

# The European Union and Latin America and the Caribbean vis-à-vis the 2030 Agenda for Sustainable Development

## THE ENVIRONMENTAL BIG PUSH



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This document was prepared by the Economic Commission for Latin America and the Caribbean (ECLAC) for the Meeting of Foreign Ministers of the Community of Latin American and Caribbean States (CELAC) and the European Union, to be held in Santo Domingo on 25 and 26 October 2016.

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The opinions expressed in this document do not necessarily reflect the official views of the European Union, the Community of Latin American and Caribbean States (CELAC) or the EU-LAC Foundation.

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## Foreword

The Economic Commission for Latin America and the Caribbean (ECLAC) and the EU-LAC Foundation have formed a strategic partnership to help strengthen relations between the Community of Latin American and Caribbean States (CELAC) and the European Union. With the support of the European Union, the two institutions offer this publication as a contribution to the Meeting of Foreign Ministers of CELAC and the European Union, to be held in Santo Domingo on 25 and 26 October 2016.

The dialogue between high-level authorities responsible for the international relations of the countries of the European Union and Latin America and the Caribbean is a key opportunity to highlight the importance of cooperation between the two regions, particularly when addressing the challenges posed by the dominant global trends.

Everywhere on the planet, we see alarming signs that inequality is increasing and the environmental crisis is worsening, particularly in terms of climate change. New issues can be seen emerging in real time: large-scale migratory movements; the acceleration of the technological revolution; the arrival of new actors on the international economic stage (particularly China and, more recently, India); and the negotiation of mega-agreements to govern trade, investment and intellectual property. This complex background, marked by profound economic, social and environmental imbalances, challenges the global community to strive for a more sustainable and egalitarian form of development.

Given the complexity of the situation, the international community has mobilized through a wide-ranging multilateral debate to provide a broad and ambitious response. In the past few months, a series of collective actions have been taken towards the definition of a new development paradigm. In September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals. These commitments recognize equality and sustainability as the shared and universal guiding principles on which a new set of national, regional and strategies and global policies should be based.

The 2030 Agenda for Sustainable Development is founded on the understanding that climate change and development are inseparable. Consequently, in December 2015, the Paris Agreement was adopted under the United Nations Framework Convention on Climate Change (UNFCCC) —the first agreement in which both industrialized nations and developing countries undertake to manage the transition towards a low-carbon economy. In April 2016, the senior representatives of 174 States and the European Union signed the Paris Agreement in New York. As of early October 2016, the Agreement had been ratified by 77 parties, including the European Union and eight of its member States, along with the United States, China and 17 countries of Latin America and the Caribbean, which are jointly responsible for 59.9% of global greenhouse gas emissions. Thanks to this “domino effect” in terms of ratifications, the Paris Agreement will enter into force much earlier than expected: on 4 November 2016.

For European Union and CELAC countries, the 2030 Agenda and the Paris Agreement highlight the need to move towards levels of consumption and production that are compatible with the environment. Shared values and the strong complementarity that exists between the two regions could help to generate an environmental big push, enabling a move towards new development paths; in other words, progress towards an investment pattern that fosters innovation and structural change while decoupling economic growth from carbon emissions.

Despite this impressive progress, the international economy's prolonged recessionary bias has generated tensions between approaches to dealing with short-term emergencies on the one hand, and medium- and long-term challenges on the other. The Latin American and European countries have adopted measures to mitigate the effects of this recessionary trend and speed up the recovery of their economies. While these measures are urgent and necessary, they must not become an excuse to neglect citizens' needs and postpone the inescapable commitment to future generations.

In this document, we offer the Foreign Ministers an overview of the main determinants of the economic, production, social and environmental circumstances of European Union and CELAC countries. Its contents will be enhanced and built upon by the discussions in Santo Domingo, and by other contributions from the authorities of Latin American, Caribbean and European countries. In the coming months, a more extensive and comprehensive version will be prepared, for presentation to Heads of State and Government attending the third Summit of Heads of State and Government of CELAC and the European Union in mid-2017.

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## Introduction

Many structural elements in the long-standing economic, political and cultural relations between the European Union and Latin America and the Caribbean naturally evolve slowly. The European Union countries have been the region's largest donors, as well as important direct investors and trade partners. Corporate relations between the two regions are especially solid in sectors such as automobile manufacturing, energy generation, financial services and telecommunications operations. Over the past 10 years, these relations have deepened with the rising share being gained in European Union markets by transnational companies based in Latin America. In several areas, including social rights and environmental sustainability, many European countries continue to serve as models for Latin American and Caribbean countries to follow.

However, the instability of the economic system, the persistence of poverty and sharp inequalities and the risk of an environmental crisis of vast proportions make it urgent to move towards a new development paradigm capable of taking on these global challenges. The 2030 Agenda for Sustainable Development and the Sustainable Development Goals are the outcomes of the emerging consensus in this regard. In particular, the progress and leadership shown by the European Union in several areas have been crucial to the global agenda and have made the bloc a key driver of these agreements.

At the same time, the understanding that economic and social development is intrinsically interconnected with climate change has helped to drive important commitments and consensus on environmental matters. With the signature of the Paris Agreement, both advanced economies and developing countries committed to managing the transition towards a low-carbon economy.

