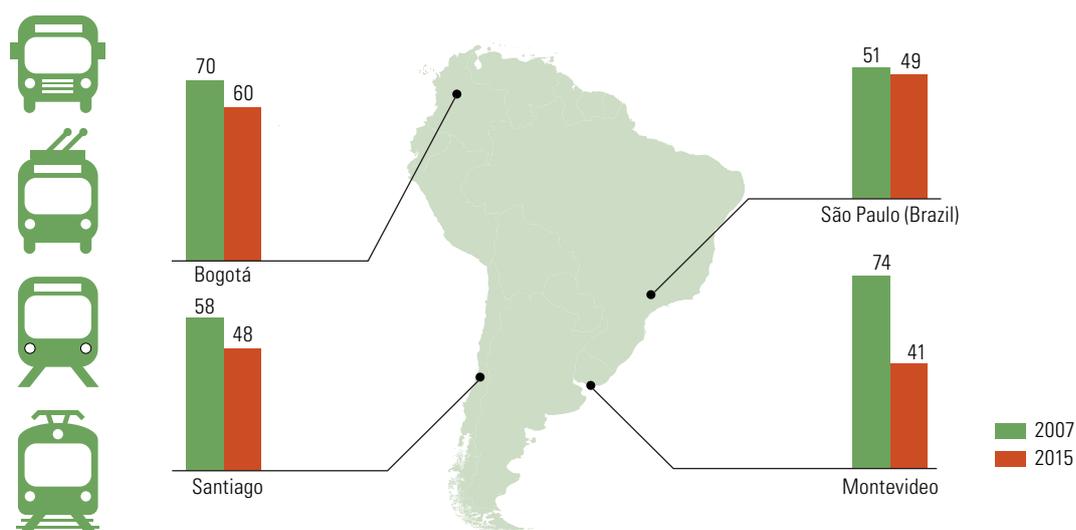
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the World Health Organization (WHO).

<sup>a</sup> Average annual concentration.

The investment bias towards private transport has also led to an increase in travel times on public transport (bus), which is 1.5 to 3.2 times (between 50% and 220%) longer than the private transport owing to the combination of spatial segregation, congestion and the design of public systems (Mejía, Castillo and Vera, 2016a). Analysis of the structure of investment in metropolitan areas shows that the largest are made in private vehicles, which accounted for more than 60% of investments at the end of the 2000s, while mass transit systems received around 20% and the rest was spent on urban roads (CAF, 2009). In addition, a lot of public space is devoted to private transport. Automobiles are the mode of transport that require the most space, taking up 30 times the space of a bus and about five times that of a bicycle (ECLAC, 2017b).

Figure II.14 shows that, while public transport use is significant in some cities in the region (Montevideo, Bogotá, Santiago and São Paulo), its relative share is falling.

**Figure II.14**  
Share of public transport in four cities, 2007 and 2015  
(Percentages)



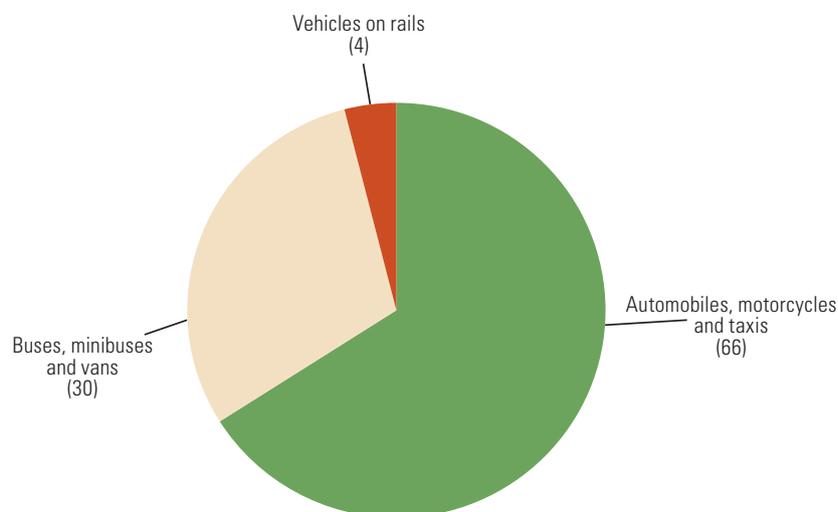
**Source:** Development Bank of Latin America (CAF), "Bases de datos" [online] <https://www.caf.com/es/temas/o/observatorio-de-movilidad-urbana/bases-de-datos>.

In Latin America and the Caribbean, 66% of the energy used in urban transport is consumed by individual vehicles (automobiles and motorcycles). Public transport buses consume 30% and rail-borne modes of transport use 4% (see figure II.15). As a result, individual transport emits the most pollutants (Vasconcellos, 2014), accounting for 74.6% of CO<sub>2</sub> emissions, while public transport emits 25.4%. With regard to particulate material, individual transport emits 82.3% of the total, compared to 17.7% produced by public transport. The decarbonization of the energy matrix of the transport sector can also be greatly improved, considering that approximately 94% of transport is powered by oil derivatives.<sup>4</sup>

Motorization rates in Latin America and the Caribbean still lag behind those of developed countries. In 2015, the United States, Australia and Norway had rates of 810, 723 and 584 vehicles per 1,000 inhabitants, respectively, while Mexico, Uruguay and Chile had 294, 280 and 248, respectively. Although some English-speaking Caribbean countries have higher rates, in Central America they are generally lower. However, analysis of rate changes between 2005 and 2015 reveals that there are countries where the vehicle fleet grew much faster than the economy (see upper left quadrant of figure II.16), which poses a challenge to efforts to change production and consumption patterns.

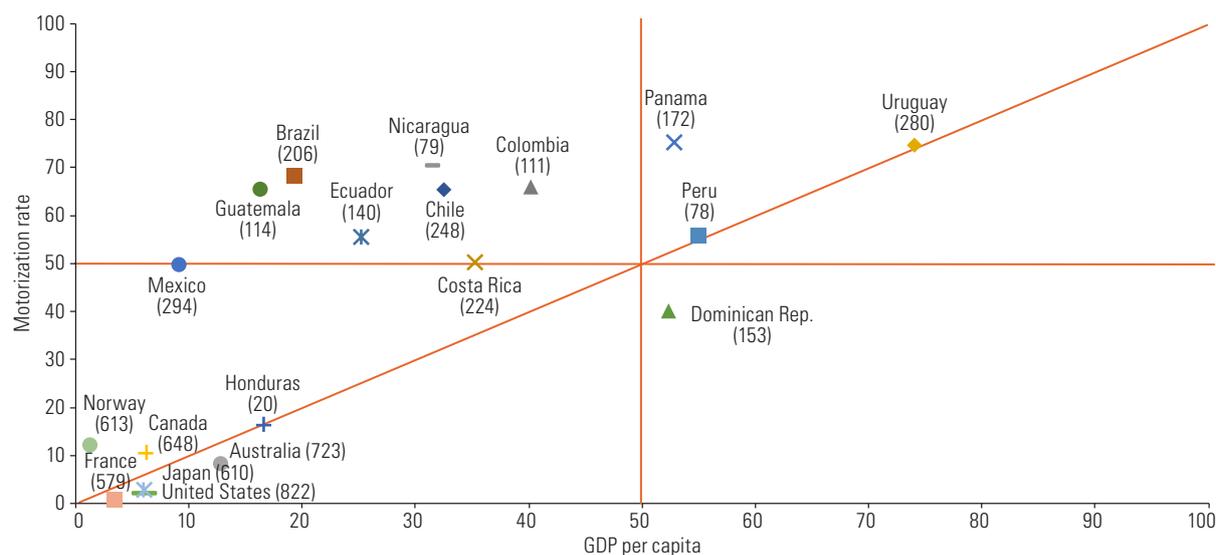
<sup>4</sup> See Enerdata [online] <https://www.enerdata.net/>.

**Figure II.15**  
Latin America: energy use in urban areas, by main mode of transport, 2014  
(Percentages)



**Source:** E. Vasconcellos and A. Mendonça, "Observatorio de Movilidad Urbana: informe 2015-2016 (resumen ejecutivo)", Caracas, Development Bank of Latin America (CAF), 2016 [online] <http://scioteca.caf.com/bitstream/handle/123456789/981/OMU%20CAF%20Resumen%2020170509.pdf>.

**Figure II.16**  
Motorization rate and GDP per capita, 2005-2015  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Organization of Motor Vehicle Manufacturers (OICA) and World Bank, World Development Indicators, Washington, D.C. [online database] <http://data.worldbank.org/data-catalog/world-development-indicators>.

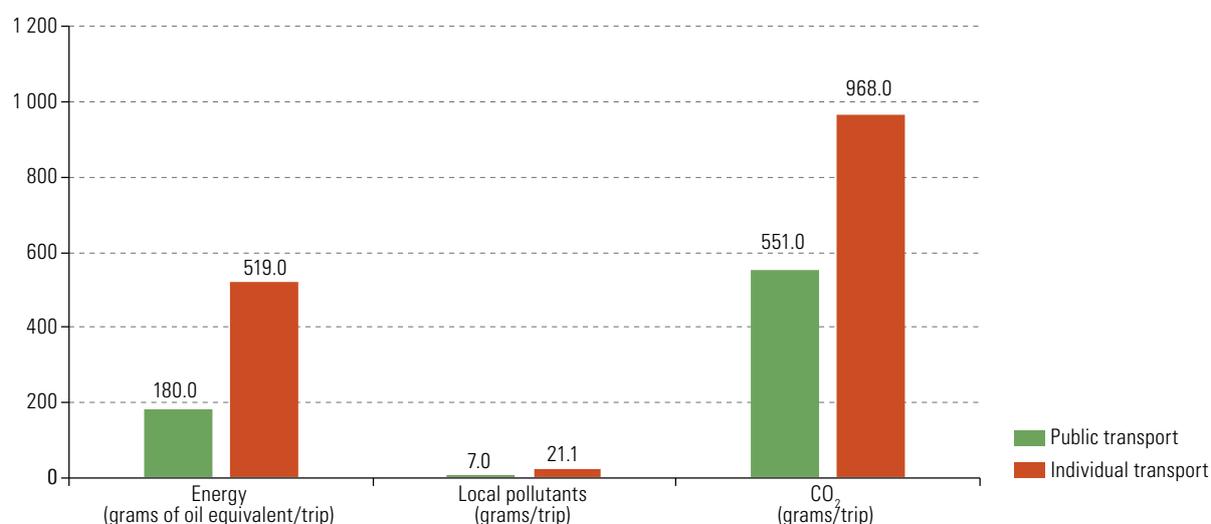
**Note:** Gross domestic product (GDP) per capita is expressed in purchasing power parity (PPP) in dollars at constant 2011 prices. The motorization rate is the number of motor vehicles per 1,000 people. The figures in parentheses indicate the motorization rate in 2015.

The region's persistently low motorization rates and stubborn infrastructure gap offer an opportunity to find a more sustainable path that also leads to less inequality. The origin-destination and household surveys show that more than half of the population uses public transport. This type of transport produces less emissions and accounts for the majority of daily trips (41%), while 32% of these trips are made by individual transport and the rest are done on foot, according to 2014 data for 29 major Latin American cities (Vasconcellos and Mendonça, 2016). Taking Brazilian cities with more than 60,000 inhabitants as an example, figure II.17 shows that the energy consumption and emission of pollutants per trip by individual transport (automobiles and motorcycles) are much higher than those undertaken by public transport (ANTP, 2016).

**Figure II.17**

**Brazil: energy use and emission of pollutants per trip in cities with more than 60,000 inhabitants, 2014**

(Grams of oil equivalent and grams per trip)

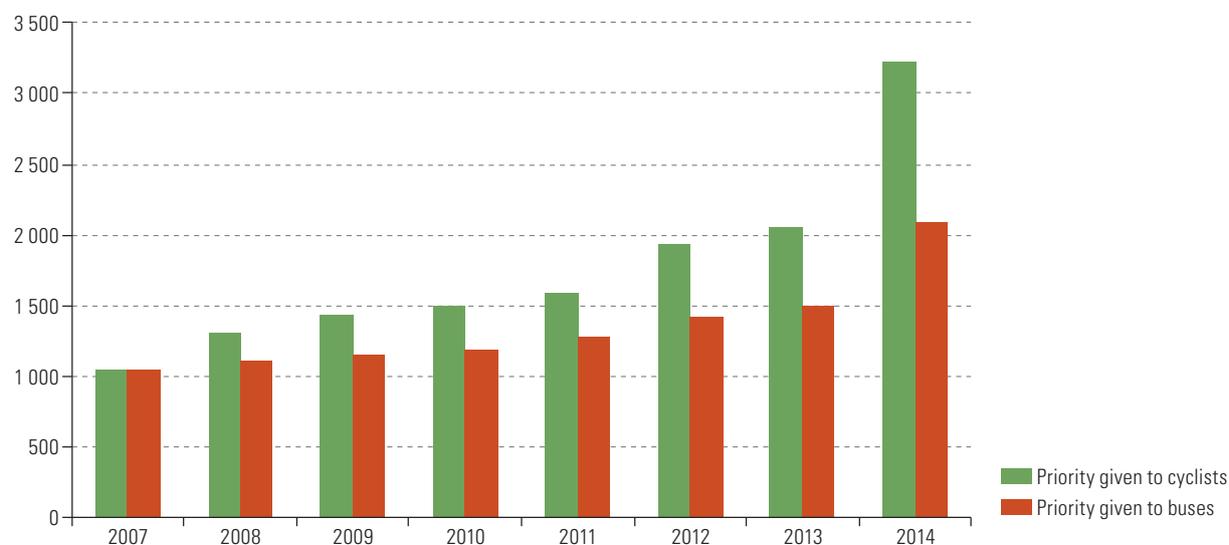


**Source:** National Public Transport Association (ANTP), "Sistema de Informações da Mobilidade Urbana: relatório geral 2014", São Paulo, 2016 [online] [http://files.antp.org.br/2016/9/3/sistemasinformacao-mobilidade--geral\\_2014.pdf](http://files.antp.org.br/2016/9/3/sistemasinformacao-mobilidade--geral_2014.pdf).

**Note:** The pollutants referred to are carbon monoxide, hydrocarbons, nitrogen oxides and particulate matter.

The prioritization of exclusive bus lanes —which are a more efficient means of mass mobility (Vasconcellos, 2014)—, in cities such as Bogotá, Quito, Lima, Santiago, Curitiba, Mexico City and Monterrey, among others, show that it is possible to change the mobility pattern. This decision has led to a significant inflow of investment and innovations that has spilled over into other sectors, such as those required to electrify and make greater use of information technologies that will take mass transit services to a higher level. Priority is also increasingly being given to physically active means of transport, such as bicycle traffic, in Mexico City, Montevideo, Rio de Janeiro and São Paulo, for example, although few bicycle lanes are segregated or linked to intermodal systems comprising automobiles, buses and bicycles (Vasconcellos, 2014). This investment opportunity requires regulatory policies that facilitate the development of the necessary infrastructure (see figure II.18). In the absence of such policies, the bias towards private transport will limit the systems' beneficial effects.

**Figure II.18**  
**Latin America and the Caribbean: giving higher priority to cyclists and buses, 2007-2014**  
*(Km of priority traffic lanes)*



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of E. Vasconcellos, "OMU: Observatorio de Movilidad Urbana de América Latina 2014", Mexico City, Development Bank of Latin America (CAF), 2014 [online] <https://www.itf-oecd.org/sites/default/files/docs/comprehensive-mobility-management-policies.pdf>.

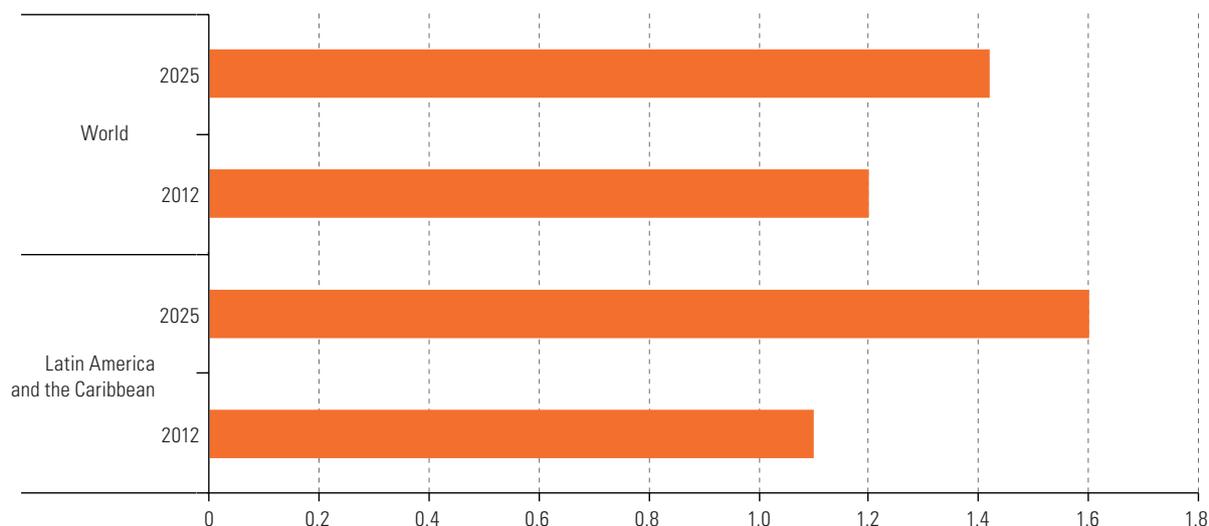
## 4. Waste

Urban waste generation per capita continues to rise in the region and the infrastructure for the management, use and adequate final disposal of waste is failing to keep pace with the consumption pattern. According to the World Bank (Hoorweg and Bhada-Tata, 2012), 1.1 kg of urban solid waste is produced per capita per day in Latin America and the Caribbean, equivalent to some 440,000 tons per day or 12% of the world total. The amount of waste generated per capita per day is slightly lower than the global average, and is projected to increase to 1.6 kg by 2025, which is about 730,000 tons per day. Per capita waste rates increased the most in Latin America and the Caribbean and Asia, above the world average (see figure II.19). The World Bank concludes that the economic cost of waste management will be four times higher in middle-income countries, such as those in Latin America, by 2025.

There is an opportunity to significantly improve urban waste management, as only 54.4% of waste is deposited in landfills. The waste of 18.5% of citizens end up in landfills. Open dumps receive the waste created by 23.3% of the population, resulting in enormous health risks and environmental problems (Espinoza and others, 2010).

Another opportunity for improvement in Latin American and Caribbean is linked to recycling rates for municipal solid waste. On average, a very small percentage of the total urban solid waste produced in the region is recycled, well below the average of the member countries of the Organization for Economic Cooperation and Development (OECD), which was 34% in 2013. For this reason, the adoption of policies to formalize waste pickers, the application of extended producer responsibility criteria and the improvement of collection, treatment and final disposal systems will open up a multitude of economic opportunities with social and environmental co-benefits.

**Figure II.19**  
**Latin America and the Caribbean: urban solid waste production, 2012 and 2025**  
*(Kg/day/capita)*



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of D. Hoornweg and P. Bhada-Tata, "What a waste: a global review of solid waste management", *Urban Development Series Knowledge Papers*, No. 15, Washington, D.C., World Bank, 2012.

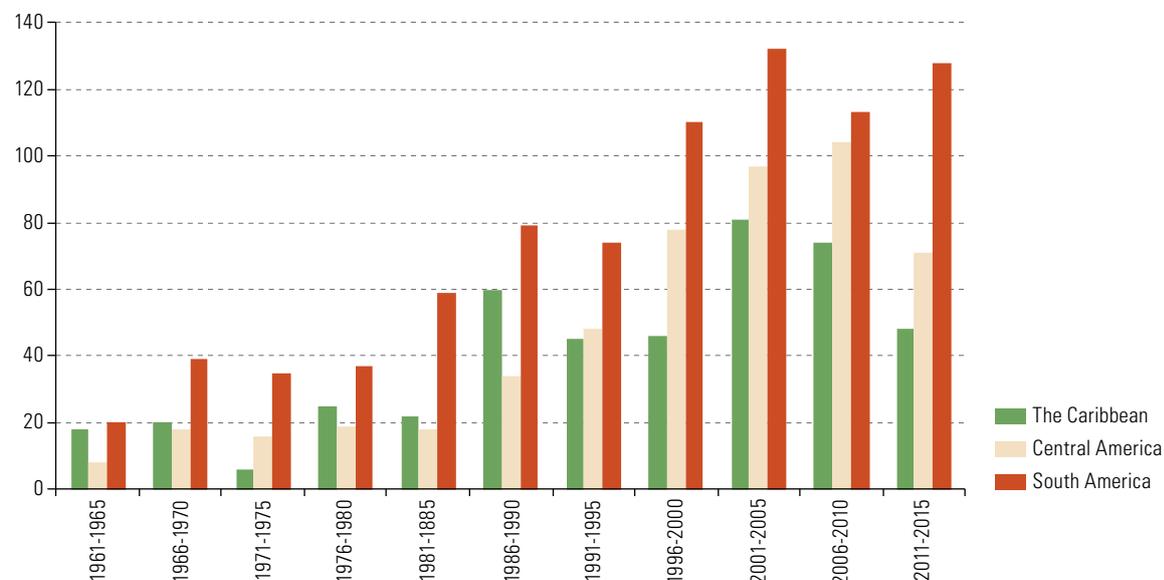
## 5. Vulnerable human settlements and climate-related events

In Latin America and the Caribbean, the number of extreme weather events related to climate change has increased steadily since the mid-twentieth century (CRED, 2016), which requires structured, climate change adaptation policies (see figure II.20). According to UN-Habitat (2012), disasters caused by natural events have affected about 160 million people in Latin America and the Caribbean in the last three decades. Between 1970 and 2009, nearly 130,000 people died as a result of disasters in 12 countries of the region and economic damage was valued at US\$ 356 billion, with 60% associated with extreme climatic events. UNISDR (2015) estimates that, between 1990 and 2013, more than 43,000 people died and 126 million people were affected by disasters of various magnitudes in 16 Latin American and Caribbean countries.

The impact of these events on the population is not homogeneous. For example, it is estimated that economic losses for people living in poverty are two to three times higher than for those who are not poor (Cecchini, Sunkel and Barrantes, 2017). This is due both to the vulnerability of their assets (Hallegatte and others, 2017) and to their limited access to disaster risk management instruments (Vakis, 2006). This points to the need to harmonize the policies of different sectors to ensure a coordinated response to these events, in terms of both prevention and mitigation.

Poorly planned and managed urban growth is an important factor in disaster vulnerability, especially in cities with a high percentage of people living in informal settlements. In Latin America, over 80% of the recorded disaster-related losses were in urban areas and, although there are variations among countries, between 40% and 70% were in cities of less than 100,000 inhabitants (UN-Habitat, 2012). Statistics suggest that risks are higher in fast-growing small and medium-sized urban centres than in larger cities or in rural areas. This may be related to the ability to invest in and manage risk reduction, which is usually weaker in smaller cities.

**Figure II.20**  
**Latin America and the Caribbean: extreme weather events related to climate change, 1961-2015**  
*(Number of events)*



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Centre for Research on the Epidemiology of Disasters (CRED), International Disaster Database (EM-DAT), 2016 [online] <http://www.emdat.be/database>.

**Note:** Includes droughts, extreme temperatures, floods, landslides, storms and forest fires.

## 6. The New Urban Agenda

At the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), held in Quito in 2016, the member countries adopted the New Urban Agenda, which identifies urbanization as one of the twenty-first century's most transformative trends and cities as spaces where the greatest global economic, social, environmental and humanitarian challenges are increasingly concentrated. Thus, according to the New Urban Agenda, sustainable urban and territorial development is an essential strategy for achieving sustainable development and addressing major challenges such as climate change. In this regard, sustainable urban policies, beyond their direct relevance to Goal 11, can help to achieve other Goals in a cross-cutting manner. The New Urban Agenda also puts emphasis on means of implementation, such as urban financing, citizen participation and capacity-building, to generate and collect data at the urban level (United Nations, 2017).

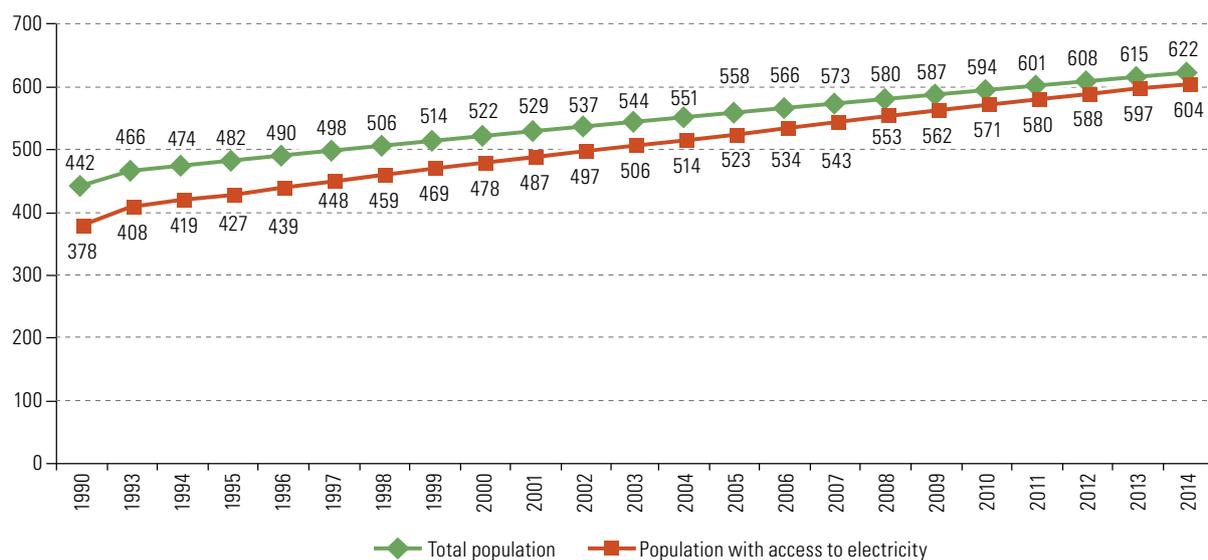
The regional expression of the New Urban Agenda is the Regional Action Plan for the implementation of the New Urban Agenda in Latin America and the Caribbean 2016-2036, which is a road map for Latin American cities to become places of prosperity, well-being and environmental protection. The coordinated adoption of this action plan by regional, national and subnational bodies will determine how quickly the implementation of the Goal 11 targets can move forward. Given the development characteristics of cities, the Regional Action Plan suggests focusing efforts on devising urban strategies and mechanisms that promote national urban policies, legal frameworks, urban and territorial planning and integrated territorial design, as well as on financing urbanization, local means of implementation and monitoring, reporting and review mechanisms (ECLAC/UN-Habitat/MINURVI, 2018).

## C. Energy development, production and consumption

### 1. Access to energy

After Europe, North America and Central Asia, the region that is closest to achieving universal access to electricity is Latin America and the Caribbean. Between 1990 and 2014, the region provided access to electricity to an additional 9.4 million people per year (World Bank/IEA, 2017) (see figure II.21). This was a remarkable achievement, but about 18.5 million people still lacked access to electricity in 2014. With regard to the subregions, the Caribbean's electricity access rates are far lower than the others. Out of a total population of 38 million, around 7 million people still do not have access to electricity.

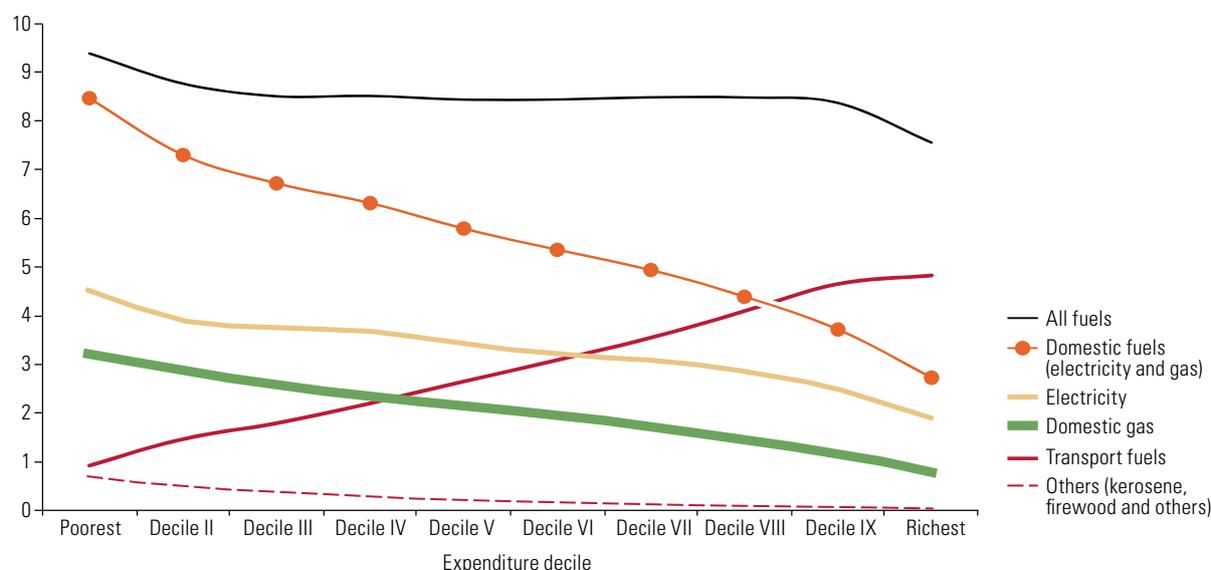
**Figure II.21**  
Latin America and the Caribbean: population with access to electricity and total population, 1990-2014  
(Millions of persons)



Source: International Energy Agency (IEA) and World Bank.

Meanwhile, according to a study by Jiménez and Yépez-García (2017) with household survey inputs from 13 countries of the region (representing more than 70% of the population of Latin America and the Caribbean), energy bills account for a significant proportion of the budget of households in the lowest income percentiles, with most energy spending going on electricity (see figure II.22). Therefore, in addition to providing access to energy, there is the problem of making it affordable for the poorest.

**Figure II.22**  
Latin America and the Caribbean: household energy budget share and composition by expenditure decile  
(Percentages)



**Source:** R. Jiménez and A. Yépez-García, "Understanding the drivers of household energy spending: micro evidence for Latin America", *IDB Working Paper series*, No. 805, Washington, D.C., Inter-American Development Bank (IDB), 2017.

**Note:** Household surveys from 13 countries were used: Brazil, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Peru, Paraguay, Plurinational State of Bolivia and Uruguay. Since household surveys cover different years, all values were extrapolated to 2014.

## 2. Clean and sustainable energy

The energy matrix of Latin America and the Caribbean is relatively dependent on oil, which accounts for 46% of the region's total primary energy matrix, compared to the world average of 31% (IRENA, 2016b). However, oil has been substituted by natural gas, which now makes up 23% of the region's primary energy matrix. According to Balza, Espinasa and Serebrisky (2016), fossil fuels (coal, oil and gas), which accounted for 68.8% of all primary energy demand in Latin America and the Caribbean in 1971, are still the most important primary fuels in the region's energy matrix, and their share had increased to 74.3% in 2013 (see table II.3).

**Table II.3**  
Latin America and the Caribbean: total energy use, 1971-2013

Energy source	1971 (MTOE) <sup>a</sup>	Share of the matrix (percentages)	2013 (MTOE) <sup>a</sup>	Share of the matrix (percentages)	Annual growth (percentages)
<b>Total</b>	<b>248.4</b>	<b>100</b>	<b>848.7</b>	<b>100</b>	<b>3.0</b>
Coal	8.0	3.2	42.8	5	4.1
Oil	135.9	54.7	389.6	45.9	2.5
Gas	27.2	10.9	199.0	23.4	4.9
Nuclear	-	-	8.5	1.0	-
Hydropower	7.6	3.1	62.8	7.4	5.2
Biofuels	69.7	28.1	136.7	16.1	1.6
Solar, wind and geothermal	-	-	8.6	1.0	-

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of L. Balza, R. Espinasa and T. Serebrisky, "Lights on? Energy needs in Latin America and the Caribbean to 2040", *IDB Monograph*, No. 378, Washington, D.C., Inter-American Development Bank (IDB), 2016.

<sup>a</sup> Million tons of oil equivalent.

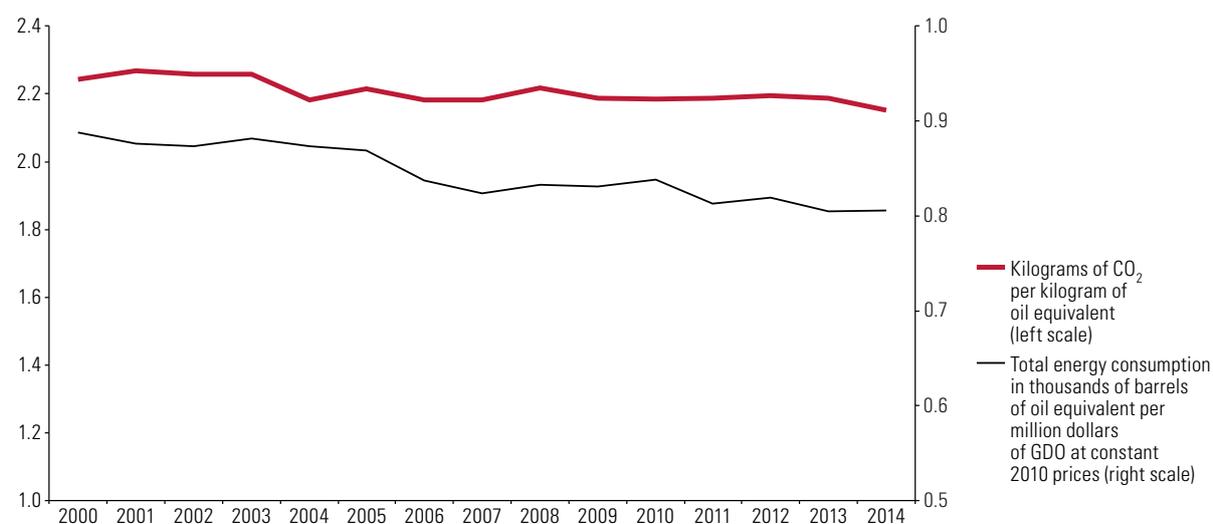
At the same time, the region's electrical matrix has one of the highest utilization rates of renewables, which is the result of its long history of harnessing hydropower and biofuels. The share of renewable energy sources in electricity production in Latin America and the Caribbean is 55%, while the global average is 21%. However, the share of hydropower in the electricity matrix has been affected by the incorporation of natural gas and extreme weather events, particularly droughts (IEA, 2015).

While demand for renewable energy, including hydro, geothermal, wind and solar power, in addition to biofuels and waste, grew from 77 million tons of oil equivalent in 1971 to 208 million tons in 2013, the share of renewable energy in the primary energy matrix declined from 31% to just under 24% over the same period (Balza, Espinasa and Serebrisky, 2016).

To implement the environmental dimension of the 2030 Agenda, energy demand trends must be observed. By 2040, the primary energy demand of the entire region will be at least 80% higher than it is today. With regard to electricity needs, they are expected to increase by more than 91%, unless current trends are reversed (Balza, Espinasa and Serebrisky, 2016). There is therefore a great opportunity to adopt policies and make investments that promote the widespread adoption of renewable energies.

In Latin America and the Caribbean, carbon intensity (emissions per unit of energy) has been falling slowly since 2000, a trend that has occurred in parallel with more stable energy intensity (energy consumed per unit of output). This indicates that, although energy use has not been decoupled from growth, there was greater penetration of cleaner energy (see figure II.23).

**Figure II.23**  
Latin America and the Caribbean: carbon and energy intensity, 2000-2014



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Statistical Yearbook for Latin America and the Caribbean, 2015* (LC/G.2656-P), Santiago, 2015; CEPALSTAT [online database] <http://estadisticas.cepal.org/cepalstat/Portada.html?idioma=english>; World Bank, World Development Indicators, Washington, D.C. [online database] <http://data.worldbank.org/data-catalog/world-development-indicators>.

Exploiting the vast potential of renewable energy in the region offers an opportunity to develop or enhance the quality of sectors and jobs, as emissions are gradually limited by the Paris Agreement. According to IRENA (2016b), doubling the supply of renewables in the energy matrix of Mexico and Brazil by 2030 could lift their GDP by more than 1%. More than 2 million people worked in the renewable energy sector in Latin America and the Caribbean in 2015. The energy matrix could be shifted towards renewable energy, thus creating even more jobs, given that oil accounts for 46% of the region's total primary energy supply, while the world average is 31% (IRENA, 2016b).

### 3. The shift to renewable energies

In the context of the 2030 Agenda for Sustainable Development and the Paris Agreement, and considering that emissions must be reduced and production and consumption patterns changed as a matter of urgency to obtain more sustainable production chains (central concept of Goals 7 and 12), regional and national policies on renewable energy must be adopted in Latin America and the Caribbean that address the aforementioned future demand for energy. Given that there is little space for non-renewable sources in the region's electricity matrix, the necessary investment must go into planning and financing a new, region-wide energy infrastructure, which should take into account the creation of new sources of employment, the demand for training in new skills and qualifications, and the social and productive impact associated with these changes.

More renewable energy tenders were held in Latin America and the Caribbean in 2015 and 2016, resulting in some of the world's lowest bid prices (IRENA, 2017b),<sup>5</sup> sometimes more than 50% lower than historical prices of fossil fuel-based power generation (see figure II.24). In terms of solar and wind energy, the region is one of the markets that grew the most, although this was from a very low base. For example, in 2015, Mexico added 700 MW of wind energy, Uruguay 300 MW and Panama 230 MW. From the point of view of technological feasibility, installation capacity and management of market prices, it seems that obstacles are being overcome, opening up a path for the expansion of renewable energies.

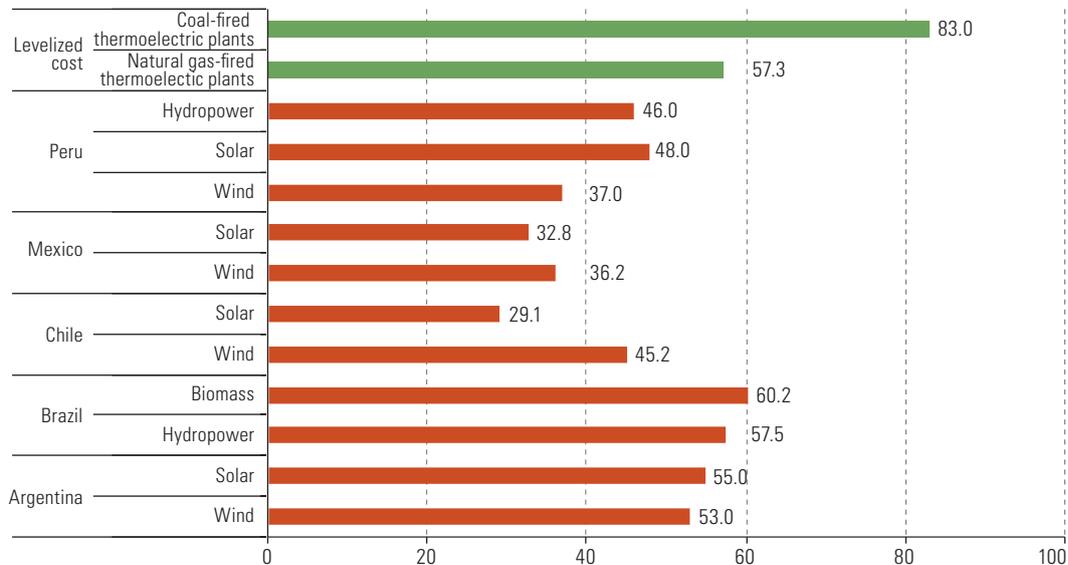
Within the electricity matrix of some Latin American and Caribbean countries, a high percentage of energy is generated from renewable sources. In 2015, Costa Rica generated 99% of its electricity from renewables (75% from hydropower) and Uruguay 92.8%. Brazil saw the second largest increases in the world in hydropower and the fourth in wind energy installed capacity, in addition being the world's second largest producer of bioethanol, producing approximately 9.7 GW of biopower from sugar cane bagasse. Mexico was one of the few countries that added geothermal power capacity in 2015 (REN 21, 2016). Chile has been recognized internationally for its renewable energy growth, particularly wind and photovoltaic solar energy. An important policy of the renewable energy sector in the region, which should be expanded by 2030, is related to the role played by national public financial institutions in promoting investment. In the period 2013-2015, these institutions accounted for more than one third of investments in renewable energies (IRENA, 2016b), particularly in Brazil and Mexico, offering attractive conditions for investment and acting as a catalyst for private financing.

An example of a possible shift, is the financial architecture for wind power adopted by Brazil, called the Alternative Sources of Energy Incentive Programme (PROINFA).<sup>6</sup> As part of that programme, wind energy was expanded dramatically, so that related industries could be installed, new technologies tested and tiered and more attractive energy pricing adopted. In 2011 and 2012, this energy source began to compete with traditional ones (thermal, fossil and water) in new energy auctions, which brought their prices down to the level of the country's most competitive energy source, namely hydropower (BNDES, 2017). As a result, in 2016 (ABEEólica, 2017), Brazilian companies comprised 80% of Brazil's wind energy production chain, reducing imports (see figure II.25) and boosting industry investment to US\$ 5.4 billion.

<sup>5</sup> IRENA (2016a) reports that 41,000 jobs were created in wind energy in Brazil in 2015, which corresponds to 64% of wind energy jobs in Latin America and the Caribbean. More than 30,000 jobs were generated in 2016 alone (ABEEólica, 2017). The projections of NRDC/ACERA (2013) suggest that, in Chile, generating 20% of electricity from renewable sources could lead to a 0.6% increase in GDP and create more than 7,800 jobs. PwC (2015) estimates that the development of 21 GW of renewable energy sources in Mexico by 2029 could have a cumulative effect on GDP, boosting it by US\$ 27 billion, or 2% of GDP in 2013, and creating 134,000 jobs. All renewable energies together could create 182,000 jobs in Mexico by 2029 (PwC, 2015). Approximately 1 million people are already employed in the liquid biofuel (ethanol) industry in Brazil (IRENA, 2016a). Solar photovoltaic energy, for example, creates twice as many jobs as coal or natural gas-powered plants. The most conservative estimate for solar photovoltaic energy is 0.4 jobs per annual GW hour, while the best estimate for fossil fuels is 0.2 jobs per annual GW hour (UKERC, 2014).

<sup>6</sup> Programa de Incentivo às Fontes Alternativas de Energia Elétrica (PROINFA).

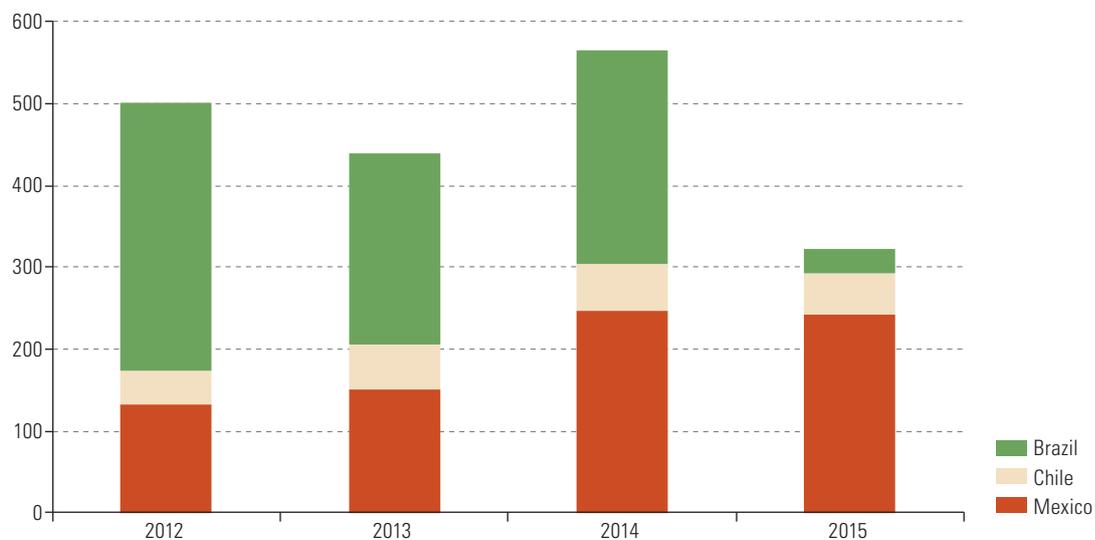
**Figure II.24**  
Latin America and the Caribbean (5 countries): levelized costs of thermoelectric plants with fossil fuels and renewable energy auction prices  
(Dollars per megawatt hour)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Renewable Energy Agency (IRENA), *Renewable Energy Auctions: Analysing 2016*, Abu Dhabi, 2017; Energy Information Administration (EIA), "Levelized cost and levelized avoided cost of new generation resources in the Annual Energy Outlook 2017", Washington, D.C., 2017 [online] [https://www.eia.gov/outlooks/aeo/pdf/electricity\\_generation.pdf](https://www.eia.gov/outlooks/aeo/pdf/electricity_generation.pdf); Energy Research Office (EPE), *Energia termelétrica: gás natural, biomassa, carvão, nuclear*, M. Tolmasquim (coord.), Rio de Janeiro, 2016.

**Note:** Global average in 2017 of levelized costs of thermoelectric plants compared to natural gas-fired plants in conventional combined cycle (EIA, 2017), levelized costs of coal-fired thermoelectric plants in Brazil in 2016 (EPE, 2016) and auction prices in Latin America and the Caribbean in 2016 (IRENA, 2017b).

**Figure II.25**  
Brazil, Mexico and Chile: imports of equipment for wind energy production from China, Germany, Spain and the United States, 2012-2015  
(Millions of dollars)

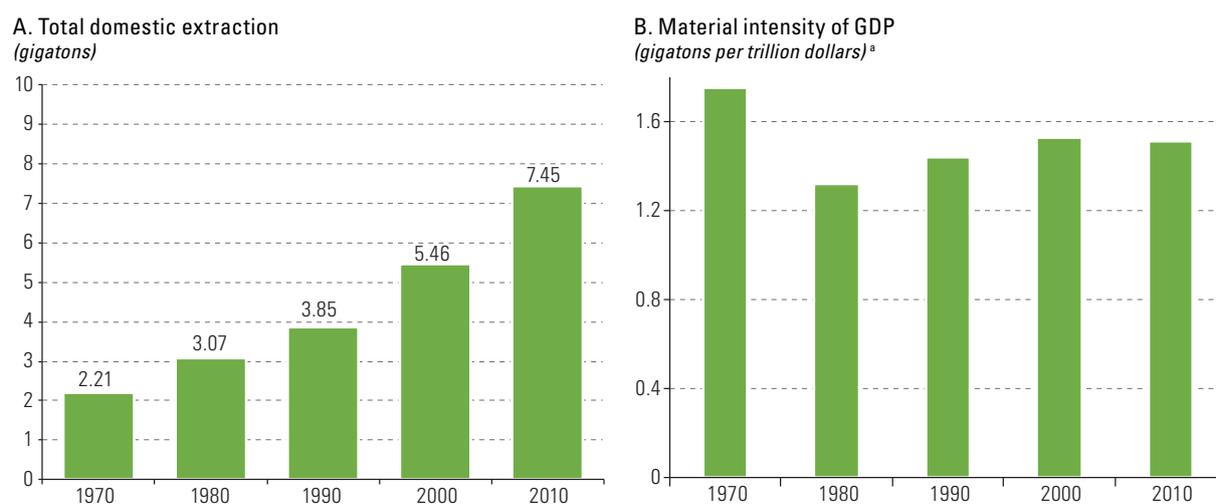


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, United Nations International Trade Statistics Database (COMTRADE) [online] <http://comtrade.un.org/>.

## 4. Opportunity to achieve greater material efficiency

The fact that growth has not decoupled from resource use is also clear from total domestic extraction data, which captures the sum of inputs extracted from the natural environment, except air and water (UNEP, 2016a). The extraction of resources has an impact on the environment and is related to the direct and indirect loss of natural heritage. It leaves a material footprint that, when compared to GDP growth, indicates the intensity of natural resource use. In Latin America and the Caribbean, total domestic extraction (see figure II.26A) and the intensity of natural resource use (see figure II.26B) reflect the aforementioned lack of progress in decoupling. They also have an effect on the social footprint of the region's prevailing development pattern (ECLAC, 2017a) and mean that communities, especially the poorest and most vulnerable, are at greater risk when faced with changes in their living conditions and potential natural disasters.

**Figure II.26**  
Latin America and the Caribbean: total domestic extraction and material intensity of GDP, 1970-2010



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Environment Programme (UNEP), Environment Live Database [online] <http://uneplive.unep.org/>.

<sup>a</sup> Constant 2010 prices.

The region's persistently high material footprint is the result of its dependence on an economic model built on natural-resource-intensive sectors and static comparative advantages. Exports of commodities with very little value added accounted for 83.4% of the total exported from South America in 2014 (total value of exports of goods, f.o.b.) (ECLAC, 2015b). In order to bring about a structural change linked to the environmental big push, the region's production specialization will also have to be defined, in particular its technological intensity.

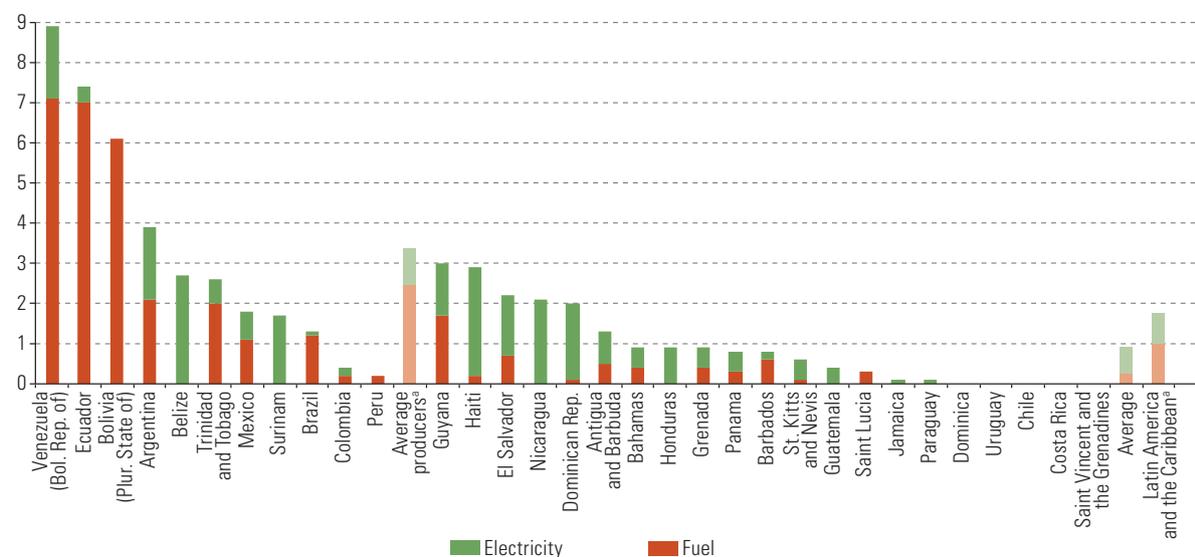
## 5. Changes in production and consumption patterns

As has been stated above, profound changes must be made to the production and consumption patterns to decouple economic growth from natural resource use. The region's growing material intensity and carbon intensity, which increase emissions and waste, is rooted in its very low technological base. Increasing renewable energy supply in the energy matrix proves that positive changes can be made in terms of technological innovation and investment, overcoming the coordination problems that hinder the

absorption of greener technologies with smaller carbon footprints. To this end, incentives, institutional and governance frameworks at the regional and national levels, regulations and standards, and public investment amounts and recipients must all be redefined. Sustainable Development Goals 7 and 12 call for progress to be made in that direction.

Goal 12, as a cross-cutting Goal, calls for incentives to be aligned in order to facilitate these changes. To create the fiscal space for the much-needed social policies, subsidies for fossil fuels and other distortions that encourage the inefficient resource use and prevent the penetration of cleaner technologies and inputs should be eliminated. On average, between 2011 and 2013, fuel subsidies represented 1.0% of regional GDP per year, while electricity subsidies were equivalent to an additional 0.8%, as shown in figure II.27 (Di Bella and others, 2015). In particular, energy subsidies are correlated with institutional quality and the abundance of those resources. Furthermore, environmental taxes are extremely low, which means that there is an opportunity to increase relative prices and thus achieve the environmental big push and use the additional revenue to cover socio-environmental needs. In 2012, revenue from energy and vehicle taxes in Latin America was equivalent to around 1.2% of GDP, while in the European Union it was 2.5% (Sánchez, 2017).

**Figure II.27**  
Latin America and the Caribbean: energy subsidies before tax, 2011-2013  
(Percentages of GDP)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of G. Di Bella and others, "Energy subsidies in Latin America and the Caribbean: Stocktaking and policy challenges", *IMF Working Paper*, No. 15/30, Washington, D.C., International Monetary Fund (IMF), 2015.

<sup>a</sup> Simple average.

Government procurement includes a high number of transactions and accounts for between 10% and 15% of GDP in most countries around the world, according to the World Trade Organization (WTO). Given the economic importance of this activity, sustainable public procurement systems in the region must also be strengthened to help those environmentally sustainable sectors, which will then perform better in the future. The involvement of the private sector—strengthening clean production agreements and public-private partnerships to promote new sectors or corporate social responsibility—also plays a role in achieving the goal of changing production and consumption patterns. Access to information, eco-labelling and environmental education are also drivers of change in these patterns (see box II.1).

**Box II.1****Information, education and participation as drivers of change in production and consumption patterns**

In recent decades, in an effort to move towards sustainable consumption and production patterns, environmental management tools based on access to information and awareness-raising have been added to traditional tools, namely those of command and control, and those of economic incentives based on market prices. One of the advantages of these tools lies in their preventive approach. These tools allow economic agents to make more informed decisions about the environmental consequences of their actions, offer incentives for companies or industries to reduce their environmental impacts, and allow people to be more aware of the environmental consequences of productive activities when choosing products.

In this context, access to environmental information, in addition to being a right in itself, is an essential component of an environmental policy that is capable of changing preferences. The asymmetries in and lack of environmental information are a market failure that can lead to decisions that are economically inefficient, socially inequitable and environmentally harmful. To understand environmental information as a public good, States must play an active role in creating them and facilitating equal access to them for all social actors.

This was recognized by the Latin American and Caribbean countries in the Declaration on the application of Principle 10 of the Rio Declaration on Environment and Development in Latin America and the Caribbean in 2012. It states that the rights of access to information, participation and justice regarding environmental issues are essential for promoting sustainable development, democracy and a healthy environment. These rights provide many benefits, such as helping to make better decisions and implement them more effectively; involving the public in environmental issues; furthering accountability and transparency in governance; and helping to change production and consumption patterns.

Despite the progress made in recent decades in terms of access to environmental information in Latin America and the Caribbean, challenges persist regarding capacities to produce, process and disseminate information on the state of the environment at the national level, to establish pollutant release and transfer registers, to develop ecolabelling schemes, and to create demand for such information to ensure that it is used. Environmental education thus has a vital role to play in developing citizen demand for more and better information and participation.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), "Access to information, participation and justice in environmental matters in Latin America and the Caribbean: Towards achievement of the 2030 Agenda for Sustainable Development" (LC/TS.2017/83), Santiago, 2018; Observatory on Principle 10 in Latin America and the Caribbean [online] <https://observatoriop10.cepal.org/en>.

## **D. Some interrelationships among and opportunities created by Goals 6, 7, 11, 12 and 15**

The Goals and targets of the 2030 Agenda are closely interconnected; achieving a specific target or not will have positive or negative effects on other targets. There are potential synergies that allow progress to be made towards a Goal while reinforcing others, thus maintaining the coherence of the 2030 Agenda. For example, the extended social pillar is used to indicate that the social dimension is reflected not only in the social development themes of the 2030 Agenda, but also in its deep ties with the Agenda's economic and environmental dimensions. Just as "social issues are not played out in the social sphere alone, but also in the economy, politics and the environment" (ECLAC, 2016d), the same applies to the environmental pillar and its close connections with economic and social development. That is why ECLAC has argued that the issue of sustainability must be addressed from the perspective of development problems (ECLAC, 2017a).

However, the decision-making and planning process sometimes lacks sufficient coordination, producing contradictory signals and potential conflicts. While implementing the 2030 Agenda, such situations should be avoided, as stated in target 17.14: "enhance policy coherence for sustainable development". Steps that must be taken include: identifying interrelationships; conducting comprehensive policy analysis; defining institutional mechanisms for monitoring and collecting data; and proposing strategies that take advantage of interrelationships.

The following are examples of some interrelationships among the SDGs, with the focus on a shift towards sustainable and resilient societies. These interrelationships can be deepened at the national level and serve as a road map to identify opportunities for creating synergies offered by the 2030 Agenda.

### **Goal 6: Ensure availability and sustainable management of water and sanitation for all**

- The interrelationship between sustainable water management and ending hunger is strong and clear. The economic future of the countries of the region, as well as their capacity to combat hunger and poverty, largely depends on governments' resources and ability to manage water sustainably. Food security depends on protecting the ecosystem and sustaining the water cycle.
- In the energy matrix of Latin America and the Caribbean, hydropower is the main source of power generation, accounting for about 69% of electricity generated in South America, for example. Climate change has intensified extreme weather events, such as droughts and floods, which have a noticeable impact on the sector's productivity. In addition, steady deforestation, which breaks the humidity circulation patterns of the region and contributes to global warming, threatens water availability and undermines the potential for power generation. In the absence of other renewable energies, the share of fossil fuels in the matrix is expanding, exacerbating the impact on the climate. As a result of these phenomena, between 2011 and 2015, hydroelectric power generation fell by 15% in Brazil, while installed capacity grew by 11%.
- All the targets under this Goal reveal the close interrelationship between the social and environmental dimensions, which is more clearly expressed in targets 6.1, 6.2, 6.3, 6.4 and 6.B. These targets have environmental objectives that have a direct impact on social development and the enjoyment of rights (ECLAC, 2017a). The link can also be made between improving access to drinking water and sanitation services (targets 6.1 and 6.2) and reducing the amount of time that women and girls devote to unpaid domestic work (target 5.4). According to data from time-use surveys, women in rural areas of Ecuador, Guatemala and Peru spend more time collecting water than men (ECLAC, 2017d, p. 196). Therefore, policies to extend drinking water distribution networks and expand sanitation services can have a considerable impact on gender equality and lighten the greater burden of unpaid work borne by women.

### **Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all**

- The widespread adoption of renewable energy has a positive impact on job creation and promotes the environmental big push, insofar as it is one of the entry points for new technologies and innovation, or it allows them to be developed domestically. Solar photovoltaic energy creates twice as many jobs as coal or natural gas-powered plants. The renewable energy sector employed 8.1 million people worldwide in 2015, and an additional 1.3 million work in large hydropower plants. Solar energy remains the largest employer, with 2.8 million jobs, an 11% increase over 2014. Wind power saw a 5% increase over 2014, reaching 1.1 million jobs in 2015. In China, renewable energy employed around 3.5 million in 2015, exceeding the 2.6 million working in the country's oil and gas sector. Doubling the share of renewable energy in the global matrix by 2030 would boost global GDP by 1.1%, equivalent to US\$ 1.3 billion. Thus, renewable energy could create 24.4 million jobs by 2030 worldwide. More than 2 million people worked in the renewable energy sector in Latin America and the Caribbean in 2015. Taking advantage of the opportunity to create decent jobs in this sector will also depend on the capacity to implement education and technical and vocational training policies that will train workers in the new skills and abilities that will be required, which is clear evidence of the link between environmental development and the technological, economic and social spheres.

- The unsustainable pattern of energy emissions contributes to climate change and intensifies extreme weather events that have major economic and social impacts, as well as affecting cities of the region. There was an increase in the frequency of extreme weather events and their costs in Latin America and the Caribbean. In addition to increased exposure to these events, the region's ecosystems, which might be able to mitigate them and facilitate adaptation, are being degraded. This vulnerability is exacerbated by informal patterns of urbanization, which are unequal and segregated. Thus, there is a double inequality in Latin America and the Caribbean: lower-income groups are not the main emitters of greenhouse gases—as people with more resources consume more fossil fuels—, but, at the same time, they are the most vulnerable to the effects of climate change owing to their limited ability to adapt. This is also the case with local emissions of air pollutants and the related health impacts.

### **Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

- Urban investments' bias towards private transport is leading the region down an unsustainable path of development and undermines peoples' quality of life in Latin American and Caribbean cities. Segregation, congestion and travel times affect productivity and exacerbate inequalities. Redefining transport systems in favour of public transport and redirecting investment accordingly will have a positive impact in many areas at the same time.
- Urban emissions affect public health and have economic and social repercussions. At the same time, they are an expression of inequality in the sense that the social sectors that produce the least emissions are those that suffer the most from the consequences. It is estimated that 93,000 people die each year from cardiopulmonary diseases and 13,000 from lung cancer, while 560,000 adult disability-adjusted life years are also lost, all as a result of air pollution. The adverse effects of air pollution affect older persons and children in particular, stunting children's future development.
- Formal waste recycling programmes could be part of an environmental big push in Latin America and the Caribbean. The region's (informal) waste pickers are a group of up to 4 million citizens who make their living by collecting, transporting, separating and selling recyclable materials, such as cardboard, paper, glass, plastic and metal. In addition to belonging to the poorest and most vulnerable sectors of society, they are also producers whose income supports not only their families, but also local communities. They collect approximately 25%-50% of all municipal recycled waste in the region. Their inclusion in formal systems, which must be encouraged, will help to link together social and environmental goals.
- The absence of risk management and climate change adaptation reproduces and reinforces inequality. Unfortunately, society's vulnerabilities are unevenly distributed; the most vulnerable are also those who are less resilient and less able to adapt. If adaptation activities are carried out properly, they can protect livelihoods, production and economic stability, and promote equality.
- Urbanization, characterized by inequality, segregation and a lack of planning, has heightened the vulnerability of the poorest members of society. Participatory territorial and urban policies that incorporate information on the environment, ecosystems and vulnerabilities to extreme weather events, among other issues, will increase the resilience and sustainability of human settlements in an eminently urban region. In addition, target 11.A explicitly calls for support for positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning. Not only can this contribute directly to disaster prevention and resilience-building in different areas, but it can also strengthen synergies between social development, the economy and environmental sustainability.

**Goal 12: Ensure sustainable consumption and production patterns**

- Agricultural and livestock production must not be increased at the expense of forest cover. The loss of forest cover affects the water balance and contributes to climate change and land degradation and desertification. These effects have a significant impact on the capacity to produce food and drinking water, and limit the ability to achieve important Goals such as zero hunger, ensuring water availability or maintaining ecosystems.
- The desertification of agricultural land also erodes the foundations of the economy and social development, by undermining agricultural production and spreading poverty, especially in the most vulnerable sectors.
- The production process in Latin America and the Caribbean has a growing material footprint, owing to the intensive and complete extraction of natural resources. Changing the production structure and patterns of specialization would not only help to reduce the environmental impact, but would also boost formal employment and narrow the gap between the region and those technologically-advanced countries.
- In the long term, there must be a cultural shift among the younger generations to modify consumption patterns and protect ecosystems. This is related, at least in part, to education as a vector for change towards sustainability, another example of how the social dimension links all the SDGs.

**Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**

- The degradation of soils, forests and water is part of a vicious circle that leads to income and job losses and increased poverty, vulnerability to disaster risks and inequality in the medium and long term (although in the short term it may mean higher incomes for some specific social sectors). To compensate for this degradation, farmers use greater quantities of fertilizers per hectare (in an effort to maintain or increase crop productivity) and pesticides, such as fungicides, herbicides and insecticides, which pose a threat to public health, the environment and the services it provides.
- Protected areas, in addition to safeguarding land and biodiversity, can be instruments for economic and social development. In Mexico and Brazil, protected areas with sustainable use of natural resources (where production is allowed) are more effective at preventing deforestation than strict nature reserves, as they allow local people to remain on their lands, strengthen traditional ways of life and promote the emergence of activities linked to bioeconomy. This would indicate that strategies to manage and make sustainable use of natural resources and ecosystem services in the region need to be strengthened. In addition, protected areas maintain water systems and account for 20% of the carbon sequestered by all land ecosystems.
- Target 15.9 calls for the integration of ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts. This can directly help to raise awareness of the contribution that these resources make and the costs associated with their destruction.
- The region's greatest asset is its base of renewable natural resources, which is rich and little explored or valued. The expansion of the bioeconomy in Latin America could be a development alternative, if countries were able to add value to biodiversity. The economic potential of these activities can be seen in the global markets that are growing at annual rates of between 8% and 10%.

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# CHAPTER III

## Means of implementation of the 2030 Agenda for Sustainable Development

Introduction

A. Tax evasion and avoidance, illicit flows and resource mobilization

B. Trade: a regional challenge of the 2030 Agenda for Sustainable Development in Latin America and the Caribbean

C. Technology and innovation

Bibliography



## Introduction

The 2030 Agenda for Sustainable Development, the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, the Sendai Framework for Disaster Risk Reduction 2015-2030 and the Paris Agreement under the United Nations Framework Convention on Climate Change outline a new development agenda, which implies a profound transformation of the sustainable development model and the mobilization of considerable internal and external resources, together with a change in the financing, organization and allocation of resources.

Fiscal space and resource availability remain limited at the national level; accordingly, public finances will need to undergo comprehensive, sustained reform in order to secure the solvency of the public sector, safeguard investment, protect social achievements and broaden tax resources. These measures must be accompanied by increased private investment to complement fiscal efforts and generate high and stable growth rates. In the area of public financing, it is also imperative to improve the region's tax systems, which in most countries are characterized by insufficient revenue generation and rampant evasion of income tax and indirect taxes (estimated by the Economic Commission for Latin America and the Caribbean (ECLAC) at 6.7 percentage points of regional GDP, worth US\$ 340 billion in 2015) and tax bases that have been eroded by the proliferation of tax incentives (ECLAC, 2017a).

With regard to external financing, the past decade has brought changes in the financing for development landscape, with new actors and financing sources gaining importance, including donors which are not members of the Development Assistance Committee (DAC), non-governmental organizations, climate funds, innovative financing mechanisms and South-South cooperation initiatives. Private capital has also become an important source of financing, through a diversified range of instruments including shares, bonds, debt securities, concessional loans and risk hedging instruments (including guarantees), as well as workers' remittances and voluntary private contributions (ECLAC, 2017a).

### A. Tax evasion and avoidance, illicit flows and resource mobilization

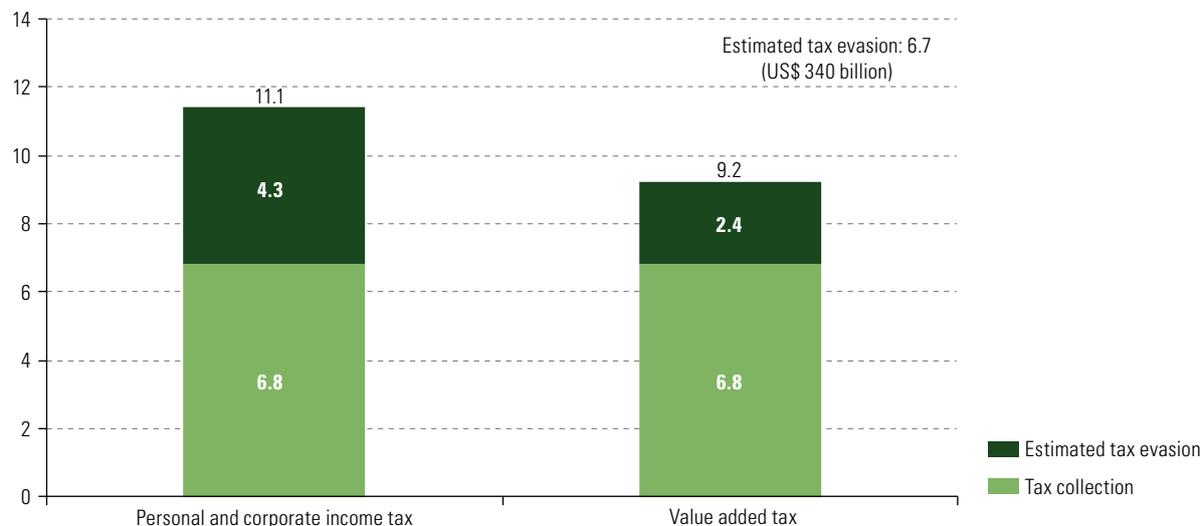
The challenges of the new development agenda must be addressed by moving towards a progressive tax regime and combating tax evasion.

The tax burden of the countries of the region is much lower than that of the countries of the Organization for Economic Cooperation and Development (OECD). Compared with the developed countries, Latin America is still 15 GDP points below their average.

One of the key features of Latin American tax systems is the high share of general indirect taxes on goods and services in the region's total tax revenue. These taxes have a regressive bias, while direct taxes do not generate enough income to have a significant impact in terms of redistribution. Personal income tax is especially weak as a redistributive instrument in Latin America. Despite the efforts of tax administrations, tax evasion remains rampant.

This issue is one of the weakest points of the tax systems in the region. On the basis of the few recent studies available, ECLAC estimates that non-compliance amounts to 2.4% of GDP for value added tax (VAT) and 4.3% of GDP for income tax, representing a total of US\$ 340 billion in 2015 (see figure III.1). These studies reckon that corporate income tax evasion is as high as 70% in some countries. It is, moreover, a very difficult proposition to bring down these figures at a time of economic slowdown. Worse still, the information available is inadequate to even gauge the magnitude of the problem, despite the significant risk of substantial loss of potential tax resources (ECLAC, 2016d).

**Figure III.1**  
**Latin America: tax collection and estimated tax evasion, 2015**  
*(Percentages of GDP)*



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

On average, Latin American countries forgo over 50% of their personal income tax revenues (32.6% in Peru, 36.3% in El Salvador, 38% in Mexico, 46% in Chile, 49.7% in Argentina, 58.1% in Ecuador and 69.9% in Guatemala). The region's endemic tax evasion is not confined to personal income tax. Corporate income tax and VAT also show high evasion rates, although these vary from one country to another. According to estimates, corporate income tax evasion ranges from 26.6% in Brazil to 65% in Costa Rica and Ecuador. What is more, these estimates are based on national accounts data and do not, therefore, distinguish losses arising from aggressive tax planning practices or transfer pricing, which artificially reduce the level of profits registered in the economy.

Evasion of VAT is less marked, but it remains significant with rates ranging from around 20% in Argentina, Chile, Colombia, Ecuador and Mexico to nearly 40% in Guatemala and Nicaragua. Although VAT evasion declined up to 2008, the economic slowdown generated a fresh rise in some countries. In fact, the progress made in reducing VAT evasion in previous years came to a halt with the reversal of the economic cycle.

## 1. Administrative changes and improvements in structural factors

In the light of the foregoing, further progress in combating tax evasion will require administrative changes and improvements in structural factors, given the high levels of informality, poverty and socioeconomic inequality, the poor quality of institutions and scant taxpayer awareness and education.

In response to deepening globalization and moments of economic crisis, fiscal authorities have repeatedly increased tax incentives and exemptions in the (often vain) hope of stabilizing aggregate demand and softening the effects of recessions on employment. Significant changes were made to tax rates: a sharp drop in the mid-1990s, along with a gradual rise in the general VAT rate, while personal and corporate income tax rates halved from their mid-1980s rate of around 50%.

The region's countries typically encounter difficulties in applying a comprehensive personal income tax that covers all a taxpayer's income sources using a progressive structure of marginal rates. Income tax is in fact badly threatened by tax base erosion. Most countries have long lists of exemptions and differential treatments depending on the source of income, which interferes with the horizontal and vertical equity of taxation and limits its potential as an instrument for revenue collection and redistribution.

Recent reforms and the adoption of what are known as “semi-dual systems” in many countries have enshrined this virtual dismemberment of the income tax by limiting taxation on capital income. Generalized capital incentive schemes, with low taxation on profits, dividends and interests—which tend to be justified by the difficulty of capital oversight in open economies and by the need to stimulate private investment—may be the least beneficial and perhaps even the most damaging feature of “harmful tax competition”.

In many of the region's countries, the justification for tax incentives is that they attract foreign direct investment (FDI), which should by nature have significant positive externalities for the recipient economies (such as the take-up of new technologies or increased productivity). The question is establishing the net impact of these special arrangements, which at first glance might be described as merely a transfer of resources from poor (recipient) countries to rich ones.

In terms of mobilizing financial resources for development, it would seem much more efficient to take more steps to reduce tax evasion and avoidance than to subsidize investments that very probably would have materialized anyway, given the region's static and dynamic comparative advantages. As discussed in OECD/ECLAC/CAF (2014), investment decisions are largely determined by the quality of the institutional framework, and firms in fact appear to afford little importance to tax advantages. On this basis, more systemic approaches to investment dynamics could be built. For example, prioritizing public spending on social matters or public safety could boost private capital expenditure more effectively than exemptions or incentives.

A basic principle for investment promotion, then, is the need to limit the proliferation of tax incentives and widespread subsidies. Public and private investment complement each other; one cannot replace the other. Attempting to stimulate private investment by reducing public investment is not a viable path towards development, particularly given that public investment is called upon to play a key role in changing the development pattern.

The question of tax incentives is also being raised in the international discussion on base erosion and profit shifting. One notable project within the United Nations aims to strengthen developing countries' capacity to protect their tax bases by developing methods and practices to deal with tax incentives and the taxation of extractive industries. The countries participating in a number of Latin American and Caribbean forums have requested analytical frameworks and technical assistance to carry out cost-benefit studies and to consider the gradual dismantling of incentive systems. These initiatives show some promise, but their success will depend on the willingness of countries with similar economic activities not to engage in tax competition.

## 2. Avoidance mechanisms

Tax evasion is not just a domestic issue: the more a country is engaged in the world economy, the greater the potential erosion of its tax base.

There are various avoidance mechanisms, making it helpful to differentiate between three sources of erosion: the burgeoning of tax incentives already described; profit shifting and aggressive tax planning; and illicit financial flows arising from international trade and capital movements. Illicit financial flows have taken on greater and greater importance in the international debate on development financing,

within the framework of the 2030 Agenda for Sustainable Development. Accordingly, ECLAC (2017b) has prepared its own estimates which represent the lower bound of foreign-trade-linked illicit financial flows in the region. The abuse of transfer prices in related party transactions —when transactions between related firms, especially within multinationals, are priced differently from similar operations conducted between independent firms under market conditions— is well documented.

Estimated tax losses in the region resulting from trade misinvoicing were approximately US\$ 31 billion or 0.5 of a percentage point of GDP in 2013. This represented between 10% and 15% of the actual corporate income tax take in that year. Potential losses at the country level vary greatly, with illicit outflows estimated to be particularly large in countries such as Costa Rica (mainly involving integrated circuits and electronic microstructures), and Mexico (arising from the country's high level of integration in value chains in different sectors, especially electrical machinery and motor vehicles, in which transactions between related firms are very significant).

A key finding of this analysis is that illicit financial flows have increased sharply in the past decade, with outflows from trade misinvoicing rising by an average of some 7.5% a year in the Latin American and Caribbean region. These flows averaged 1.5% of regional GDP over the 10 years considered, which is equivalent to a cumulative total of US\$ 836 billion between 2006 and 2015 (two thirds owing to overinvoicing of imports and one third to underinvoicing of exports). These illicit outflows climbed to US\$ 92.6 billion in 2015, the latest year with full information available (see figure III.2).

**Figure III.2**  
Latin America and the Caribbean: gross illicit financial outflows owing to trade misinvoicing, 2000-2015  
(Millions of dollars and percentages of GDP)



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

### 3. International cooperation at the global, regional and national levels

Combating tax evasion and avoidance and illicit flows requires better international cooperation at three levels: global, regional and national.

At the global level, this means creating an intergovernmental body within the framework of the United Nations with a mandate for international tax cooperation and promoting the adoption of multilateral

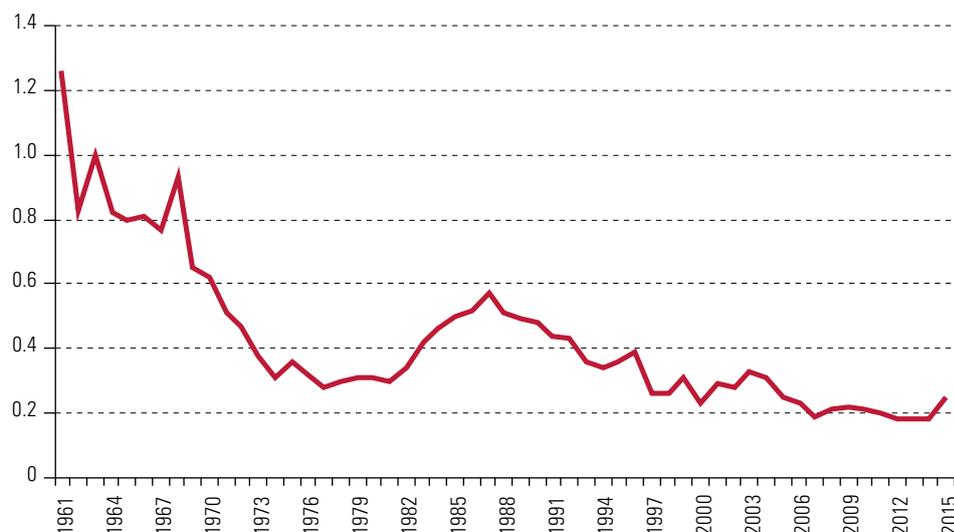
instruments to avoid double taxation and aggressive tax planning in developing countries. At the regional level, the use of tax incentives should be reviewed through agreements to adopt a regional code of conduct and other ways explored of reducing harmful tax competition in the region. At the national level, all economic authorities (ministries of finance and economic affairs, among others) must be made aware of the need for cooperation within and among countries, adapt the tax framework to good international practices; strengthen tax administration (particularly in the area of international taxation) and promote a constant cost-benefit analysis of tax incentives.

## 4. The importance of private flows

In the external sphere, the growing importance of private flows poses the challenge of how to mobilize and channel them towards achieving the goals of the new agenda for financing for development.

The analysis of financial flows towards Latin America and the Caribbean shows that the proportion of official development assistance (ODA) received by the region has declined sharply compared with other developing regions and relative to its average gross national income. ODA flows currently represent 0.17% of regional gross national income (GNI), which is lower than the 0.4% seen in previous decades (see figure III.3) (Cipoletta Tomassian and Matos, 2017).

**Figure III.3**  
Latin America and the Caribbean: official development assistance, 1961-2015  
(Percentages of gross national income)

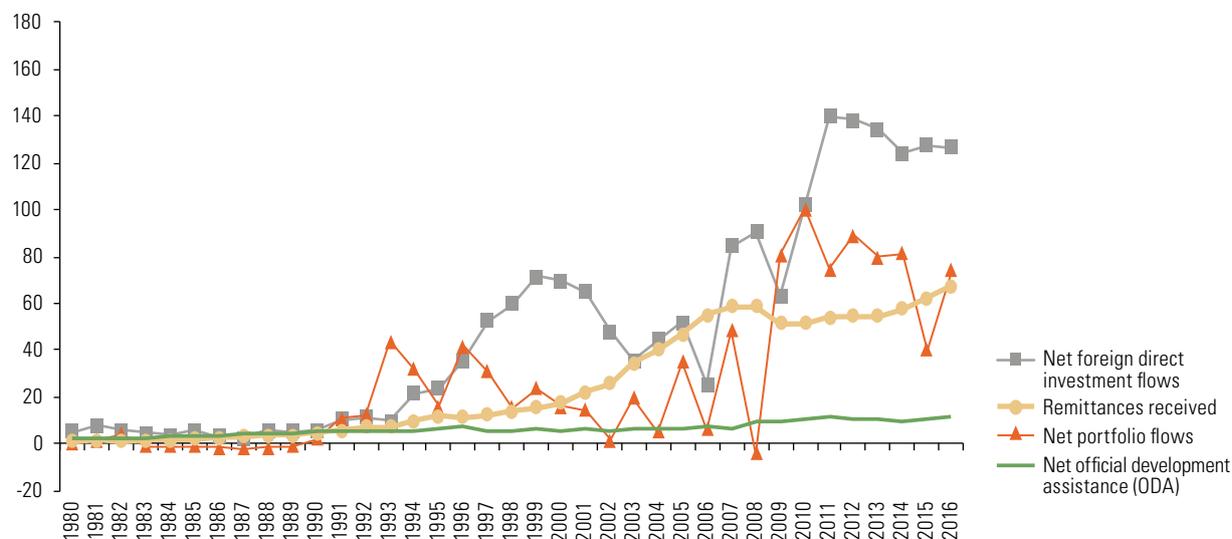


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC).

While ODA is declining, private financing is increasingly important (US\$ 263.4 billion in net terms, or 95% of total financial flows in 2016). The main component is FDI, which represented 2.18% of regional GDP in 2015 and is directly linked to the region's trade specialization patterns and comparative advantages.

A second component of private flows is migrant remittances (US\$ 20 billion and US\$ 60 billion in 2000 and 2015, respectively), which account for roughly 25% of net financial flows. Portfolio flows are the third component of financial flows, although they are not considered a source of financing for development because of their function and volatility (see figure III.4).

**Figure III.4**  
**Latin America and the Caribbean: main external financing flows, 1980-2016**  
*(Billions of dollars)*



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

Private capital is largely driven by profit rather than developmental considerations. This can lead to underinvestment in crucial areas for sustainable development if the expected return underperforms compared to other investment opportunities. The public sector plays an increasingly important role in including social returns in the cost-benefit analysis, providing public financing for sectors that do not attract sufficient private flows and establishing proper incentives for gearing private capital towards development goals (Cipoletta Tomassian and Matos, 2017).

## 5. Mobilization of public and private funds

The challenge of mobilizing an adequate volume of combined public and private funds is made more complex by the significant changes that have taken place in recent decades in the financing for development landscape.

These changes include the emergence of new actors, mechanisms and sources of finance. In this last category are emerging donors that are not Development Assistance Committee member countries, innovative financing mechanisms and climate funds. All these are playing a stronger and more visible role in development finance.

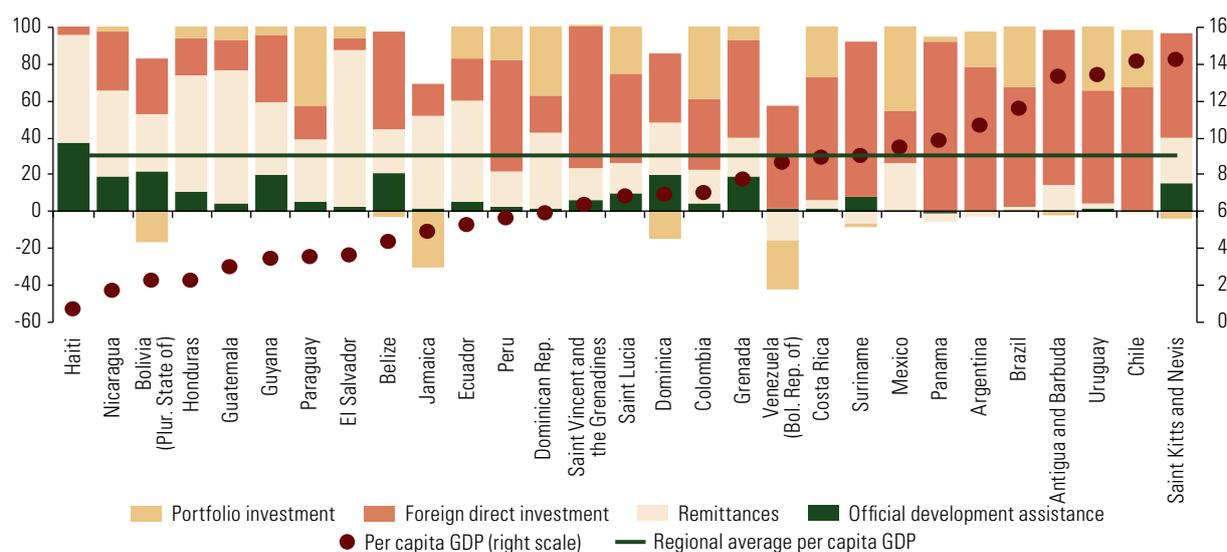
While these changes in the financial landscape increase the options of development funding, they also increase the complexity of coordinating and combining the different actors, funds, mechanisms and instruments under a coherent development financing architecture. This is particularly true in the case of climate funds and innovative financing mechanisms, which need more clarity in terms of development goals, sources of funding and conditions of use and access.

At the same time, the search for efficient and effective funding, which accelerates progress toward sustainable development across all income levels, should not lead to some countries being excluded from ODA on the basis of per capita income criteria.

Mapping out the financing for development architecture is not enough to guarantee that countries adopt a strategic approach to financing for development. The multiplicity of existing financial options does not amount to effective access.

The capacity and capabilities of countries within Latin America and the Caribbean to effectively access private financing varies greatly (see figure III.5). Access to this type of financing is subject to multiple access requirements and conditionalities, which makes it difficult for countries to take a strategic approach to financing their development priorities and to assess the impact and effectiveness of different finance sources. Not all private finance providers impose the same conditions and access and eligibility requirements as public funding sources.

**Figure III.5**  
Latin America and the Caribbean (selected countries): relative importance of selected external financing sources  
(Percentage of all flows analysed, 2013-2015 average, and GDP per capita in thousands of dollars  
at constant 2010 prices, 2011-2015 average)



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

## 6. Greater mobilization of external resources

Greater mobilization of external resources should be accompanied by the promotion of new and innovative instruments and mechanisms for financing social and production development.

The emergence of a range of innovative financial instruments and mechanisms aimed at mobilizing and channelling larger volumes of international finance represents one of the key changes in the landscape of financing for development. Nonetheless, the objectives and sources of finance of the new funds and instruments have yet to be clearly defined.

Innovative financing mechanisms are believed to complement flows of international resources (ODA, FDI and remittances), mobilize additional development resources and address market failures and institutional barriers. They also support collaboration with the private sector. Such financing mechanisms can provide stable and predictable financial flows for developing countries. They can also be double dividend instruments by helping to provide public goods and raising income.

Innovative financing for development encompasses a wide range of mechanisms and instruments, some of which are already being used, while others are still at the planning stage. These fall into four major categories: (i) taxes, dues and other obligatory charges on globalized activities; (ii) voluntary solidarity contributions; (iii) frontloading and debt-based instruments; and (iv) State guarantees, public-private incentives, insurance and other market-based mechanisms.

Countries in the Latin American and Caribbean region have embraced some of the new innovative financing mechanism initiatives, including tax on airline ticket sales, auction (or sale) of emission permits and a sovereign insurance pool known as the Caribbean Catastrophe Risk Insurance Facility.

ECLAC has proposed an innovative debt-swap mechanism, which would allow the Caribbean economies to create a fund to finance climate change adaptation and mitigation, and thus reduce their vulnerability to natural disasters.

Mobilizing external and domestic resources must be a key pillar of the financing architecture for meeting the challenges of the 2030 Agenda for Sustainable Development. However, this does not mean that responsibility for the development process should lie with national policies alone. The principle that applies is rather that of common but differentiated responsibilities: countries must assume greater responsibility for their own development and steer their own development agenda, but the means of implementation also require a propitious external environment to tackle and reduce existing asymmetries.