In this context, relations between the European Union and the Community of Latin American and Caribbean States (CELAC) —given the values shared by the two regions— must now enter a new phase in order to drive forward the new development paradigm that is emerging in a world in the throes of major changes. Indicative of these new consensus was the rapid ratification of the Paris Agreement, which will enter fully into effect on 4 November 2016.

The technological revolution involves changes, often convergent, in information and communications technologies (ICTs), biotechnologies, new materials and nanotechnologies. Both regions are experiencing the effects of technological changes and the need to constantly adapt to the globalization of consumption patterns, albeit from very different positions.

Whereas the countries of the European Union are near or at the technological frontier for several advanced technologies, for example, in the chemical-pharmaceutical and engineering sectors, the countries of Latin America and the Caribbean have few companies with the capacity to produce cutting-edge technology. Notwithstanding this gap between them, neither of the two regions approaches the productivity levels of the United States or the productivity growth of the most robust Asian economies. This common characteristic necessarily comes into play in major international trade negotiations, particularly those with a trans-Atlantic or trans-Pacific scope.

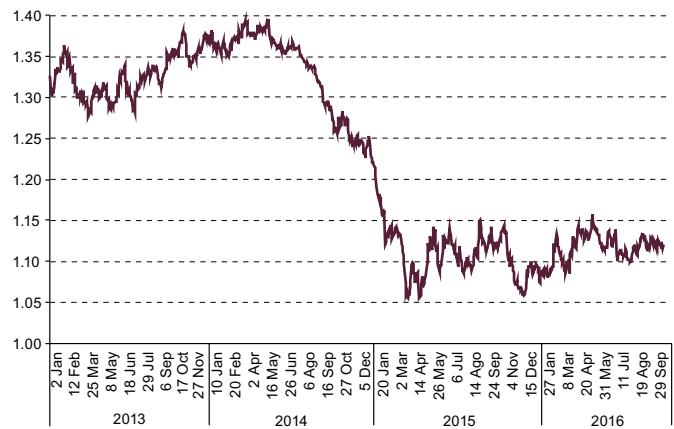


With this dynamic international scenario as the backdrop, structural relations between the two regions are subject to significant changes in the current environment, which present new opportunities and challenges.

The first change has to do with the pace of economic growth. With the deepening of the recessionary bias in the global economy, Latin America and the Caribbean, which for 10 years grew at faster rates than the European Union, is now growing more slowly. The strong growth of the Latin American economies between 2009 and 2014 was driven by the boom in prices for a number of export commodities and derivatives with low levels of processing (hydrocarbons, metals, soybeans and fruit, principally). This period also saw some convergence in per capita income between the two regions.

The end of the price boom, along with the reversal in the financial flows that the region had been receiving and serious domestic issues in several of the large economies, has led to a heavy drop in growth rates in Latin America and the Caribbean. At the same time, the economy in the European Union is showing signs of recovery, although at still-modest rates being driven basically by domestic consumption. Both regions are thus facing a period of uncertain duration characterized by slow growth and fresh pressures to boost competitiveness.

■ Figure 1 ■  
Euro exchange rate against the dollar, 2 January 2013-29 September 2016



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the European Central Bank [online] <https://www.ecb.europa.eu/stats/exchange/eurofxref/html/eurofxref-graph-usd.en.html#>.

The second change is the heavy depreciation of the euro against the dollar and against the major currencies of Latin America. The dollar exchange rate of the European Union's common currency fell from US\$ 1.38 to the euro in April 2014 to US\$ 1.08 dollars to the euro in March 2015, before stabilizing at around US\$ 1.1. If this rate holds in the medium term, the change in the value of the euro will naturally hurt the trade balance of Latin America and the Caribbean with the European Union, although it is hard to foresee the magnitude of the impact.

The third factor to consider is the significant reduction in poverty that took place in Latin America from the early 2000s to around 2014. The population living in poverty fell from nearly 44% in 2002 to just over 29% in 2015. Although the trend slowed in 2012-2014, its magnitude has been such that broad sectors of society have joined the ranks of the middle class for the first time, a development attended by social and economic impacts.

The fourth variable is pressure on the environment. As a region, Latin America and the Caribbean has already attained annual levels of greenhouse gas emissions similar to those in the European Union, despite being less developed. In fact, greenhouse gas emissions in the European Union have fallen by 0.9% every year on average since 1990 while steadily increasing in Latin America and the Caribbean at an annual rate of 0.6%, which is nevertheless far below the rate in Asia.

Inasmuch as the upward trend in greenhouse gas emissions in the region will certainly continue in the near future given its economic expansion, the evolution of the sectoral structure of production and demographic growth, environmental pressures are likely to intensify. Meanwhile, the European Union should continue with its successful efforts in this regard. The sustainable production models that it has developed could serve as a solid base for new experiences in Latin America and the Caribbean.

This document analyses the aforementioned changes in four chapters that compare and contrast the realities of the two regions. After this introduction, chapter I analyses the new consensus represented by the signing of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals. Chapter II looks at the situation in the countries of Latin America and the Caribbean and the European Union in relation to global economic conditions, considering macroeconomic, trade and foreign direct investment matters, as well as production and industry. Chapter III reviews progress on the social front in the two regions. Chapter IV considers the position of the European Union and CELAC in relation to the new vectors of change, basically the digital economy and climate change. Lastly, chapter V offers some final considerations.