Domestic resource mobilization strategies in such a structurally diverse region as Latin America and the Caribbean must take its heterogeneity into account. In some of the region's economies, such as small island developing States, small size is a significant constraint for the mobilization of domestic resources.

Adequate levels of domestic resource mobilization are a necessary but not a sufficient condition to render the financing for development architecture effective in responding to countries' development needs. Domestic resource mobilization strategies must be placed within the broader context of an enabling external environment.

This requires a profound change in the means of implementation, including in the financial system, the global trade system and in the conditions for the transfer of knowledge and technology from developed to developing countries.

The financial architecture at the global, regional and national levels must govern the current process of globalization and deal with its three major challenges: achieve a greater degree of financial stability, understood as a global public good; improve the governance structure of multilateral financial institutions, which is asymmetrical in terms of representation and participation of emerging market economies and middle-income countries; and broaden the limited capacity to channel resources to finance inclusive and sustainable development.

This external environment must reflect the importance of developing economies in its global governance structure, avoid discrimination in access to funding, guarantee stability as a global public good, enhance the international trade participation of developing countries—including middle-income countries—and open up opportunities to reap the benefits of technology and knowledge acquisition and transfer.

## **B. Trade: a regional challenge of the 2030 Agenda for Sustainable Development in Latin America and the Caribbean**

Trade has been identified as one of the means of implementation of the Sustainable Development Goals (SDGs). Paragraph 68 of the 2030 Agenda for Sustainable Development states that “international trade is an engine for inclusive economic growth and poverty reduction, and contributes to the promotion of sustainable development” (United Nations, 2015). Both trade and the governance of trade (that is, the set of rules and institutional arrangements that govern it) have multiple, closely interrelated transmission channels with sustainable development. However, analytically speaking, a distinction should be drawn between the links in each case.

Trade can make a cross-cutting contribution to sustainable development. In stylized terms, trade allows countries to achieve gains in efficiency, scale and learning, including access to technologies and knowledge that are not locally available, thus raising productivity levels and, consequently, increasing their potential for economic growth. These gains stem both from the expansion of exports (for example, by building on existing comparative advantages and supplying larger markets) and from liberalizing imports (for example, through companies’, the State’s and households’ access to lower cost, higher quality goods and services). Stronger growth also allows progress to be made in the economic, social and environmental dimensions of development, by generating more and better jobs and increasing tax revenues, which expands the fiscal space available to implement public policies focused on sustainable development.

Trade governance determines the space available to States to implement policies in this area. It is a complex network of systems operating at different levels (multilateral, regional, bilateral and national), which affects each country differently depending on the agreements they have signed. The effects of this set of rules on sustainable development transcend the trade sphere. Since the 1980s, there has been a marked tendency in trade agreements (particularly North-North and North-South ones) to include provisions that limit States’ autonomy in areas beyond trade. This is the case in matters as diverse as public health (for example, through the regulation of pharmaceutical patents and food), environmental protection, labour standards and Internet regulation. Similarly, there is a growing tendency to regulate foreign investment through trade agreements, with a major impact on the regulatory autonomy of the States receiving this type of investment.

In short, the links between trade and sustainable development are very diverse and both quantitative and qualitative. For example, a successful outcome of the World Trade Organization (WTO) negotiations to define new rules that limit fisheries subsidies would help to achieve many of the targets of Sustainable Development Goal 14.<sup>1</sup> The same is true of the plurilateral negotiations —currently suspended— to liberalize trade in environmental goods with respect to Goals 6, 7, 9, 11, 12 and 13, among others. Against this backdrop, the limited scope of the “strictly trade” targets contained in the 2030 Agenda for Sustainable Development, and especially their associated indicators (focused mainly on tariffs), means that the contribution of trade to sustainable development cannot be evaluated comprehensively (see table III.1). In particular, there is no conceptual link between target 17.10, which is highly qualitative, and indicator 17.10.1, which is quantitative.

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<sup>1</sup> “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”.

**Table III.1**

Trade-related targets and indicators under Goal 17 of the 2030 Agenda for Sustainable Development: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Target	Indicator
17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda	17.10.1 Worldwide weighted tariff-average
17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020	17.11.1 Developing countries' and least developed countries' share of global exports
17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access	17.12.1 Average tariffs faced by developing countries, least developed countries and small island developing States

**Source:** United Nations, "Transforming our world: the 2030 Agenda for Sustainable Development" (A/RES/70/1), New York, 2015.

## 1. The situation in Latin America and the Caribbean

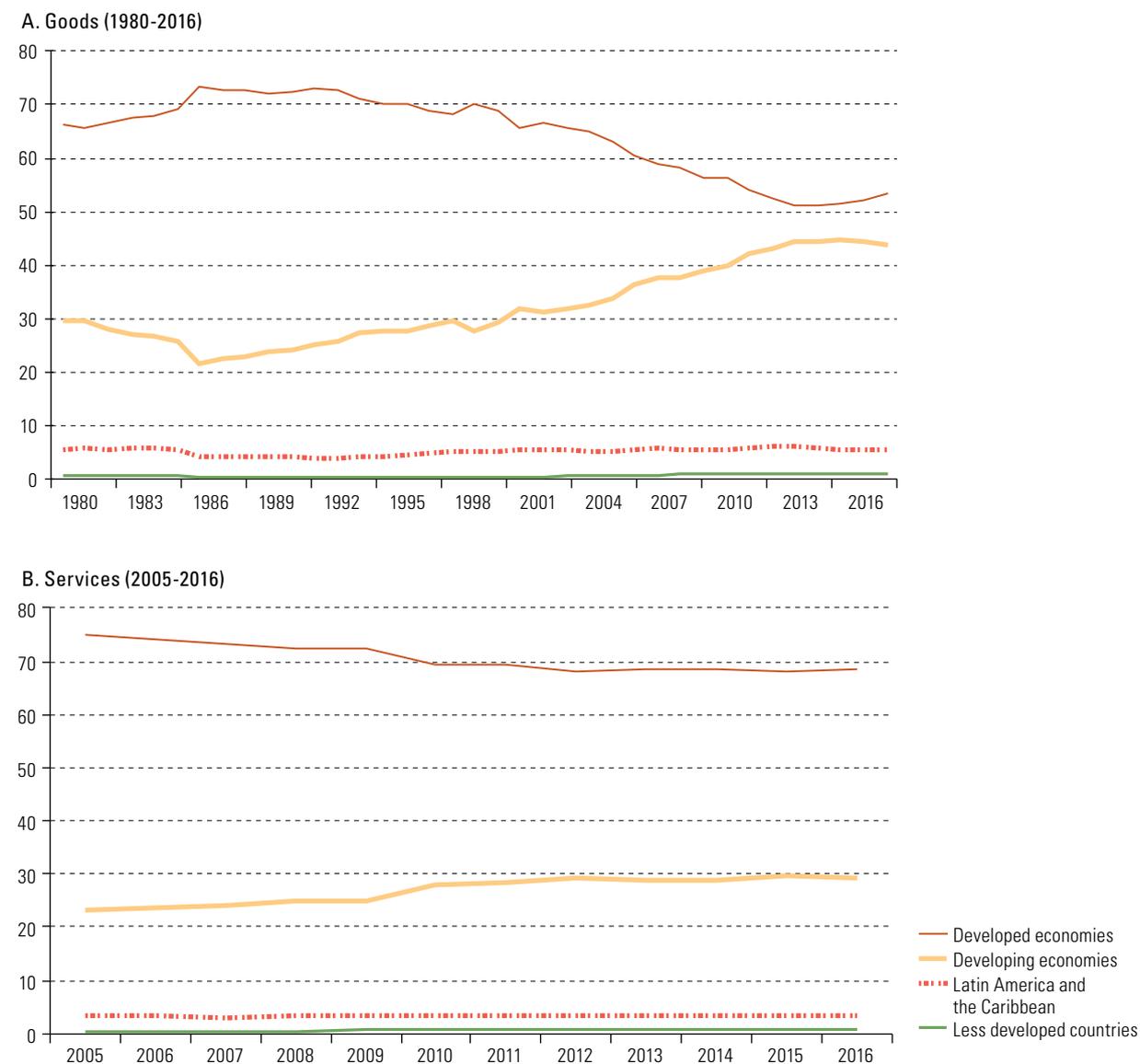
In the case of Latin America and the Caribbean, the two main indicators that stand out from targets 17.10 to 17.12 are the share of global exports and the average tariffs applied to the region's exports to the world. With regard to the first indicator, developing countries' share of total global goods exports doubled in the past three decades, up from 22% in 1986 to 44% in 2016. This process was driven in large part by foreign investment focused on the development of export platforms. The main beneficiaries of this were China and other Asian economies. By contrast, the share of Latin America and the Caribbean in global goods exports has remained stagnant, averaging 5.7% since 2000, with minimal variations (see figure III.6A). This demonstrates the region's inability to overcome its export specialization rooted in raw materials and manufactured products characterized by low labour costs.

Overall, developing countries have also increased their weight in global services exports in the past decade, although little progress has been made towards closing the gap with developed countries in the case of goods exports (see figure III.6B).<sup>2</sup> Developed countries continue to account for almost 70% of the value of global services exports, thanks to strong competitive advantages in intangible activities. For its part, the share of Latin American and Caribbean is barely 3.5% and has remained practically unchanged since 2005. This reflects the serious deficiencies in various determining factors of service export competitiveness, such as the availability of skilled human capital, spending on science, technology and innovation, and the quality of digital infrastructure. The region accounts for an even lower share (1.8%) of global modern services exports, which are those whose international sales are strongly linked to the use of digital platforms (ECLAC, 2017c).

Considering the average most-favoured-nation tariffs applied by countries that account for 90% of the region's total goods exports, the weighted average tariff applied to the region's exports to the world was 5.8% in 2016 (see table III.2) However, the relevance of this figure should be put into perspective, mainly for two reasons. Firstly, tariff barriers faced by the region's exports to the world are, on average, much lower, since several of the region's countries have signed trade agreements with their main partners (including the United States, the European Union, China and other countries within the region), by virtue of which their exports to these markets are free from tariffs.

<sup>2</sup> The global services trade series for 1980-2013 is based on *Balance of Payments and International Investment Position Manual Fifth Edition* of the International Monetary Fund, and is not comparable to the 2005-2016 series, which is based on the sixth edition.

**Figure III.6**  
**Selected groupings and Latin America and the Caribbean: share of global goods and services exports**  
*(Percentages)*



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Conference on Trade and Development (UNCTAD), UNCTADSTAT database [online] <http://unctadstat.unctad.org/EN/>.

**Table III.2**

Latin America and the Caribbean: goods exports to selected markets and average most favoured nation tariff, 2016  
(Millions of dollars and percentages)

Ranking	Country	Amount	Share of exports to the world	Total share of exports to the world	Average most favoured nation tariff
1	United States	382 390	45.7	45.7	3.5
2	China	74 073	8.8	54.5	9.9
3	Brazil	23 119	2.8	57.3	13.5
4	Netherlands	19 560	2.3	59.6	5.2
5	Canada	19 105	2.3	61.9	4.1
6	Argentina	18 177	2.2	64.1	13.7
7	Japan	17 121	2.0	66.1	4.0
8	Germany	13 916	1.7	67.8	5.2
9	Republic of Korea	12 991	1.6	69.3	13.9
10	Spain	12 639	1.5	70.8	5.2
11	Chile	12 044	1.4	72.3	6.0
12	India	11 154	1.3	73.6	13.4
13	Colombia	10 028	1.2	74.8	6.6
14	United Kingdom	9 633	1.2	76.0	5.2
15	Italy	9 112	1.1	77.0	5.2
16	Mexico	8 724	1.0	78.1	7.0
17	Peru	8 634	1.0	79.1	2.4
18	Belgium	8 218	1.0	80.1	5.2
19	Switzerland	7 867	0.9	81.0	6.3
20	Viet Nam	6 653	0.8	81.8	9.6
21	France	6 575	0.8	82.6	5.2
22	Panama	5 649	0.7	83.3	6.8
23	Russian Federation	5 291	0.6	83.9	7.1
24	Uruguay	4 502	0.5	84.5	10.4
25	Guatemala	4 456	0.5	85.0	5.6
26	Venezuela (Bolivarian Republic of)	4 387	0.5	85.5	12.7
27	Bolivia (Plurinational State of)	4 185	0.5	86.0	11.7
28	Ecuador	4 159	0.5	86.5	12.3
29	Paraguay	4 116	0.5	87.0	9.8
30	United Arab Emirates	4 062	0.5	87.5	4.7
31	Singapore	4 053	0.5	88.0	0.0
32	Turkey	3 833	0.5	88.4	10.9
33	Indonesia	3 794	0.5	88.9	7.9
34	Malaysia	3 789	0.5	89.3	5.8
35	Egypt	3 774	0.5	89.8	17.9
36	Hong Kong SAR	3 610	0.4	90.2	0.0
	Subtotal	755 394		90.2	5.8

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Trade Centre/World Trade Organization/United Nations Conference on Trade and Development (ITC/WTO/UNCTAD), *World Tariff Profiles 2017*, Geneva, 2017; United Nations, United Nations International Trade Statistics Database (COMTRADE) [online] <https://comtrade.un.org/>.

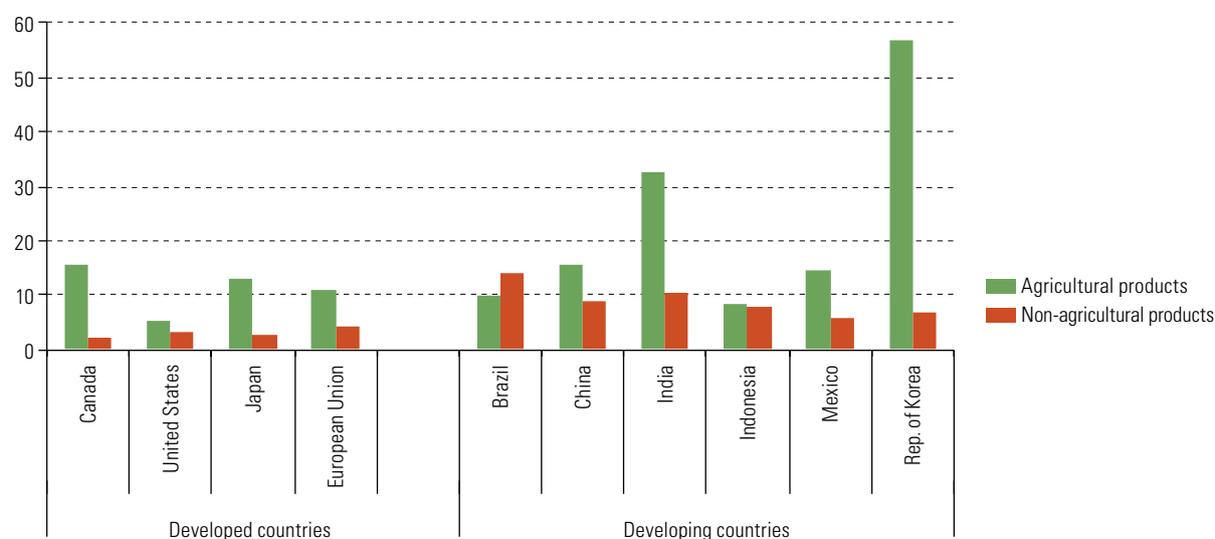
Secondly, the average global tariff is an aggregate figure that masks considerable variations between countries and sectors. A notable example that is of particular relevance to the region is the agricultural sector, as the tariffs applied to agricultural products are on average higher than in other sectors (see figure III.7), and they can reach prohibitive levels, especially in certain developed

countries.<sup>3</sup> Agriculture is in fact subject to protection instruments that are prohibited for other products, including tariff quotas and seasonal tariffs. This is also the case with production and export subsidies, despite some recent progress toward the elimination of the latter. Agricultural trade is also characterized by the extensive use of administrative barriers, such as non-automatic import licenses and cumbersome procedures for obtaining health and phytosanitary permits (ECLAC, 2017c). Lastly, some important agricultural products tend to be excluded from the lower tariffs under the free trade agreements signed by the countries of the region with their main partners.

**Figure III.7**

**Selected countries and groupings: average most-favoured-nation tariffs applied to agricultural and non-agricultural products, 2016**

(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Trade Centre/World Trade Organization/United Nations Conference on Trade and Development (ITC/WTO/UNCTAD), *World Tariff Profiles 2017*, Geneva, 2017.

Target 17.10 of the SDGs refers to the promotion of a universal, rules-based, open, non-discriminatory and equitable multilateral trading system in the framework of WTO. Although this target is extremely important, the period since the adoption of the 2030 Agenda for Sustainable Development has been marked by the increasing fragility of multilateral cooperation in general and of WTO in particular. At its Tenth Ministerial Conference, held in Nairobi in December 2015, WTO recognized that it was impossible to conclude the Doha Development Round of trade negotiations, after 14 years of unsuccessful efforts. Since then, the main success of WTO as a forum for developing new rules for world trade has been the entry into force of the Agreement on Trade Facilitation in February 2017, more than three years after a consensus was reached at its Ninth Ministerial Conference (Bali, December 2013).

The current weakness of WTO is even more worrying given the accelerated technological changes sweeping the globe, which pose unprecedented challenges to trade regulation. In particular, the provisions of agreements (multilateral, regional and bilateral) signed in the 1990s fail to regulate e-commerce flows, which are growing exponentially. In the light of the serious difficulties faced by WTO in addressing this

<sup>3</sup> The maximum duty applied to agricultural products in some of the world's main import markets in 2016 were: Canada, 368%; United States, 350%; India, 150%; Indonesia, 150%; Japan, 613%; Republic of Korea, 887%; European Union, 170% (ITC/WTO/UNCTAD, 2017).

issue, the major global trade actors —mainly the United States, the European Union and China— have resorted to so-called megaregional negotiations (ECLAC, 2016a).

The arrival of a new Administration in the United States in January 2017 considerably altered the ongoing efforts to redefine global trade governance. The new America First trade policy is characterized by overtly protectionist rhetoric, a shift from multilateralism to bilateralism and even unilateralism, a focus on reducing trade deficits above all else and initiatives for the reshoring of industries and jobs. Against this backdrop, the new Administration withdrew the United States from the Trans-Pacific Partnership (TPP),<sup>4</sup> indefinitely suspended negotiations on the Transatlantic Trade and Investment Partnership (TTIP) with the European Union, and forced the start of negotiations to update the North American Free Trade Agreement (NAFTA), with the main objective of reducing trade deficits with Canada and Mexico. It has also been openly critical of WTO, accusing the Organization of treating the United States unfairly in dispute settlement procedures and of failing to ensure that its own rules are respected by countries guilty of unfair competition.

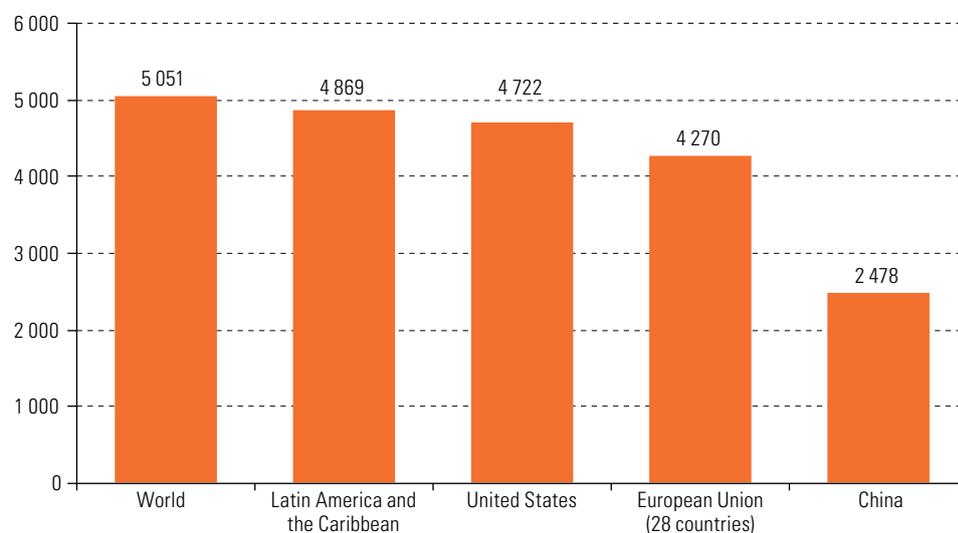
After being the leading advocate of trade liberalization and the multilateral trading system for the first seven decades of the post-war era, the United States has embarked on a radically different direction, with results that are still difficult to predict. To date, this shift does not appear to have marked a turning point in economic globalization; in fact, other key players in the global economy, particularly the European Union, China and Japan, have publicly reiterated their commitment to openness and multilateralism. However, global trade governance is now undeniably fraught with uncertainty, which —if it persists— will make it harder to make progress towards achieving the 2030 Agenda and the SDGs.

## 2. Regional integration

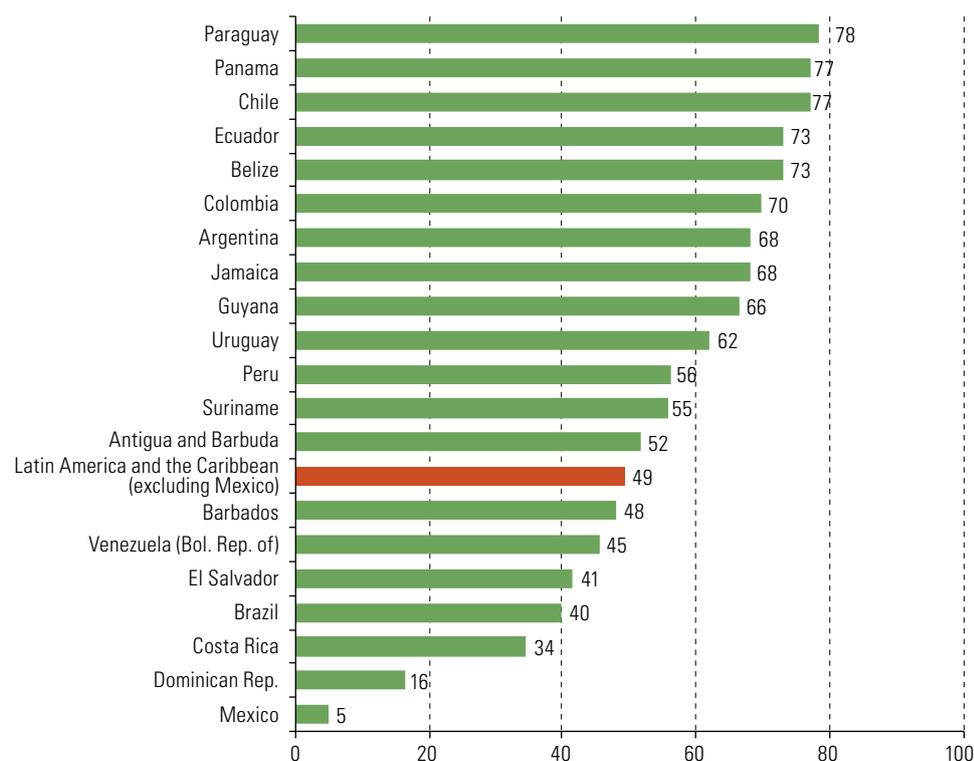
Deeper regional integration is urgently needed. In the current context of considerable uncertainty in global trade governance, efforts to strengthen regional integration are even more pressing. Empirical evidence shows that intraregional trade is characterized by a favourable pattern of production and export diversification, which is one of the major unresolved issues in the region. The regional market is the destination of the largest number of products (see figure III.8). It is also the market that absorbs the largest share of exports of manufactured goods from many countries of the region (see figure III.9). In most cases, the region is also the main market for Latin American and Caribbean small and medium-sized enterprises (SMEs) that export. Nonetheless, the share of intraregional exports in total exports to the world remains at about 17% in Latin America and the Caribbean. This figure is not only much lower than the levels of intraregional trade seen in Europe (62%) and North America and East Asia (both around 50%), but is also 5 percentage points lower than the historical peak of 22% seen in intraregional trade in Latin America and the Caribbean in 1995 (ECLAC, 2017c).

There are many reasons for the low level of intraregional trade, including the region's vast size (more than 20 million square kilometres), its complex geography, its poor transport infrastructure, the marked asymmetries in the size of its economies, the similarities between the commodity export profiles of South American countries and the pull the United States market exerts on trade from Mexico, Central America and the Caribbean. These factors are compounded by the persistence of high tariff and especially non-tariff barriers, which restrict intraregional trade and foreign investment flows, and thus limit the possibilities for greater production integration. These barriers are largely the result of the considerable institutional and regulatory fragmentation that characterizes Latin American and Caribbean integration. In short, the rules applicable to trade and foreign investment are different for each integration mechanism and hinders flows between the member countries of the various mechanisms.

<sup>4</sup> In March 2018, the remaining 11 countries signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which is a slightly modified version of the original agreement.

**Figure III.8****Latin America and the Caribbean: products exported to selected destinations, 2016***(At the six-digit level of the Harmonized Commodity Description and Coding System)*

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, United Nations International Trade Statistics Database (COMTRADE) [online] <https://comtrade.un.org/>.

**Figure III.9****Latin America and the Caribbean (selected countries): share of total manufacture exports to markets within the region, 2016<sup>a</sup>***(Percentages)*

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, United Nations International Trade Statistics Database (COMTRADE) [online] <https://comtrade.un.org/>.

<sup>a</sup> Includes low-, medium- and high-tech manufactures.

The region's countries have made significant progress in eliminating trade tariffs among them, thanks to many bilateral and multilateral agreements. However, there are still important trade relationships between countries and groupings in the region that are not subject to preferential tariffs and, thus, are still mainly subject to most-favoured-nation treatment. This is the case for trade between the region's two largest economies, Brazil and Mexico.<sup>5</sup> Considerable informal barriers to intraregional trade also remain, in violation of the signed integration agreements. Lastly, there are large discrepancies in the different integration mechanisms' treatment of issues that are highly relevant to modern value chains, such as trade in services, FDI, public procurement and technical standards.

The larger percentage of manufactured and processed goods and modern services is what sets intraregional trade apart from interregional trade, which is dominated by commodities (particularly in South America). This specialization poses serious problems from the sustainable development perspective, as the extractive activities linked to commodity exports have a low formal employment intensity and a very high environmental impact, both directly and in terms of energy consumption (ECLAC, 2017b). Meanwhile, the fact that SMEs account for a large share of intraregional trade makes it more socially inclusive than exports to extraregional markets, which are generally dominated by a relatively small number of large companies.

To summarize, given its characteristics, intraregional trade is the most conducive approach to progressive structural change and economically, socially and environmentally sustainable development. Therefore, all the countries of the region should adopt measures to gradually lift the currently low levels of intraregional trade as a matter of priority. This calls for action on multiple fronts, including coordinating initiatives to close the wide regional infrastructure gap and building an integrated regional space with common trade and investment rules. Given the considerable economic and demographic weight of the Pacific Alliance and the Southern Common Market (MERCOSUR), the convergence of these two blocs would be a positive step in that direction. The shift in the trade policy of the United States, the region's main trading partner, is another powerful incentive to adopt this approach.

## C. Technology and innovation

The 2030 Agenda and the SDGs recognize the potential of technology and innovation to accelerate human progress, facilitate access to information and resolve complex problems in areas critical to development, such as productivity, health and education. In particular, information and communications technologies (ICTs) are instruments that can improve the quality of education, promote women's empowerment and encourage inclusive and sustainable industrialization. The new Agenda also calls for commitment to regional and international cooperation in the fields of science, technology, innovation and ICTs, and for the development of environmentally sound technologies.

The successful implementation of the 2030 Agenda and the achievement of the SDGs is also linked to opportunities for promoting more sustainable production models resulting from changes to production processes and the incorporation of green technology into businesses. Within this framework, eco-innovation must be promoted to reduce the environmental impact and create new economic opportunities. In this context, production methods determine possibilities for innovation, improving productivity and competing in international markets.

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<sup>5</sup> This situation will change if the negotiations for of a new comprehensive trade agreement between the two countries, which began in 2015, are concluded successfully.

Some of the main challenges in the areas described above and the potential of technology and innovation to help to achieve the 2030 Agenda are analysed below.<sup>6</sup>

## 1. Digital infrastructure and skills

Latin America and the Caribbean continue to make progress in use of and access to telecommunications services. Taking into account the different means of connection, 56.4% of the region's population were Internet users in 2016. Although this figure is higher than the global average, there is still a clear gap between the region and the OECD countries, the European Union and North America (Canada and the United States) of more than 20 percentage points (see table III.3).

**Table III.3**  
Internet use by region  
(Percentages)

Regions and country groupings	2013	2014	2015	2016
Latin America and the Caribbean	46.2	48.7	54.2	56.4
Organization for Economic Cooperation and Development (OECD)	75.6	77.3	78.8	80.9
Emerging countries	34.1	37.8	41.4	44.6
European Union (27 countries)	75.6	77.2	78.5	80.8
North America	72.8	74.4	75.9	77.5
Asia and the Pacific	30.7	34.6	38.2	41.9
World	37.2	40.5	43.8	47.1

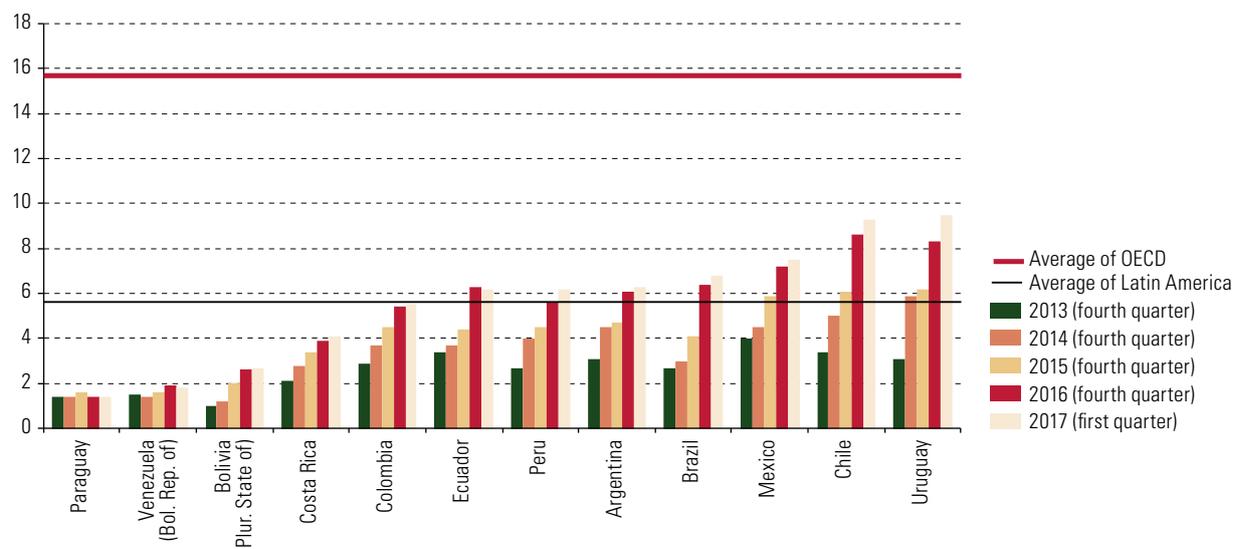
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), Regional Broadband Observatory, on the basis of International Telecommunication Union (ITU).

The countries of the region should continue to promote investment in telecommunications infrastructure to meet the growing demand for digital services. Although the expansion of the Internet in Latin America and the Caribbean has picked up pace in the past five years, both in terms of access and affordability, some problems related to network quality still persist.<sup>7</sup> According to recent data, the average Internet connection speed for the region is close to 5.6 Mbps, while that of OECD countries is close to 15.7 Mbps (see figure III.10), which severely limits potential use of digital technologies in the economic and social spheres. Differences in Internet access also remain between rural and urban areas, and among income distribution quintiles, meaning that the efforts made to date must be stepped up (ECLAC, 2016a).

<sup>6</sup> Several of these aspects have been discussed in different forums organized by ECLAC, in particular the preparatory meeting for the sixth Ministerial Conference on the Information Society in Latin America and the Caribbean, which was held in Santiago in August 2017; the training workshops on data innovation in Latin America and the Caribbean held in Santiago in March 2017, in São Paulo in September 2017 and in Mexico City in October 2017; and the seminar on sustainable production and eco-innovation held in Bogotá in February 2017. This document contains a set of challenges and means of implementation identified to maximize the benefits of the digital revolution and technology as an instrument for achieving the SDGs.

<sup>7</sup> Roughly 55% of the region's inhabitants used the Internet in 2015, 20 percentage points more than in 2010. Broadband penetration also increased sharply, particularly mobile connections, which surged from 7% to 58% of the population.

**Figure III.10**  
**Latin America (selected countries) and the Organization for Economic Cooperation and Development (OECD):**  
**broadband connection speeds**  
*(Mbps)*



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), Regional Broadband Observatory, on the basis of Akamai, *Akamai's State of the Internet Q1 2017 Report*, vol. 10, No. 1, Cambridge, 2017.

In the coming years, mobile telephony will continue to be an important driver of connectivity in the region. At present, penetration rates (measured in unique mobile subscribers) in Latin America and the Caribbean (65%) are slightly ahead of the global average (62%) and behind those seen in more developed regions. An additional 100 million unique mobile Internet subscribers are expected in the region by 2020, which is almost 50% more than in 2015, increasing the regional penetration rate by more than 12 percentage points. Annual unique subscriber growth between 2015 and 2020 is forecast to be 4.8%, ahead of the 4% global average. Similarly, smartphone and 4G adoption is expected to continue apace. By the end of the current decade, the region is expected to add around 260 million new smartphone connections than at the end of 2015, with smartphones accounting for some 70% of total connections (GSMA, 2016).

Several factors are now putting pressure on demand for broadband, including mobility, the falling cost of devices and the technological convergence giving rise to the Internet of Things. Although the Internet of Things is still in the development phase, its importance is evident, especially in the shift to a more sophisticated production economy, based on smart systems and the interaction of multiple devices and applications. However, there are obstacles to the roll-out of high-speed networks and connectivity services. Some of these obstacles are related to the technology itself, such as the importance of promoting Internet exchange points (IXP), spectrum management and the adoption of Internet Protocol version 6 (IPv6). Other challenges are linked to the regulatory environment, which should not only promote competition, but also innovation and investment. Financing is another challenge as, in many cases, private sector resources must be complemented with funds from the public sector.

Good-quality Internet access is fundamental to the implementation of the 2030 Agenda. There is a need for greater synergy between the promotion of competition, investment and innovation. Likewise, regulations must be flexible, but at the same time rigorous when evaluating the levels of saturation that could threaten competition. Some guidelines that regulators may follow include identifying and eliminating

barriers to entry to certain markets, assessing alignment with the public interest and continuously evaluating regulatory instruments.

Digital know-how and advanced professional skills in new Internet-based technologies must be improved.

Promoting full employment and decent work for all is one of the Goals of the 2030 Agenda. However, the slowdown in sustained growth in Latin America and the Caribbean in recent years has had negative effects on job creation and quality. The urban unemployment rate in the region is growing steadily, up from 6% in 2014 to 8.9% in 2016, and was expected to reach 9.4% in 2017. Not only are too few jobs being created to absorb the expansion of the labour supply, but their quality has deteriorated, something that is reflected in the stronger growth of own-account work than of wage employment. Considering that own-account work is largely an indicator of a lack of opportunities in the labour market and it translates into lower incomes and poorer social protection for workers (ECLAC, 2016a).

Digitization and automation are revolutionizing production activities, with marked effects on industrial processes, business management, supply chains and sales and distribution channels. This trend points to an increase in smart, connected devices, which are integrated into complex systems and combine different technologies, such as sensors, microprocessors, and new user interfaces and connectivity. These changes are transforming competition between companies by disrupting value chains and redefining industry limits (Porter and Heppelmann, 2014).

Today robots and computers can carry out a series of physical and cognitive activities. In addition to reducing costs, these technologies improve companies' performance, product quality and problem-solving. Automation is thus helping to boost economic growth and productivity, with the possibility of creating new jobs and offsetting the negative impact of demographic trends. It is estimated that, between 1995 and 2005, information technologies increased productivity by 0.6% worldwide, but automation is expected to raise productivity growth by between 0.8% and 1.4% annually (Manyika and others, 2017).

Meanwhile, predictions of the impact of technology on the labour market vary widely depending on the author and the approach or methodology used (number of vulnerable tasks or occupations). For example, according to Frey and Osbourne (2013), nearly 50% of jobs in the United States are at risk of being automated in the near future. Arntz, Gregory and Zierahn (2016), in their study of 21 OECD countries, found that, on average, 9% of jobs could be automated, but with significant differences between countries, for example, it is 6% in the Republic of Korea and 12% in Austria. According to Manyika and others (2017), less than 5% of all occupations can be automated entirely, but 60% of all occupations have at least one third of constituent activities that could be automated. In Latin America, automation potential is estimated to be near 50%, which means that half of total full-time-equivalent time spent at work may be automated. The most vulnerable activities are manufacturing, tourism, agriculture and mining (Cadena and others, 2017).

Although automation is expected to have a negative impact on employment in the region—it is predicted that around 3.4 million jobs (between 1% and 2% of the total) could be lost by 2030—technology can also create many new jobs. Higher productivity and a lighter workload could free up time and resources for other activities that could in turn boost growth. One trend that could be accentuated is the decline in the relative importance of routine and non-routine manual tasks and routine cognitive tasks, and the increasing significance of skills to work on new tasks and solve complex problems. Ultimately, the impact of technology will depend on the specific characteristics of the countries, including their production structure and their ability to adapt their education and skills policies (OECD/ECLAC/CAF, 2016).

The failure to participate fully in technological change could be detrimental to the region, as it could make the region even less competitive and further exacerbate structural problems. A fundamental cause of the middle-income trap is undoubtedly the inability to move towards a more knowledge- and technology-intensive economy, with production sectors that generate higher value added. Latin America and the Caribbean need better skills to take advantage of the opportunities that this type of technology opens up. The quality and complexity of individual skills are closely connected to knowledge- and innovation-intensive activities (OECD/ECLAC/CAF, 2014). Latin America appears to be the region with the widest gap between training that the education system provides and the skills that the production sector demands (World Bank, 2012).

To take advantage of the opportunities created by digitization in the framework of the 2030 Agenda, the education system must develop basic ICT skills, in addition to providing a solid foundation in reading, mathematics and science. Technical and professional ICT skills should also be strengthened, promoting ongoing training in the business sector. Although a large number of workers have access to ICTs, they do not use them extensively to solve problems. Automation will require workers to carry out less routine tasks and be able to interact with technology. While there is no one-size-fits-all approach to promote the updating and development of digital skills, system-wide action throughout the educational cycle and ongoing cooperation with the private sector could facilitate efforts to strengthen these skills.

## 2. Innovation

Data-based innovation must be promoted to facilitate the implementation and follow-up of the 2030 Agenda.

The new development agenda and the SDGs call for transformative action to be taken to address the planet's economic, social and environmental problems. It is important to mobilize and accelerate the innovative use of data in order to monitor the progress towards the SDGs, improve government accountability and promote sustainable development in critical areas such as health, education and the environment. Access to more diverse, integrated, reliable and timely information can improve decision-making and policy design. To mobilize the data revolution for sustainable development, a comprehensive review must be undertaken of a set of principles and standards, and concrete steps taken to invest in technology, promote innovation and develop data analysis capacities and resources (IEAG, 2014).

The exponential progress made in generating, collecting, analysing and visualizing data is transforming value creation worldwide, with major consequences for economic and social activities. Data flows are growing rapidly; for example, Internet traffic in Latin America is expected to more than double between 2015 and 2020, with a compound annual growth rate of 21%, up from 4.5 exabytes per month in 2015 to 11.6 exabytes per month in 2020. The average fixed broadband speed is also projected to grow 2.3-fold between 2015 and 2020, from an average of 7.6 Mbps to 17.8 Mbps. It is expected that by 2020 there will be 2 billion Internet-connected devices (Cisco Systems, 2016).

Data are an increasingly important resource for promoting new industries, processes and products. The economies that are best positioned to take advantage of these conditions will be able to boost their productivity, growth and employment. At present, the high-income countries at the heart of technological developments are the ones that are exploiting digitization. However, these technologies are also generating transformation processes and rapid technological improvement in less developed economies. In order to bring about these changes, the authorities must guarantee not only the necessary resources in terms of infrastructure and skill development, but also a governance structure that improves data access and use. Some of these elements are linked to the identification of mechanisms to foster portability and interoperability, improve data quality and safeguard the rights of individuals to increase trust in digital media.

The value that can be generated from the use and exploitation of public information and government data is another crucial element. There are important links between the publication and reuse of public sector information and new product development, cost cutting, efficiency, the provision of new services and promotion of co-creation processes, as well as the positive effects in terms of transparency and accountability (European Commission, 2011). Innovation based on public data can also have a positive impact in areas critical to well-being and development, such as transport, health and education. In these cases, legal frameworks must be adapted to encourage access to and reuse of government data and mobilize the necessary resources to create an environment of exchange and collaboration between public sector agencies, users and companies (Patiño, 2014).

While data-based innovation provides significant benefits, it also poses challenges, some of which are the result of tensions between collective and private interests. Greater analytical capacity can alter the relationships among individuals and organizations, governments and businesses. Maximizing the innovative potential of data requires more openness, but also greater awareness of the importance of protecting privacy, personal data and intellectual property. Resolving these issues is a complex task and calls for close cooperation among governments, individuals and businesses.

The countries of the region must promote legal frameworks that facilitate the publication of government data and legal provisions, geospatial techniques and statistics to encourage innovative uses of public data. Steps should also be taken to strengthen innovation networks that use data to build knowledge and solve common problems, as well as financing mechanisms to support entrepreneurship and build technological and analytical capacity. The importance of establishing common guidelines to facilitate the cross-border exchange of personal data and the value of an interoperable global framework for privacy must also be recognized.

The opportunities offered by advanced manufacturing and production digitization should be seized in order to promote production diversification.

Some of the Goals of the 2030 Agenda call for research and innovation to promote industrial diversification and to add value to commodities. New manufacturing trends combine innovative technologies: advanced software, augmented reality, sensors, big data analysis, robotization and additive manufacturing, which give rise to new processes, production systems and smart products. These technologies introduce greater flexibility into industrial processes and encourage decentralized and even autonomous decision-making, the manufacture of customized products and the scaling-up of production processes. Several of these developments are already evident in different areas of the manufacturing industry (such as advanced robotization and new technologies for industrial platforms), and in sectors such as health (such as emotional technology, care technology, monitoring applications and telemedicine) and energy (for example, to optimize the buying and selling of power) (ECLAC, 2016a).

Investment in innovation and development is essential to the development of industrial technology. Therefore, investment in these activities attracts considerable resources and affects the competitiveness of many industries. Globally, six sectors account for over 50% of the total amount invested in research and development (R&D): digital technologies, life sciences (which include pharmaceuticals, biotechnology and medical instruments), chemicals and new materials, aerospace and defence technology, automobiles and the transport system, and the energy system (ECLAC, 2016a). Globally, software and technologies associated with the Internet had the highest year-on-year growth in R&D spending (27%) across all industries. This sector is the fourth largest in terms of R&D spending, and companies such as Apple and Google are among the most innovative in the world, demonstrating the disruptive potential of this industry (Jaruzelski, Schwartz and Staack, 2015).

The country with the highest R&D spending in the world is still the United States, while Japan, Germany and the Republic of Korea have been overtaken by China, whose share grew from 1.6% in 2000 to

more than 18% in 2015. Meanwhile, analysis of R&D investment trends among Latin American countries between 2000 and 2015 shows that spending in the region stalled compared to other emerging countries, which are expanding their technological frontiers, even with respect to more technologically mature and advanced countries. It would appear that the commodity price boom in the region did not lead to the development of a strategic vision that focused on science, technology and innovation as key drivers of development (ECLAC, 2016a).

Innovation and the digitization of production processes generate a large number of positive externalities for businesses, some of which stem from the fact that innovation boosts productivity and contributes to the efficiency of business operations, the design of new products and market openness. These technologies also help to position the brand and establish channels of communication with clients, providing valuable feedback to improve and adapt services and products. Another positive effect is the flexibility to acquire inputs and support services efficiently and at a low cost. These effects encourage innovation of the production matrix and allow traditional value chains to be modified.

The region currently lags behind higher-income countries in the digitization of its production processes. In terms of the production chain, the widest gaps are in the processing of information for business-related activities (for example, the use of economic recovery programmes) and the use of digital technologies to distribute and market products and services (including after-sales service and e-commerce channels). The greatest advances have been made in infrastructure and the provision of inputs. With regard to the digitization rates by economic activity, the communications sector is the most advanced, followed by the real estate, financial intermediation and hospitality sectors. Manufacturing lags the furthest behind and no data are available for activities such as mining or agriculture (Katz, 2016).<sup>8</sup>

Empirically evidence reveals that many SMEs in the region, including in the informal sector, use digital technology differently compared with larger companies. Most SMEs appear to make basic use of ICTs (computers and the Internet), but find it difficult to make more sophisticated use of these technologies (for example, to interact with banks and the government) (Rovira and Stumpo, 2013). Hence, the use of more sophisticated digital technologies must be encouraged among SMEs (such as cloud computing), since many of these technologies can help to overcome barriers associated with the costs of ICT services and allow technological leaps to be made. In the particular case of e-commerce (online purchases and sales), there is no significant gap between companies of different sizes, but there is evidence that use of this technology remains very limited in the region's countries.

The extent to which digital technologies are incorporated into and dissemination across the business fabric depends on a number of different factors. These may be linked to company-specific elements, such as their size, sector, organizational structure, human and financial resources, relationship with clients and competitive pressure, or to technological factors (including costs, availability of solutions and standards). An enabling environment is also crucial for expanding the digital economy. The availability of skilled labour, incentives for R&D investment and the level of development of the ICT industry significantly affect the dissemination and adoption of ICT by companies (Rovira and Stumpo, 2013).

Incentives for technological entrepreneurship and the development of new business models stimulate the digital ecosystem. The Internet lowers barriers to innovation and facilitates many aspects of business management. It is now easier to communicate with suppliers, clients and employees, and to access new markets. Technology-based initiatives and businesses can foster structural change and knowledge-intensive activities in the region. However, there are still barriers to greater innovative capacity in the region, related to the creation of systemic conditions (legislative and institutional changes) that promote entrepreneurship, the formulation of policies that encourage access to production factors

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<sup>8</sup> The analysis covers Argentina, Chile, Colombia, Ecuador and Mexico.

(such as human resources and seed capital), the creation of collaborative environments and the active involvement of companies, universities and the public sector (Katz, 2016).

In this context, the countries of the region should offer incentives, technical assistance and resources to encourage companies, especially SMEs, to use more sophisticated digital technologies. It is also important to promote strategic alliances among the public sector, academia and the private sector to encourage innovation and technological development. The promotion of regional entrepreneurship ecosystems to foster data-based innovation and accelerate technology-based ventures (start-ups) is another aspect to consider. Access to financing and the promotion of regional capital funds, with the support of financial institutions, are also crucial to providing resources for technological initiatives through accelerators and incubators.

Instruments to measure sustainable production and encourage eco-innovation policies and the adoption of green technologies in businesses must be promoted.

According to the 2030 Agenda, one of the most complex challenges that the world currently faces is the urgently needed harmonization of economic growth, social inclusion and environmental sustainability. Drastic climate change and the negative environmental effects of industrial activities are underscoring the importance of green growth and sustainable development in the political agenda, with an emphasis on the need to replace the current consumption and production patterns with more sustainable industrial practices, which in turn foster innovation and the ability to compete in new markets.

Latin American and Caribbean businesses face major challenges in terms of increasing their low levels of productivity, improving salaries, integrating into global value chains and renewing their human resource capacities. In addition, the region's production structure is heterogeneous and not highly diversified, with a large share of SMEs that have very low-productivity and are poorly linked to other businesses in the production system, making it even more difficult for them to access technology and develop their own innovations. Although it may be difficult to link these challenges with the environmental agenda, this could be an opportunity to promote new business models, increase innovation and overcome the challenges of structural change. In this way, eco-innovation, understood as the use of new technologies and production processes and practices to reduce environmental impact, could be a solution to the challenges posed by sustainable development for businesses (OECD/ECLAC/CAF, 2014).

To make progress in this direction, the technological development strategy must focus on SMEs. This change of approach involves unwavering and much more coordinated support in various production areas and greater interaction among public institutions. Strategies, agendas and activities must also be developed that set specific goals and targets for the short, medium and long term with respect to sustainable innovation. The different dimensions of sustainability (economic, social and environmental) require countries to foster greater coordination among production system actors and innovation.

ECLAC, in a coordinated effort with other institutions working on this subject in the region, has helped to develop a set of methodological tools to promote the compilation of indicators of green production in companies, providing statistical data to support the design and follow-up of green growth policies and strategies, and to foster the incorporation of more sustainable technologies into Latin American and Caribbean businesses.

The implementation of the conceptual framework for the promotion of sustainable production policies and the adoption of green technologies by companies covers seven key areas: (i) institutional development; (ii) strategies and plans; (iii) creating an enabling environment; (iv) regulatory and information tools; (v) voluntary initiatives; (vi) development and dissemination of technology; and (vii) greening SMEs. The countries of the region should take advantage of the opportunities created by a greener growth model. Proactive policies are needed to make more effective progress in this area. The government,

private sector, research institutions and non-governmental organizations must all participate in the political dialogue. International experience in this area shows that there is no single path to achieving a greener industry, and that the institutional design and application of coherent policies can have the desired effects (ECLAC, 2017c).

In this context, it is important to improve the capacity of the different areas responsible for measuring environmental innovation to assess the degree to which companies have adopted environmental practices, national capacities for environmental innovation, “intermediate” and “direct” outputs of environmental innovation, and environmental innovation activities and their effects. Based on this information, there is a need to develop the design and implementation of policies and instruments that help businesses to adopt green technology. It is also important to encourage cooperation between public and private actors in order to advance waste treatment, energy efficiency and recycling by smaller companies.

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## Second annual report on regional progress and challenges in relation to the 2030 Agenda...

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# CHAPTER IV

## Latin American and Caribbean countries' progress with developing institutional frameworks and tools for implementing the 2030 Agenda for Sustainable Development<sup>1</sup>

Introduction

- A. Update of institutional coordination mechanisms
- B. National planning systems
- C. Changes in budgetary, fiscal and financial systems
- D. Partnerships with the private sector
- E. Conclusions

Bibliography

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<sup>1</sup> This chapter was prepared from United Nations Development Programme (UNDP) inputs obtained through the network that links and coordinates national efforts around the 2030 Agenda for Sustainable Development, supplemented by contributions from the Latin American and Caribbean Institute for Economic and Social Planning (ILPES).



## Introduction

In the two and a half years since the adoption of the Sustainable Development Goals, the countries of the region have been establishing new coordination mechanisms and planning instruments for the 2030 Agenda and building multi-stakeholder partnerships in the area of sustainable development. During this period, these countries moved from the initial phase of disseminating the content of the 2030 Agenda to an implementation phase characterized by translating the Agenda into public policies, institutions and national and subnational monitoring and evaluation mechanisms. The implementation of these mechanisms is part of the construction of robust, transparent and accountable institutions, in line with Goal 16 and, in particular, Target 16.6, “Develop effective, accountable and transparent institutions at all levels”. This chapter describes progress with institutional coordination mechanisms in the countries of the region, updates to planning systems and new partnerships in relation to the 2030 Agenda, with particular focus on the increasingly important role of the private sector.

### A. Update of institutional coordination mechanisms

During the process of adapting the Sustainable Development Goals to national contexts, new coordination mechanisms were developed. To meet the main challenge of the 2030 Agenda, comprehensive intersectoral and inter-territorial mechanisms were built. This change called not only for a whole-of-government approach, but also the involvement of stakeholders from civil society, the private sector, academia and international cooperation agencies.

The *2017 Annual report on regional progress and challenges in relation to the 2030 Agenda for Sustainable Development in Latin America and the Caribbean* (ECLAC, 2017) presented the mechanisms implemented in 16 countries, in two distinct groups: those that had established new coordinating institutions for the 2030 Agenda; and those that had built on existing institutions. New institutions were established in the Bahamas, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Panama, Paraguay and Peru; while Argentina, the Bolivarian Republic of Venezuela, Guatemala, Guyana, Jamaica and Mexico built upon existing institutions.

Implementing the 2030 Agenda requires a shift in political culture, participation and strengthening of dialogue and cooperation between public and private-sector stakeholders at national, regional and local levels of administration. The trend observed in most countries has been to couple these institutional mechanisms with high-level political decision-making entities that have a mandate for intersectoral coordination; in the majority of cases, the technical secretariat functions are delegated to planning agencies or to the office of the head of Government.

In 2017, three countries —Belize, Honduras and Uruguay— established new coordination and follow-up mechanisms for the 2030 Agenda. Argentina, Brazil, Mexico and Peru made significant progress with the institutional mechanisms that had been presented in 2017.

There is a total of 20 institutional coordination mechanisms for the implementation of the 2030 Agenda in the region (see map IV.1). Other mechanisms are to be established in the first half of 2018 and will become operational in the following months. As indicated in the previous report, the mechanisms and institutions responsible for implementing the 2030 Agenda are meant to orient policy towards attainment of the Sustainable Development Goals; coordinate different institutions and sectors; mobilize resources and direct spending; manage partnerships; and perform reporting, monitoring and evaluating functions. The main achievements of the past year can be found in the national voluntary reports presented by some countries at the 2017 meeting of the high-level political forum on sustainable development and those being prepared for the meeting in 2018. In the light of the above, and considering that the principal

advances made in institution-building processes under way in Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Panama and Paraguay were presented in the 2017 report, the following pages will focus on the recently created mechanisms in Belize, Honduras, Peru and Uruguay and present an update on the progress of 2017.

#### Map IV.1

Latin America and the Caribbean (20 countries): coordination mechanisms for implementation of the 2030 Agenda for Sustainable Development



**Source:** United Nations Development Programme (UNDP) and Economic Commission for Latin America and the Caribbean (ECLAC), Regional Observatory on Planning for Development in Latin America and the Caribbean [online] <https://observatorioplanificacion.cepal.org/en>.

**Note:** The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

As mentioned previously, three countries (Belize, Honduras and Uruguay) established new institutional mechanisms. In Belize, the operational guide for long-term planning for development is contained in the framework document “Horizon 2030: National Development Framework for Belize 2010-2030”,<sup>2</sup> which sets forth priorities such as democratic governance for effective public administration and sustainable development, education, economic resilience and healthy environment and healthy people. To implement this very long-term plan, Belize adopted the “Growth and Sustainable Development Strategy (GSDS) 2016-2020”,<sup>3</sup> a strategic planning document that is in line with the 2030 Agenda. To include as many perspectives as possible with a view to achieving long-term objectives, the institutional mechanisms that have been designed and implemented under the Strategy provide for participation from public and private stakeholders, academia, advocacy groups, non-governmental organizations (NGOs), rural communities, political parties and groups focusing on women, youth and populations at risk of exclusion. The institution-building process has also been strengthened by the experience gained from previous development plans and strategies that informed the above-mentioned Strategy which, for the first time ever, incorporates all the pillars of sustainable development.

The institutional mechanisms for the implementation and follow-up of the Strategy include a coordination unit in the Ministry of Economic Development—under the authority of the Cabinet, which is the final-instance decision-making body—and wide interministerial participation. Five technical committees coordinate the actions of several ministries with a view to achieving the five critical success factors (CSFs). For example, the Social Cohesion and Resilience Committee comprises the Ministries of Education, Science and Technology, Culture, Youth and Sports; Human Development, Social Transformation and Poverty Alleviation; Health; and Foreign Affairs and Home Affairs.

As mentioned above, the proposed institutional structure in the Horizon 2030 framework document consists of the Cabinet as the ultimate decision-making body and the Ministry of Economic Development as the coordination unit. It also establishes the Horizon 2030 Commission as a multisectoral body with wide representation from business leaders, trade unions and NGOs that report to the Cabinet. The coordination unit, the Ministry of Economic Development, advises other ministries on strategic policies and plans of action, prepares annual reports for the Commission, and organizes consultations every three or four years for the implementation of the Horizon 2030 plan. The District Committees, which represent the ministries and departments, have a mandate and structure that facilitate interministerial and intersectoral planning.<sup>4</sup>

In Honduras, achieving the Sustainable Development Goals is seen as a challenge to be met by incorporating multisectoral, multidimensional and comprehensive approaches as a matter of priority.

The Office of the President designated the General Coordination Secretariat of Government as focal point for the 2030 Agenda—thus making it lead agency for national ownership of the Agenda—to ensure that all levels of the central government (sector-specific cabinets, State secretariats and centralized and decentralized agencies) meet their commitments with regard to achieving the Sustainable Development Goals and their targets (see diagram IV.1). The Secretariat has since spearheaded institutional systems, involving key stakeholders, in support of the Goals and has linked the 2030 Agenda with the national planning system, monitoring and evaluation systems and the national budget.

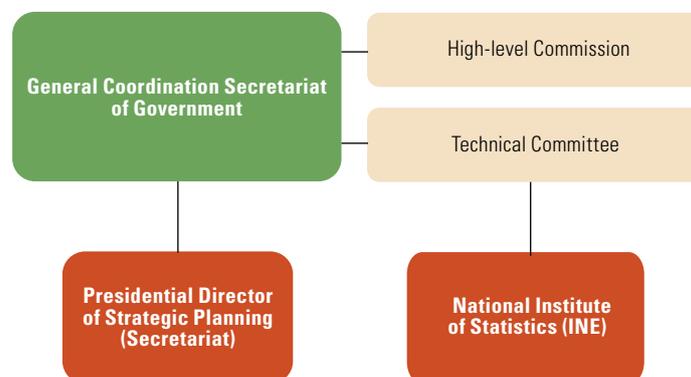
<sup>2</sup> See Government of Belize, “Horizon 2030: National Development Framework for Belize 2010-2030” [online] <http://www.cdn.gov.bz/belize.gov.bz/images/documents/NATIONAL%20DEVELOPMENT%20FRAMEWORK%202010-2030%20USER%20FRIENDLY%20VERSION.pdf>

<sup>3</sup> See Ministry of Economic Development, “Belize 2016-2019: Growth and Sustainable Development Strategy” [online] [http://cdn.gov.bz/mof.gov.bz/files/FINAL%20GSDS\\_March\\_30\\_2016.pdf](http://cdn.gov.bz/mof.gov.bz/files/FINAL%20GSDS_March_30_2016.pdf).

<sup>4</sup> See Government of Belize, “Belize’s voluntary national review for the sustainable development goals 2017” [online] <https://sustainabledevelopment.un.org/content/documents/16389Belize.pdf>.

**Diagram IV.1**

Honduras: coordination mechanism for implementing the 2030 Agenda for Sustainable Development



**Source:** United Nations Development Programme (UNDP), on the basis of the Government of the Republic of Honduras/Economic and Social Council (ECOSOC), "Voluntary national review, 2030 Agenda: laying the foundations for the implementation of the 2030 Agenda for Sustainable Development", New York, 2017 [online] <https://sustainabledevelopment.un.org/content/documents/15871Honduras.pdf>.

To encompass key actors in the implementation mechanism, two bodies were established by law: the first is a very high-level commission, responsible for strategic decisions and tackling obstacles to implementation; the second provides technical assistance to the High-level Commission and is in charge of following up on the latter's decisions. Both bodies are made up of actors from the public sector, private sector, workers' and farmers' organizations, academia, civil society and municipal representatives of Honduras.

- (i) The High-level Commission is the formal instance for decision-making and follow-up with regard to the implementation of the 2030 Agenda, by means of public policies, plans, strategies, programmes and projects. It comprises representatives of central, municipal and local governments, civil society, the private sector and workers' organizations.
- (ii) The role of the Technical Committee is to develop an operating system for the analysis and formulation of thematic proposals and suggestions on which the High-level Commission takes decisions. The Committee is made up of technical officers from the entities that form the Commission and from the National Institute of Statistics.

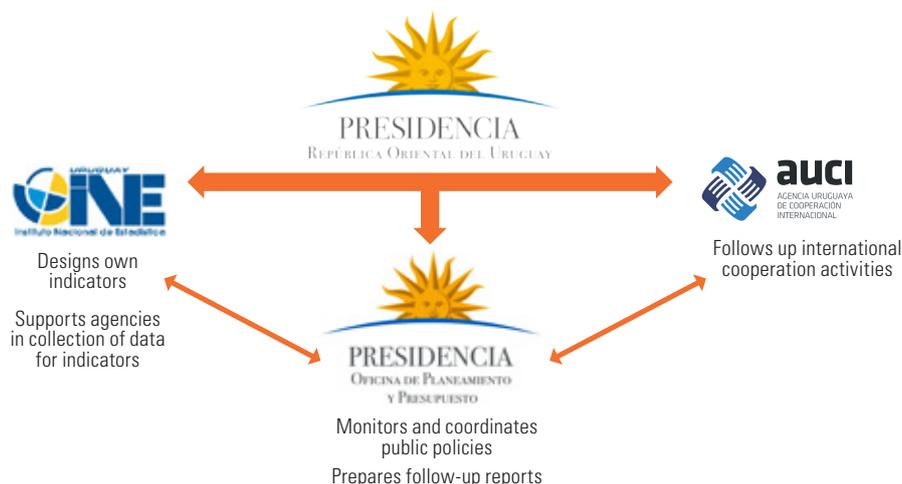
Coordination for both bodies is performed by the General Coordination Secretariat of Government, through the State secretariat. The Presidential Directorate for Strategic Planning, Budget, Public Investment and External Cooperation serves as the technical secretariat and is responsible for monitoring compliance of the activities to be implemented to achieve the goals of the 2030 Agenda.

In Uruguay, the coordination mechanisms for SDGs have been built on existing bodies and platforms. Presidential Resolution no. 988-16<sup>5</sup> established the institutional mechanism required for the implementation and follow-up of the 2030 Agenda and the Council of Ministers approved the designation of three institutes —selected on the basis of their past experience— to implement the 2030 Agenda and ensure compliance with the cross-cutting mandates (see diagram IV.2). The Office of Planning and the Budget is responsible for monitoring and coordinating the actions relating to the Sustainable Development Goals, the Uruguayan Agency for International Cooperation (AUCI) handles matters relating to international cooperation and the National Institute of Statistics is responsible for developing indicators and collecting relevant data.

<sup>5</sup> See Uruguay, Office of the President of the Republic, "Resolución núm. 988/16", Diario Oficial, Montevideo, 14 December, 2016 [online] <http://www.impo.com.uy/diariooficial/2016/12/14/12>.

**Diagram IV.2**

Uruguay: coordination mechanism for implementing the 2030 Agenda for Sustainable Development



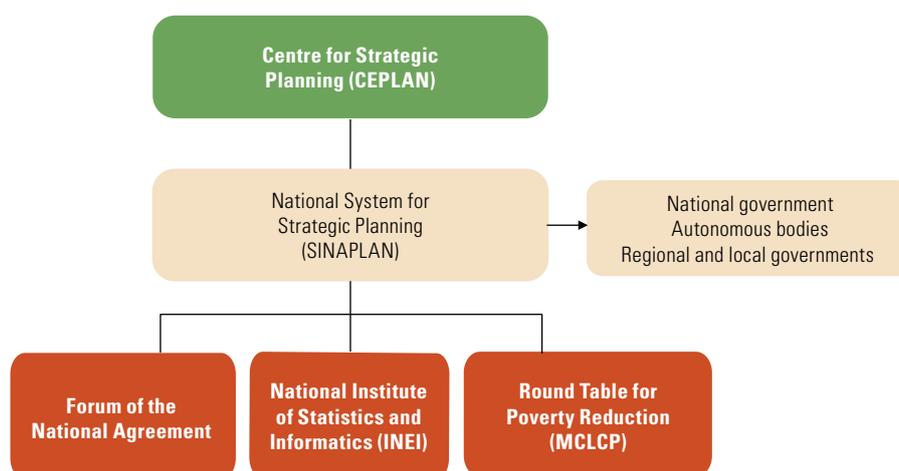
Source: United Nations Development Programme (UNDP).

Peru was another country from the region that presented its national voluntary report in July 2017.<sup>6</sup> The report showcased the country's strategy at institutional level as well as its strategy for monitoring policies and indicators for the implementation of the 2030 Agenda in the country. The institutional mechanism has been built on existing agencies.

The process began in September 2016, when nationwide sectoral policies were rapidly brought in line with the 2030 Agenda. It facilitated intergovernmental coordination for updating policies and plans via the institutionalization of dialogue and coordination mechanisms at multiple levels. The Centre for Strategic Planning (CEPLAN), which reports directly to the Office of the President of the Council of Ministers (see diagram IV.3), is responsible for establishing the institutional framework.

**Diagram IV.3**

Peru: coordination mechanism for implementing the 2030 Agenda for Sustainable Development



Source: United Nations Development Programme (UNDP), on the basis of Government of Peru, "Informe nacional voluntario sobre la implementación de la Agenda 2030 para el Desarrollo Sostenible", 2017 [online] <https://sustainabledevelopment.un.org/content/documents/15856Peru.pdf>.

<sup>6</sup> See Government of Peru, "Informe nacional voluntario sobre la implementación de la Agenda 2030 para el Desarrollo Sostenible", 2017 [online] <https://sustainabledevelopment.un.org/content/documents/15856Peru.pdf>.

The Centre for Strategic Planning (CEPLAN), which already existed, is the specialized technical agency that serves as the governing body that guides and coordinates the National System for Strategic Planning (SINAPLAN); the latter brings together all the entities and partner agencies responsible for national planning for development. SINAPLAN is therefore the technical lead for the implementation of the 2030 Agenda and is made up of an array of entities assembled to carry out specific functions, be they from the national government, autonomous constitutional bodies, or regional and local governments.

The Forum of the National Agreement, which provides a space for dialogue and consultation on strategic national planning, is also a constituent of SINAPLAN. In addition to representatives of the State, political parties present in congress and civil society organizations also participate in the Forum.

Lastly, it is important to highlight the work done by the National Institute of Statistics and Informatics (INEI) and the Round Table for Poverty Reduction (MCLCP)—established in 2001 pursuant to an agreement between the State and civil society and now present in 26 regions of the country—which draws on the rights-based approach and the commitments undertaken by the country in the framework of the United Nations, in particular those undertaken in conferences prior to the Millennium Summit. This mechanism drives the implementation and monitoring of SDGs and collates data to assess the progress made.

The following paragraphs highlight some of the progress made on the institutional front in Argentina, Brazil and Mexico in the last year.

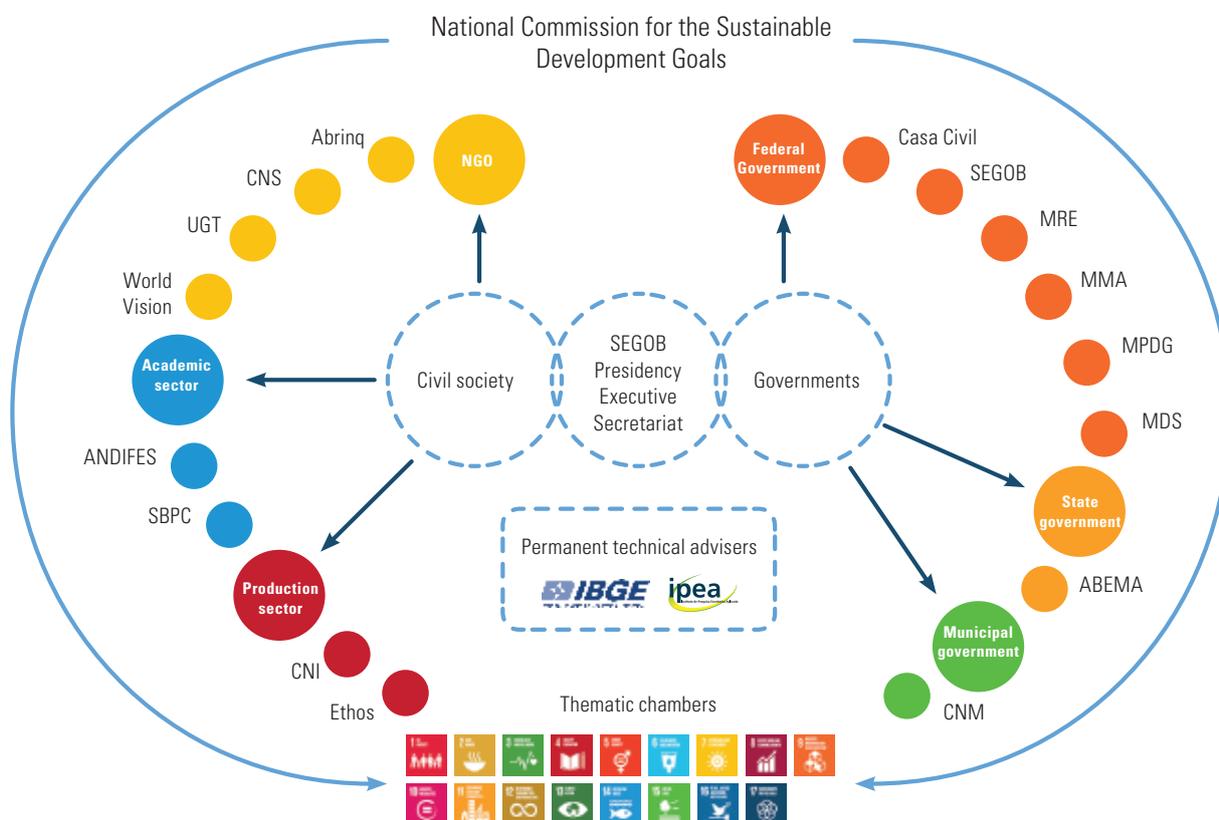
Brazil established the National Commission for the Sustainable Development Goals, which is under the Government Secretariat of the Office of the President and comprises representatives of the Office of the President and representatives of four portfolios, namely the Ministry of Foreign Affairs, the Ministry of Social and Agrarian Development, the Ministry of Planning, Development and Management and the Ministry of the Environment. In addition, the Brazilian Geographical and Statistical Institute (IBGE) and the Institute of Applied Economic Research (IPEA) participate as permanent technical advisers.

For the first term of the National Commission, 16 representatives of the Federal Government, state and municipal governments and civil society were selected, with the various sectors and segments represented as illustrated in diagram IV.4.

As indicated in the 2017 report, Argentina presented its coordination mechanism at the high-level political forum on sustainable development; the mechanism is based on the National Council for Social Policy Coordination, which was established in 2002 and is attached to the Office of the President. This Council coordinates the actions of 20 ministries through 6 commissions, grouped by strategic priority areas: education; science and technology; sustainable agricultural production; housing, urban development and infrastructure; work and employment; and social protection. The main purpose of the Commissions is to define and prioritize the objectives for each strategic area for subsequent systematization of the goals and targets, in coordination with the Council, which would lead to a framework document that compiles the set of adapted goals and indicators for formulating lines of work at the national level.”<sup>7</sup>

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<sup>7</sup> See Ibero-American Secretariat (SEGIB), “Documento técnico: Iberoamérica y los Objetivos de Desarrollo Sostenible (ODS)”, Madrid, 2017 [en línea] [https://www.academia.edu/33983045/Iberoam%C3%A9rica\\_y\\_los\\_Objetivos\\_de\\_Desarrollo\\_Sostenible\\_ODS](https://www.academia.edu/33983045/Iberoam%C3%A9rica_y_los_Objetivos_de_Desarrollo_Sostenible_ODS).

**Diagram IV.4**Brazil: coordination mechanism for implementing the 2030 Agenda for Sustainable Development<sup>a</sup>

**Source:** United Nations Development Programme (UNDP), on the basis of Government Secretariat of the Office of the President/Ministry of Planning, Development and Management, "Voluntary national review on the Sustainable Development Goals", 2017 [online] [https://sustainabledevelopment.un.org/content/documents/15806Brazil\\_English.pdf](https://sustainabledevelopment.un.org/content/documents/15806Brazil_English.pdf).

<sup>a</sup> The sectors and entities making up the Commission are as follows:

Federal Government: Government Secretariat of the Office of the President (SEGOB), representatives of the Office of the President, the Ministry of Foreign Affairs (MRE), the Ministry of the Environment (MMA), the Ministry of Planning, Development and Management (MPDG) and the Ministry of Social Development (MDS).

State governments: Brazilian Association of State Environment Authorities (ABEMA).

Municipal governments: National Confederation of Municipalities (CNM).

Production sector: National Confederation of Industry (CNI), which represents 27 state-level industry federations and 700,000 manufacturers, and the Ethos Institute for Business and Social Responsibility.

Academia: National Association of Directors of Federal Institutions of Higher Education (ANDIFES) and the Brazilian Society for the Advancement of Science (SBPC).

NGOs and community sector: Abrinq Foundation for Children's Rights, National Council of Rubber Tappers (CNS), General Workers' Union (UGT) and World Vision Brasil.

Permanent technical advisers: Brazilian Geographical and Statistical Institute (IBGE) and Institute of Applied Economic Research (IPEA).

It should be noted that the Commission has worked with specific agencies on cross-cutting issues to promote gender mainstreaming, the inclusion of persons with disabilities, indigenous peoples and other vulnerable population groups, a rights-based approach, a life-cycle approach and territoriality and to ensure compliance with methodological standards for the development of monitoring indicators. Those agencies are listed below, by area of action:

- Rights-based approach: National Secretariat for Human Rights and Cultural Pluralism, Ministry of Justice and Human Rights

- Gender mainstreaming: National Women's Council, National Council for Social Policy Coordination, Office of the President
- Inclusion of first peoples: National Institute of Indigenous Affairs, Ministry of Justice and Human Rights
- Inclusion of persons with disabilities: National Advisory Commission for the Integration of Persons with Disabilities, National Council for Social Policy Coordination, Office of the President
- Life cycle: National Institute of Statistics and Censuses (INDEC), Ministry of Finance and ministries responsible for disaggregation of data
- Territoriality: Ministries responsible for disaggregation of data
- Statistical rigour: National Institute of Statistics and Censuses (INDEC), Ministry of Finance

## B. National planning systems<sup>8</sup>

In addition to defining their implementation and follow-up mechanisms, the countries of the region have begun to link their planning systems to the goals of the 2030 Agenda for Sustainable Development. Planning has gained renewed importance in Latin America and the Caribbean, as evidenced by data such as that shown below:

Of the 33 countries of the region:

- 27 have medium- or long-term plans
- 14 have a legal framework for devising a development plan; and
- 30 allow for citizen consultation when formulating their development plans.

Examples can be seen in Jamaica, which conducted public consultations with key stakeholders; in Peru, where the Forum of the National Agreement serves as a space for tripartite dialogue and consensus-building involving the three levels of government and the main political and social institutions; and in Costa Rica, where the political parties involved in the 2014 elections shared their experiences and consultations were conducted with more than 100 public institutions and civil society organizations.

Six countries in the region (Bahamas, Cuba, Grenada, Guyana, Saint Lucia and Uruguay) are at different stages in the formulation of their long-term planning instruments and have seized the opportunity provided by the 2030 Agenda to incorporate the Sustainable Development Goals therein (see diagram IV. 5).

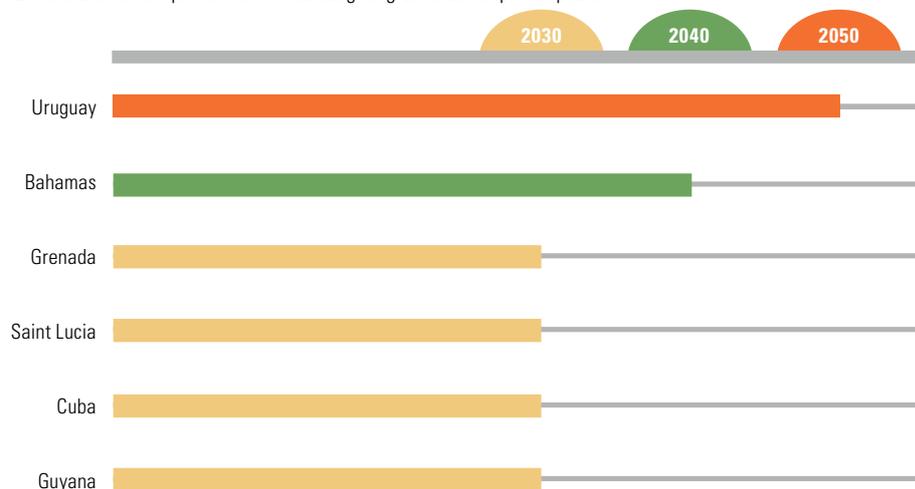
<sup>8</sup> Data in this section come from the Regional Observatory on Planning for Development in Latin America and the Caribbean of the Latin American and Caribbean Institute for Economic and Social Planning (ILPES) of ECLAC. The Observatory was established to be a dynamic forum for analysis, information and collective knowledge-building for governments, civil society, academia and the private sector. Its creation and launch were made possible by the formation of a network of planning experts and authorities, which has been vital in facilitating the exchange of information, creating and validating data, and sharing knowledge, among other actions. The Observatory works along four lines of action in line with the four stages of planning and public administration: formulation, implementation, tracking and monitoring, and evaluation. To date, it has collected and systematized data on the following aspects of planning for development in the countries of the region: national planning systems, national development plans, the objectives of national development plans, the most frequent development concepts and institutional architecture for the implementation and follow-up of the 2030 Agenda for Sustainable Development.

**Diagram IV.5****Latin America and the Caribbean (19 countries): long-term development plans**

## A. Countries with long-term development plans



## B. Countries in the process of formulating long-term development plans



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), Regional Observatory on Planning for Development in Latin America and the Caribbean [online] <https://observatorioplanificacion.cepal.org/en>.

## 1. National development plans and the 2030 Agenda

With the renewed interest in planning in Latin America and the Caribbean, the countries that have designed medium- and long-term national development plans, or are in the process of doing so, have benefited from a favourable situation resulting from the 2030 Agenda and its 17 Sustainable Development Goals.

The following section presents the landscape of the region in terms of the existence of development plans and how they are linked to the 2030 Agenda for Sustainable Development.

There are three different scenarios:

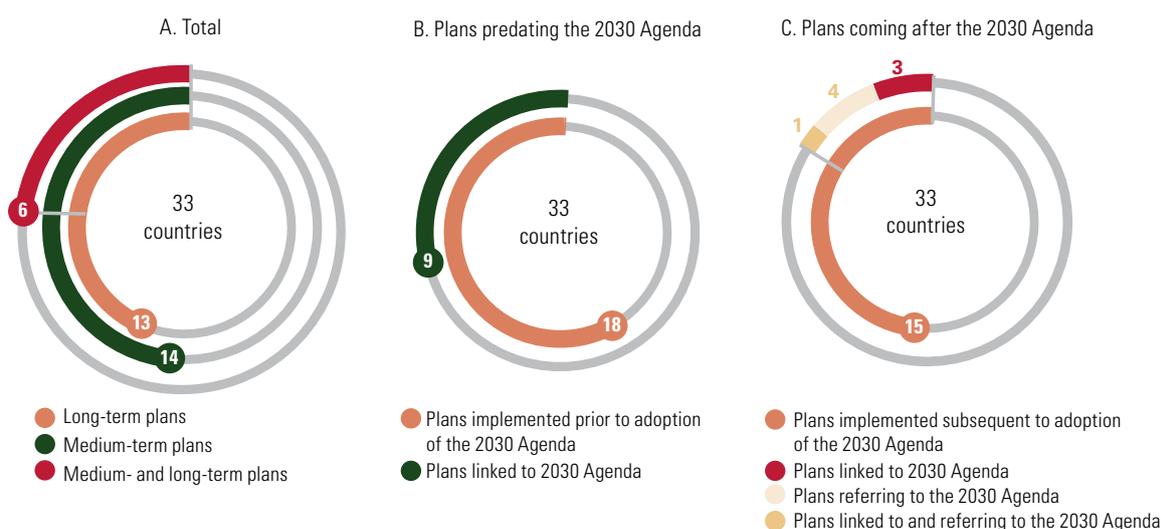
- The case of Colombia, which was formulating its development plan while negotiations on the 2030 Agenda—in which the country played an active role—were ongoing and was, therefore, able to mainstream SDGs in its national development plan (92 of the 169 targets are included in that plan).

- The case of countries that had already embarked on the process of drafting their development plans when they subscribed to the 2030 Agenda. The methodology for these countries —Argentina, Belize, the Bolivarian Republic of Venezuela, Chile, Costa Rica, the Dominican Republic, El Salvador, Mexico, Paraguay and Peru— was to seek to align their national plans with the 2030 Agenda.
- The case of countries that formulated their national development plan subsequent to 2016 (Ecuador, Suriname and Trinidad and Tobago) and incorporated the 2030 Agenda and SDGs in their strategic objectives. This is also the case of countries which are currently drafting development plans (Bahamas, Cuba, Grenada, Guyana, Saint Lucia and Uruguay).

Diagram IV.6 summarizes the overall situation in the region in terms of the existence of national development plans and their linkage to the 2030 Agenda for Sustainable Development.

#### Diagram IV.6

Latin America and the Caribbean (33 countries): national development plans and the 2030 Agenda for Sustainable Development



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), Regional Observatory on Planning for Development in Latin America and the Caribbean [online] <https://observatorioplanificacion.cepal.org/en>.

## 2. The most frequent themes in development plans and in Sustainable Development Goals and their targets

A lexicometric analysis<sup>9</sup> carried out on the development plans of the 33 countries of the region shows that the four most frequently occurring themes are economy, education, health and employment. The aim of this analysis was to identify the concepts related to each SDG appearing frequently in national plans.

In the Caribbean subregion, the most frequent themes, in descending order, are education, economy, employment and institutions. In Latin America, they are economy, education, institutions and health; the themes of poverty and security also stand out. Diagram IV.7 gives a graphic illustration of the lexicometric analysis.

<sup>9</sup> The methodology used for the analysis was to identify from among the 17 Goals and 169 targets which concept or family of concepts represented the meaning of each Goal and target. The analysis was conducted jointly by staff from all ECLAC divisions. A list of 110 agreed concepts was then prepared. The text of each development plan was then analysed for the 110 concepts in order to generate a visual representation of which of the selected concepts appeared most frequently in the body of the plan.



**Box IV.1****The National Strategic Plan with a State Vision “Panama 2030”**

The Council of the National Concertation for Development (CCND) of Panama —established by Law No.20 of 2008 as the consultative body for all sectors of society with a mandate to review the progress towards targets and compliance with agreements— and the United Nations Development Programme published the National Strategic Plan with a State Vision “Panama 2030” in September 2017.

The Panama 2030 plan is the result of the joint efforts and active involvement of advisers, the CCND Technical and Administrative Unit and Secretariat and other public, private and civil society stakeholders and organizations. Technical support was provided by the United Nations Development Programme (UNDP) in Panama, the Inter-American Development Bank (IDB) and the Development Bank of Latin America (CAF).

Among other essential issues affecting the public, the Plan addresses the following:

- Healthy lives for all
- Greater and better quality growth
- Environmental sustainability
- Democracy, institutionality and governance
- Strategic partnerships for development

The plan seeks to ensure well-being and healthy lives for all, inclusive and equitable quality education and learning opportunities for all.

With regard to environmental sustainability, it seeks to introduce sustainable consumption and production patterns and to address climate change and its effects on terrestrial ecosystems and biodiversity.

**Source:** United Nations Development Programme (UNDP).

**Box IV.2****Belize’s Growth and Sustainable Development Strategy 2016-2019**

In 2013, at a capacity-building workshop and expert group meeting on integrated approaches to sustainable development planning and implementation, held under the auspices of the Economic and Social Council, Belize volunteered to be a pilot country. The aim was to show how planning for development could be carried out in harmony with the then-emerging Post-2015 Development Agenda, predecessor of the 2030 Agenda for Sustainable Development.

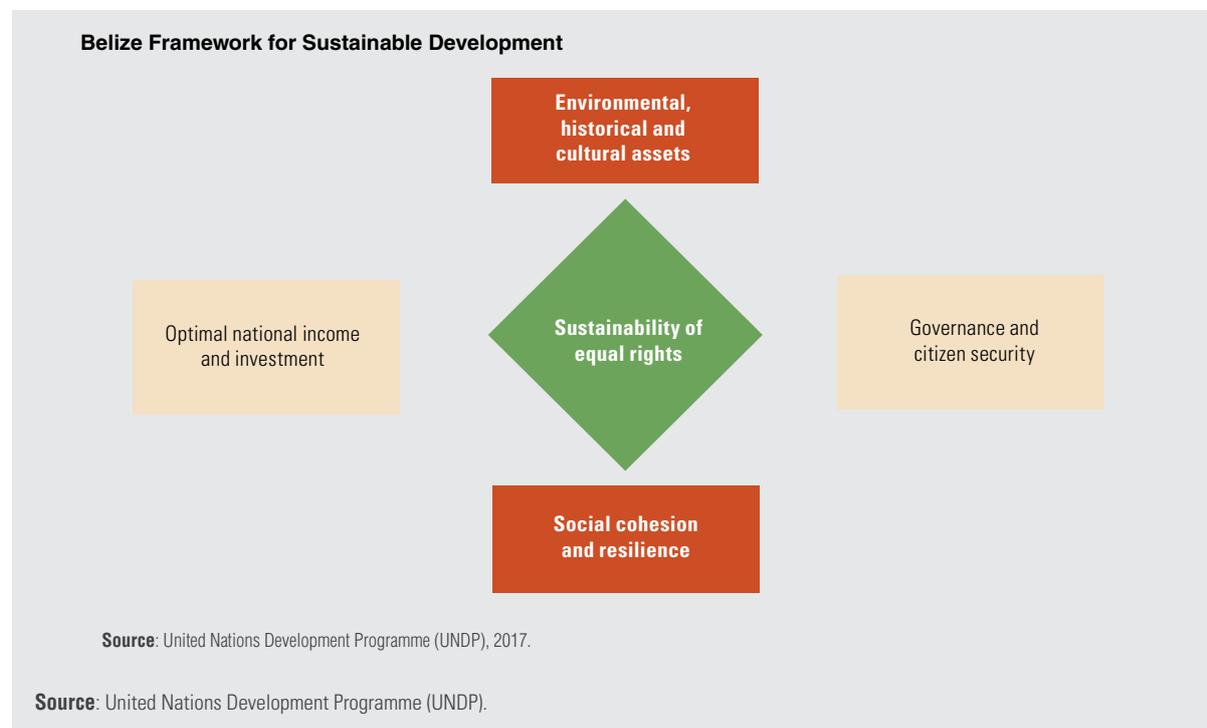
At the time, the Government of Belize was drafting its main national planning document, the Growth and Poverty Reduction Strategy, spearheaded by the Ministry of Finance and Economic Development. However, the Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development and Immigration had anticipated it with its own National Sustainable Development Strategy, which saw the parallel existence of two complementary planning documents.

The two processes were then merged in 2014, with the support of the Department of Economic and Social Affairs of the United Nations, giving rise to the Growth and Sustainable Development Strategy. Although the Strategy focuses on the development vision for Belize, it remains consistent with the 2030 Agenda.

The processes of the National Sustainable Development Strategy added validity to the Growth and Poverty Reduction Strategy by extending the consultative process. It should be noted that the institutional mandate of the ministries had shaped the initial outputs: while the Growth and Poverty Reduction Strategy had been centred on economic planning, the combined strategy has a broader sustainable development mandate, in line with the 2030 Agenda.