## **I. The new consensus: the Sustainable Development Goals**



## A. Building the new paradigm

### 1. The world is seeking a sustainable development model

- The instability of the economic system, the persistence of poverty and sharp inequalities and the risk of an environmental crisis of immense proportions are increasingly at the forefront of public debate.
- The international community has mobilized to put forward a response. The 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), adopted by the General Assembly of the United Nations, are the outcome of an emerging consensus in the search for a new development paradigm to address planetary challenges.
- The 2030 Agenda is the outcome of a wide-ranging multilateral debate involving governments and social stakeholders. Furthermore, it restores the principle of shared but differentiated responsibilities among the countries in the environmental, economic and social spheres.
- The 2030 Agenda for Sustainable Development and the Sustainable Development Goals constitute a political and conceptual advance with regard to the agenda previously set in the Millennium Development Goals. Equality and environmental sustainability are the main pillars of the Sustainable Development Goals, but they also embrace other themes, such as the right to productive employment, transparency and a new equation between the State, market and society, which were not covered by the Millennium Development Goals.

#### ■ Diagram I.1 ■

##### Sustainable Development Goals



Source: United Nations [online] <https://sustainabledevelopment.un.org/?menu=1300>.

## 2. The new strategy will govern global development plans for the next 15 years

- The 2030 Agenda for Sustainable Development includes 17 Goals with 169 targets to be achieved by 2030. They are integrated, indivisible and encompass the economic, social and environmental spheres.
  - The 2030 Agenda represents the continuation of the Millennium Development Goals, the United Nations Conference on Sustainable Development (Rio+20), and the meetings of the International Conference on Financing for Development (the Addis Ababa Action Agenda adopted in July 2015 at the Third International Conference on Financing for Development, is an integral part of the 2030 Agenda for Sustainable Development).
- Furthermore, the SDGs were crucial in the negotiations for the new climate deal achieved in Paris in December 2015.
- By adopting the 2030 Agenda, the States committed to mobilize the means required to implement it through partnerships focused on the needs of the poorest and most vulnerable.
  - The Agenda represents a common and universal commitment. However, since each country faces specific challenges in the search for sustainable development, every State has full permanent sovereignty over all its wealth, natural resources and economic activity, and each one will set its own national targets in relation to the Sustainable Development Goals.

■ Table I.1 ■

### The 17 Sustainable Development Goals (SDGs)

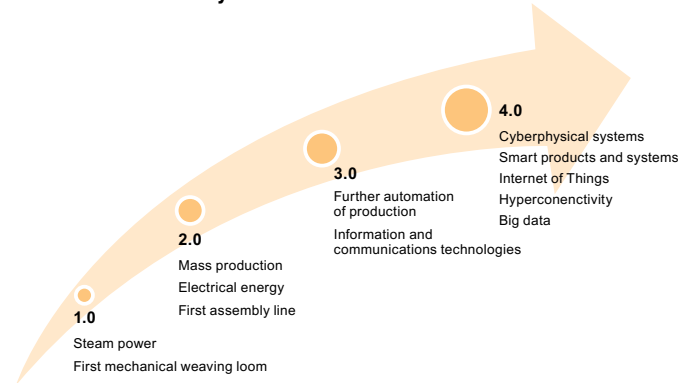
- |  |   |
|--|---|
| 1. End poverty in all its forms everywhere.  | 10. Reduce inequality within and among countries.   |
| 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.                         | 11. Make cities and human settlements inclusive, safe, resilient and sustainable.   |
| 3. Ensure healthy lives and promote well-being for all at all ages.  | 12. Ensure sustainable consumption and production patterns.   |
| 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.                 | 13. Take urgent action to combat climate change and its impacts.  |
| 5. Achieve gender equality and empower all women and girls.  | 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.   |
| 6. Ensure availability and sustainable management of water and sanitation for all.                                       | 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. |
| 7. Ensure access to affordable, reliable, sustainable and modern energy for all.   | 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.            |
| 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. | 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.   |
| 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.            |   |

Source: United Nations, General Assembly resolution 70/1, New York, 2015.

### 3. The Sustainable Development Goals must tackle the greatest market failure the world has ever seen: pollution and climate change

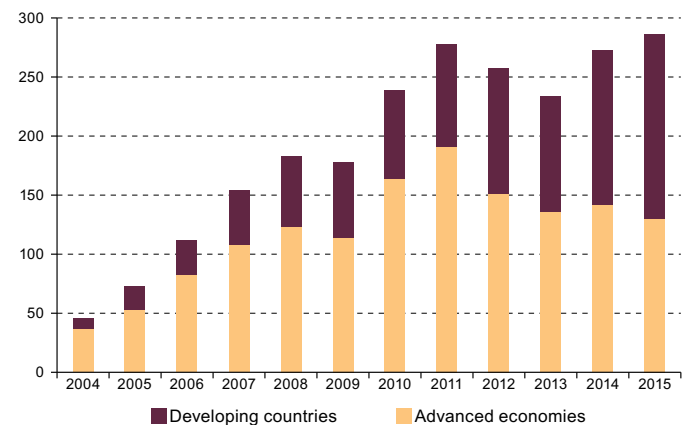
- The rapid emergence and consolidation of new technological paradigms have provided humanity with an unprecedented powerful, unparalleled tool to tackle its problems. The transformative potential of the technological revolution must be aligned with the 2030 Agenda for Sustainable Development by means of policies that create incentives to revitalize investment and channel it into the creation of more inclusive and less polluting production and consumption patterns.
- To implement the 2030 Agenda, new partnerships based on solidarity and equity must be forged at the international level and within each country. Such is the interdependence of the new goals and the universality and indivisibility of the new agenda that this will be a more complex and challenging process in terms of institution-building and policymaking than was the case for the MDGs.
- The impact of climate change opens new spaces for public policy. The emerging consensus that there is a need to invest heavily in a new energy matrix and production pattern may support the expansion of fiscal spending.
- However, developing this type of policy is a highly complex undertaking. Today, incentives are structured in such a way that pollution becomes the prevailing strategy. The benefit of greater production accrues directly to the producer, whereas its negative externalities are diffuse and are sometimes felt more intensely in regions far from the source of pollution. For this very reason, the response by the international community and national policymakers to change the development pattern is now more urgent and legitimate than ever before.

■ **Diagram I.2 ■**  
**Evolution of industry**



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Federal Ministry of Education and Research (BMBF) of Germany, "Umsetzungsempfehlungen für das Zukunftsprojekt Industrie 4.0", 2013 [online] [https://www.bmbf.de/files/Umsetzungsempfehlungen\\_Industrie4\\_0.pdf](https://www.bmbf.de/files/Umsetzungsempfehlungen_Industrie4_0.pdf).

■ **Figure I.1 ■**  
**New investments in non-conventional renewable energies in advanced economies and developing countries, 2004-2015**  
(Billions of dollars)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Environment Programme (UNEP)/Frankfurt School of Finance and Management, *Global Trends in Renewable Energy Investment 2016* [online] [http://fs-unep-centre.org/sites/default/files/publications/globaltrendsrenewableenergyinvestment2016lowres\\_0.pdf](http://fs-unep-centre.org/sites/default/files/publications/globaltrendsrenewableenergyinvestment2016lowres_0.pdf).



B. The role of the European Union and the Community of Latin American and Caribbean States in building and implementing the Sustainable Development Goals

1. The European Union at the forefront of sustainable development

- The European Union has long been committed to sustainable development. In 1997, sustainable development was included in the Treaty of Amsterdam as a priority objective for European policies. In 2001, the bloc launched the Sustainable Development Strategy (EU SDS), which established objectives and policy measures for seven key challenges to be addressed over 10 years: climate change and clean energy; sustainable transport; sustainable consumption and production; conservation and management of natural resources; public health; social inclusion, demography and migration; and global poverty and sustainable development challenges.
- The strategy was reviewed in 2006 and 2009, and improvements were made to aspects of implementation, follow-up and the division of responsibilities. Sustainable development was mainstreamed across a broad range of policies —especially on climate change— and a stronger emphasis was placed on the international dimension in keeping with the Millennium Development Goals.
- In 2010, a new development strategy was presented to replace the Lisbon Strategy: Europe 2020. The new strategy proposes three mutually reinforcing priorities for smart, sustainable and inclusive growth, by developing an economy based on knowledge and innovation; promoting a resource-efficient, greener and more competitive economy; and fostering a high-employment economy delivering and territorial cohesion. By 2020, Europe 2020 aims to deliver on three key priorities, by meeting eight targets and deploying seven flagship initiatives.
- These early efforts have made the European Union a leader in efforts to combat climate change, develop environmentally-friendly technologies and promote a low-carbon economy.

■ Table I.2 ■  
Europe 2020: key priorities, headline targets and flagship initiatives

Priorities	Targets by 2020	Flagship initiatives
Smart growth	<ul style="list-style-type: none"><li>• Increasing combined public and private investment in R&amp;D to 3% of GDP</li><li>• Reducing school drop-out rates to less than 10%</li><li>• Increasing the share of the population aged 30-34 having completed tertiary education to at least 40%</li></ul>	<ul style="list-style-type: none"><li>• Innovation Union</li><li>• Youth on the move (ended in December 2014)</li><li>• A digital agenda for Europe</li></ul>
Sustainable growth	<ul style="list-style-type: none"><li>• Reducing greenhouse gas emissions by at least 20% compared to 1990 levels</li><li>• Increasing the share of renewable energy in final energy consumption to 20%</li><li>• Moving towards a 20% increase in energy efficiency</li></ul>	<ul style="list-style-type: none"><li>• Resource-efficient Europe</li><li>• An industrial policy for the globalization era</li></ul>
Inclusive growth	<ul style="list-style-type: none"><li>• Increasing the employment rate of the population aged 20-64 to at least 75%</li><li>• Lifting at least 20 million people out of the risk of poverty and social exclusion</li></ul>	<ul style="list-style-type: none"><li>• An agenda for new skills and jobs</li><li>• European platform against poverty and social exclusion</li></ul>