At the core of the Growth and Sustainable Development Strategy is a hierarchical framework of inter-related goals and objectives called the “Belize Framework for Sustainable Development”, which aims to achieve equality and guarantee human rights by strengthening governance and citizen security, optimizing national income and investment, protecting the country’s natural, environmental, historical, and cultural assets and enhancing social cohesion and resilience.

Box IV.2 (concluded)



Lastly, there are countries which use existing planning frameworks and seek to develop road maps for the implementation of the 2030 Agenda for Sustainable Development and the SDGs, with the support of the United Nations system. The joint approach of the United Nations Development Group, known as the mainstreaming, acceleration and policy support (MAPS) strategy, provides the overall framework for such support. Under this framework, a number of inter-agency missions<sup>10</sup> have been carried out, providing high-level technical support for developing these road maps, monitoring and evaluation and financing options.

Missions have been held in the Dominican Republic, El Salvador, Jamaica and Trinidad and Tobago. With regard to national planning, analyses were conducted on the extent to which SDGs were reflected in planning documents and on the degree of horizontal and vertical linkage between existing institutions. Subsequently, progress was made in the identification of entry points for implementation, taking into account national priorities and establishing the multidimensional links between these entry points. Diagram IV.8 shows the entry points that have been prioritized for Trinidad and Tobago.

The result was a group of “accelerators” for achieving the 2030 Agenda for Sustainable Development (diagram IV.9) and the Goals that were positively affected by the establishment of priority actions were identified (diagram IV.10).

<sup>10</sup> Led by the United Nations Resident Coordinator, the following have participated in MAPS missions: the Office of the United Nations High Commissioner for Refugees (UNHCR), ECLAC, the Food and Agriculture Organization of the United Nations (FAO), the Office for the Coordination of Humanitarian Affairs (OCHA), the International Labour Organization (ILO), the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the Pan American Health Organization (PAHO), the World Food Programme (WFP), the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA) and the United Nations Children's Fund (UNICEF).

**Diagram IV.8**

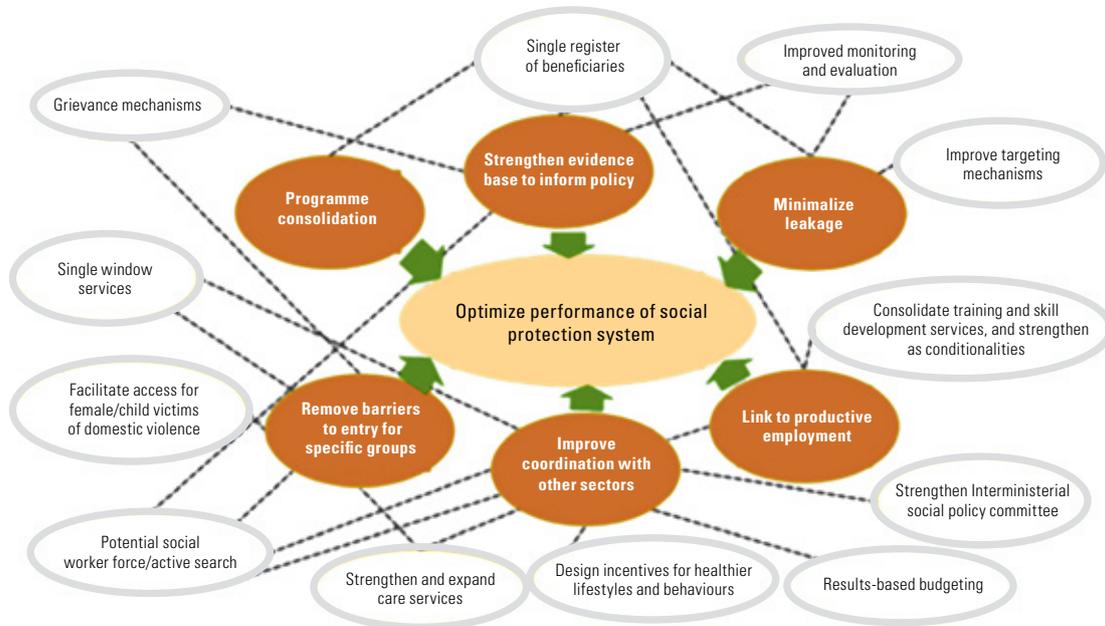
Trinidad and Tobago: priority entry points for the 2030 Agenda for Sustainable Development



Source: United Nations Development Programme (UNDP), on the basis of official information from Trinidad and Tobago.

**Diagram IV.9**

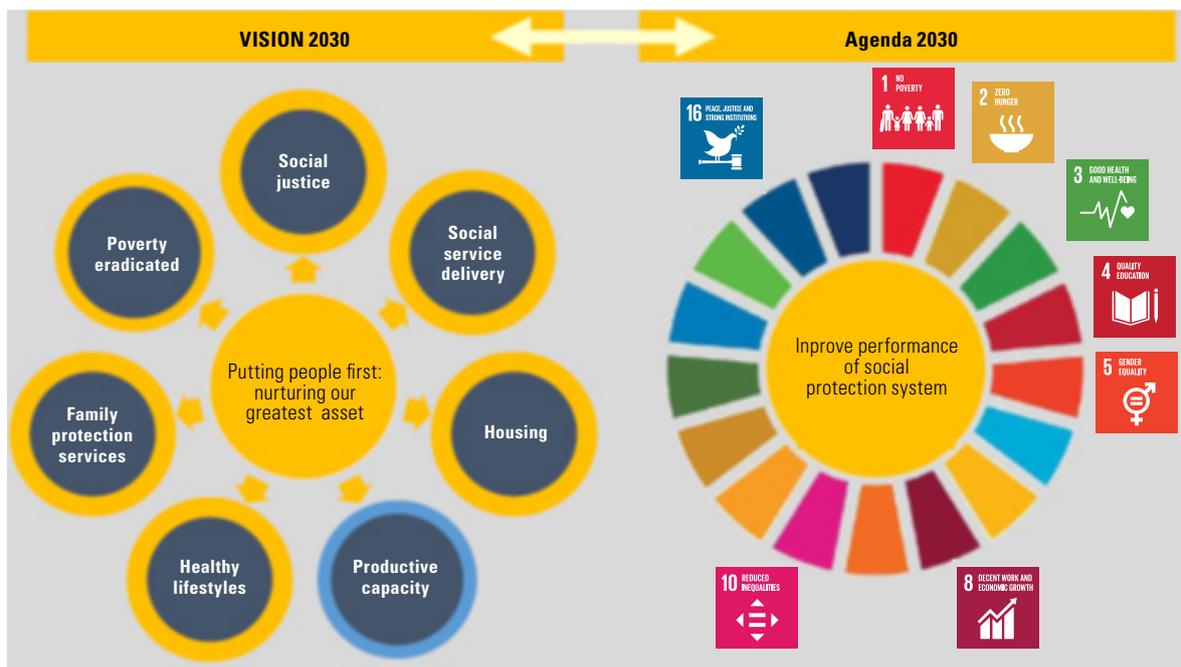
Trinidad and Tobago: combination of interventions for the entry point for optimizing the performance of the social protection system



Source: United Nations Development Programme (UNDP), on the basis of official information from Trinidad and Tobago.

**Diagram IV.10**

Trinidad and Tobago: Sustainable Development Goals associated with the combo of interventions for the entry point for optimizing the performance of the social protection system



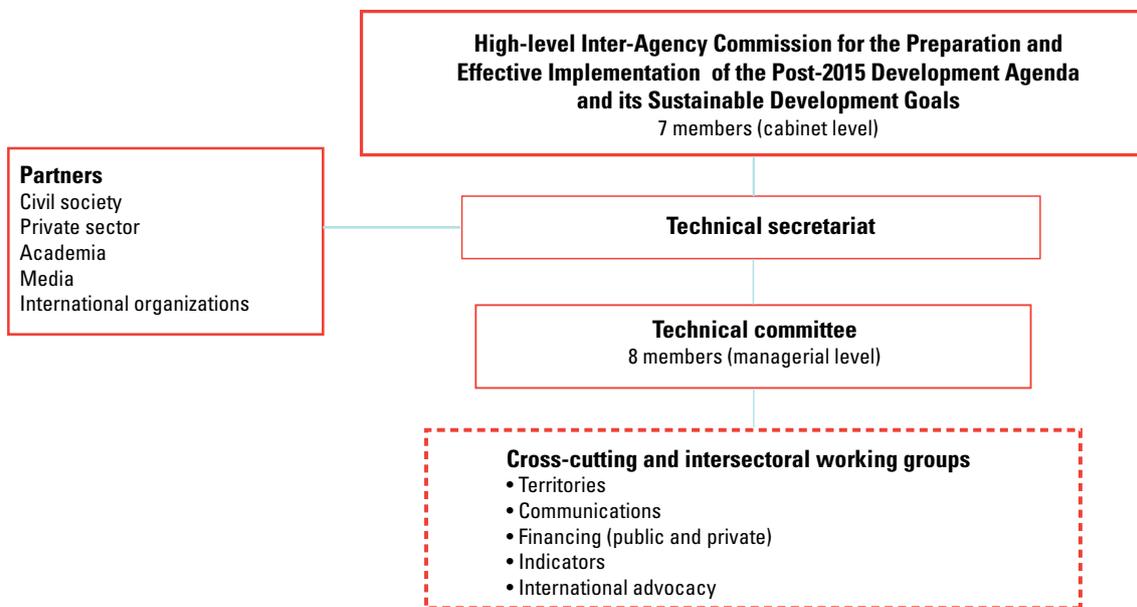
**Source:** United Nations Development Programme (UNDP), on the basis of official information from Trinidad and Tobago.

There are two critical challenges for the implementation of the 2030 Agenda: (i) horizontal coordination, that is, between ministries, and (ii) vertical coordination, from central to local government.

In Colombia, the High-level Inter-Agency Commission for the Preparation and Effective Implementation of the Post-2015 Development Agenda and its Sustainable Development Goals—the institution responsible for implementing the 2030 Agenda—includes both aspects by design. The purpose of the Commission and its technical committee is to provide horizontal coordination, while that of the territorial working group is to ensure vertical coordination (see diagram IV.11). The National Development Plan 2014-2018 has a regional focus with an emphasis on narrowing social divides (see map IV.2). Under the National Development Plan, assistance has also been provided to regions and municipalities to ensure that new territorial development plans reflect the Sustainable Development Goals.

**Diagram IV.11**

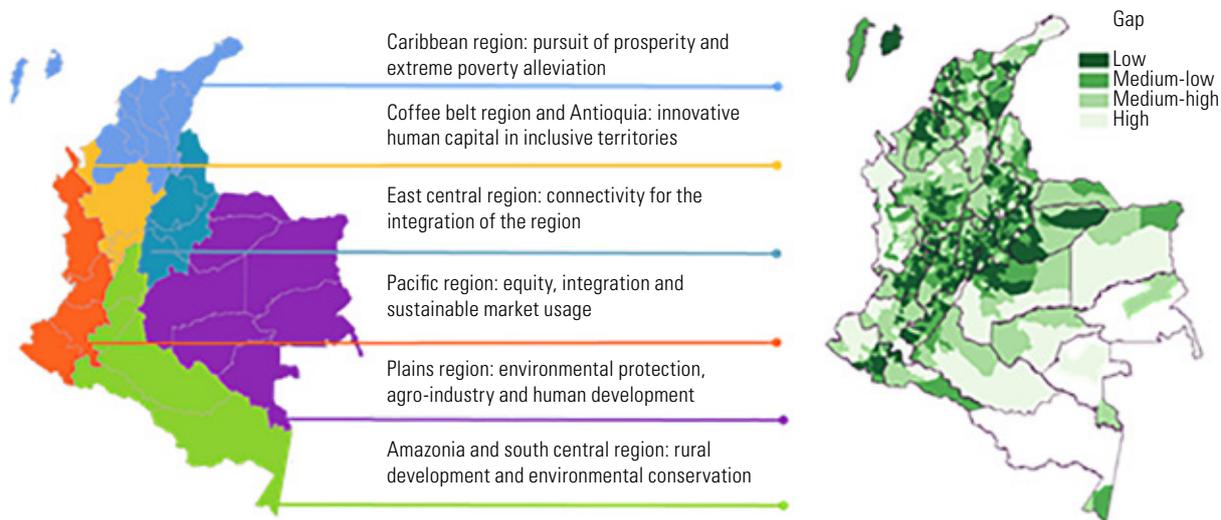
Colombia: structure of the High-level Inter-Agency Commission for the Preparation and Effective Implementation of the Post-2015 Development Agenda and its Sustainable Development Goals



**Source:** United Nations Development Programme (UNDP).

**Map IV.2**

Colombia: regional approach to the National Development Plan 2014-2018



**Source:** United Nations Development Programme (UNDP), on the basis of National Planning Department, *Plan Nacional de Desarrollo 2014-2018: todos por un nuevo país*, Bogota, 2015.

**Note:** The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

## C. Changes in budgetary, fiscal and financial systems<sup>11</sup>

Fiscal space constitutes a real restriction to the acceleration of social, economic and environmental achievements. In middle-income countries and small island developing States, tax revenues are among the most important sources of financing for development.

The third International Conference on Financing for Development, which resulted in the Addis Ababa Action Agenda, refocused the discussion on a comprehensive approach to financing that went beyond official development aid to encompass tax revenue, private investment, trade and technology transfers. Given that the 2030 Agenda is a more ambitious and integrated development agenda, the change from a concept based solely on aid to a concept based on the role of tax resources, including tax evasion and avoidance, has become a critical issue.

Research on the influence of taxation in the region (Lustig and Martínez-Aguilar, 2016) has established a rigorous baseline on the functioning of tax transfers, subsidies and taxation and services in-kind, among others, in the region's economies. Two characteristics identified in this study have implications for the 2030 Agenda. The first has to do with the wide variety of taxpayers and net beneficiaries of post-tax revenue in the region. In Latin America, net contributors to government, for whom cash transfers and subsidies amount to less than what they pay in taxes, are found in the lower deciles (third to seventh). This situation affects many more poor and vulnerable homes in the region compared with the levels observed in OECD countries. The second characteristic has to do with the special role of regressive taxes, which are generally linked to value added taxes. These taxes have a huge regressive effect on the post-tax situation of the region's households.

In recent years, the discussion has shifted from taxation to fiscal space. In the Caribbean, this has meant tackling high levels of public and private debt. In Latin America, this means addressing the progressiveness of current policy on taxation, subsidies and transfers. In recent years, UNDP has worked with countries in the region to carry out microsimulations to assess the impact of alternative policies on poverty and inequality trends. In Mexico, for example, microsimulations served to support the work of the Government on the comprehensive tax reform carried out in 2013. These tax simulations, which were performed in conjunction with the Secretariat of Social Development, emphasized the costs and benefits of value added taxes for baskets of food and medicine. The reformed fiscal policy made it possible to prevent approximately 14 million people from falling back into poverty.

The region has registered a strong demand for tools that are capable of providing systematic measurements on the effect of existing taxation systems, subsidies and transfers, and also of carrying out microsimulations of the potential distributive impact of social, economic and environmental policies. Tax tools will guarantee the implementation of a transformative development agenda in the region.

In response to the region's need for experience in this area, examples are shown below. They include partial results of the tax microsimulation in Guatemala (box IV.3), details of the linkage between budget allocations and the Sustainable Development Goals in Mexico (box IV.4) and budgeting and monitoring of national expenditure on Sustainable Development Goals in Panama (box IV.5).

<sup>11</sup> The contents of this section are taken in large part from UNDP (2016).

**Box IV.3****Tax microsimulation in Guatemala**

Although dating back to the late 1950s-early 1960s when first used in the seminal works of Guy H. Orcutt, microsimulation models are increasingly used to analyse the effects of public policies on the well-being of households (Orcutt, 1957; Orcutt and others, 1961, cited in Abalón and Urzúa (2012)).

As Absalón and Urzúa (2012, p. 88) state, “these models use computer applications to create a structure of taxes and benefits operating on economic units at the micro level, in particular, households or individuals. On this basis, the simulations can be used to estimate the potential impact of policy changes over a given period of time on income distribution, inequality and poverty levels and, more generally, social welfare. The estimate also takes into account the influence of heterogeneity and diverse population characteristics, giving these simulations an advantage over models such as computable general equilibrium models, which simulate the economy in very aggregate form.”

To implement the 2030 Agenda, the requisite fiscal policy space must be defined. This can be achieved, following the UNDP methodology, by carrying out tax microsimulations and impact microsimulations for different types of actions. The simulations are first conducted to analyse the impact of taxation, subsidies and transfers on households in the status quo; changes in fiscal policy “above” the budget line (with variable taxes) and “below” the line (without variable taxes) are then simulated (see UNDP, 2016).

Guatemala carried out a microsimulation of social spending on health, education and food for vulnerable households with a view to providing the data needed for preparation of the multi-year budget, which was linked to the Sustainable Development Goals. The simulator focused on the following areas:

- Health (Goal 3)
- Education (Goal 4)
- Mi Bolsa Segura<sup>a</sup> programme

**Table 1**

Guatemala: Gini coefficient - spending on vaccination, income and expenditure per capita, 2014

Type of vaccine	Income	Expenditure
Gini	0.5402	0.4579
Tuberculosis	0.5400	0.4575
Pentavalent (diphtheria, pertussis, tetanus, hepatitis B and polio)	0.5312	0.4365
Diphtheria, Tetanus and Pertussis (DPT)	0.5399	0.4572
Rotavirus	0.5248	0.4229
Poliomyelitis	0.5401	0.4578
Measles	0.5378	0.4520
Human papilloma virus (HPV)	0.5353	0.4475
Gastrointestinal conditions	0.5393	0.4560
Respiratory diseases	0.5391	0.4559
Out-of-pocket spending	0.5372	0.4538
Immunization schedule, acute illnesses and out-of-pocket spending	0.5057	0.3885

**Source:** National Institute of Statistics (INE) National Survey of Living Conditions (ENCOVI), Guatemala City, 2014.

The outcome of the microsimulation in Guatemala showed that:

- The relationship between the various government entities is one of openness and dialogue.
- With respect to Goal 3, spending on vaccination has the greatest redistributive effects.
- With respect to Goal 4, spending on primary education has the greatest positive redistributive effect, followed by spending on secondary education.
- The greatest redistributive effect of the Mi Bolsa Segura programme is seen among mothers aged under 20. The nutritional benefits of the programme could be improved by expanding the basket of goods.

Box IV.3 (concluded)

**Guatemala: Gini coefficient - spending on education, by level of schooling, 2014**

Source: National Institute of Statistics (INE) National Survey of Living Conditions (ENCOVI), Guatemala City, 2014.

**Table 2**

Guatemala: Gini coefficient - per capita income and expenditure in the Mi Bolsa Segura programme, by recipient, 2014

Population category	Income	Expenditure
Gini	0.5402	0.4579
Persons living in Guatemala in extreme poverty	0.5398	0.4584
Single mothers	0.5402	0.4579
Mothers aged under 20	0.4711	0.4444
Older persons	0.5329	0.4508

Source: National Institute of Statistics (INE) National Survey of Living Conditions (ENCOVI), Guatemala City, 2014.

Source: United Nations Development Programme (UNDP), on the basis of National Institute of Statistics (INE) National Survey of Living Conditions (ENCOVI), Guatemala City, 2014; C. Absalón and C. M. Urzúa, "Modelos de microsimulación para el análisis de las políticas públicas", *Gestión y Política Pública*, vol. 21, No. 1, Mexico City, January 2012 [online] [http://www.scielo.org.mx/scielo.php?script=sci\\_arttext&pid=S1405-10792012000100003](http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-10792012000100003); and United Nations Development Programme (UNDP), *Human Development Report for Latin America and the Caribbean. Multidimensional progress: well-being beyond income*, New York, 2016 [online] [http://www.latinamerica.undp.org/content/rblac/en/home/library/human\\_development/informe-regional-sobre-desarrollo-humano-para-america-latina-y-e/](http://www.latinamerica.undp.org/content/rblac/en/home/library/human_development/informe-regional-sobre-desarrollo-humano-para-america-latina-y-e/).

<sup>a</sup> The Mi Bolsa Segura is a government social assistance programme aimed at reducing poverty and the risk of extreme malnutrition in urban and rural areas of Guatemala. Under the programme, a food basket is provided free of charge and on a regular basis to the families at highest risk of poverty and extreme poverty in the department of Guatemala. It is also distributed to persons with disabilities, older persons and households with insufficient resources to provide adequate food (FAO/LAIA/ECLAC, no date).

**Box IV.4****Linking budget allocations and the Sustainable Development Goals in Mexico**

There are two examples of budgetary programmes managed by the Secretariat of Finance and Public Credit that have been linked to the achievement of the SDGs.

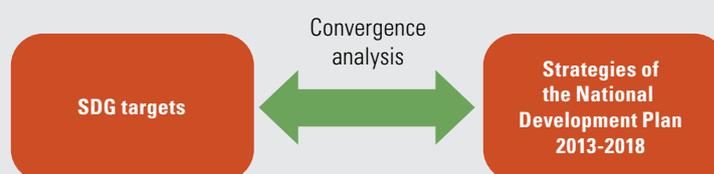
**1. Budgetary programmes falling under the National Development Plan 2013-2018**

In this example, a three-step process has been used to link budgetary programmes to the SDG targets:

- (i) Analysis of the convergence between the SDG targets and the national and cross-cutting strategies set forth in the National Development Plan 2013-2018. The outcome of that analysis was a proposal to link national planning with the Sustainable Development Goals and their targets (see figure 1).

**Figure 1**

Mexico: first step in linking the Sustainable Development Goals and budgetary programmes

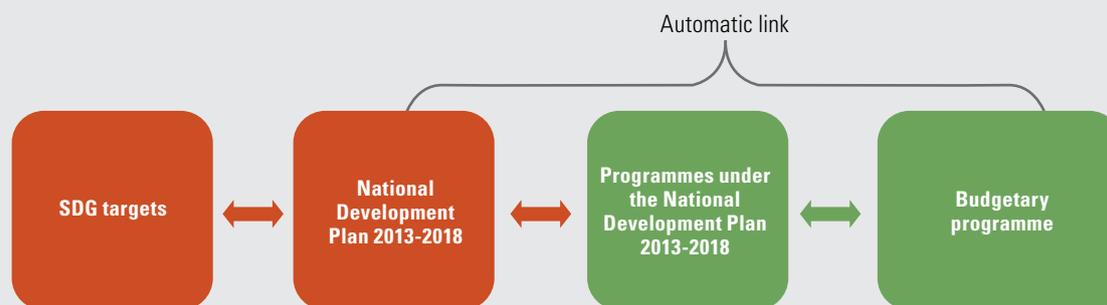


Source: Performance Evaluation Unit, Secretariat of Finance and Public Credit.

- (ii) Given the link between the SDGs and their targets and the structure of the programmes under the National Development Plan 2013-2018, it followed that budgetary programmes—which are aligned with the objectives of the Plan's programmes— were automatically linked.

**Figure 2**

Mexico: second step in linking the Sustainable Development Goals and budgetary programmes



Source: Performance Evaluation Unit, Secretariat of Finance and Public Credit.

- (iii) In December 2016 the Office of the President of the Republic submitted the proposed linkages between the budgetary programmes and the Sustainable Development Goals to public offices and departments for their consideration, in a participatory exercise. Public officials were thus given the opportunity to examine the proposal and validate or reject it and to identify cases in which any other linkages had been missed during the first step, as appropriate.

The public offices and departments will be authorized to make any changes required to the initially identified links, bearing in mind that a budgetary programme can be linked to a given target when it meets any of the following three characteristics: its objectives directly promote the achievement of the target; its benefits were determined or designed with objectives similar to the intent of the target; and it meets the capacity-building needs for officials working to achieve the target.

Box IV.4 (concluded)

## 2. Budgetary programmes not falling under the National Development Plan 2013-2018

This involves the budgetary programmes implemented by autonomous public bodies or other authorities and which are not aligned with the National Development Plan 2013-2018. Consequently, there are insufficient elements to analyse them through national planning systems, as in the first example.

In order to identify the links between these budgetary programmes and the Sustainable Development Goals, it is therefore necessary to examine the purpose of a specific programme and determine which of the SDG targets best coincide with it. As above, once the link between a budgetary programme and SDG targets has been identified, and to enable a more comprehensive analysis and understanding of that link, a budgetary programme is considered to be linked to the target when it meets any of the following three characteristics: its objectives directly promote the achievement of the target; its benefits were determined or designed with objectives similar to the intent of the target; and it meets the capacity-building needs for officials working to achieve the target.

In both cases, the intended population for each target must be borne in mind, given that each budgetary programme is designed for a specific population or area of action and these can be compared with the population group or area of action identified in the SDGs.

**Source:** United Nations Development Programme (UNDP), on the basis of Secretariat of Finance and Public Credit, "Vinculación del presupuesto a los Objetivos de Desarrollo Sostenible", Mexico City, 2017 [online] [https://www.gob.mx/cms/uploads/attachment/file/231527/Lineamientos\\_p\\_y\\_p\\_2018\\_Anexo\\_2\\_Vinculacion\\_ODs.pdf](https://www.gob.mx/cms/uploads/attachment/file/231527/Lineamientos_p_y_p_2018_Anexo_2_Vinculacion_ODs.pdf).

### Box IV.5

#### Budgeting and monitoring of national expenditure on Sustainable Development Goals in Panama

In order to achieve the Sustainable Development Goals, the effectiveness, coordination, transparency and accountability of institutions must be strengthened. To complement efforts to mainstream SDGs into national planning, it is essential to identify State and private sector actions that are undertaken in support of those Goals in the country — the initiatives implemented, the amounts invested and persons responsible for them.

One such example is the platform for measuring progress towards achieving the SDGs developed by the Government of Panama, with the support of the UNDP regional project Management System for Governance, known by its Spanish acronym, SIGOBa SIGOB uses a public administration tool to visualize the contributions of existing initiatives towards the achievement of the Goals. Used in complement with other tools, it can enable the mainstreaming of SDGs in planning, budgeting and public and private implementation. It is an analytical platform that uses big data, with continuous and systematic information updates, and allows users to conduct searches for management, analysis, monitoring and reporting purposes. It can also combine data from different sources of information and in different formats and has an adaptive user interface.

It is vital for work to be done at subnational and local levels, where all public policy designs ultimately have an impact. It is also important to recognize the need to build synergies, for it is more often a lack of synchronization, rather than budgetary constraints, that cause plans and strategies to fail. Lastly, it is crucial to form partnerships with public and private development stakeholders to implement the Sustainable Development Goals. Management tools such as those described here are key to meeting these challenges.

The platform has two key components: initiatives (projects, programmes and public policy interventions) and indicators (depending on their consistency with SDG targets). The systematization of this information seeks to answer four fundamental questions: where initiatives are concentrated, how work is being done in communities in the framework of SDGs, which public and private stakeholders are involved in the initiatives and how much is being spent.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), United Nations Development Programme (UNDP), Management System for Governance (SIGOB) [online] <http://www.sigob.org>.

<sup>a</sup> The SIGOB project, operating under the UNDP Regional Directorate for Latin America and the Caribbean, is designed to strengthen the capacities of institutional management for governance. Its objective is to develop methodologies and tools that support political action by the government's senior management and contribute to producing and maintaining the conditions necessary for democratic governance. For further information, see [online] <http://www.sigob.org>.

## D. Partnerships with the private sector

The 2030 Agenda for Sustainable Development brings together stakeholders from civil society and the private sector, academia and multilateral and international cooperation agencies. This section highlights private sector participation in national plans for implementation of the 2030 Agenda two years after its adoption by the international community.

Over this period, four types of actions have illustrated the increasing involvement of the private sector:

- (i) Greater involvement in national processes to adopt the 2030 Agenda for Sustainable Development: national and multinational companies participate more in processes aimed at delivering on the 2030 Agenda. The work of the United Nations Global Compact, which has an intensive and strategic procedure to encourage corporate engagement, has been vital in this regard. There have been more than 300 workshops aimed at building the capacities companies need to incorporate the 10 principles of the Global Compact, align their business strategies with the SDGs and communicate with interested parties on the positive impact of these strategies, as drivers of environmental, social and business value. The Sustainable Development Goals Fund (SDG Fund) has helped to establish capacity-building initiatives to support platforms for South-South knowledge transfer. It worked with the United Nations Institute for Training and Research (UNITAR) to design the e-learning course “Business & the 2030 Agenda: Working Together Towards a Sustainable Future”.
- (ii) Adoption of environmental, social and governance responsibility: firms in the region have been adopting social and environmental responsibility measures, in line with target 12.6, which encourages “companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle”. The application of environmental, social and corporate governance (ESG) criteria has gained ground and helps to attract financial and asset management institutions.
- (iii) Financial reporting that sets the foundation for new financial instruments: the multiplication of instruments for financing for development—including Green Bonds, social impact bonds and sovereign guarantees—has been spurred by improved mechanisms for reporting on financial and non-financial performance that are in line with the Sustainable Development Goals. Organizations such as the Global Reporting Initiative, Sustainability Accounting Standards Board (SASB) and the International Integrated Reporting Council (IIRC) assist companies in setting sustainability goals and key performance indicators as well as incorporating sustainable production and consumption practices in their business strategies and models.
- (iv) Ad hoc initiatives and public-private partnerships: the region has a long history of public-private partnerships, mainly in energy and transport infrastructure. In the framework of the 2030 Agenda for Sustainable Development, public-private partnerships have been playing an increasingly important role, both because of their focus on risk management and reduction and disaster prevention and the potential to expand sources of financing for climate change mitigation and adaptation. In addition to these alliances, there is an abundance of specific initiatives in the region that aim to adopt a comprehensive approach to sustainable development and help to build resilient cities, infrastructure and energy systems.

In the light of the call in the 2030 Agenda for Sustainable Development for the widest possible participation in support of implementation of all the Goals and targets, the following section describes some initiatives developed in the region to encourage the participation of civil society, the private sector and other actors from multilateral and international cooperation agencies.

Notable experiences in the area of private sector participation include the Chilean experience in “Dialogos para un Chile Sostenible” (see box IV.6); the innovative use of the tool SDG Compass in Colombia (see box IV.7); and the role of Argentine companies in the achievement of the Sustainable Development Goals (see box. IV.8). Experiences in mobilizing civil society support for the 2030 Agenda for Sustainable Development and the Sustainable Development Goals —such as youth-led initiatives in Argentina, Colombia and Peru and the Asocia 2030 project in Chile— are also highlighted (see box IV. 9). Lastly, box IV. 10 presents the United Nations Global Compact and its action in Latin America and the Caribbean, illustrating the systematic work done by Local Networks in the region to put in motion a process to mobilize the business sector.

#### **Box IV.6**

##### **Dialogue for a Sustainable Chile**

The Dialogue for a Sustainable Chile, launched in August 2015, was an initiative led by the Sustainability Committee of the Santiago Chamber of Commerce to exchange views and build confidence in the pursuit of the country's development; it was subsequently linked to the 2030 Agenda for Sustainable Development. Starting out with 16 and then 23 organizations, it eventually comprised 28 organizations that agreed on a joint narrative and engaged in a proactive dialogue to reflect on the country and set it on the path to sustainable development in line with the demands of society. The 28 organizations involved in the sustainability field in Chile represent various sectors —business, trade, civil society and the public sector, academic centres and individual experts who have years of experience working in areas such as human development, inclusion, transparency, organizational ethics, fair trade, environment, integrity and anti-corruption.

The process leading up to the convening of the Dialogue was gradual and persistent. The discussions were conducted according to the “World Café” method, which evokes the spirit of informal café conversations and enables participatory and collective creativity.

Meeting participants were divided into groups, each focusing on one of the Sustainable Development Goals. Two thematic hosts explained the Goals in the Chilean context, drawing reference to global and national data, and introduced the Dialogue with a gap analysis and a proposal for the ensuing discussion. After their presentation, the hosts joined the discussion groups and tables and described the methodology to ensure that the etiquette and structure of the meeting were respected and guided the activity.

Progressive rounds of discussion were set up around three questions. After each round, each member of the group moved to a different table with new participants, with one person remaining as “table host” to fill in newcomers on the prior conversation. Participants discussed each of the questions and answers were synthesized in a “harvest” which was then shared.

Three questions focused on the following: (i) the most urgent and significant challenges for the country with respect to each SDG; (ii) imagining, in a collective effort, Chile in the year 2030 where all the issues referred to in the SDGs are resolved; and (iii) concrete action and shared commitments that could be feasibly taken to achieve this vision of the Chile of 2030, with the understanding that it was impossible to attain through individual effort alone.

Following reflection on the three questions, the conclusions were synthesized by prioritizing challenges, creating a shared vision of the future and identifying the tangible actions needed to ensure a sustainable Chile by means of voluntary commitments.

**Source:** United Nations Development Programme (UNDP), on the basis of “Diálogos para un Chile Sostenible” [online] <http://dialogoschile.cl/static/pdf/conclusiones.pdf>.

**Box IV.7****Colombia: innovation through use of the SDG Compass tool of the Global Reporting Initiative**

Many Colombian companies are committed to the 2030 Agenda for Sustainable Development. For example, Colombian trans-Latin companies have all become flagships for sustainable growth and consolidation in domestic and foreign markets. This is evidenced by the fact that trans-Latins such as Interconexión Eléctrica S.A. (ISA), Grupo de Inversiones Suramericana (Grupo Sura), ISAGEN, Empresas Públicas de Medellín (EPM), Grupo Nutresa, Grupo Argos, Grupo Bancolombia and Grupo Éxito have been listed in the Dow Jones Sustainability Index (DJSI) as leaders in the field. Moreover, of the 12,700 companies that are signatories to the United Nations Global Compact, close to 600 companies and organizations, from across all sectors, are in Colombia. A significant number of enterprises and organizations have adopted the methodology of the Global Reporting Initiative in their annual corporate reporting, to show interest groups that their management results are in sync with progress towards the targets and indicators of the Sustainable Development Goals (SDGs).

Companies have understood that sustainability can be an economic opportunity. This is why it is important to develop and spur innovation in eco-friendly technologies and adopt instruments such as SDG Compass, developed by the Global Reporting Initiative and the United Nations Global Compact.<sup>a</sup> This tool makes it easy to align corporate strategy with sustainability and to identify practical ways for companies to make a difference by prioritizing and taking decisions to help achieve the Goals in which they can make the greatest contribution. SDG Compass provides guidance through five steps: (i) understanding the SDGs and how they affect business; (ii) defining priorities with regard to relevant SDGs; (iii) setting goals and indicators; (iv) integrating these elements into the corporate strategy; and (v) transparent reporting and communication.

**Source:** United Nations Development Programme (UNDP), on the basis of Global Compact Colombia Network [online] <http://www.pactoglobal-colombia.org/>, and M. González, “The private sector in Colombia and its contribution to the 2030 Agenda”, *Dinero*, Bogotá, 8 October [online] <http://www.dinero.com/opinion/columnistas/multimedia/sector-privado-colombiano-y-contribucion-2030-maria-gonzalez/250868>.

<sup>a</sup> See Global Reporting Initiative/United Nations Global Compact/World Business Council for Sustainable Development (WBCSD), “SDG Compass: the guide for business action on the SDGs” [online] [https://sdgcompass.org/wp-content/uploads/2015/12/019104\\_SDG\\_Compass\\_Guide\\_2015.pdf](https://sdgcompass.org/wp-content/uploads/2015/12/019104_SDG_Compass_Guide_2015.pdf).

**Box IV.8****Argentina: companies’ contribution to the Sustainable Development Goals**

In Argentina, the Inter-agency Commission on Implementation and Follow-up of the Sustainable Development Goals published a guide on the actions that companies could take in the framework of the 2030 Agenda for Sustainable Development. After analysis of the 17 Goals and their targets, it identified the role of businesses and the relevant actions available to them to advance achievement of the Sustainable Development Goals. Some of the possible Goal-specific actions available to the private sector include:

On Goal 2: develop innovative technologies to improve crop yields, respecting the criteria for sustainable development.

On Goal 5: develop vocational training and qualification programmes for women and young people; promote awareness-raising activities on gender equality in collaboration with relevant stakeholders; implement actions to ensure gender balance in leadership positions.

On Goal 6: develop and use systems to improve the populations access to water.

On Goal 7: develop new technologies for clean energy in the various stages of the production chain.

On Goal 8: create formal, good quality jobs; improve work environment conditions; implement support programmes for employees and their immediate families.

On Goal 9: develop methodologies and programmes for the exchange of experiences of production processes for SMEs; develop mechanisms for the construction of public works that are designed to have a positive environmental impact on nearby communities.

On Goal 11: invest in innovation to develop construction materials that reflect companies’ actions to align themselves with the Goals; develop transport systems aimed at reducing toxic gas emissions.

On Goal 12: incorporate actions and incentives to reduce the use of non-sustainable inputs.

On Goal 13: invest in and develop water-efficient production techniques.

**Source:** United Nations Development Programme (UNDP), on the basis of National Council for Social Policy Coordination, “Sector empresario”, Buenos Aires [online] <http://www.odsargentina.gob.ar/Empresas>.

**Box IV.9****Civil society mobilized for the 2030 Agenda for Sustainable Development and the Sustainable Development Goals**

This section presents four innovative examples of regional civil society organizations' commitment to and involvement in the implementation of the 2030 Agenda and the Sustainable Development Goals, with particular focus on the mobilization of young people in Argentina, Chile, Colombia and Peru.

**Argentina: young people —key players in the achievement of Sustainable Development Goals**

The partnership between the United Nations system in Argentina and youth organizations seeks to promote the SDGs, strengthen cooperation between those organizations and the public sector entities focusing on youth and create joint initiatives to advance local implementation of the 2030 Agenda. At the invitation of the United Nations Information Centre in Buenos Aires in 2016, youth organizations developed a set of actions to promote the content of the 2030 Agenda and its 17 Sustainable Development Goals.

The youth group of the Argentine Council of Foreign Relations (CARI) conducted an open debate and academic session entitled "The Road to 2030: the Sustainable Agenda and the Role of Young people" in collaboration with the United Nations system in Argentina. Students, academics, diplomats and representatives of the public and private sectors and civil society participated in the event.

The organization MiNU Asociación Civil organized four initiatives: Model United Nations at schools and universities, Model Argentine National Congress in schools in Buenos Aires, the Education for Sustainable Citizenship initiative in technical colleges in Buenos Aires and the #YoTambiénFirmoporlaTierra hashtag campaign, conducted in plazas around Buenos Aires in association with the United Nations system in Argentina. A total of 3,800 young people between the ages of 13 and 18 from middle schools participated in all of the activities.

Socialab Argentina—in partnership with Ashoka, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and Koga Impact Lab—launched a competition entitled "Comprometidos" (Committed), aimed at young people from Argentina, Chile, Paraguay and Uruguay. Of the more than 360 project proposals received, 5 were provided with seed capital to develop their project and make it a reality. Information and motivation talks were held with the aim of encouraging debate. One example was a presentation on the difference between an entrepreneur and a social entrepreneur, held at the Universidad de San Andrés and attended by about 40 young people.

In an attempt to influence public policy, Socialab Argentina and 16 other organizations met with the Senate to present ideas and projects that could contribute to efforts to achieve the 169 targets of the 2030 Agenda. It also participated in a national forum on social responsibility for sustainable development organized by the Ministry of Social Development.

In 2017, the CARI youth group decided to expand its programme of work to include communication and awareness-raising initiatives with diplomatic representatives accredited to the country, with a view to strengthening its contribution to the analysis of the global agenda for youth through a multidisciplinary approach. In that regard, it envisaged holding academic sessions and cultural activities related to the Sustainable Development Goals and the empowerment of women and young people.

Socialab will launch another edition of the Comprometidos competition and will continue to work with partner organizations to highlight the commitment of civil society organizations to the 17 Goals. It will also participate in future events of the national forum on social responsibility for sustainable development.

**Chile: Asocia 2030 project**

The Asocia 2030 project focuses on the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (specifically Goals 1,5,10, 13 and 16) and on giving a greater voice to the organized civil society of Chile, through greater democracy, rights-based participation and sustainable development.

Its efforts stem from the conviction that the 2030 Agenda and the Sustainable Development Goals call for all sectors of society to work together and that cooperation between government agencies and civil society can reconcile differing perspectives to address the common challenges such as gender equality, overcoming poverty, ending hunger, ensuring quality health, building resilient infrastructure, promoting inclusive industrialization and ocean conservation, and others included in the 2030 Agenda and the SDGs.

Asocia 2030 encourages significant and comprehensive participation of civil society in national policies and builds capacity to allow civil society to fulfil its role as an independent development stakeholder more effectively. As part of its commitment to participation, it has organized meetings and advocacy roundtables, a civic schools programme and certificate, training and consultation workshops, national and international seminars, regional colloquiums, publications launches and a register of civil society organizations, among other initiatives.

## Box IV.9 (concluded)

The Chilean Association of NGOs (ACCIÓN), the Community of Pro-Solidarity Organizations (COS) and the Chilean Network of Volunteer Organizations are all part of the Asocia 2030 project. These entities bring together more than 350 civil society organizations, with a territorial coverage extending over the regions of Antofagasta, Coquimbo, Valparaíso, greater Santiago, Bío Bío, La Araucanía, Los Lagos and Magallanes.

### Colombia: “Young people for SDGs”, a special category of the National Youth Volunteers Award

To enhance the implementation of the 2030 Agenda and the achievement of the Sustainable Development Goals, Colombia established an unprecedented special category in the fifth edition of the National Youth Volunteers Award,<sup>a</sup> called “Young people for SDGs”.

For this category, the Government of Colombia invited nominations from all volunteer leaders who have worked to raise awareness among young people about the importance of the 2030 Agenda and the Sustainable Development Goals.

The selected volunteers had been trained by United Nations Volunteers and have since passed on what they learned to other young people in their communities.

The purpose of the special category is to reward leadership and to give local meaning to the SDGs by calling for powerful actions linked to the Goals and, consequently, contribute to development.

### Peru: Mission 2030 - 17 young people are the first generation of SDG Ambassadors in Peru

The Mission 2030–SDG Ambassadors initiative aims to create a community of young people to spread the message on the importance of achieving the Sustainable Development Goals (SDGs) in Peru, through projects designed and led by youth of the country. It is a joint initiative of the United Nations system, Peru 2021 and Unilever Southern Cone.

SDG Ambassadors were selected through a nationwide call, to which a number of high-level candidates responded, and will work with a team of specialists from various sectors over the course of 2018 to develop a tailor-made agenda to encourage other young people to undertake development initiatives. The first generation of SDG Ambassadors consists of 17 young people recognized for their leadership in and outstanding contribution to efforts in support of the 2030 Agenda for Sustainable Development. They come from eight regions of the country—including Lima, Ica, La Libertad, Lambayeque, Cusco, Loreto, Tacna and Callao—and their projects, which contributed primarily to 11 of the 17 SDGs, have helped 11 regions.

Mission 2030–SDG Ambassadors seeks to recognize the efforts and contributions of youth and to encourage more talented young people to join the movement and become agents of change in their local contexts, promoting initiatives such as accessibility for persons with disabilities, gender equality and protection of the environment and ecosystems.

Through the joint effort of the private sector and civil society, it was possible to select participants from different regions of Peru aged between 18 and 29 years and whose actions seek to build a more just, equitable and sustainable country.

Over the course of one year, the young leaders will motivate their peers to become agents of change. The idea is to create a multiplier effect that will help to change the local realities of young people throughout Peru, using the SDG platform. In addition, four seminars will be conducted with a view to involving more young people in the implementation of the 2030 Agenda, through forums for discussion of key issues related to sustainable development. A number of experts from the United Nations Development Programme (UNDP) and other United Nations system agencies will participate in these talks. The 17 Ambassadors were introduced at an official ceremony in the Ministry of Foreign Affairs of Peru during the commemoration of the seventy-second anniversary of the United Nations.