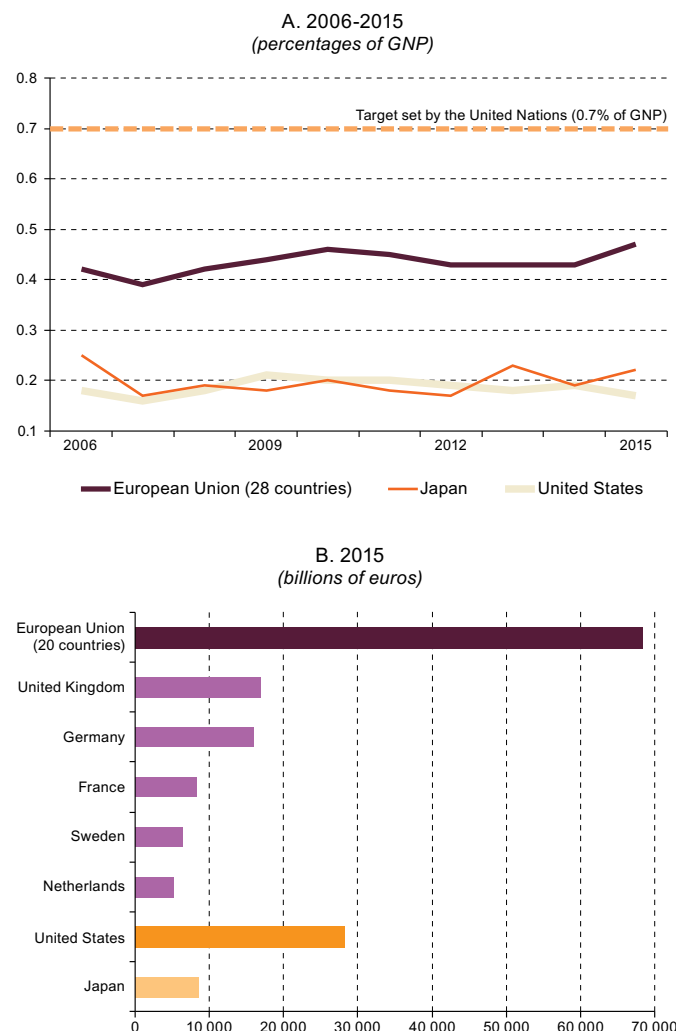
Source: European Union, *Smarter, greener, more inclusive? Indicators to support the Europe 2020 Strategy, 2016 edition*, July 2016 [online] <http://ec.europa.eu/eurostat/documents/3217494/7566774/KS-EZ-16-001-EN-N.pdf/ac04885c-cfff-4f9c-9f30-c9337ba929aa>.

## 2. The European Union was a key player in the construction of the 2030 Agenda for Sustainable Development

- Since the outset, the European Union has used its broad experience to contribute to the construction of the 2030 Agenda and the Sustainable Development Goals. Today, it is committed to carrying the 2030 Agenda forward, both within the European Union itself—for example, by means of the Circular Economy Strategy for establishing more sustainable production and consumption models—and in its foreign policy, by supporting diverse initiatives, especially in developing countries.
- Between 2000 and 2015, the European Union's development policy was guided by the Millennium Development Goals and did much to achieve them. The European Union and its member States together form the largest donor to official development assistance (ODA) and are pioneers in the formulation and use of innovative financing mechanisms. The European Union's combined ODA exceeded 68 billion euros in 2015, and will increase to an estimated 100 billion euros by 2020.
- However, despite the multiple international agreements in place, these resource transfers still fall short of the targets established by the United Nations. First with General Assembly resolution 2626 (XXV) of 1970, and again at the International Conference on Financing for Development in Monterrey and the World Summit on Sustainable Development in Johannesburg (both in 2002), the industrialized countries committed to a target of 0.7% of gross national product (GNP) for ODA to developing countries. The European Union has made the greatest efforts in this direction. Notwithstanding severe budget constraints arising from the economic crisis, the European Union's combined ODA held steady at around 0.45% of GNP in the 2010-2015 period. In July 2015, on the occasion of the Third International Conference on Financing for Development, held in Addis Ababa, the European Union reaffirmed its collective commitment to devote 0.7% of GNP to ODA within the lifetime of the 2030 Agenda. Several European Union countries individually have shown a strong commitment to attain and even exceed this target: Sweden (1.4% of GNP in 2015), Luxembourg (0.93%), Denmark (0.85%) and the Netherlands (0.76%).

■ Figure I.2 ■

### Official development assistance, contributions by main donors, 2006-2015 and 2015



Source: Eurostat [online] [http://europa.eu/rapid/press-release\\_MEMO-16-1363\\_en.htm](http://europa.eu/rapid/press-release_MEMO-16-1363_en.htm) and Organization for Economic Cooperation and Development (OECD) [online] <http://www.oecd.org/newsroom/development-aid-rises-again-in-2015-spending-on-refugees-doubles.htm>.

### 3. An opportunity for a strong role by the countries of the Community of Latin America and Caribbean States (CELAC)

- Achieving the objectives of the 2030 Agenda will require a change in the pattern of development along with economic, industrial, social and environmental policies that are aligned with progressive structural change.
- Speeding up capital accumulation is key to achieving progressive structural change, as today’s investment will determine the production structure of tomorrow, and it is the main instrument for transforming industry, expanding technological capabilities and redefining the style of development. However, progressive structural change will not result from spontaneous market forces: it demands industrial policies to stimulate dynamic sectors, and follow low-carbon paths with forward and backward linkages, so as to pull along the entire economy as they grow.
- The environmental crisis opens up opportunities for industrial and technological policies focused on sustainability. Building capabilities and developing institutions and policies around an environmental big push offers a new learning path with massive potential for economic transformation.
- In order to achieve the Sustainable Development Goals, countries will have to grapple with a socioeconomic and political reality marked by tensions and contradictions. In this scenario, the Latin American and Caribbean countries must act on three fronts: international governance for the production of global public goods; regional cooperation and input to the global discussions; and national policies, in particular macroeconomic, social, industrial and environmental policies.

■ Table I.3 ■  
**Policy proposals for implementing the 2030 Agenda for Sustainable Development**

Sphere	Policies
Creating global public goods	<ul style="list-style-type: none"><li>• Achieve greater correlation between the weight of developing countries in the world economy and their representation and decision-making power in international financial institutions.</li><li>• Coordinate fiscal policies focused on environmental investments to give an expansionist thrust to the global economy and sustain employment.</li><li>• Coordinate foreign-exchange and financial policies to reduce trade imbalances and volatility through redesign of the financial architecture.</li><li>• Strengthen international coordination to reduce tax evasion and avoidance.</li><li>• Create funds to finance the adaptation and transfer of environmental technologies.</li><li>• Disseminate environmental standards and eco-labelling to promote trade in goods of lower carbon intensity.</li><li>• Adjust global trade and investment rules to make them more compatible with the Sustainable Development Goals.</li><li>• Participate proactively in the discussion on Internet and information governance.</li></ul>
Strengthening the regional contribution	<ul style="list-style-type: none"><li>• Create or expand financial safety nets (Latin American Reserve Fund (FLAR), regional development banking, payments clearing system).</li><li>• Apply common fiscal, social and environmental standards to avoid predatory competition in international trade and foreign investment.</li><li>• Create a digital common market.</li><li>• Develop regional value chains in environmental goods and services.</li><li>• Establish a regional fund for the purchase and licensing of patents.</li><li>• Create a debt relief and resilience fund for countries in the Caribbean.</li></ul>
National strategies and policies	<ul style="list-style-type: none"><li>• Fiscal space and multi-year planning to protect and promote public investment.</li><li>• Afford equal priority to nominal and financial stability in monetary policy.</li><li>• Implement suitable macroprudential policy in the external sphere, especially at times of abundant liquidity.</li><li>• Smart cities: expand the public transport and social integration system.</li><li>• Increase the share of clean energies in the energy mix.</li><li>• Develop clean technology capacities.</li><li>• Create science centres to evaluate, implement and monitor intended nationally determined contributions (INDC).</li><li>• Gradually withdraw fossil fuel subsidies.</li><li>• Tax carbon-intensive sectors and activities.</li><li>• Include environmental costs in the cost of bank loans.</li><li>• Achieve universal social protection.</li><li>• Achieve universal health and education coverage.</li></ul>

Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Horizons 2030: Equality at the Centre of Sustainable Development* (LC/G.2660/Rev.1), Santiago, 2016.

## **II. Latin America and the Caribbean and the European Union: coping with the world economic situation**

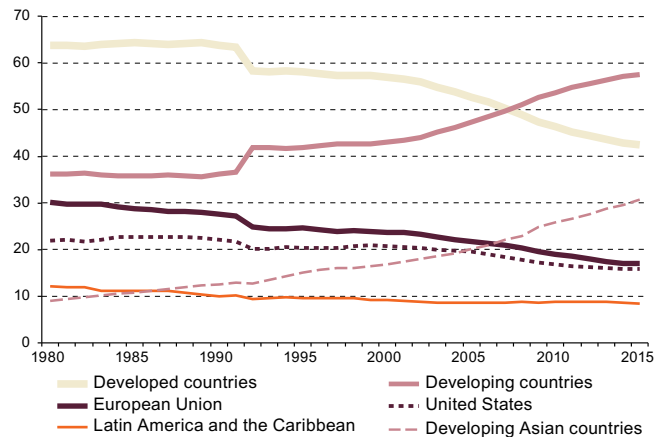


## A. The macroeconomic situation

### 1. Emerging economies, particularly the most dynamic among them in Asia, are superseding developed countries in the global economy

- The structure of the world economy has undergone significant changes, heightened in recent years by the global financial crisis that struck developed countries with full force. Between 1990 and 2015, the share of developed countries in world GDP fell from 64% to 42%. The European Union and some of its most important economies —Germany, the United Kingdom, France and Italy— as well as the United States and Japan have been losing weight in global output, to the benefit of emerging economies.
- Between 2000 and 2015, the weight of Asian developing countries in global GDP rose from 17% to 31%, an outcome influenced by the strong and rapid economic growth of China and, more recently, of India. During that same time, China's share jumped from 7% to 17%, while that of India went up from 4% to 7%. In 2015, China's share of the world economy was equal to that of the European Union.
- By contrast, the share of Latin America and the Caribbean in the global economy has declined, if only slightly. The region's share recorded its sharpest drop between 1980 and 2002, falling from 12% to 8.6% before stabilizing at around 9%.