**Source:** United Nations Development Programme (UNDP), on the basis of MINU Asociación Civil “Model United Nations” [online] <http://www.minu.org/programas/mnu-general?gclid=CLTRglL44tMCFUaAKQod7FQ0mQ>; Organización Argentina de Jóvenes para las Naciones Unidas (OAJNU) [online] <http://www.oajnu.org/>; Argentine Council for International Relations (CARI), “Grupo Joven” [online] <http://www.cari.org.ar/organos/grupojoven.html>; AIESEC Argentina [online] <http://www.aiesec.org.ar/>; Socialab Argentina [online] <http://ar.socialab.com/>; Office of the President of the Republic of Colombia, “Colombia Joven” [online] <http://www.colombiajoven.gov.co/quehacemos/Paginas/premiovoluntariado2017.aspx>; Asocia 2030, “Asocia 2030: sociedad civil protagonista. Chile” [online] <http://proyectoasocia2030.cl/>; and UNDP Peru, “17 Jóvenes impulsarán acciones para promover los ODS” [online] <http://www.pe.undp.org/content/peru/es/home/presscenter/articles/2017/11/10/17-j-venes-impulsar-n-acciones-para-promover-los-ods-.html>.

<sup>a</sup> The youth volunteering strategy of the Directorate of the “Young Colombia” National Youth System focuses on promoting, encouraging and highlighting the volunteer efforts and actions of young Colombians. The basis of the strategy is that these actions: (i) build generic capacities and skills in young people and are a form of generous participation that subscribes to the essential values of citizen coexistence, such as life, liberty, solidarity, justice and peace; (ii) help to build peace and social capital in the country; and (iii) highlight young people’s contributions as agents of change through a multiplicity of vocations, interests, codes, languages, forms of engagement and areas of action (see [online] <http://www.colombiajoven.gov.co/quehacemos/Paginas/premiovoluntariado2017.aspx>).

**Box IV.10****United Nations Global Compact: actions in Latin America and the Caribbean**

Over the last three years, United Nations Global Compact Local Networks in Latin America, the Caribbean and North America have worked consistently over the past three years with regional Local Networks to begin mobilizing businesses that are committed to sustainability and responsibility to participate actively in the implementation of the 2030 Agenda for Sustainable Development, joining with United Nations country teams, international cooperation agencies, civil society and academia in an approach based on internal transformation that aims to inform national, regional and global agendas.

The Local Networks contribute significantly to five key processes for local implementation of the Sustainable Development Goals (SDGs), as described below.

**(i) Dissemination and localization of the 2030 Agenda and SDGs**

Global Compact Local Networks have invited high-level representatives from the corporate sector, governments, the United Nations system, academia and civil society to more than 250 events to raise awareness in the countries of the region about the 2030 Agenda and the role that businesses committed to sustainability and responsibility can play in this universal, comprehensive, collaborative and multistakeholder agenda. Local Networks participate in policy dialogue mechanisms such as those implemented by the High-level Inter-Agency Commission for the Preparation and Effective Implementation of the Post-2015 Development Agenda and its Sustainable Development Goals or the National Planning Department in Colombia; the National Council for the Coordination of Social Policies in Argentina; the revamped National Commission for the Sustainable Development Goals in Brazil; in Guatemala, through the Secretariat for Planning and Programming of the Office of the President (SEGEPLAN); the High-level Inter-Agency Commission for Sustainable Development in Costa Rica; the National Council for Implementation of the 2030 Agenda for Sustainable Development in Chile; the Consultative Council on Social Responsibility and Sustainability of the National Assembly in Panama; and by the Specialized Technical Committee for the Sustainable Development Goals in Mexico. The Mexican National Council for the 2030 Agenda for Sustainable Development, established in 2017, is expected to implement similar mechanisms.

**(ii) Capacity-building and leadership development for companies to align their business models with the principles of the United Nations Global Compact and the SDGs**

There have been more than 300 workshops on building the capacities companies need to incorporate the 10 principles of the Global Compact, align their business strategies with the SDGs and communicate with interested parties on the positive impact of these strategies, as drivers of environmental, social and business value. Hundreds of companies are receiving training and creating an impact in the region, establishing themselves as clear leaders and role models in this respect. Specifically, 45 workshops on integrating the SDGs into corporate governance, aligning business strategy with the Goals and reporting through SDG Compass and 263 workshops on incorporating the 10 principles of the United Nations Global Compact and submitting relevant reports have been held (1,492 hours of training); and 1,392 companies have received training on SDG Compass and the 10 principles of the Global Compact.

**(iii) Definition of national Sustainable Development Goal agendas through multistakeholder participation in public-private dialogues on policy**

The Global Compact Local Networks contribute —substantively, in some cases— to public-private dialogues on policy involving multiple stakeholders. This is achieved through participation in relevant institutional mechanisms, in constant communication with United Nations country teams, in joint efforts to accelerate the implementation of and national agendas and their alignment with the SDGs. By the end of 2017, a total of 19 countries had established institutional arrangements for dialogue and the purpose of Local Networks is to act as the natural business sector counterpart to United Nations country teams, governments and other stakeholders. In particular, 11 Local Networks fulfil that role in policy dialogues aimed at defining and advancing national SDG agendas in Argentina, the Plurinational State of Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Paraguay and Peru. In addition, four Local Networks were involved in the drafting of the voluntary national reports submitted by Argentina, Brazil, Costa Rica and Guatemala to the high-level political forum on sustainable development in 2016 and 2017 and were part of those countries' official delegations.

**(iv) Implementation of local and national sustainable development agendas through public-private partnerships with companies in Local Networks and United Nations system agencies, international cooperation agencies, civil society, academia and other actors**

Given that the Local Networks allow for lead companies to participate in the definition of the agendas, those companies are best placed to ensure their implementation through collaborative projects and multistakeholder partnerships. Five Local Networks are actively facilitating public-private partnerships in the region, with 67 projects

Box IV.10 (concluded)

involving public-private partnerships under way. Of those projects, 10 are of a general nature, some are related to specific Goals (12 relate to Goal 5, 11 to Goal 8 and 7 to Goal 16) and the rest are linked with a number of other SDGs. One notable project related to target 8.7 is the Regional Initiative: Latin America and the Caribbean Free of Child Labour, a public-private partnership introduced at the fourth Global Conference on the Sustained Eradication of Child Labour, held in Buenos Aires in November 2017 and which brings together 13 Local Networks from the region, the International Labour Organization (ILO), the International Organization of Employers (IOE), ministries of Labour in the region and the network of businesses against child labour.

#### **(v) Mobilizing private financial resources for the Sustainable Development Goals**

The Global Compact Local Networks actively promote cooperation with multilateral development banks, development finance institutions, corporate foundations and philanthropic organizations in the search for innovative financing mechanisms. They aim to attract investment in sustainable development processes of the region's middle-income countries and integrate sustainability criteria in the actions of private investors.

**Source:** United Nations Development Programme (UNDP), on the basis of United Nations Global Compact, "Act globally. Engage locally" [online] <https://www.unglobalcompact.org/engage-locally/latin-america>.

## E. Conclusions

Two and a half years after the adoption of the Sustainable Development Goals, it is clear that the focus of the emerging institutional architecture for the SDGs in Latin America and the Caribbean lies on: (i) a shift towards national and local institutions, policies and actors in the approach to 2030 Agenda for Sustainable Development, which has a significant impact on national development plans and planning and budgeting systems; (ii) an increase in number of private sector and civil society stakeholders, and (iii) a particular emphasis on identifying population groups that suffer from exclusion, with a view to meeting the commitment to "leave no one behind", with a particular focus on rural, urban and territorial gaps.

The institutional coordination mechanisms adopted point to an issue that was already latent in the implementation of public policy in the 2000's: addressing the region's environmental, social and economic challenges requires comprehensive, cross-cutting, inter-regional action implemented throughout the life cycle. The development of these interventions is in full swing in the region. At the current juncture, one of the greatest shortfalls is harmonising the environmental, economic and social dimensions of development. The transition towards sustainable consumption and production patterns poses one of the most significant institutional challenges for the future.

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# CHAPTER V

## Regional progress in the statistical monitoring of the Sustainable Development Goals

- A. Summary of the statistical process at the global and regional levels
- B. National progress in the statistical monitoring of the Sustainable Development Goals
- C. Towards a regional indicator framework for monitoring the core areas for sustainable development in Latin America and the Caribbean
- D. Status of the integration of statistical and geospatial data in Latin America and the Caribbean
- E. Reflections on progress made and pending challenges in measuring the Sustainable Development Goals in Latin America and the Caribbean

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Since the adoption of the 2030 Agenda for Sustainable Development, the statistical community has undertaken a series of actions aimed at addressing the statistical challenges posed by the Sustainable Development Goals (SDGs). This chapter describes some of the advances made in statistical development at the global, regional and national levels for the attainment of the Goals. First, it summarizes the progress in statistical processes at the global and regional levels and describes actions undertaken by the region's countries in the national sphere for the statistical monitoring of the Goals. It then examines the activities conducted by the Economic Commission for Latin America and the Caribbean (ECLAC) and the Statistical Coordination Group for the 2030 Agenda in Latin America and the Caribbean to prepare a proposal for the regional indicator framework for following up on the SDGs in Latin America and the Caribbean. The chapter concludes with an overview of the outcomes of a regional study describing the status of statistical and geospatial data integration in the region's countries.

## **A. Summary of the statistical process at the global and regional levels**

### **1. Global level**

Since they were established in 2016, the Inter-Agency and Expert Group on Sustainable Development Goal Indicators and the High-level Group for Partnership, Coordination and Capacity-Building for Statistics for the 2030 Agenda for Sustainable Development have worked intensively to review the global indicator framework for monitoring the SDGs with a view to tracking progress towards achieving the targets of the 2030 Agenda. Likewise, they have been working on developing strategies for promoting activities that can help close gaps in the data needed for the construction of the indicators.

More specifically, the Inter-Agency and Expert Group on Sustainable Development Goal Indicators—with the support of all the stakeholders in the international statistical system under the coordination of the United Nations Statistics Division—has reviewed the definitions and methodological aspects of the global indicators, adjusting and enhancing the initial list, as well as defining strategies to broaden the available calculation guidelines and methodologies.

Based on the conclusions reached at the last meeting of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, the total indicators now number 232, some of which are repeated in more than one Goal (see table V.1).

Since the adoption of the initial proposal of indicators in March 2016, the Inter-Agency and Expert Group has worked to classify the SDG indicators into three tiers on the basis of their level of methodological development and the availability of data at the global level, as follows: (i) Tier 1: Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50% of countries and of the population in every region where the indicator is relevant; (ii) Tier 2: Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries; and (iii) Tier 3: No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested. According to the latest available results at 15 December 2017, the global indicators, by tier of development and availability of information at the international level, can be broken down as seen in figure V.1.

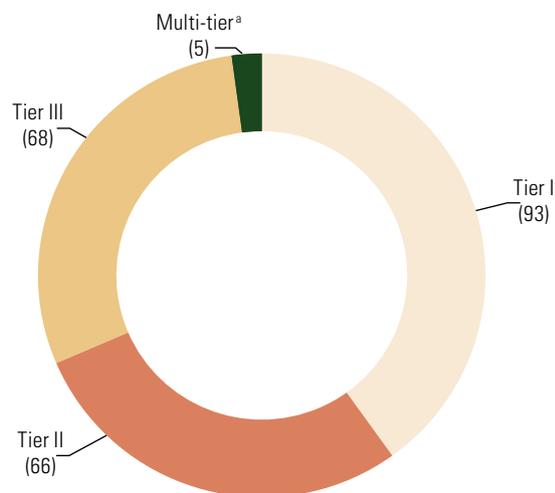
**Table V.1**  
Number of indicators in the global indicator framework for follow-up to the Sustainable Development Goals

Goals	Number of indicators
Goal 1: End poverty in all its forms everywhere	14
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	13
Goal 3: Ensure healthy lives and promote well-being for all at all ages	27
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	11
Goal 5: Achieve gender equality and empower all women and girls	14
Goal 6: Ensure availability and sustainable management of water and sanitation for all	11
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all	6
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	17
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	12
Goal 10: Reduce inequality within and among countries	11
Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable	15
Goal 12: Ensure sustainable consumption and production patterns	13
Goal 13: Take urgent action to combat climate change and its impacts	8
Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development	10
Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	14
Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	23
Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development	25

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, "Annex IV: final list of proposed Sustainable Development Goal indicators", *Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. Note by the Secretary-General* (E/CN.3/2016/2/Rev.1), New York, 2016.

**Note:** Some Goals share the same indicators; hence, the total for the 17 Goals adds up to 244 indicators, rather than 232.

**Figure V.1**  
Number of Sustainable Development Goal indicators by tiers of data availability, 15 December 2017



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, "Tier Classification for Global SDG Indicators. 15 December 2017", New York [online] [https://unstats.un.org/sdgs/files/Tier%20Classification%20of%20SDG%20Indicators\\_15%20Dec%202017\\_web%20final.pdf](https://unstats.un.org/sdgs/files/Tier%20Classification%20of%20SDG%20Indicators_15%20Dec%202017_web%20final.pdf).

<sup>a</sup> There are five multi-tier indicators (the different components of the indicator are classified in different tiers).

While this reclassification points to an 18% drop in the number of indicators classified as Tier III compared to December 2016 (83 vs. 68 indicators), in general, countries and regions vary greatly in terms of their capacity to produce the SDG indicators of the global framework. The statistical capacities to address the challenges of producing the basic information for the construction of the indicators are very uneven between member countries and, based on the analyses and diagnoses carried out since the adoption of the 2030 Agenda, Latin America and the Caribbean are no exception.

## 2. Regional level

The Statistical Conference of the Americas of ECLAC has drawn attention to the importance of joint actions between the region's statistical stakeholders in the effort to strengthen national statistical capacities to address the measurement challenges posed by implementing the 2030 Agenda.

In the past year, the Statistical Coordination Group, the working groups of the Conference, ECLAC and the United Nations entities, agencies, funds and programmes have carried out various capacity-building activities to enhance the measurement and production of statistics and indicators referring to the SDGs.

Member States have emphasized the need to promote several actions to:

- Contribute to the development of national statistical capacities
- Make progress towards a regional indicator framework
- Promote the integration of statistical and geospatial information

Activities carried out by the Statistical Coordination Group in 2017 to meet these demands included updating the diagnosis of national capacities for producing global indicators, implementing an online system to collect these results and preparing a preliminary proposal for the regional indicator framework for SDG follow-up in Latin America and the Caribbean.

## 3. Updating the diagnostic of the availability of information for producing the global indicators

The diagnostic of national statistical capacities was updated in 2017, after first being conducted in 2016 to provide an initial overview of national capacities to produce the SDG indicators, identify gaps in statistical capacities and institutions, and assess cooperative ways in which to improve regional statistics.

Although some countries had engaged earlier with these activities, by taking part in global or specific sectoral initiatives, the first consultation carried out by the Statistical Coordination Group under the auspices of the Statistical Conference of the Americas helped to establish a baseline for future actions in this area. For countries that had yet to set out along this path, the value of this exercise lay in providing the stimulus for several national statistical offices to focus on indicators that had been defined at the global level. Accordingly, to a greater or lesser extent, the diagnostic prompted national agencies responsible for producing statistical information to respond to a number of critical aspects in the production of each one of the indicators.

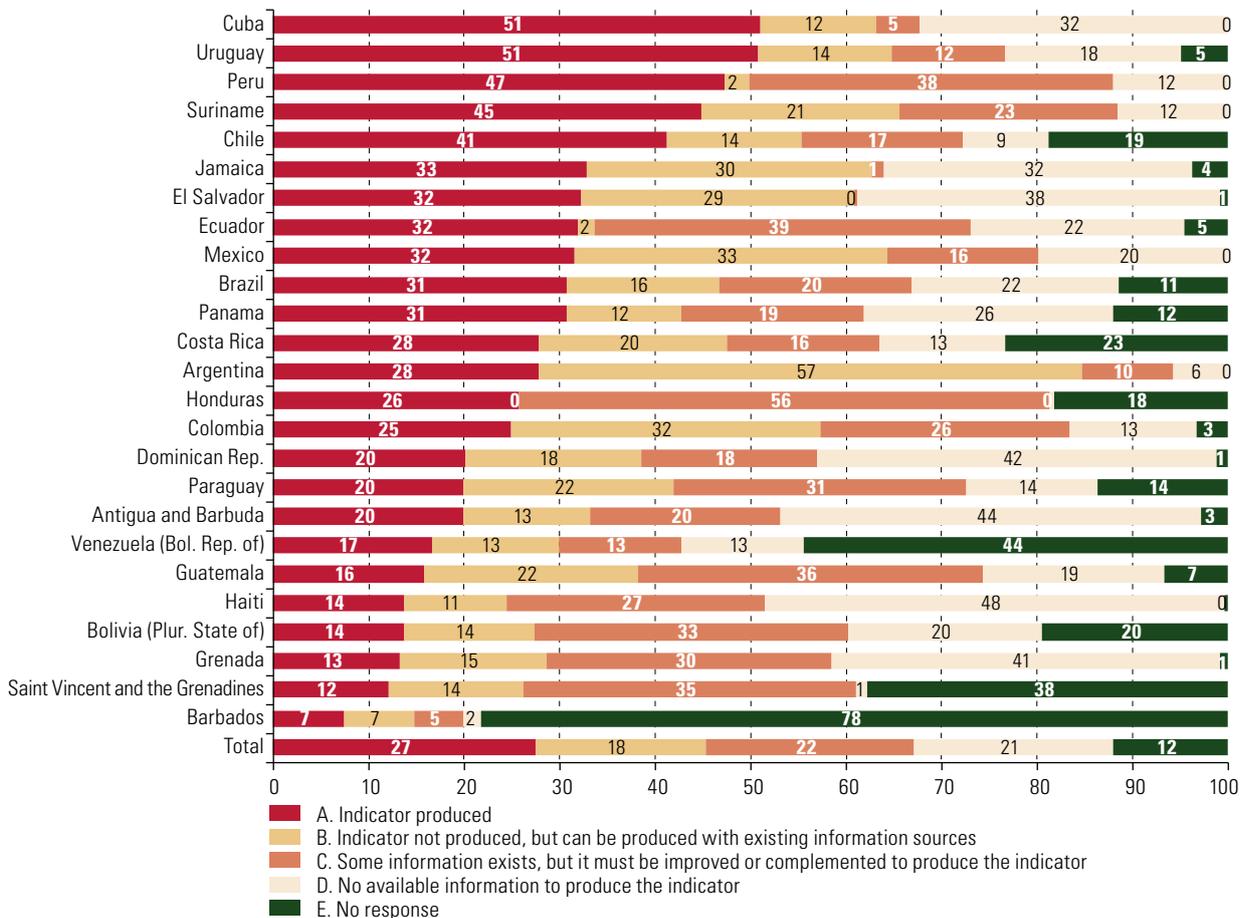
The general results of the diagnostic showed that there was an urgent need to make progress in setting up statistical monitoring mechanisms for the SDG indicators, by working towards enhanced statistical systems capable of meeting the statistical information challenges for monitoring the SDGs.

The position in January 2018 was very similar to that of 2017, with still quite sharp differences between countries and subregions, and significant lags in the countries of the Caribbean compared to the rest of the region (see figure V.2).

**Figure V.2**

Latin America and the Caribbean (25 countries): Sustainable Development Goal indicators, by level of production, by country, 2017

(Percentages)

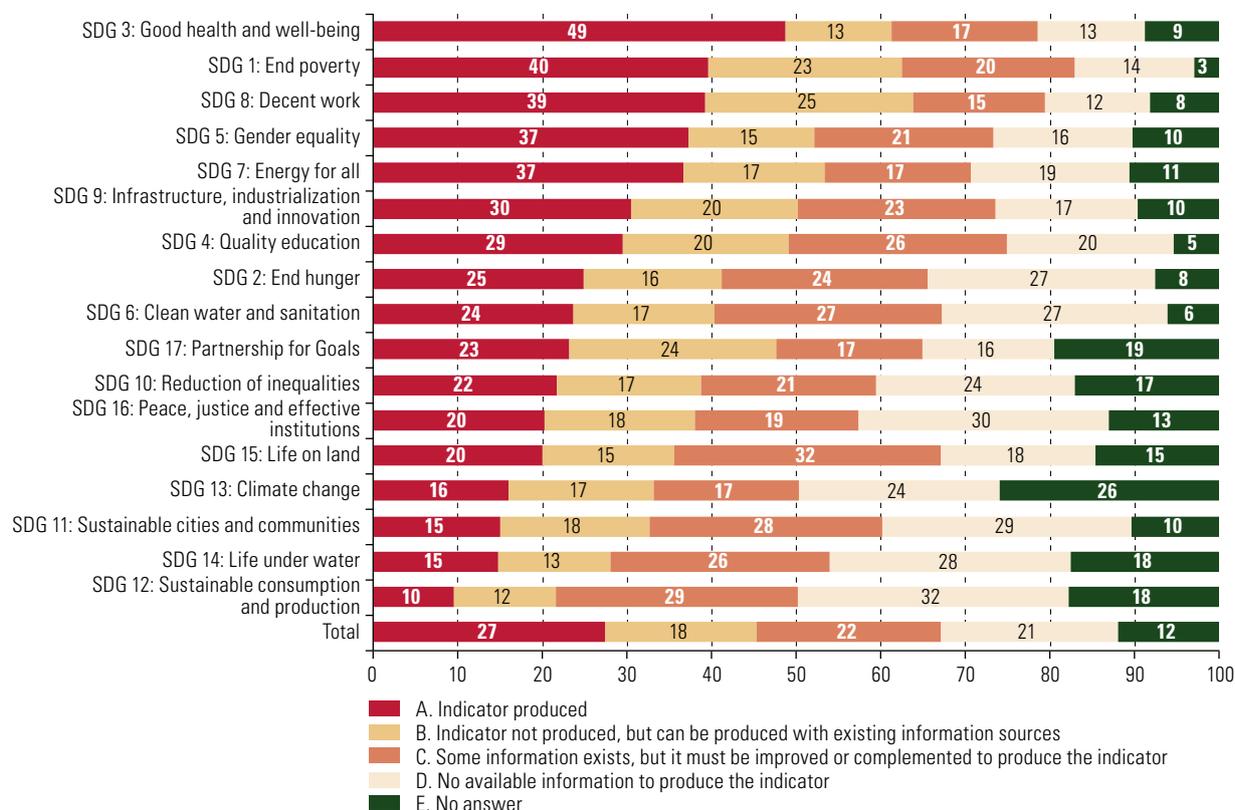


Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Production levels remain close to 45% on average, considering the indicators that already are or could be produced nationally with the available information. There is greater capacity to produce indicators for Goals related to health and well-being (Goal 3), poverty (Goal 1), decent work (Goal 8) and gender equality (Goal 5). Meanwhile, the Goals for which indicator production is lower on average are those addressing climate action (Goal 13), sustainable cities and communities (Goal 11), life below water (Goal 14) and sustainable consumption and production patterns (Goal 12) (see figure V.3).

**Figure V.3**

Latin America and the Caribbean: Sustainable Development Goal indicators by level of production, by Goal, 2017  
(Percentages)



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

These results are available on an online information system launched in 2017. This platform provides national statistical systems, United Nations agencies and other specialized agencies with access to information on the capacity of the region's countries to produce the global SDG indicators, as well as to a set of data describing the production process for each one. The platform also identifies the thematic areas of the 2030 Agenda for which countries may offer or request technical cooperation.

## B. National progress in the statistical monitoring of the Sustainable Development Goals

Apart from efforts in the global and regional spheres, in recent years the countries have taken different actions towards implementing the 2030 Agenda at the national level. These include the development—or ratification and strengthening—of new implementation and coordination mechanisms for the SDGs, the preparation of plans or strategies for the implementation of the SDGs with concrete actions for the attainment of targets, the review and calculation of indicators belonging to the global indicator framework and the construction of national frameworks for SDG follow-up that take into account the specific priorities of each member State.

This section contains the results of a regional study that identifies progress made by Latin American and Caribbean countries in the measurement of SDG indicators, including progress in statistical capacities to measure the global framework indicators, in inter-agency coordination for the statistical monitoring of the SDGs and in the construction of monitoring frameworks at the national level.

The study analysed a number of dimensions of statistical capacities: first, the institutional practices that frame statistical efforts relating to the SDGs (including the coordination of agencies responsible for producing information); second, the actions taken to generate monitoring and data production frameworks—prioritizing targets, developing methodologies and classifying indicators based on their statistical viability—and, lastly, practices in reporting and dissemination of SDG data. Priority areas for countries were also analysed, as were the proposed indicators for their measurement.

The information was collected between August and December 2017 through open searches of information available online for the 33 members of the Forum of the Countries of Latin America and the Caribbean on Sustainable Development. Efforts were directed, on the one hand, towards determining the role of national statistical offices as guarantors of the production of official statistics and, on the other, towards progress made in prioritizing targets and building national frameworks for SDG follow-up. The study considered the scope of the proposals, the degree of national specificity and the criteria used for national alignment or adaptation of targets and indicators.

The study compiled information from institutional websites in the countries, official websites for the implementation of the SDGs at the national level, websites of institutions responsible for heading up national implementation processes, websites of national statistical offices, resources published by United Nations agencies and materials submitted by national representatives in national, regional and global seminars or workshops, as well as information from the press.

Once the information from these open searches was compiled and systematized, the 33 countries were consulted to confirm the information compiled on their national frameworks for SDG follow-up or, where information on a national indicator framework had not been found on public websites, to confirm that the framework was still under development.

This study provides key information to continue strengthening the national statistical offices in the production of SDG indicators in the region. The dissemination of good practices helps to strengthen national statistical systems by creating and empowering inter-agency and intersectoral mechanisms under the leadership of the national statistical offices.

## 1. Progress with statistical institutions

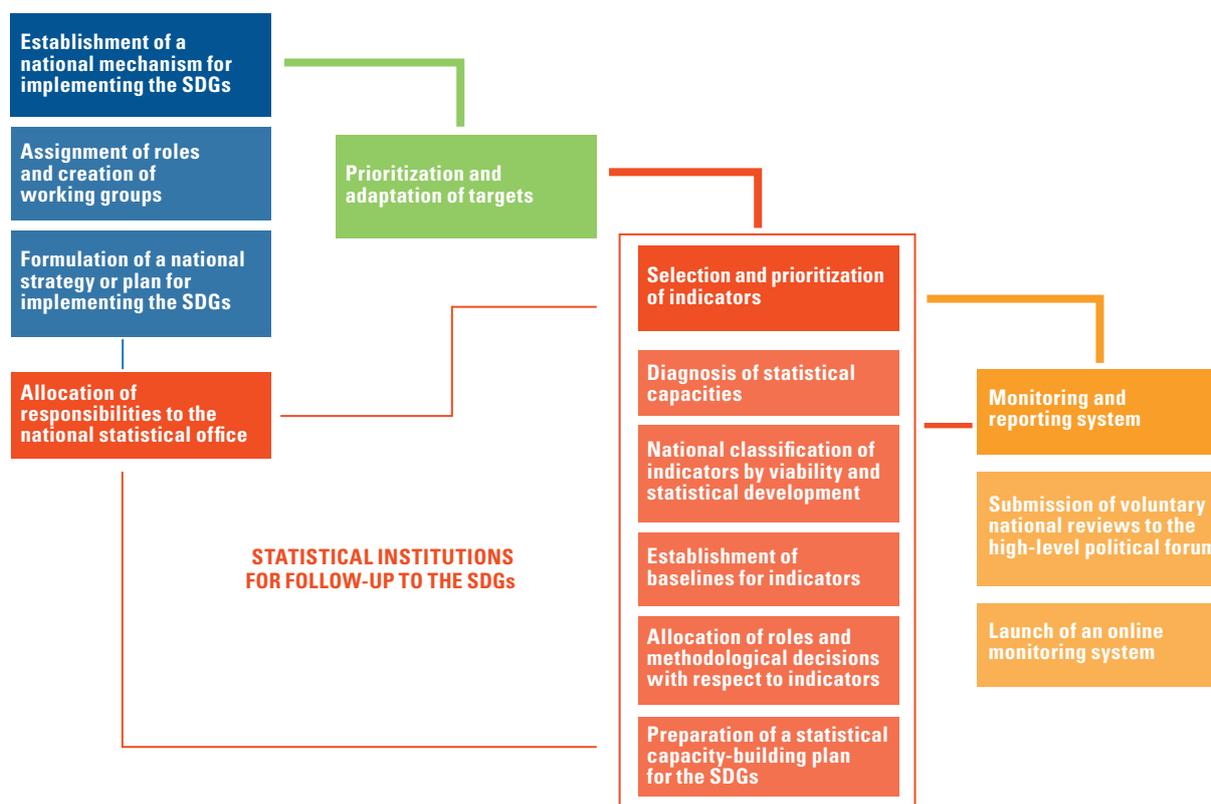
To a large extent, difficulties in data measurement and collection for SDG follow-up can be solved only by the adoption of a multisectoral approach in each country, in which all the stakeholders in the national statistical system—including new stakeholders from the private sector, civil society and academia—contribute to statistical production and support the process. Given the multidimensional nature of this process, it will be necessary to ensure that all stakeholders are able to manage high-quality information, especially in countries that already require special support to produce basic information and will thus need to make an even greater effort to cover the information requirements of the 2030 Agenda.

Thus, it has been an important step to establish national SDG implementation mechanisms that have engaged producers and users of statistical information and that have gained recognition for national statistical offices as the governing bodies responsible for national statistics. In some cases, SDG implementation efforts and the establishment of national coordination mechanisms have fostered new partnerships with other public agencies, the private sector and academia, and have helped to improve previous coordination mechanisms, including in relation to the governance and leadership

necessary to properly develop national statistical systems. Setting up these mechanisms is an essential part of implementing the development agenda, as they will be responsible for coordinating the actions needed to actually meet the targets.

Although there is no single process of SDG implementation at the national level, the most successful countries so far have opted to ratify international commitments at the national level and establish or appoint inter-agency mechanisms with overall responsibility for the national implementation of the 2030 Agenda. Some have also developed plans or strategies for implementing the SDGs, conducted participatory processes to align national targets with the SDGs and —albeit to a lesser extent— selected a framework of indicators to monitor the selected targets, together with a plan of work for statistical development related to the chosen indicators. Some countries have even advanced in defining metadata for each indicator, in line (albeit in differing degrees) with international technical requirements and good practices. The process also includes the design of a permanent monitoring system and assessment of the results in each country, including the preparation and submission of follow-up reports in each sphere (see diagram V.1).

**Diagram V.1**  
Strategy for implementing the Sustainable Development Goals at the national level



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

To date, as noted in chapter IV of this report, there is evidence that at least 20 national mechanisms for implementing the SDGs have been established in the region. Most of these are in the countries of Latin America, while in the Caribbean substantial institution-building progress has been made in Belize, Jamaica, and Trinidad and Tobago.

These institutional arrangements have been led in most cases by the planning and foreign affairs ministries and, to a lesser extent, by departments reporting directly to the office of the president. These forums bring together many stakeholders from the public sector, academia and civil society, many of which have engaged very actively in joint work to adapt and prioritize targets at the national level.

As part of these arrangements, in many countries national statistical offices have been acknowledged as the governing entities of the national statistical system and, as such, they are leading the definition and methodological development of national indicators. In most cases, national statistical offices have been called upon to act as the technical bodies of the national mechanisms for implementing the Sustainable Development Goals and in some cases, they also lead specific subgroups focused on measuring and defining the indicators (such is the case in Chile, Colombia, Cuba, the Dominican Republic and Uruguay).

The national statistical offices convene and coordinate tasks for the definition and methodological development of the indicators, setting protocols to ensure greater technical and methodological rigour and comparability of the indicators over time and at the global scale. To this effect, national statistical offices are coordinating inter-agency efforts to establish responsibilities in the collection, processing, analysis and dissemination of information, as well as promoting the adoption of standardization and quality-control tools. Part of this work includes establishing and regulating information flows between different stakeholders.

In this regard, mention must be made of the national statistical system of Guatemala which, guided by the National Institute of Statistics (INE), has implemented a capacity-building and adaptation process to respond to baseline information demands with technical standards for results-based management and the SDG agenda. The starting point of these efforts was the design of a general strategy of statistical management with an emphasis on baselines (EGGE) and its accompanying guide, which contained general guidelines for members of the national statistical system for building specific statistical management strategies. To date, 27 Guatemalan agencies have submitted the definitive versions of their specific strategies for statistical management.

## 2. Development of national frameworks for follow-up to the Sustainable Development Goals

### **(a) Prioritizing targets and selecting indicators**

The need to establish reliable mechanisms for monitoring the achievement of the SDGs is increasingly important, and providing appropriate follow-up has become a national, regional and global priority. Several countries have carried out, or are now conducting, broad participatory processes at the national level aimed at rethinking national development priorities and linking these to the Goals adopted at the global level. To achieve this, countries have prioritized or adapted global indicator framework targets, identifying convergences with their national plans, aiming to define the national indicators on which to base SDG follow-up and reporting, as well as to prioritize efforts to strengthen statistical capacities and bolster investment in information production processes in the coming years.

Not all countries have recorded the same level of progress. Whereas some have emphasized the need to build new frameworks for indicators to monitor the 2030 Agenda overall, others have prioritized indicators from the global indicator framework, or indicators which have been identified for annual review in the voluntary national reviews submitted to the high-level political forum on sustainable development.

From the analysis of the available information, countries may be divided into four categories, by type of process:

- (i) Countries whose strategy for follow-up of SDG implementation focuses on: (a) prioritizing or adapting targets to the national development plan; (b) selecting, adapting or constructing relevant indicators to follow up on the selected targets; (c) developing metadata and dissemination platforms for the chosen indicators. This group includes Argentina, Colombia, Costa Rica, El Salvador, Honduras and Mexico.
- (ii) Countries such as Chile and Peru, which have prioritized specific targets, in accordance with their national development plans, but that have yet to define the indicators that will be used to follow up on these targets.
- (iii) Countries which, in view of the lengthy process entailed in defining a national framework, have decided to use the global indicators—to the extent of their statistical capacities and feasibility—while simultaneously preparing and defining a national framework. Ecuador is representative of this group.
- (iv) Countries which have prioritized indicators that are part of the SDGs and have been reviewed in the voluntary national reviews submitted to the high-level political forum. The Dominican Republic, Haiti and Uruguay are in this group.

Although this process has unfolded differently in each country—depending directly on the strengths and degree of coordination between national institutions— all these processes share the common purpose of constructing a national indicator framework to follow up on the 2030 Agenda.

Thus, a national framework for SDG follow-up may be understood as a coherent set of targets and indicators, formulated by consensus between national agencies, which serve to identify the different dimensions of sustainable development, measure the population's standard of living and support the formulation of policies, programmes and projects to achieve sustainable development within a given timeframe. Accordingly, to date, eight Latin American countries (Argentina, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico and Panama) have established a national framework of preliminary indicators for SDG follow-up at the national level. Some have progressed so far as to have the relevant statistical operations identified within their national statistical systems.

The targets prioritized by each country relate directly to national issues, interests and needs. However, in establishing their national priorities, most countries have sought convergence between their national plans and the SDGs. By the same token, in prioritizing their targets, the countries have taken into account their international commitments or agreements, as in the cases of Chile and Mexico—which consider the green growth agenda—or Colombia—which has aligned its prioritization of targets with the peace agreement. This process of determining the targets of national frameworks for SDG indicators links the longer-term global target timeframe to the short- and medium-term commitments and priorities of national governments.

To date, 16 countries in Latin America and the Caribbean have prioritized or adapted some of the SDG targets in accordance with the requirements of their national development plans. Although only two Caribbean countries have prioritized targets at the national level, the member States of the Caribbean Community (CARICOM) have committed to working together on a group of selected targets and indicators at the subregional level, taking into account the vulnerabilities of these countries (see box V.1).

**Box V.1****Prioritizing Sustainable Development Goal indicators in the Caribbean Community (CARICOM)**

The Caribbean Community (CARICOM), through the Standing Committee of Caribbean Statisticians and its main subsidiary body, the CARICOM advisory group on statistics, is working on a list of prioritized indicators to follow up on the 2030 Agenda and address the main shared challenges faced by Caribbean countries, especially the small island developing States.

The process for defining this basic set of indicators included the organization of regional face-to-face workshops and off-site meetings to create awareness and involve policymakers and statisticians who would oversee the compilation and production of the indicators. One key activity was a workshop held jointly with the United Nations Statistics Division, ECLAC and the CARICOM Secretariat, in which approximately 180 preliminary indicators were selected. Subsequently, the Standing Committee of Caribbean Statisticians created a technical working group comprising national statistical bodies and offices, which continued with these efforts and defined a shorter set of 109 indicators.

This set of prioritized indicators was defined following different criteria, including their relationship with the CARICOM five-year strategic plan and with the national development plans and priorities of member States. Indicators were also meant to reflect the vulnerabilities of CARICOM member States—as well as those of the small island developing States—and allow for comparisons at the national, regional and international level. The specific selection criteria were that the indicators should:

- Be linked with national and regional planning programmes and with the development priorities, and provide a solid measure of progress in the development of CARICOM countries.
- Enable the SDGs to be measured in the context of the various population groups in CARICOM, leaving no one behind.
- Reflect the unique vulnerabilities of the small island developing States of CARICOM.
- Allow for comparability at the national, regional and global levels.

The list of indicators is currently under review to verify the availability of the necessary information for regular monitoring of these indicators in the Caribbean countries. Once this stage is concluded, the proposal will be submitted for adoption to the Council for Trade and Economic Development, the political body responsible for sustainable development in the subregion.

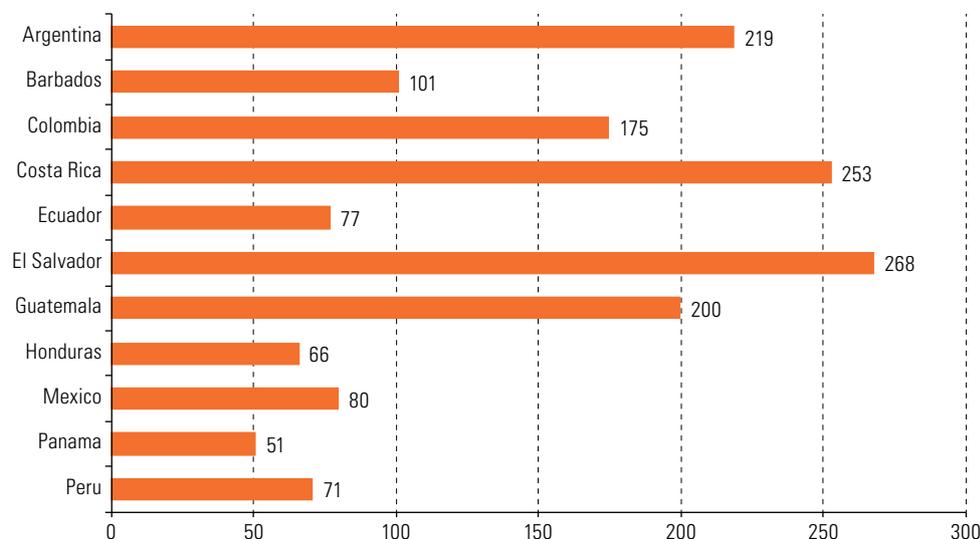
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Caribbean Community (CARICOM).

In defining and prioritizing targets, countries have also made progress in developing indicator groupings—including both measurements from the global SDG indicator framework and proposals more adapted to their national contexts—with a prioritized core of more relevant and feasible indicators for monitoring progress towards the targets adopted. Most of these efforts have been led by national statistical offices, with the participation of all spheres of the national statistical systems. Thus, it has been necessary to establish synergies between the different systems of indicators already existing at the national level, or between those used for monitoring other regional or global commitments.

To date, 11 countries have selected a set of preliminary indicators for national-level SDG monitoring covering all the Goals, and 3 countries have identified a group of national indicators focused on the Goals prioritized in the voluntary national reviews submitted to the high-level political forum. Several of the countries that have a more consolidated institutional structure for official statistics have also now formulated technical notes on specific conceptual and operational definitions.

Having systematized the information from the 11 countries with a set of SDG indicators, it may be seen that the number of indicators used by region's countries varies widely (see figure V.4). Some countries have opted for broad frameworks with over 200 indicators (Argentina, Costa Rica and El Salvador), while others have adopted smaller frameworks with less than 100 (Guatemala and Mexico). Importantly, the number of indicators in each framework is not necessarily related to the coverage of the Goals.

**Figure V.4**  
Latin America and the Caribbean (11 countries): Sustainable Development Goal indicators at the national level, by country



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

**Note:** The Government of Peru has prioritized 26 indicators in the framework of the SDGs. This figure illustrates the number of global framework indicators that have been reported as SDG indicators in budgetary programmes.

## (b) National classification by statistical feasibility

Using the information collected at the regional level to describe the national statistical capacities to produce SDG indicators, several countries expanded on the national diagnostic to confirm the availability of information in their statistical systems and corroborate the relevance of the measurements. Several countries have also carried out a detailed analysis of the available information sources in their national statistical systems.

Analysis of the feasibility of disaggregating indicators has led to the identification of alternative data sources and proposals of additional indicators and statistical information needs, which has thrown up new challenges beyond simply defining indicators. These challenges refer to the capacity to produce the data necessary to measure the indicators and the need to coordinate inter-agency efforts to establish priorities in collecting, processing, analysing and disseminating information.

As at the global level, some countries have established their own classification of indicators on the basis of the regional diagnosis, based on their statistical calculation viability, the availability of standards and efforts required for their production. This is the case of Argentina, Colombia, Costa Rica, Mexico and Panama.

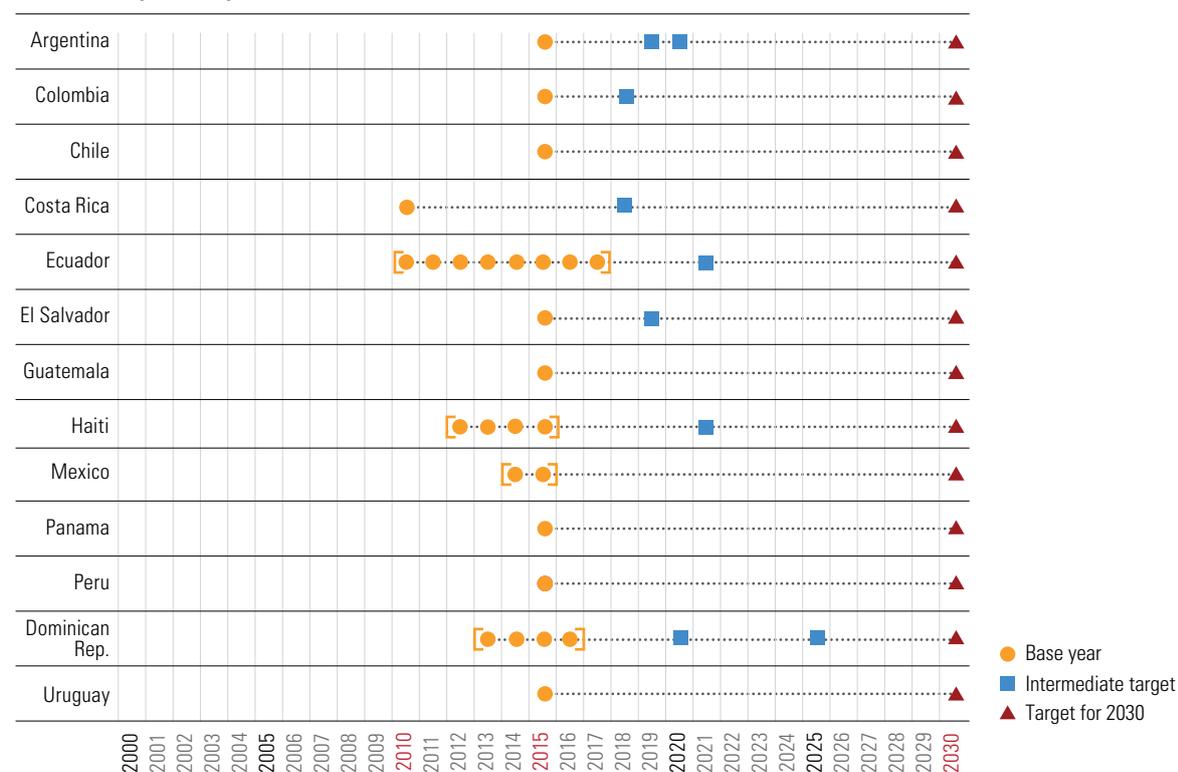
## (c) Defining indicator baselines

Several countries have made progress in the construction of baselines and intermediate targets, and in discussions on the best way to calculate them, especially in terms of their usefulness and use.