■ **Figure II.1**  
**Selected countries and regions: share of world GDP, 1980-2015**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of figures from the International Monetary Fund (IMF) and the World Bank.

## 2. The world economy has sunk further into recession, triggering alarm signals about the 2030 Agenda for Sustainable Development

- The prolonged period of slow growth worldwide poses a challenge for achieving the 2030 Agenda for Sustainable Development, as financing remains severely constrained. Since the international financial crisis of 2008, the world economy has experienced low rates of growth and recurrent bouts of instability and uncertainty. The persistent weakness of aggregate demand in the advanced economies continues to depress global growth; at the same time, low commodity prices and growing fiscal and current account imbalances, as well as the tightening of fiscal and monetary policies, have further dimmed the outlook for developing countries that export natural resources, particularly those of Africa and of Latin America and the Caribbean.
- Forecasts suggest that the world economy will remain on this recessionary trend, which is dampening growth prospects and inhibiting the recovery of international trade, investment, productivity and wages. In 2015, the world economy grew by 2.4%; this sluggish performance is expected to persist in 2016, with a modest improvement beginning in 2017.
- In developing countries, growth will continue to slow markedly, with the notable exception of India. For the first time since 1990, China recorded growth of less than 7% in 2015, and this slowdown could continue in coming years. Emerging economies are still hostage to volatility in capital flows and to exchange-rate pressures, which could intensify in the face of the widening divergence in global interest rates. Together with the weakness of international trade, this could worsen the debt service burden, especially for countries that are dependent on natural resources.
- GDP growth in the less developed countries stood at 3.9% in 2015, and is expected to rise to 4.8% in 2016, a level far below the 7% assumed in target 8.1 of the Sustainable Development Goals (SDG). Such an outcome would place at risk public spending that is indispensable for education, health and adaptation to climate change, and could jeopardize progress in reducing poverty.

■ Table II.1 ■

### GDP growth 2013-2015 and projections for 2016

(Percentages)

	2010	2011	2012	2013	2014	2015	2016 <sup>a</sup>
<b>World</b>	<b>4.3</b>	<b>3.1</b>	<b>2.5</b>	<b>2.3</b>	<b>2.6</b>	<b>2.4</b>	<b>2.4</b>
<b>Developed countries</b>	<b>2.6</b>	<b>1.5</b>	<b>1.1</b>	<b>1.0</b>	<b>1.7</b>	<b>1.9</b>	<b>1.8</b>
United States	2.5	1.6	2.2	1.5	2.4	2.4	2.0
Japan	4.7	-0.5	1.7	1.6	-0.1	0.5	0.5
European Union (28 countries)	2.1	1.8	-0.5	0.2	1.4	1.9	1.9
<b>Transition economies</b>	<b>4.8</b>	<b>4.5</b>	<b>3.3</b>	<b>2.1</b>	<b>0.9</b>	<b>-2.8</b>	<b>-1.2</b>
Russian Federation	4.5	4.3	3.4	1.3	0.6	-3.7	-1.9
<b>Developing economies</b>	<b>7.6</b>	<b>6.0</b>	<b>4.7</b>	<b>4.6</b>	<b>4.4</b>	<b>3.8</b>	<b>3.8</b>
South and East Asia	9.1	7.2	5.8	6.1	6.1	5.7	5.7
India	9.8	7.5	5.5	6.5	7.2	7.3	7.3
China	10.6	9.5	7.7	7.7	7.3	6.9	6.4
Africa	5.2	1.0	5.5	3.3	3.8	3.0	2.8
Latin America and the Caribbean	6.2	4.5	2.8	2.9	0.9	-0.5	-0.9
Least developed countries <sup>b</sup>	6.1	3.7	5.3	5.1	5.6	3.9	4.8

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016*, Update as of mid-2016, New York, May 2016.

<sup>a</sup> Projections.

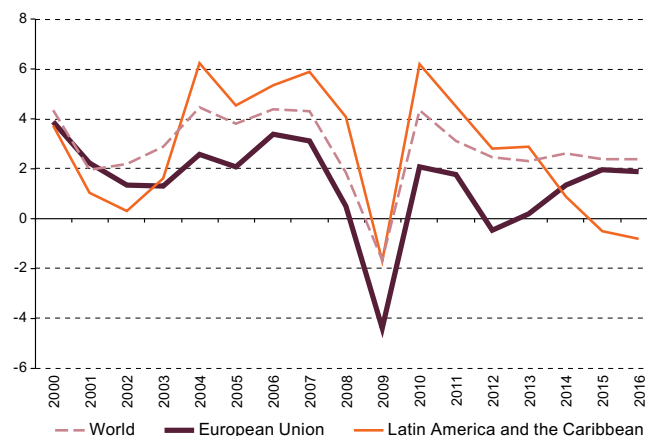
<sup>b</sup> The category of the least developed countries, according to the United Nations definition, includes the 48 countries in the world with the lowest socioeconomic indicators.