Evidently, baselines are needed in order to measure progress towards the achievement of the sustainable development targets and assess the effectiveness of national plans and programmes, as they set the point at which the first measurement is taken and in relation to which the results achieved thereafter will be measured during the term of the 2030 Agenda.

At least 13 of the region's countries have already defined baselines for the SDG indicators (see figure V.5), taking the reference starting point for the measurement of results as around 2015. Some countries have established or are close to establishing the specific base year for their measurements, but are still in the process of defining indicators.

**Figure V.5**  
Latin America and the Caribbean (13 countries): baselines for producing the Sustainable Development Goal indicators, by country, 2000-2030



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

The National Administrative Department of Statistics of Colombia (DANE) has emphasized the importance of distinguishing between baselines for ex ante and ex post comparisons, and baselines viewed in a context of assessment, in which their rationale and usefulness can be approached in a differentiated manner.

For example, Guatemala's proposal consists not only of a baseline at the national level, but also the various disaggregations that will serve to capture nuances of development in relation to different social groups and territories (ethnic identify, geographic area, age group, sex, territory, and other characteristics required for particular indicators).

#### (d) Preparing metadata

Documentation on the methodologies to be used for the regular production of indicators is key to maintaining coherence and comparability between data, over time and with respect to other countries. It is also an essential component in data quality analysis, as it can verify that statistics are based on statistically sound procedures. This information, in the form of metadata, must accompany data releases so that users can fully understand the information published.

At the global level, in the framework of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, work is ongoing on the construction of metadata sheets for each indicator in the global framework. Although this provides countries with overall guidelines on the construction of each metric, it is imperative to adapt this information to national practices, a process that in most cases accounts for the differences that arise between national and international data for the same point of observation. The analysis indicates that at least nine countries in the region are developing—or have already developed—metadata for the SDG indicators to be used at the national level. Among these are Cuba, the Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Peru, the Plurinational State of Bolivia and Uruguay.

### **(e) Designing actions to improve national monitoring capacities: new requirements for statistical plans**

Statistical management plans and strategies are essential to guide the way in which institutions manage and generate statistical production to meet the information needs of a country or sector. A plan or national strategy for the development of statistics should set out two overarching goals: (i) to organize the production and dissemination of statistics prepared by the national statistical system in order to increase the value of information, and (ii) to boost the synergies between the stakeholders of the national statistical system in order to provide—in line with specific statistical standards—timely and useful information for decision-making.

As regards the SDG indicators, some countries have gone a step further and included actions in their national statistical plans to enable the institutions within their national statistical system to generate and apply SDG-related indicators using predefined guidelines.

A case in point is the 2017–2022 national statistical plan of Colombia, which will be the country's roadmap for statistical production over the next five years. This document will guide agencies in the national statistical system in their work to strengthen their statistical activities. Among other things, the plan proposes to broaden the national and territorial statistical information provided by the national statistical system to meet international commitments such as those of the SDGs and OECD.<sup>1</sup>

Other examples are Ecuador's statistical development plan for SDG indicator reporting, and Guatemala's general strategy for statistical management with an emphasis on baselines.

### **(f) Reporting and dissemination systems for Sustainable Development Goal indicators at the national level**

As a part of the mechanisms for follow-up and review of progress in the global implementation of the 2030 Agenda for Sustainable Development, the Member States of the United Nations have been encouraged to conduct regular and inclusive reviews of their progress at the national and subnational levels. The expectation is that these national reviews will serve as the basis for the periodic reviews submitted to the high-level political forum under the auspices of the Economic and Social Council (ECOSOC). As provided in the 2030 Agenda, reviews must be voluntary, State-led and involve multiple stakeholders. The purpose of the voluntary national reviews is to enhance the exchange of experiences, including successes, challenges and lessons learned, with a view to accelerating the implementation of the 2030 Agenda. They also help to strengthen government policies and institutions, and to mobilize multi-stakeholder support and partnerships towards the achievement of the SDGs.

Voluntary national reviews have served as catalysts for progress towards the implementation of the 2030 Agenda in its different spheres. Of the 14 countries in Latin America and the Caribbean which have a set of SDG indicators available for consultation, only 2 have yet to submit their voluntary national reviews to the high-level political forum (although they have committed to do so in 2018).

<sup>1</sup> See National Administrative Department of Statistics (DANE), *Plan Estadístico Nacional 2017-2022*, Bogotá, 2017.

Some countries have also committed to preparing annual follow-up reports compiling lessons learned, information on indicators and the actions of national stakeholders at different levels. The expectation is that future reports will focus on describing the progress and experiences on the path towards sustainable development.

With a view to ongoing monitoring of progress, several countries have developed or are developing online platforms for SDG tracking, as well as online monitoring and follow-up systems for the SDG indicators (see table V.2).

**Table V.2**  
Sustainable Development Goals dissemination systems at the national level

	<b>Name and URL</b>	<b>Responsible institutions</b>
Argentina	"Agenda 2030-ODS Argentina" [online] <a href="http://www.odsargentina.gob.ar/">http://www.odsargentina.gob.ar/</a>	National Council for the Coordination of Social Policies of the Officer the President
Brazil	"Plataforma Agenda 2030. Acelerando as transformações para a Agenda 2030 no Brasil" [online] <a href="http://www.agenda2030.com.br/">http://www.agenda2030.com.br/</a>	Institute of Applied Economic Research (IPEA)
Chile	"Chile Agenda 2030 para el Desarrollo Sostenible" [online] <a href="http://www.chileagenda2030.gob.cl">http://www.chileagenda2030.gob.cl</a>	Technical Secretariat, Ministry of Social Development
Colombia	"Objetivos de Desarrollo Sostenible" [en línea] <a href="https://ods.gov.co/">https://ods.gov.co/</a>	National Planning Department (DNP) and National Administrative Department of Statistics (DANE)
Costa Rica	"Sustainable Development Goals" [online] <a href="http://www.ods.cr/">http://www.ods.cr/</a>	Ministry of National Planning and Economic Policy (MIDEPLAN)
	"Sustainable Development Goals. Presentation video" [online] <a href="http://www.inec.go.cr/objetivos-de-desarrollo-sostenible">http://www.inec.go.cr/objetivos-de-desarrollo-sostenible</a>	National Institute of Statistics and Censuses (INEC) of Costa Rica
Dominican Republic	"Objetivos de Desarrollo Sostenible" (ODS. Presentación) [online] <a href="http://odm.gob.do/Los-ODS">http://odm.gob.do/Los-ODS</a>	Ministry of Economy, Planning and Development
Ecuador	"Objetivos de Desarrollo Sostenible" [online] <a href="http://www.ecuadorencifras.gob.ec/objetivos-de-desarrollo-sostenible/">http://www.ecuadorencifras.gob.ec/objetivos-de-desarrollo-sostenible/</a>	National Institute of Statistics and Censuses (INEC) of Ecuador
El Salvador	"Objetivos de Desarrollo Sostenible" (ODS) [online] <a href="http://www.odselsalvador.gob.sv/indicadores/">http://www.odselsalvador.gob.sv/indicadores/</a>	Technical and Planning Secretariat of the Office of the President of the Republic of El Salvador
Guatemala	"Objetivos de Desarrollo Sostenible" [online] <a href="http://www.segeplan.gob.gt/nportal/index.php/ods">http://www.segeplan.gob.gt/nportal/index.php/ods</a>	Secretariat for Planning and Programming of the Office of the President (SEGEPLAN) and the National Institute of Statistics (INE)
Jamaica	"Overview of the 2030 Agenda" [online] <a href="http://statinja.gov.jm/sdg.aspx#/Overview">http://statinja.gov.jm/sdg.aspx#/Overview</a>	Statistical Institute of Jamaica
Mexico	"Information system of the Sustainable Development Goals" [online] <a href="http://agenda2030.mx/">http://agenda2030.mx/</a>	Office of the President of the Republic
Peru	"Perú: sistema de monitoreo y seguimiento de los indicadores de los Objetivos de Desarrollo Sostenible. 'Objetivos para transformar nuestro país'" [online] <a href="http://ods.inei.gob.pe/ods/">http://ods.inei.gob.pe/ods/</a>	National Institute of Statistics and Informatics (INEI)
Uruguay	"Uruguay Suma Valor" [online] <a href="http://www.ods.gub.uy/index.php">http://www.ods.gub.uy/index.php</a>	The Office of Planning and the Budget, through the Directorate of Management and Evaluation (AGEV), together with the National Institute of Statistics (INE) and the Uruguayan Agency for International Cooperation (AUCI)

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

### 3. Progress in metrics for the 2030 Agenda at the national level

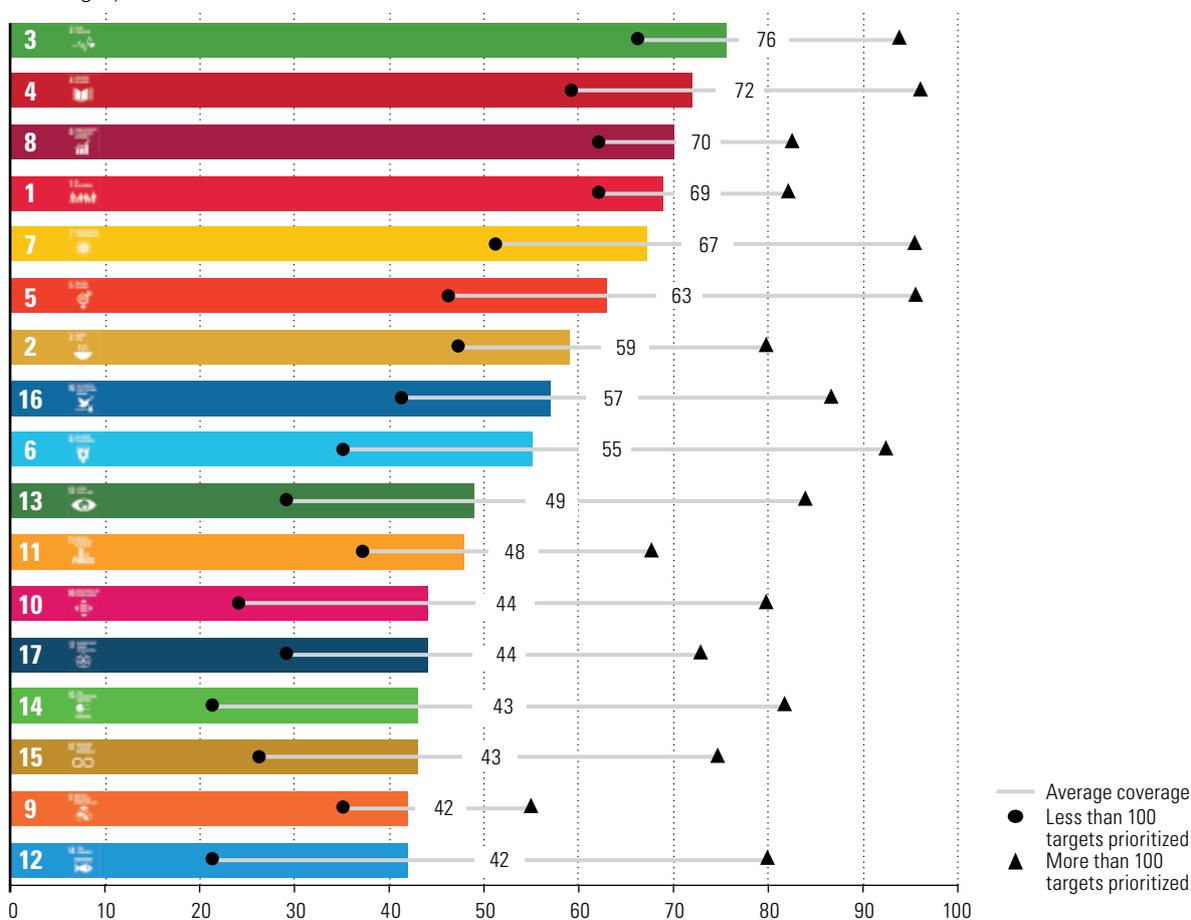
Following the description given above, it is useful to look in more detail at the targets prioritized by the countries, which also helps to account for the uneven picture of their progress regarding the different indicators. For this purpose, the targets included in the national proposals were taken as the unit of analysis. The target is used as the control variable and the assumption is that a metric will be covered if it has at least one indicator. After identifying a target that has been prioritized at the national level, a direct comparison is made with the corresponding SDG target.

Haven defined the unit of analysis, the exercise focused on the 14 countries that, according to the available information, had at that point prioritized national targets and linked them to the 169 targets of the SDGs.

The purpose of the exercise was to identify the average coverage at the regional level for each Goal, on the basis of the global targets included in the national sphere, and to determine which targets had been prioritized by the 14 countries (based on their relevance or feasibility of being measured), and those that were omitted. It also revealed the issues reflected in the countries' choices of priorities and, in some cases, the associated and additional indicators identified at the local level.

The average coverage of each Goal was calculated by taking the average number of targets prioritized by each country in relation to the targets of the global framework, for each of the 17 Goals. As illustrated in figure V.6, good health and well-being (SDG 3), quality education (SDG 4) and decent work and economic growth (SDG 8) show coverage of 70% or more, with respect to the global targets. In turn, the targets the countries have prioritized under the Goals referring to climate change (SDG 13), sustainable cities and communities (SDG 11), reduction of inequalities (SDG 10), partnerships for the Goals (SDG 17), life below water (SDG 14), life on land (SDG 15), industry, innovation and infrastructure (SDG 9) and responsible consumption and production (SDG 12) show coverage of less than 50%, on average.

**Figure V.6**  
Latin America and the Caribbean (14 countries): average coverage of the Sustainable Development Goals by the targets prioritized at the national level  
(Percentages)



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

In terms of the inclusion of the global targets in the countries' lists of national priorities, the analysis of the national framework revealed four groupings: a first group of targets that were included by more than 80% of the countries (those shown in green in figure V.7); a second group of targets that were chosen by 60%-79% of the countries (in yellow); a third consisting of those targets chosen by 21%-59% of the countries (in orange); and a fourth, consisting of targets included by 20% or fewer of the countries (in red).

**Figure V.7**

Latin America and the Caribbean (14 countries): average coverage of each Sustainable Development Goal and countries that have included targets from the global framework in their national priorities

(Percentages)

	69	1.1	1.2	1.3	1.4	1.5	1.a	1.b												
		86	100	64	79	50	71	36												
	59	2.1	2.2	2.3	2.4	2.5	2.a	2.b	2.c											
		79	86	64	57	29	71	50	36											
	76	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.a	3.b	3.c	3.d						
		100	100	79	79	64	86	93	71	64	71	64	64	50						
	72	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.a	4.b	4.c									
		100	93	71	64	64	79	43	79	50	79									
	63	5.1	5.2	5.3	5.4	5.5	5.6	5.a	5.b	5.c										
		64	79	64	71	86	57	57	64	29										
	55	6.1	6.2	6.3	6.4	6.5	6.6	6.a	6.b											
		79	86	64	64	50	29	36	36											
	67	7.1	7.2	7.3	7.a	7.b														
		93	93	79	36	36														
	70	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	8.10	8.a	8.b							
		86	79	71	43	100	86	79	79	86	64	21	43							
	42	9.1	9.2	9.3	9.4	9.5	9.a	9.b	9.c											
		64	86	64	64	79	43	50	57											
	44	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.a	10.b	10.c									
		64	57	29	64	50	29	43	43	29	36									
	48	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.a	11.b	11.c									
		86	50	29	43	64	71	43	36	43	14									
	42	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.a	12.b	12.c								
		43	36	43	64	57	36	29	29	21	43	21								
	49	13.1	13.2	13.3	13.a	13.b														
		71	64	57	36	14														
	43	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.a	14.b	14.c									
		43	50	36	36	71	36	36	43	43	36									
	43	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	15.a	15.b	15.c							
		100	50	50	36	71	36	36	29	36	29	29	21							
	57	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	16.10	16.a	16.b							
		100	57	64	64	57	86	43	29	71	36	43	36							
	44	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	17.10	17.11	17.12	17.13	17.14	17.15	17.16	17.17	17.18	17.19
		86	29	57	71	14	57	21	57	43	29	57	36	36	21	36	50	36	50	57

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

Figure V.7 shows the priorities that countries have chosen, with respect to the targets of the global framework, in selected targets for their national SDG frameworks.

An important caveat here is that the targets prioritized could be influenced by the availability of information and not necessarily reflect the importance that a particular country attaches to a given issue.

**Goal 1. End poverty in all its forms everywhere.** To end poverty in all its forms —as one of the region's main challenges— is one of the targets selected by most countries. While 12 countries include measurements to indicate progress in terms of income poverty (target 1.1), all 14 include metrics for the multidimensional poverty target (target 1.2). Although the average coverage for this Goal's target stands at 69%, only a few countries have defined metrics for the dimensions referring to the creation of policy frameworks at the national, regional and international levels to support accelerated investment in poverty eradication actions (1.b).

**Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.** Total average coverage for this Goal stood at 59%, with significant differences between the countries that included more than 100 targets and those that selected less than 100 targets in their national frameworks. None of the targets under this Goal were selected by all 14 countries, but 11 included targets aimed at improving food security (target 2.1) and 12 had targets aimed at reducing malnutrition (target 2.2). The same cannot be said of targets to maintain genetic diversity in seeds (target 2.5); correct and prevent trade restrictions and distortions in world agricultural markets (target 2.b) and ensure the proper functioning of food commodity markets (target 2.c), which, despite being indispensable for the attainment of the Goal, were included by only 4, 7, and 5 countries, respectively.

**Goal 3. Ensure healthy lives and promote well-being for all at all ages.** Maternal health (target 3.1) and infant mortality (target 3.2) were prioritized by all 14 countries. A good number, though not all, also prioritized epidemics such as HIV-AIDS, tuberculosis and malaria, as well as other transmittable diseases, traffic accidents, and sexual and reproductive health. Half of the countries included metrics on early warning, and risk reduction and management, but in most cases these were frameworks with over 100 targets in total.

**Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.** Target 4.1 under this Goal, inclusive and equitable quality primary and secondary education leading to relevant and effective learning outcomes, is prioritized by all 14 countries. Most countries have also included targets on early childhood care and development (target 4.2), youth and adult literacy (target 4.6), suitable facilities (target 4.a) and qualified teachers (target 4.c). Although this Goal has the greatest overall coverage (72%) after health, several countries whose national frameworks have fewer than 100 targets in total do not measure the targets linked to the knowledge and skills needed to promote sustainable development (target 4.7).

**Goal 5. Achieve gender equality and empower all women and girls.** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life (target 5.5), is a target prioritized by 12 of the 14 countries. Ten countries have defined metrics for targets related to physical and economic autonomy (targets 5.2 and 5.4), while only 29% of countries prioritize measures referring to policies and legislation for the promotion of gender equality (target 5.c).

**Goal 6. Ensure availability and sustainable management of water and sanitation for all.** Achieve access to adequate and equitable sanitation and hygiene for all (target 6.2) is prioritized by 12 of the countries analysed under this Goal. Despite 55% coverage for Goal 6, a high percentage of countries have not defined metrics for three of its associated targets: protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes (target 6.6); international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes (target 6.a), and participation of local communities in improving water and sanitation management (target 6.b).

**Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all.** This Goal has one of the fewest targets in the global framework, so it might be expected that most of them would be included in the national frameworks and in the chosen metrics. It does in fact have one of the highest levels of coverage (67%) —making it one of the Goals for which countries include specific metrics— but it is significant that the targets to which least priority is afforded are those concerning international cooperation in research, technology and infrastructure for clean energy (target 7.a) and modern and sustainable energy services (target 7.b).

**Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.** Of the 12 targets associated with this Goal, 7 are included by 10 of the countries examined. All the countries prioritize achieving full and productive employment and decent work (target 8.5), while 12 propose metrics for economic growth with sustainable levels of economic productivity (target 8.1), youth not in employment, education or training (target 8.6) and implementation of policies to promote sustainable tourism (target 8.9). In contrast with the other Goals, the targets prioritized by all 14 countries for this Goal are similar regardless of the total number of targets included in the national frameworks. Despite the importance of international cooperation in the context of this Goal, increasing Aid for Trade support for developing countries (target 8.a) and the global strategy for youth employment (target 8.b) are the most underrepresented targets in the national frameworks.

**Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.** Sustainable and inclusive industrialization (target 9.2) is prioritized by 12 of the 14 countries. Sustainable and resilient infrastructure (target 9.a) is prioritized by only 6 of them. Despite its importance in achieving sustainable production, this Goal has the lowest metrics coverage, with countries including only 42% of its targets, on average.

**Goal 10. Reduce inequality within and among countries.** This is one of the seven Goals with low average coverage (44%), and none of its targets have been prioritized by all 14 countries. Four targets are included by only five or fewer countries: equal opportunity, eliminating discriminatory laws, policies and practices (target 10.3); representation and voice for developing countries in decision-making in global international economic and financial institutions (target 10.6); encouragement of official development assistance and financial flows (target 10.b) and reduction of the transaction costs of migrant remittances (target 10.c).

**Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.** This Goal is also among the seven with the lowest average coverage; the only target selected by 12 of the countries is target 11.1, ensure access for all to adequate, safe and affordable housing and basic services and upgrading slums. Supporting least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials (target 11.c) is the most underrepresented target in the metrics chosen for the national frameworks.

**Goal 12. Ensure sustainable consumption and production patterns.** Like the Goal on reduced inequalities, Goal 12 has no target prioritized by all 14 countries. Its coverage levels are among the lowest (42%), and several of its targets have been selected by only a few countries: support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production (target 12.a); rationalize inefficient fossil-fuel subsidies (target 12.c); promote public procurement practices that are sustainable (target 12.7); and ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature (target 12.8).

**Goal 13. Take urgent action to combat climate change and its impacts.** Average coverage for this Goal stands at 49%, but countries whose national frameworks include more than 100 targets have defined a significant number of metrics for it. To strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries (target 13.1) is considered a priority by most of the countries analysed. However, very few prioritize metrics referring to mechanisms for raising capacity for effective climate-change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities (target 13.b).

**Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.** This Goal has the lowest average coverage, as only 43% of its targets are included by the countries studied. Except for conservation of coastal and marine areas (target 14.5), the targets are all underrepresented in the metrics prioritized by the countries.

**Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.** All 14 countries prioritized target 15.1: by 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements. Ten countries also prioritized taking urgent and significant action to reduce the degradation of natural habitats and halt the loss of biodiversity (target 15.5). For this Goal, countries with national frameworks including less than 100 targets omitted the following targets: prevent the introduction of invasive alien species (target 15.8), mobilize and significantly increase financial resources to conserve and sustainably use biodiversity and ecosystems (target 15.a) and finance sustainable forest management (target 15.b), and enhance global support for efforts to combat poaching and trafficking of protected species (target 15.c).

**Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.** Target 16.1 —significantly reduce all forms of violence and related death rates everywhere— was a priority for all 14 countries, while 12 countries include metrics referring to the development of effective, accountable and transparent institutions (target 16.6). Ten countries omitted the target referring to broadening and strengthening the participation of developing countries in the institutions of global governance (target 16.8).

**Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.** Coverage levels for this Goal are also low, at below 44% on average, and several of its targets are omitted from the national frameworks, especially in those countries with less than 100 targets. In particular: adopt and implement investment promotion regimes for least developed countries (target 17.5), promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms (target 17.7) and enhance policy coherence for sustainable development (target 17.14) are underrepresented in national frameworks (this may be attributable to the nature of these targets as being more attuned with developed countries or requiring greater technical specification to define the appropriate metrics). For these same reasons, very few countries include metrics for targets that refer to the full implementation of official development assistance commitments by developed countries (target 17.2), or to the promotion of a universal, rules-based, open, non-discriminatory and equitable multilateral trading system (target 17.10).

## C. Towards a regional indicator framework for monitoring the core areas for sustainable development in Latin America and the Caribbean

### 1. Statistical institution-building in the region

The region's countries, together with ECLAC as technical secretariat, have consolidated the Statistical Conference of the Americas of ECLAC as the main forum for all aspects related to this scientific and technical field, and especially as the foremost sphere for cooperation, coordination and harmonization of work in the field of official statistics. The Conference has thus become the natural arena for all matters related to the statistical monitoring of the 2030 Agenda for Sustainable Development at the regional and global level.

Accordingly, matters agreed upon at the meetings of the Statistical Conference of the Americas range from the participation of the region's representative countries in global mechanisms —such as the Inter-Agency and Expert Group on Sustainable Development Goal Indicators and the High-level Group for Partnership, Coordination and Capacity-Building for Statistics for the 2030 Agenda for Sustainable Development— to the coordinated effort to develop a more targeted set of indicators than the global ones, or to devise other complementary indicators, in order to follow up on critical sustainable development challenges shared by all the countries that make up the region.

In the framework of the Statistical Conference of the Americas of ECLAC, the countries (10 countries<sup>2</sup> out of the 33 that make up the region, on a 2-year rotation) decided —in a pioneering and emblematic initiative— that the representatives to the global mechanisms of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators and the High-level Group for Partnership, Coordination and Capacity-Building for Statistics for the 2030 Agenda for Sustainable Development should work together on various coordination and subregional representation activities within the Statistical Coordination Group for the 2030 Agenda in Latin America and the Caribbean.<sup>3</sup> In particular, the countries requested the Conference, together with ECLAC as technical secretariat, to propose a regional indicator framework for follow-up of the Sustainable Development Goals in Latin America and the Caribbean, with a regional focus.

Thus, in the resolution adopted at its eighth meeting, held in Quito in November 2015, the Statistical Conference of the Americas of ECLAC recognized the importance of the regional forum as an apt platform for the statistical monitoring of the 2030 Agenda for Sustainable Development and requested that ECLAC, in its capacity as technical secretariat of the Conference, and in particular the Commission's Statistical Division, prepare a proposal for a regional statistical monitoring framework for the SDGs.<sup>4</sup> Accordingly, work began on a diagnostic of the national statistical capacities for measuring the global SDG indicators, together with an analysis of what each of the region's countries considered to be their main sociodemographic, economic and environmental challenges, with a view to building an analytical basis for development of the statistical monitoring framework.

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<sup>2</sup> For this period, the 10 countries making up the Statistical Coordination Group for the 2030 Agenda in Latin America and the Caribbean are: Argentina, Brazil, Colombia, Costa Rica, Ecuador, Grenada, Mexico, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago.

<sup>3</sup> See *Report of the fifteenth meeting of the Executive Committee of the Statistical Conference of the Americas of the Economic Commission for Latin America and the Caribbean*, Santiago, October 2016 [online] [http://repositorio.cepal.org/bitstream/handle/11362/40655/1/S1601019\\_en.pdf](http://repositorio.cepal.org/bitstream/handle/11362/40655/1/S1601019_en.pdf).

<sup>4</sup> See *Report of the eighth meeting of the Statistical Conference of the Americas of the Economic Commission for Latin America and the Caribbean*, Santiago, February 2016 [online] [https://repositorio.cepal.org/bitstream/handle/11362/40065/S1600207\\_en.pdf?sequence=1&isAllowed=y](https://repositorio.cepal.org/bitstream/handle/11362/40065/S1600207_en.pdf?sequence=1&isAllowed=y).

## 2. Conceptualization and methodology of the initial proposal for the discussion and development of a regional framework

Further to the request made and agreements reached at the eighth meeting of the Statistical Conference of the Americas, at the ninth meeting of the Conference, held in Aguascalientes (Mexico) in November 2017, ECLAC presented the *Proposal on a regional framework of indicators for monitoring the Sustainable Development Goals in Latin America and the Caribbean* (ECLAC, 2017). The proposal identifies the core areas for sustainable development in the region in its sociodemographic, economic and environmental dimensions (see table V.3), and proposes for discussion and analysis 128 “complementary” indicators and 25 “proxy” indicators focused on the statistical follow-up of the challenges for sustainable development in the region. The initial proposal includes 141 indicators from the global framework that were relevant for monitoring the region in the demographic, social, economic and environmental dimensions of sustainable development.

**Table V.3**

Number of indicators —complementary, proxy or from the global framework— included in the proposal of a regional framework of indicators for monitoring the Sustainable Development Goals, by core areas for sustainable development in Latin America and the Caribbean

Topics	Complementary indicators	Proxy indicators	Indicators from the global framework
Progressive structural change (research and development (R&D), employment, technological change and value chains)	14	4	15
Quality of life and citizenship (poverty, health, education, basic services, public safety)	32	10	44
Environmental big push (energy patterns, climate change)	19	8	12
Equality and social protection	34	2	30
Food security and sustainable agriculture	5	0	7
Environmental sustainability (consumption patterns and sustainable production, biodiversity, tourism and other sustainable services, pollution, natural resources)	17	0	13
Macroeconomics for development, taxation and financial management (tax collection, regulation, evasion, illicit flows, corruption)	3	1	4
Governance, regional integration and trade	11	4	18
Total	128	25	141

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

**Note:** The sum of figures in each column does not add up to the corresponding totals, as some indicators are repeated under different Goals.

As a complement to the main purpose intended for this regional framework —to follow-up on the critical sustainable development challenges share by the countries of the region— the proposal by the technical secretariat sets forth a number of considerations on the analytical deductions reached in relation to the most critical issues for sustainable development in the region, as well as in relation and to the spirit and scope of the proposal. This document offered a point of departure for the 10 member countries of the Statistical Coordination Group to begin working jointly on the definitive proposal of indicators, which will be submitted for consideration and adoption at the next meeting of the Executive Committee of the Statistical Conference of the Americas of ECLAC, to take place in the last quarter of 2018.

### (a) Spirit and scope of the proposal

In line with the agreements reached in the framework of the Executive Committee of the Conference, the proposal drafted by the technical secretariat should be viewed as a non-binding frame of reference. The following should be taken into consideration:

- The proposal should serve as a guide for the region’s statistical community, providing as much high-quality, comparable information as possible;

- Given the multiple demands on national statistical offices and national statistical systems, the indicators proposed in the regional framework will be aspirational in nature and be able to be measured progressively;
- The proposal should allow for gradual progress conducive to obtaining the best and largest volume of available information for the indicators agreed at the global level;
- It should prioritize both measurement efforts (the challenges linked to methodological and operational aspects, and to measurement instruments) and achieving more effective and fruitful coordination of efforts for horizontal, regional and international cooperation to close gaps in statistical capacities, with a view to leaving no one behind, in the spirit of the joint work carried out by the statistical community of the Conference; and
- The regional framework will be viewed initially as a reference framework for coordinated work, and will not carry specific obligations.

## (b) Reasoning used in considering the main phenomena associated with core areas for to sustainable development in the region

The indicators included in the initial proposal for monitoring the core areas for sustainable development in Latin America and the Caribbean were selected on the basis of a prior exercise which consisted of:

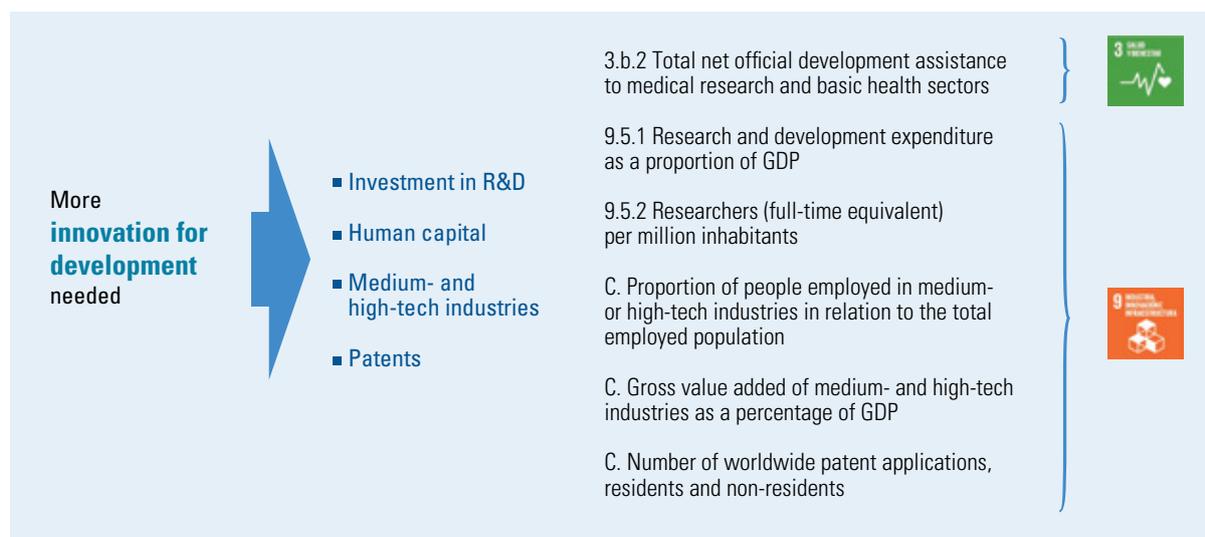
- Identification of the dimensions that need to be measured in order to track the main components of the core areas; and
- Determination of the indicators most relevant for monitoring in those dimensions; these may ultimately relate to one or more of the 17 Sustainable Development Goals of the 2030 Agenda.

With this in mind, consideration was given to several sustainable development issues in the regional agenda, as set forth in the ECLAC document in *Horizons 2030: Equality at the Centre of Sustainable Development*.

As an example, diagram V.2 shows the work plan for one of the topics included in the regional agenda: more innovation for development.

### Diagram V.2

Dimensions and indicators included in the proposal of a regional framework of indicators for monitoring the Sustainable Development Goals for the critical area of innovation for development



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

Diagram V.2 illustrates the development of the work plan:

- The core area identified is “more innovation for development needed”;
- The dimensions identified for monitoring this core area are “investment in research and development (R&D)”, “information on human capital”, “intensity of medium- and high-tech industries” and “patents awarded”; and
- Lastly, the indicators are identified:
  - “3.b.2 Total net official development assistance to medical research and basic health sectors” (Goal 3)
  - “9.5.1 Research and development expenditure as a proportion of GDP» (Goal 9)
  - “9.5.2 Researchers (full-time equivalent) per million inhabitants” (Goal 9)
  - “Proportion of people employed in medium- or high-tech industries in relation to the total employed population” (Goal 9)
  - “Gross value added of medium- and high-tech industries as a percentage of GDP” (Goal 9)
  - “Number of worldwide patent applications, residents and non-residents” (Goal 9)

### **(c) Aspects to consider**

The initial working proposal for advancing towards a regional framework also expresses the expectation that the Statistical Coordination Group for the 2030 Agenda in Latin America and the Caribbean of the Statistical Conference of the Americas of ECLAC will continue to address the main goal, as well as the complementary ones, in order to follow up on the core areas for sustainable development in the region, clarifying technical aspects such as:

- The number and type of indicators needed to reach the desired balance to measure regional specificities, apart from the global indicators;
- The criteria that should be prioritized in seeking this equilibrium, for example, their relevance to regional sociodemographic, economic and environmental characteristics, the information available for calculating the selected indicators, or the viability of building and calculating them within a reasonable timeframe, and so forth;
- The level of disaggregation desired for the indicators to be used within the framework; for example, regional and subregional values only, or with national disaggregation in some cases only and, if so, what the criteria will be used to determine the level of disaggregation;
- The desired scope for the dissemination of the indicators in the framework, for example, their use in the *Annual report on regional progress and challenges in relation to the 2030 Agenda for Sustainable Development in Latin America and the Caribbean* that ECLAC submits to the Forum of the Countries of Latin America and the Caribbean on Sustainable Development, or in the voluntary national reviews that are submitted both to that Forum and, at the international level, to the high-level political forum; and
- Other methodological aspects regarding the consolidation of measurement tools, agreement on the frequency of production and dissemination of indicators, and horizontal, regional and international cooperation to achieve greater and enhanced regional coverage, among others.

### 3. The roadmap towards the regional framework in 2018

In paragraphs 11 and 12 of resolution 10(X), adopted at its ninth meeting, the Statistical Conference of the Americas of ECLAC:

“11. *Notes with interest* the document *Proposal on a regional framework of indicators for monitoring the Sustainable Development Goals in Latin America and the Caribbean* presented by the secretariat, and requests that the Statistical Coordination Group for the 2030 Agenda, with the support of the secretariat, review the document in depth and propose, at the seventeenth meeting of the Executive Committee of the Conference, a framework of indicators for regional monitoring of the Goals and targets of the 2030 Agenda for Sustainable Development, taking into account the situations, emphases and shared challenges of the Latin American and Caribbean countries, in keeping with the provisions of General Assembly resolution 71/313;

12. *Urges* the Statistical Coordination Group for the 2030 Agenda to continue coordinating its activities with the ad hoc working group for the preparation of a proposal on the indicators for regional follow-up of the Montevideo Consensus on Population and Development that was established by the Regional Conference on Population and Development in Latin America and the Caribbean at its second session;”<sup>5</sup>

On the basis of this resolution, adopted on 16 November 2017, the technical secretariat sent the 10 member countries of the Statistical Coordination Group additional material for the task commended, including:

- A compilation of the contributions made by all the countries as part of the diagnostic of the statistical capacities for calculating the global indicators;
- Recommendations made by the funds, programmes and specialized agencies of the United Nations system in Latin America and the Caribbean, based on their respective areas of expertise, in relation to areas that should be emphasized; and
- Contributions by ECLAC, as technical secretariat and in its capacity as a regional commission of the United Nations specializing in a systemic approach to the region’s development dimensions, based on the analysis contained in the document *Horizons 2030* (ECLAC, 2016), presented at the thirty-sixth session of the Commission.

The next step was the online meeting held on 11 January 2018 by the countries of the Statistical Coordination Group and the technical secretariat, at which the roadmap for interaction and coordination was laid out with a view to making a definitive proposal at the seventeenth meeting of the Executive Committee of the Statistical Conference, to be held in the last quarter of 2018.

The main milestones in the roadmap agreed by the members of the Statistical Coordination Group and the technical secretariat were:

- The countries in the Statistical Coordination Group would send their comments to the technical secretariat by mid-March 2018, so that the secretariat may systematize all the comments, changes, eliminations, additions and so forth, and send them back to the Statistical Coordination Group by mid-May 2018;
- The countries will have a reasonable length of time to review the changes and identify new reflections to contribute to further dialogue in a face-to-face meeting between the Statistical Coordination Group and the technical secretariat, to be held in the last week of June 2018;
- Based on the decisions made at that face-to-face meeting, the technical secretariat will work in July and August on the basis of the points agreed and will prepare a definitive version to be sent to the 10 member countries of the Statistical Coordination Group for their review of interpretations and edits;

<sup>5</sup> See Economic Commission for Latin America and the Caribbean (ECLAC), “Resolution 10 (IX)”, Aguascalientes, 16 November 2017 [online] <https://cea.cepal.org/9/sites/cea9/files/cea9-resolution-adopted-16nov.pdf>.

- Once these materials have been received, the definitive, reviewed version will be sent in September 2018 to the seven member countries of the Executive Committee of the Statistical Conference of the Americas of ECLAC for their information, and one week later to all the members of the Conference, to give them sufficient time to review it in the run-up to the meeting of the Executive Committee in the last quarter of 2018.

## D. Status of the integration of statistical and geospatial data in Latin America and the Caribbean

The territory is the where all the dimensions of sustainable development converge and integrate. It is also the level at which differences are marked out: it is where data are disaggregated, distribution patterns are identified, different situations of inequality are revealed, and solutions to the same problem occurring in different geographical contexts are differentiated and adjusted. Consequently, data referring to the territorial level are an essential input for guiding public policies and decisions aimed at promoting development with equality —leaving no one behind— and have become a new management and communication tool for changing lifestyles and achieve greater sustainability.

The international geospatial community has put the 2030 Agenda at the centre of its strategy, framing its challenges within a broad spectrum of thematic content in areas such as environmental management, disaster management, sustainable development, urban planning, food security, land management, water resource management, poverty reduction and many others.<sup>6</sup>

In order to approach these challenges in a joint and collaborative manner in Latin America and the Caribbean, the regional geospatial information community —represented by the Regional Committee of the United Nations Global Geospatial Information Management for the Americas— and the regional statistical community —represented by the Statistical Conference of the Americas of ECLAC— have been coming together to engage in joint efforts at the highest level.

In less than 24 months these efforts have laid the foundations for this collaboration in the region, with several milestones: resolution 712(XXXVI) of the thirty-sixth session of ECLAC on the integration of statistical and geospatial information (May 2016), the first meeting of the Executive Committee of the Statistical Conference and the Regional Committee of United Nations Global Geospatial Information Management for the Americas (June 2016), the historic first open-ended meeting of the Conference and the Regional Committee of the United Nations Global Geospatial Information Management for the Americas (June 2017), and the first geospatial seminar held at the beginning of the ninth meeting of the Conference (November 2017).

As a result of this convergence, and by virtue of the agreements on joint work with the Regional Committee of the United Nations Global Geospatial Information Management for the Americas, ECLAC, in its role as technical secretariat of the Conference, has prioritized formulating strategies and conducting activities to support the integration of the region's statistical and geospatial communities, thus contributing to the development of mechanisms for addressing some of the challenges inherent to the statistical monitoring of the 2030 Agenda.

In this framework, the Statistical Division of ECLAC ran a survey over October and November 2017 aimed at identifying a baseline for the Latin American and Caribbean countries regarding certain

<sup>6</sup> Since its inception in 2011, the Committee of Experts on Global Geospatial Information Management has built a comprehensive and cross-cutting agenda focused on fundamental issues related to human well-being, which treats territory as an essential variable in the decision-making process. In this context, one of the key lines of work pursued by the Committee and by the United Nations Statistical Commission has been the integration of statistical and geospatial information, on the premise that the SDGs of the 2030 Agenda and their broad thematic content require integrated and interoperable data provided by statistical systems, geospatial data infrastructure and Earth observation systems.

institutional and technical aspects of the management of statistical and geospatial data, with the aim of identifying and measuring progress needed in these areas to achieve the integration of statistical and geospatial information, and especially for following up on the 2030 Agenda.

## 1. Goals and scope of the regional consultation

The questionnaire was addressed separately to the national statistical offices and the national geospatial bodies of the 33 ECLAC member countries in the region. It included a set of specific questions for each community and a section with questions in common, referring to the two bodies' perception of and participation in national processes for integrating statistical and geospatial information.

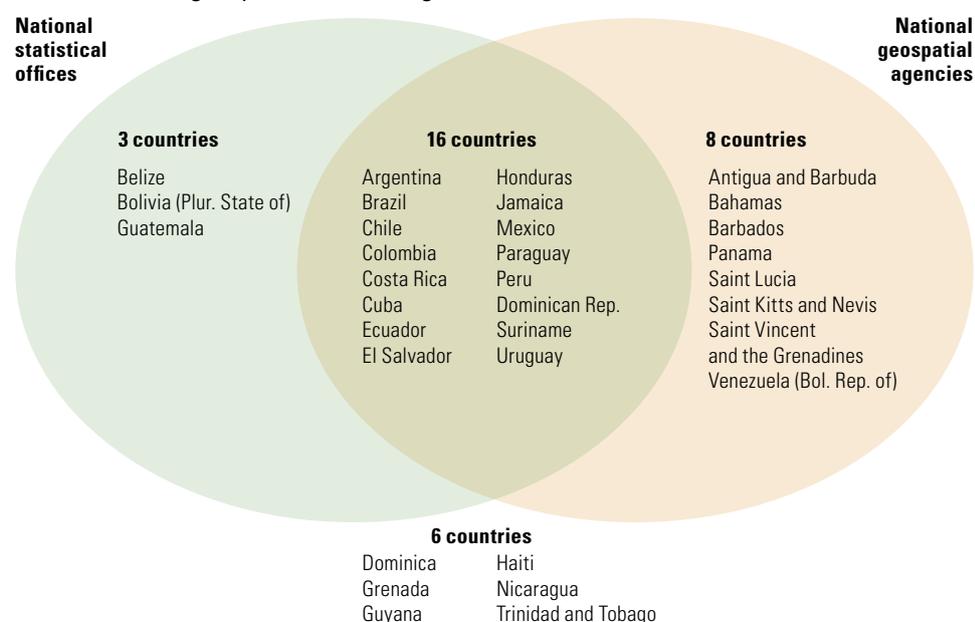
The main purpose of the survey was to compile information to steer support for information integration and statistical monitoring of the 2030 Agenda—both in assistance to countries on technical aspects related to information, standards and platforms, and in the strengthening of inter-agency coordination—so that the communities involved in the production of geospatial statistics could work in a collaborative and integrated manner with those responsible for implementing the SDGs.

## 2. Summary of the results of the regional survey

As shown in diagram V.3, 27 countries responded to the survey, and they were divided into three groups. The first group, comprising most of the countries (16), is those with responses from both the national statistical offices and the national geospatial agencies; the second group is the 8 countries for which only the national geospatial entities replied; and the third group consists of the 3 countries for which only the national statistical offices sent a response.

**Diagram V.3**

Latin America and the Caribbean: responses to the survey on institutional and technical aspects of statistical and geospatial data management



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

## **(a) Institutional landscape for the integration of geospatial and statistical information in the region**

As noted above, one of the main goals of the regional survey was to learn about the most important aspects of the institutional arrangements for management of geospatial information in national geospatial agencies and national statistical offices. In turn, this would help to identify opportunities and challenges for these institutional arrangements—in their current state or after assistance or capacity-building—to support the integration of geospatial and statistical information and thus foster coordination with the community responsible for implementing the 2030 Agenda. The analysis focuses on the process of integrating geospatial and statistical information, first in relation to the institutional setting of the national geospatial agencies, and subsequently in the context of the national statistical offices and their internal structures for the management of geospatial information.

### **(i) Institutional architecture for the management of geospatial information in national geospatial agencies**

Many countries are setting up integrated and collaborative models to optimize geospatial information generation, access, exchange and use, so that it can provide the best possible support to the decision-making process and to public policies. These models are aligned with the concept known internationally as spatial data infrastructure (SDI), which brings together all the institutional and technological components necessary for the attainment of a proposed goal.

National spatial data infrastructures are the responsibility of a national public institution (a ministry, or the national geographic institute itself), and they are structured around intersectoral committees or working groups. They have technological platforms that provide access to various types of geospatial content and they provide guidelines for achieving interoperability of data and platforms through standards and specifications.

In this context, the process of integrating statistical and geospatial information can draw on the coordinated and collaborative efforts of the statistical bodies that belong to the national statistical systems, together with the national geographic or mapping agencies, using the inter-agency coordination forums offered by the spatial data infrastructures, whenever available.

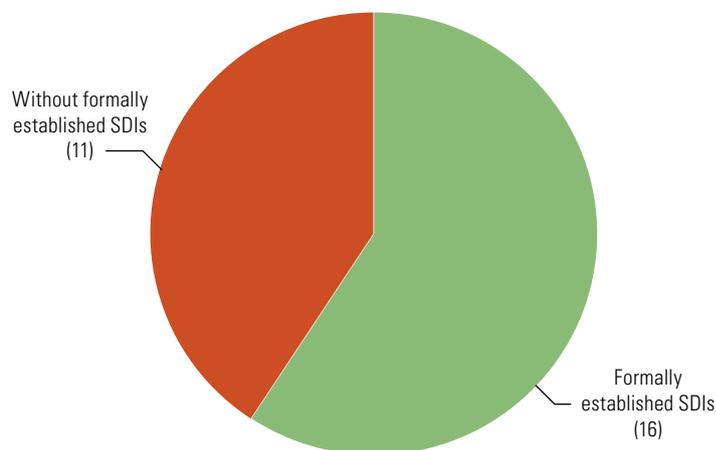
On the basis of the information provided by the 27 countries that responded to the survey, figure V.8 summarizes the regional situation regarding spatial data infrastructure at the national level; in more than 50% of cases, countries had a formally established spatial data infrastructure, i.e. a structure backed by a decree, law or directive.

Through analysis of the responses, progress in integrating statistical and geospatial information may be correlated with the existence of spatial data infrastructures in the countries (see figure V.9).

As illustrated in figure V.9, the integration process has yet to begin in most of the countries with no established spatial data infrastructure. Conversely, in many countries which do have such infrastructure in place, initial conversations are under way or the process is already being executed through one or more pilot programmes, or under a formally established medium- or long-term programme of work.

**Figure V.8**

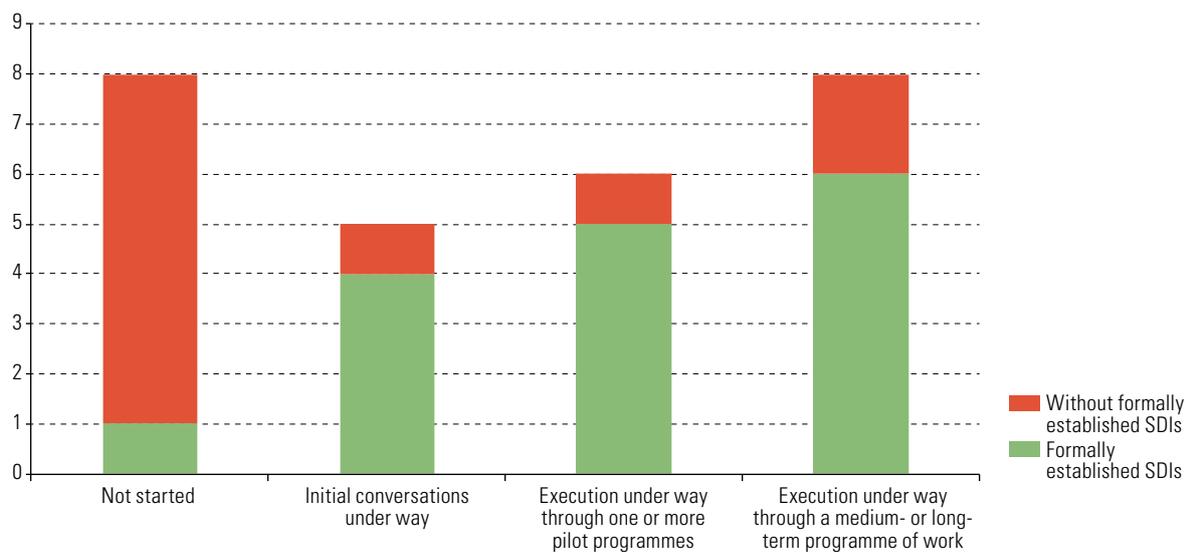
Latin America and the Caribbean (27 countries): existence of spatial data infrastructures (SDIs)  
(Number of countries)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

**Figure V.9**

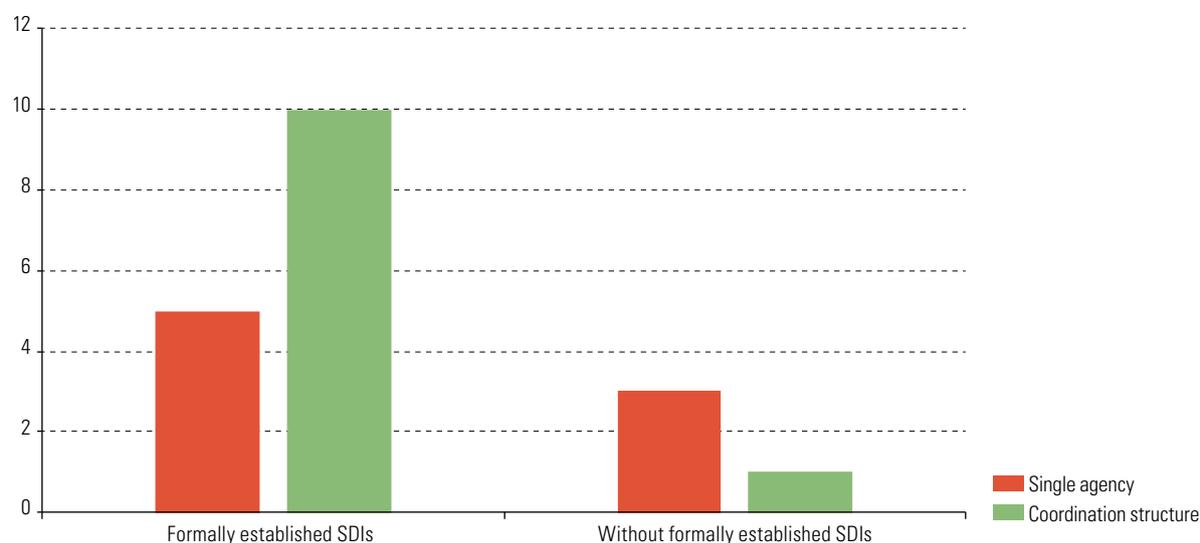
Latin America and the Caribbean (27 countries): status of statistical and geospatial information integration with respect to the existence of spatial data infrastructures (SDIs)  
(Number of countries)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

This analysis also shows the correlation between the mechanism for integrating statistical and geospatial information and the existence—or not—of a national spatial data infrastructure (among the 19 countries that report having begun this integration). Figure V.10 shows that in most of the countries with a formally established spatial data infrastructure, the integration process is taking place under a coordination structure. Conversely, in countries lacking a formally established spatial data infrastructure it is more common for processes to be carried forward by a single agency.

**Figure V.10**  
Latin America and the Caribbean (19 countries): conduct of statistical and geospatial information integration with respect to the existence of spatial data infrastructures (SDIs)  
(Number of countries)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

Where there are inter-agency coordination mechanisms for statistical and geospatial data integration, further investigation may be conducted to learn about existing structures and the work methods currently under way. This information may be valuable to support the integration process in countries where it is just starting or has yet to begin.

## **(ii) Institutional architecture for the management of geospatial information in national statistical offices**

In most of the region's national statistical offices, geospatial information management is divided between different hierarchical levels which, for the purposes of the regional survey, are described as a directorate or division (highest level), department (intermediate) and unit (lowest).

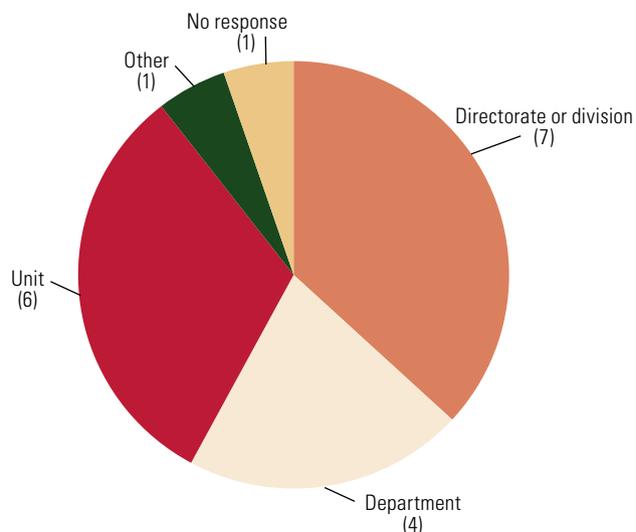
According to the universe of responses from the national statistical offices in 19 countries, geospatial information is managed mostly at the directorate or division level, or at the unit level (see figure V.11).

To verify whether there is a relationship between the stage of geospatial and statistical information integration and the hierarchical level at which geospatial information is managed within national statistical offices, data corresponding to the two variables were crossed. It was found that management of this information at the unit level in national statistical office tends to be associated with the earlier stages of the process, with most cases in the "not started" or "initial conversations under way" categories (see figure V.12). In turn, where geospatial information is managed at the highest hierarchical levels in the national statistical offices, integration tends to be more advanced. From this it could be inferred that geospatial institution-building could promote greater consolidation of the integration process in the medium and long terms.

**Figure V.11**

Latin America and the Caribbean (19 countries): hierarchical levels of geospatial information management in national statistical offices

(Number of countries)

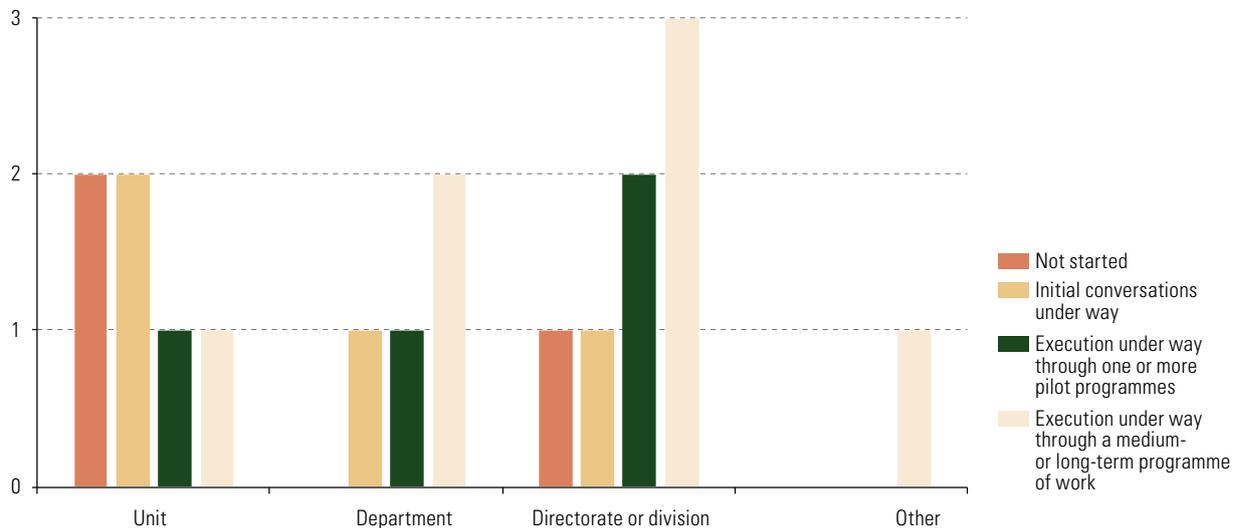


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

**Figure V.12**

Latin America and the Caribbean (18 countries): stage of statistical and geospatial information integration with respect to the hierarchical levels of geospatial information management in national statistical offices

(Number of countries)

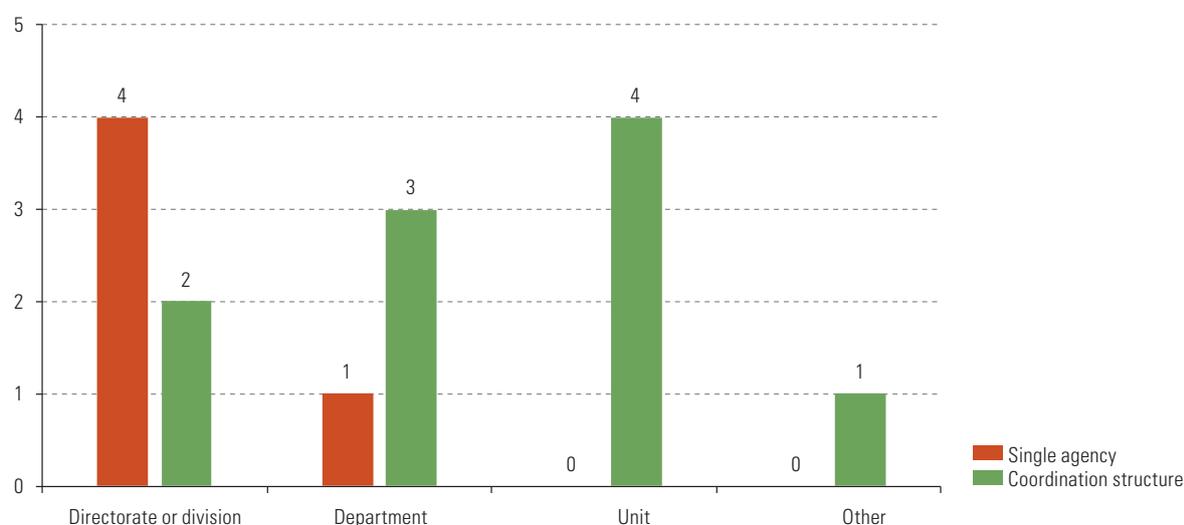


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

Another interesting correlation occurs between the way geospatial and statistical information integration is being carried out and the hierarchical level of geospatial information management within national statistical offices, for a population of 16 countries that have started the integration process and provided information on the corresponding mechanism. Figure V.13 shows that the higher up within the national statistical office that geospatial information is managed, the more cases in which integration is conducted by a single agency (i.e. the national statistical office itself). In turn, at lower hierarchical levels (exclusively at the unit level), more processes are conducted by coordination mechanisms (among the countries that have begun the process).

**Figure V.13**

Latin America and the Caribbean (15 countries): conduct of statistical and geospatial information integration with respect to the hierarchical levels of geospatial information management within national statistical offices (Number of countries)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

### **(b) Availability of basic geospatial data for integrating geospatial and statistical information: situation in countries with or without geospatial data infrastructure**

Integrating geospatial and statistical information consists basically of linking the data relating to a statistical object to a location within the territory. This is done through a process known as geocoding, which uses sets of basic geospatial data obtained from the geospatial data infrastructures as input (see boxes V.2, V.3 and V.4). The survey enquired into the existence and accessibility of basic data in the countries, on the premise that those which have made greater progress will best be placed to face the challenges of integrating geospatial and statistical information and, consequently, to provide more effective support to the implementation of the 2030 Agenda.

**Box V.2****Political and administrative division mapping**

Mapping of political and administrative divisions (PAD) occurs at different territorial levels, with possibilities for disaggregation increasing from the national to the local level. Generally, the first hierarchical level is the national sphere, the second may be termed province, state or otherwise (depending on the national practice), and the third corresponds to municipalities, parishes or other local levels.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

**Box V.3****Mapping of georeferenced postal addresses**

Every physical address can be referenced to a specific geographic coordinate, to the corner of a block or to a census block. When this input is available, the databases included in censuses, administrative records or household surveys can be placed on the territory with very high levels of disaggregation, potentially increasing the precision, effectiveness and equity of public policies that use this type of information as input.

This is especially important in view of the fact that administrative records and surveys represent almost 70% of data sources for producing the SDG indicators included in the global framework, as reported by the region's countries in the survey of national statistical capacities to produce these indicators. Accordingly, whenever possible, linking these databases to a particular geographic location offers an unparalleled opportunity for their territorial disaggregation.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

**Box V.4****Land, property or cadastral mapping**

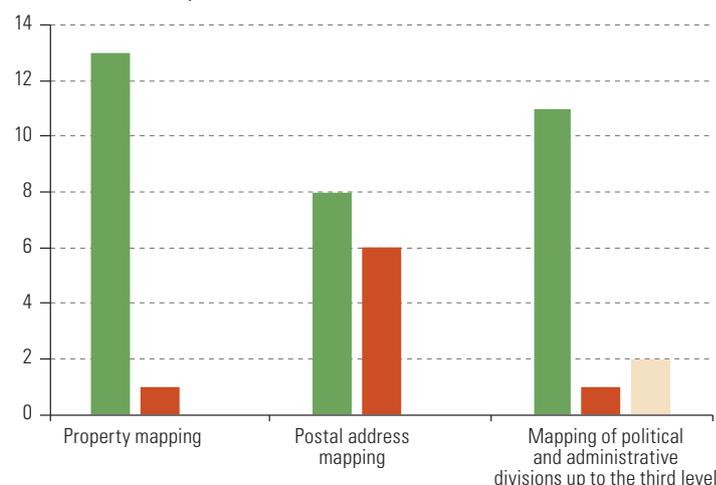
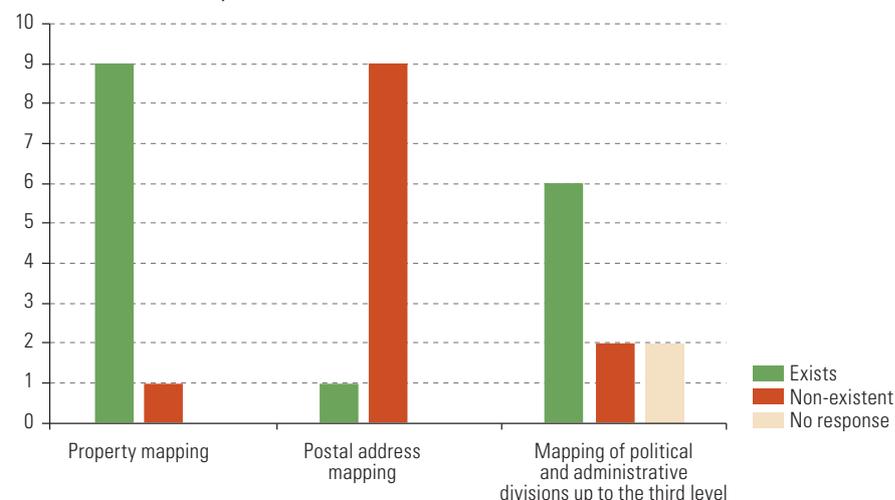
As in the case of georeferenced postal addresses, land, property or cadastral mapping (depending on the terminology used in each country) offers a high level of territorial disaggregation.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

The results include the 24 countries whose national geospatial agencies responded to the survey, differentiated by the existence or not of national spatial data infrastructures (see figure V.14).

**Figure V.14**

Latin America and the Caribbean (24 countries): availability of basic data for statistical and geospatial information integration, with respect to the existence of national spatial data infrastructure  
(Number of countries)

**A. Countries with spatial data infrastructure****B. Countries without spatial data infrastructure**

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

Figure V.14 shows how countries are placed in terms of the three sets of basic geospatial data, in scenarios in which a formally established spatial data infrastructure does or does not exist.

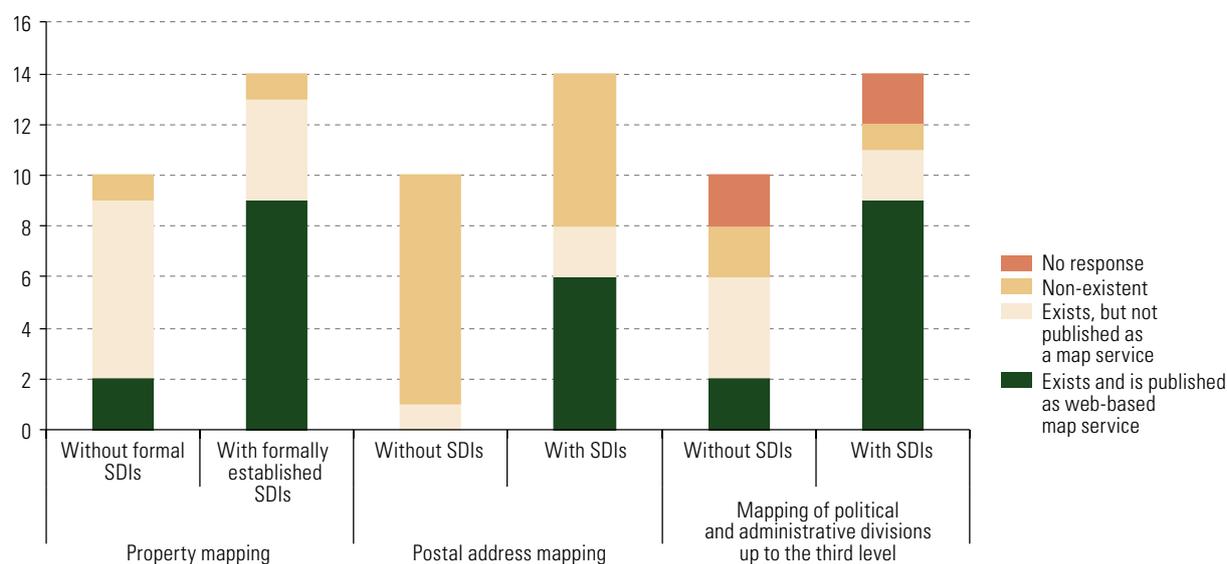
As regards property mapping, there were no significant differences between the countries with spatial data infrastructure and those without. This makes this type of information an asset for countries that have yet to begin integrating geospatial and statistical information, which are, as it happens, the same countries still lacking an established spatial data infrastructure.

The existence of national spatial data infrastructure seems to be significant in marking differences in postal address mapping, since only one of the countries lacking a formally established spatial data infrastructure had this input available. Consequently, this offers the opportunity for countries that already have a structure in place to transfer experiences and provide methodological support.

Finally, the mapping of political and administrative divisions showed no significant differences between countries with or without spatial data infrastructures. A caveat here is that the analysis considers political and administrative division mapping data to exist where it is available up the third level of hierarchy; and in the three cases of “non-existent” data, political and administrative mapping data do exist, but up to the first or second levels of hierarchy only.

A second important aspect of the analysis is access to basic geospatial data for geospatial and statistical information integration, in relation to the existence, or not, of a formally established national spatial data infrastructure (see figure V.15).

**Figure V.15**  
Latin America and the Caribbean (24 countries): access to basic data for statistical and geospatial information integration with respect to the existence of spatial data infrastructures (SDIs)  
(Number of countries)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

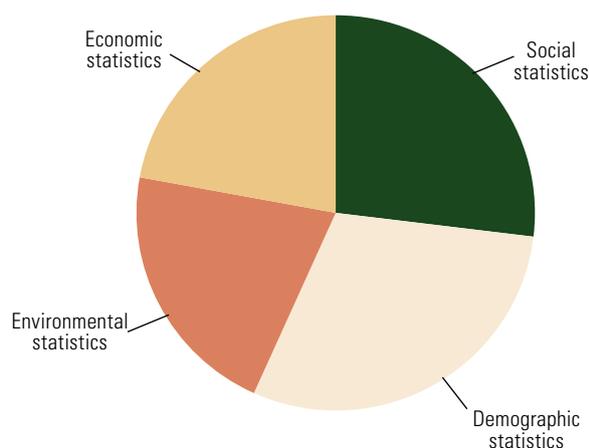
Figure V.15 shows that for the three types of basic data (property mapping, postal address mapping and political and administrative division mapping), the existence of a national spatial data infrastructure increases the capacity to access information through platforms known as “map services”, i.e. websites that share this type of content interactively with users.

### (c) Progress in the use of geospatial information for the production and dissemination of statistics

The geographical dimension is increasingly considered a key element in national statistics management as it provides a territory-based framework and structure for compiling, processing, storing and aggregating data. It is also a factor driving the modernization of statistical production systems and processes.

The regional consultation sought to learn more about the status of geospatial information use—in both the production and the dissemination of statistical data—as a complementary measure to the progress made in geospatial and statistical information integration, in the universe of the national statistical offices of the 19 respondent countries (see figure V.16).

**Figure V.16**  
Latin America and the Caribbean (19 countries): use of geospatial information to produce statistics, by dimension  
(Number of countries)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

As illustrated in figure V.16, social and demographic statistics make greatest use of geospatial inputs, while economic and environmental statistics make less frequent use of this type of information. In the case of environmental statistics, the use of geospatial inputs might be more frequent if the universe of respondents were expanded—beyond the national statistics offices currently surveyed—to include public agencies related to environmental management. The questionnaire identifies a gap in this regard, and poses a challenge, especially for the communities involved in Earth observation that are contributing to the global production of statistics and supporting the construction and monitoring of SDG indicators.

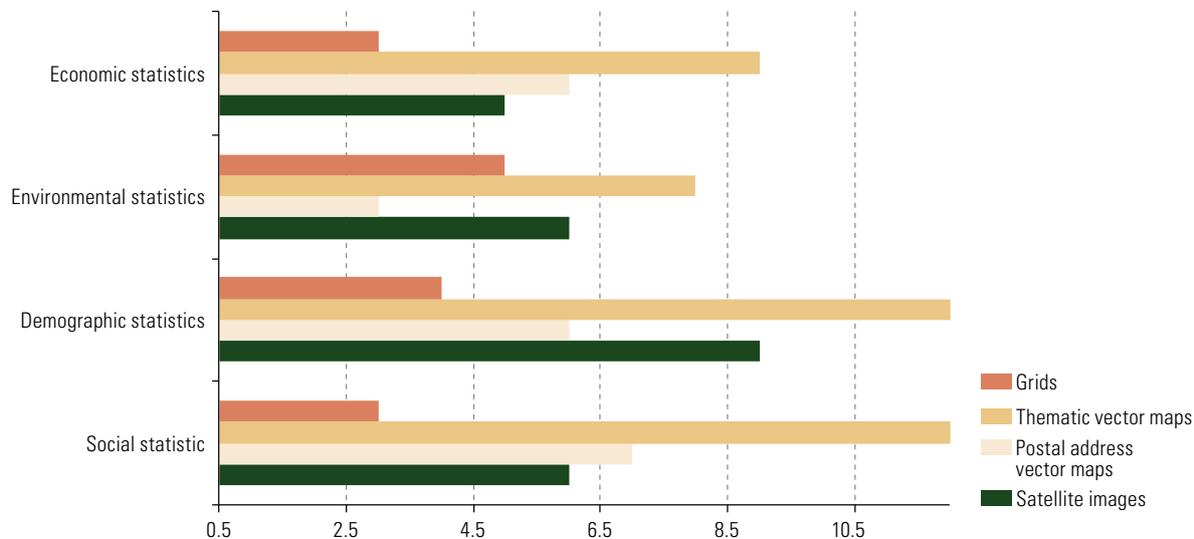
As may be seen in figure V.17, which shows the sorts of inputs used to produce different types of statistics, thematic maps are often used to produce the four types of statistics covered by the regional survey. Satellite images are used mainly to generate demographic statistics, while postal address maps are used more frequently in constructing social statistics. As mentioned earlier, postal address mapping is an important geocoding tool that can, in the framework of statistical monitoring of the 2030 Agenda, enhance the territorial component of the two main data sources for the production and monitoring of sustainable development indicators: administrative records and surveys.

Geospatial information is also a means for statistical data dissemination which adds value by tracking the behaviour of variables in the territory, identifying distribution patterns and offering the possibility to establish correlations with other layers of thematic information that could contribute to the analysis of a management issue or guide the implementation of a public policy.

**Figure V.17**

Latin America and the Caribbean (19 countries): use of geospatial inputs for producing statistics, by type of input and statistics

(Number of countries)



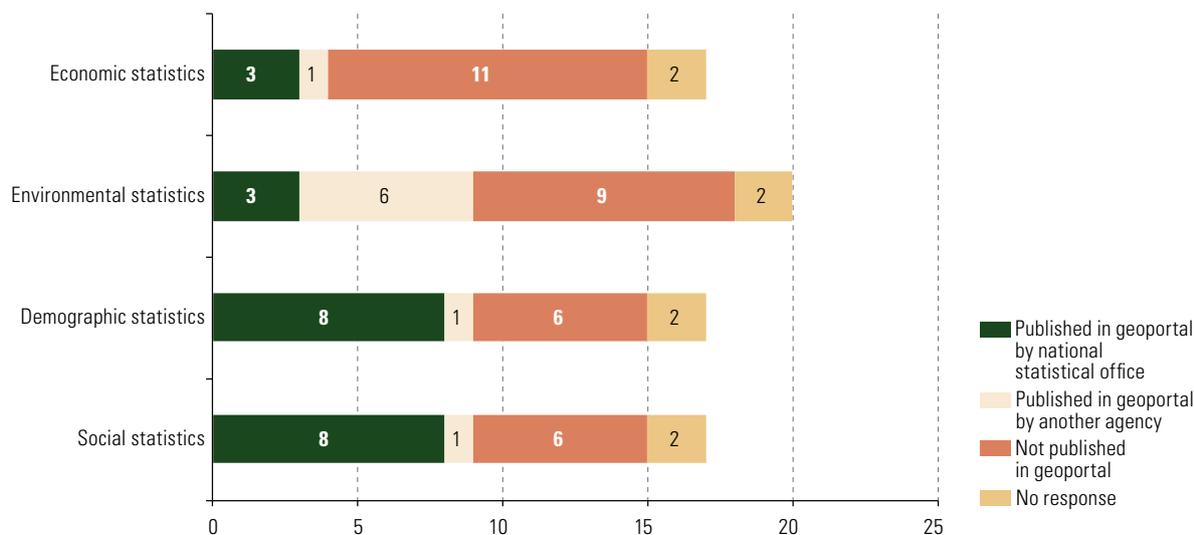
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

As illustrated in figure V.18, social and demographic statistics are the type most disseminated via geoportals, most of which are administered by national statistical offices themselves. However, many countries have yet to deploy these technologies.

**Figure V.18**

Latin America and the Caribbean (19 countries): use of geospatial technology for dissemination of statistics

(Number of countries)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the diagnostic questionnaire on the baseline for statistical and geospatial information integration in the countries of Latin America and the Caribbean, 2017.

This area offers another opportunity for collaboration between the geospatial and statistical communities, as the region has notable experiences in the use of open source platforms in the construction, analysis and publication of geospatial information, which could be connected and shared by national geospatial agencies and national statistical offices.

## **E. Reflections on progress made and pending challenges in measuring the Sustainable Development Goals in Latin America and the Caribbean**

In the past two years, the region's countries have undoubtedly made progress in institution-building and developing statistics with a focus on the Sustainable Development Goals.

The ratification of national agreements for fulfilling the commitments of the 2030 Agenda has been reflected in the establishment of new implementation and coordination mechanisms for the Sustainable Development Goals at the national level, or in the ratification and strengthening of existing mechanisms, thus demonstrating the collective efforts of various stakeholders towards implementation of the Goals.

The broad and participatory processes conducted have led countries to rethink their national priorities for development and establish links between these and their global commitments. In addition, several countries have prioritized and adapted targets, prioritized indicators and established national indicator frameworks for monitoring the SDGs. It is increasingly important for countries to be able to draw on reliable mechanisms for monitoring the fulfilment of these Goals, and proper statistical follow-up has become a national, regional and global priority.

The continuous improvement of statistical capacities and investment in infrastructure, technology and human resources are essential to make progress towards the proposed targets for the attainment of the SDGs.

Although further progress is needed in different spheres, and despite widespread fragility in region's national statistical systems—some of which suffer from leadership weaknesses and obsolete organizational and institutional norms—the progress described in this chapter gives ground for optimism that official statistics can be modernized through new institutional and management mechanisms and procedures, including governance, leadership, coordination mechanisms and tools, and enhanced dialogue and partnerships between producers and users of data and indicators.

Despite the multiple ongoing challenges faced by the region's statistical institutions, many national statistical offices have been acknowledged in practice as the governing bodies of the national statistical systems and, accordingly, are responsible for managing and coordinating statistical activities related to sustainable development.

Several of the practices now under way in the region in statistical production for the SDGs are doing much to make the region's systems more modern and reliable, with greater coordination between users and producers, in alignment with processes that make the production and dissemination of official statistics more dependable. In this regard, it is essential to tighten the linkages between data, statistics and the adoption of public policy decisions in order to build solid foundations for accountability.

The progress made, however, coexists with growing challenges regarding the integration of statistical and geospatial data, as described in the corresponding section.

The aspiration that most—and if possible all—the region's countries will have infrastructure for basic spatial data by the 2020 census round is an ambitious target, yet it is also an achievable one if

the efforts to integrate statistical and geospatial information are supported by productive institutions that are open to working in coordination. This is a challenge that both communities are committed to addressing throughout the region.

To conclude, the Sustainable Development Goals pose significant challenges to countries' capacity to produce statistics in a manner that includes all stakeholders in the national statistical system and in coordination with the geospatial institutional architecture.

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## **Annex V.A1**

### **Content of the questionnaire**

The questionnaire was sent separately to the national statistical offices and the national geospatial agencies, and included a set of specific questions for each community and another section with questions in common referring to the two bodies' perception of and participation in national processes for integrating statistical and geospatial information.

In the case of national statistical offices, the questions were focused on measuring, in general, the presence and/or importance of the geographical component in the production and dissemination of statistics, by way of the following descriptors:

- hierarchical levels in the management of geospatial information in the national statistical office
- use of geospatial inputs in the production of statistics
- use of geospatial technologies for the transfer and dissemination of statistics

For national geospatial agencies, questions concerned the existence —and basic specifications— of geospatial data relevant to the process of integrating these with statistical data, in line with the following:

- existence of national geospatial data infrastructures
- disaggregation of geospatial information referring to political and administrative divisions
- existence and specifications of geospatial information referring to the division of territories in properties or plots of land
- existence and specifications of geospatial information referring to georeferenced postal addresses



Concluding remarks



The *Second annual report on regional progress and challenges in relation to the 2030 Agenda for Sustainable Development in Latin America and the Caribbean* has been prepared in response to the request set forth in the conclusions and recommendations agreed upon by the governments attending the first meeting of the Forum of the Countries of Latin America and the Caribbean on Sustainable Development, held in Mexico City. As with the first annual report, it is expected that the Chair of the thirty-seventh session of the Commission will submit this document as a regional contribution to the next meetings of the High-level Political Forum, the Economic and Social Council Forum on Financing for Development, and the United Nations Regional Coordination Mechanism, for their consideration.

The purpose of the report is to support the systematic follow-up and review of the 2030 Agenda and the Sustainable Development Goals in the region. It has been prepared bearing in mind the Goals set for review in 2018, which are framed within the theme of transformation towards sustainable and resilient societies (Goals 6, 7, 11, 12 and 15). The report considers the experience of existing national mechanisms regarding peer-learning through the exchange of good practices and the discussion of targets that can generate useful opportunities for cooperation within the region and beyond.

The topics addressed include the sustainable use of natural resources, the dynamics of human settlements, energy development, and production and consumption, together with an analysis of the interrelationships between the Sustainable Development Goals and the associated opportunities for policymaking. While there is no global formula for sustainable development, and each country and region must decide on its own path in the light of its production trajectories and particular challenges, the compelling need to transform development paradigms is common to all. This transformation must render economic and social progress compatible with appropriate use of physical and biological resources.

In 2016, ECLAC advocated a progressive structural change in Latin America and the Caribbean based on an environmental big push as the path towards sustainable development with equality. This environmental big push involves exploring complementarities between various development goals: stronger investment in building a less-polluting energy matrix and cleaner technologies (in agriculture, services and industry); growth on a low-carbon path, with a positive impact on employment; social policies promoting equality and basic and universal levels of well-being, not only as an ethical goal inherent to the notion of development, but also as a condition for building resilience, capacities and learning; and stakeholder commitment to productivity and innovation. Policies aimed at equal access to capacities and opportunities are becoming an increasingly important asset in a world in the throes of a technological revolution that is rapidly redefining countries' competitiveness and international positioning.

In a region with persistently low rates of investment, a broad spectrum of investment opportunities—which could have a decisive impact on the region's economic recovery—are to be had in the process of redefining the energy matrix and transport, as well as the dynamics of cities and production processes as they transition towards cleaner technologies. This must be considered against the backdrop of the technological revolution, as responding to environmental challenges will differ from country to country and will have to be addressed by building capacities and closing gaps in the local sphere. There are also significant opportunities for regional cooperation, both in the scientific and technological spheres and in the reinvigoration of regional integration and trade.

Given the need for coordinated action in various spheres, the environmental big push will demand significant efforts from the region in terms of political leadership, governance, and capacity- and institution-building, as well as in the design, execution and follow-up of regional, national and subnational plans for the attainment of the Sustainable Development Goals.

More than two years after the adoption of the 2030 Agenda, Latin American and Caribbean countries have made significant progress in the design and implementation of an institutional architecture, in the development of measurement mechanisms and in follow-up to the Goals. They

have also made efforts to build the requirements of the 2030 Agenda into their development plans and into their national and subnational budgets. Moreover, most countries have seen a steady rise in the participation of stakeholders from civil society, the private sector and academia in the follow-up and monitoring of 2030 Agenda implementation.

Further progress is needed in developing the means of implementation of the 2030 Agenda. The sheer scale of this task requires significant mobilization of domestic and external resources, as well as changes in the way resources are financed, organized and allocated. Social spending, in particular, emerges as a key means of implementation to attain various social targets related to education, health, social protection and access to basic services, among many others. The 2030 Agenda imposes an obligation to combat tax evasion and to transition towards progressive tax regimes. It also requires more extensive and more effective international coordination joining up the global, regional and local levels, and the channelling of private resources towards development financing, among others.

The third annual report on regional progress and challenges in relation to the 2030 Agenda for Sustainable Development in Latin America and the Caribbean, to be presented in 2019, will refer to empowering people and ensuring inclusiveness and equality. It will also link up with and expand on the content of the two former reports, as its preparation will coincide with a change in the cycle of the 2030 Agenda for Sustainable Development process.

The High-level Political Forum on Sustainable Development plays a central role in overseeing the network of follow-up and review processes of the 2030 Agenda at the global level, working in coordination with the General Assembly, the Economic and Social Council and other relevant bodies and forums. At the same time, this is framed within the current process of repositioning the United Nations development system to deliver on the 2030 Agenda. As part of this process, the development system needs to be strengthened to make it more coherent and efficient, and build up its capacity to address the full range of development challenges of our time effectively and in a manner that is consistent with the purposes and principles of the Charter of the United Nations. Also within this process, the development system is called upon to adapt and respond to the current challenges and opportunities for international cooperation.

In keeping with the theme of the High-level Political Forum on Sustainable Development, efforts in 2017 centred on eradicating poverty and promoting prosperity in a changing world; accordingly, the Goals reviewed were 1, 2, 3, 5, 9 and 14. As noted earlier, work in 2018 is revolving around the transition towards sustainable and resilient societies. In 2019, under the theme of empowering people and ensuring inclusiveness and equality, Goals 4, 8, 10, 13 and 16 will be reviewed, thus completing the review cycle of the Sustainable Development Goals. The end of this cycle also means that the convening of the High-level Political Forum on Sustainable Development will pass from the auspices of the Economic and Social Council to the auspices of the General Assembly.

The High-level Political Forum will meet in 2019 under the auspices of the General Assembly<sup>1</sup> and will provide high-level political guidance on the 2030 Agenda and its implementation, identify progress made and emerging challenges, and mobilize further actions to accelerate implementation. Accordingly, the 2019 meeting of the High-level Political Forum on Sustainable Development will reset the cycle of meetings in order to maximize coherence between the follow-up of the 2030 Agenda and the quadrennial comprehensive policy review process.

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<sup>1</sup> Resolution 70/299 provides that the High-level Political Forum on Sustainable Development will meet every four years under the auspices of the United Nations General Assembly.

Thus, 2019 will offer the first opportunity to comprehensively review the importance of the regional and subregional dimensions, regional economic integration and interconnectivity in sustainable development. This will be an occasion to examine the link between national reviews and inclusive regional processes and their contribution to monitoring the 2030 Agenda at the global level, as well as to analyse the relationship between the regional and subregional frameworks, and their translation into concrete measures and sustainable development policies at the national and subnational levels. The impact of the regional and subregional follow-up and review of the 2030 Agenda on mutual learning, sharing of good practices and discussion on shared targets may also be considered.

The end of the cycle is also significant for the Forum of the Countries of Latin America and the Caribbean on Sustainable Development. Over the past two years, chaired by Mexico, the Forum has set out along a path towards an institutionalized format and organization of work, as well as modalities for multi-stakeholder participation. This has contributed to maintaining a fluid, ongoing dialogue between all member countries of the Forum, and to opening communication channels with relevant stakeholders, with a view to the achievement of the Sustainable Development Goals.

The Forum, like this report (the second of its kind), is an example of the commitment of ECLAC to support the region's efforts to implement the 2030 Agenda for Sustainable Development and thus strengthen regional initiatives aimed at leaving no one behind.



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