### 3. In this complex scenario, the Latin America and Caribbean region is growing at a slower pace than the European Union for the first time in a decade

- Between 2003 and 2013, GDP growth in Latin America and the Caribbean exceeded that of the European Union. In 2009, the impact of the international financial crisis was more pronounced in the European Union (where GDP growth fell by 4.4%) than in the countries of the Community of Latin America and Caribbean States (CELAC) as a whole (where growth was -1.7%), and the recovery was more sluggish and uncertain in the first group of countries.
- However, as of 2011, the less favourable external conditions in Latin America and the Caribbean —associated in particular with the collapse of commodity prices— and the domestic problems of some countries have produced a prolonged period of deceleration in economic growth. For the first time since 2009, regional GDP contracted in 2015 (-0.5%), a trend that persisted in 2016 with a further decline in output (-0.9%).
- In 2016, on the other hand, the European Union's economy is enjoying a fourth year of recovery, although the pace of growth (driven essentially by domestic consumption) remains moderate. In the euro zone, the strengthening of private consumption —boosted by low oil prices, favourable financing conditions and the depreciation of the euro— is offsetting the weakness in exports that reflects the slowdown in major markets, including both advanced and emerging economies. However, growth will continue to be dampened by the heavy burden of public and private debt, together with other fallout from the crisis such as high structural unemployment and political uncertainty. As a result, economic growth has remained moderate, but with downward projections for 2017, due in part to the United Kingdom's decision to leave the European Union (commonly referred to as "Brexit").

■ Figure II.2 ■

**Latin America and the Caribbean and the European Union: GDP growth, 2000-2016<sup>a</sup>**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", *Institutional Paper*, N° 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eep/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eep/pdf/ip025_en.pdf).

<sup>a</sup> The figure for 2016 is a projection.



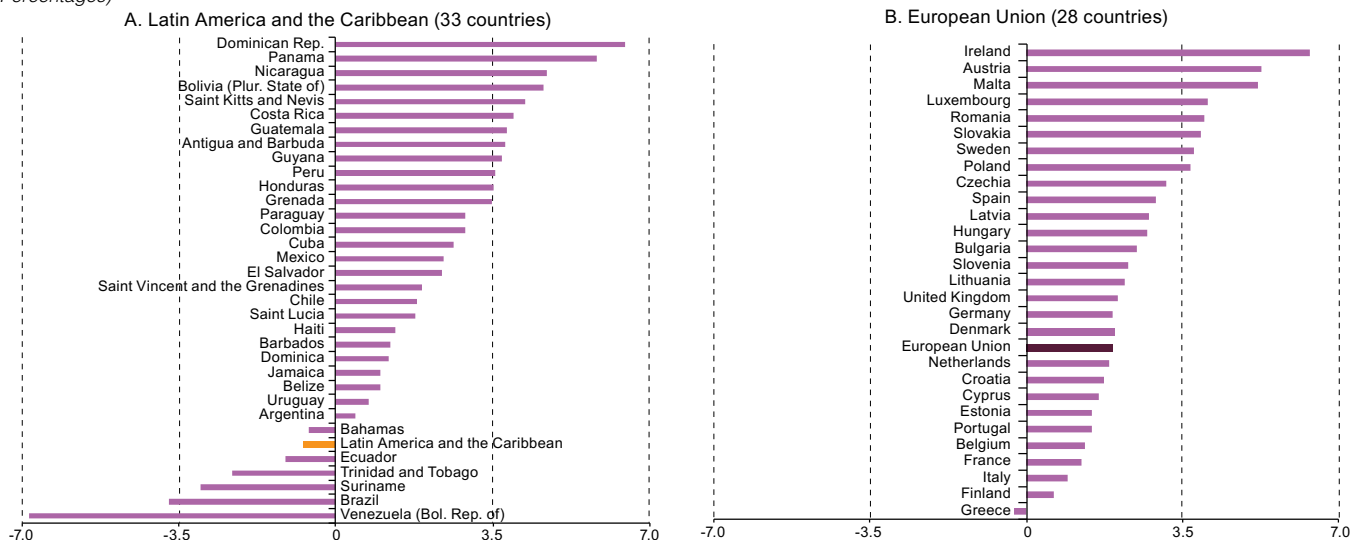
## 4. GDP growth is more uneven among the member countries of the Community of Latin America and Caribbean States (CELAC) than among those of the European Union

- External factors such as the performance of commodity prices, the slowdown of growth in emerging economies, sustained but sluggish growth in the United States, and the volatility on international financial markets have been compounded by domestic factors that have accentuated the uneven performance of Latin American and Caribbean economies.
- The countries of South America have seen a severe deterioration in their terms of trade, combined with lower external demand (from China as well as from partners within the region) and a significant shrinking of political manoeuvring room for stimulating demand, as a result of rising inflation and falling fiscal revenues from commodity exports (hydrocarbons and minerals). In this scenario, two of the region's largest economies (Brazil and the Bolivarian Republic of Venezuela) have seen their GDP shrink sharply, which in turn has had an impact on aggregate outcomes.
- On the other hand, Central America and Mexico have achieved better outcomes, thanks to lower energy prices, a recovery in external demand, and inflows of remittances (linked to the recovery in the United States), and they have more policy room for stimulating domestic demand.
- By contrast, the countries of the European Union have experienced more generalized growth, although of uneven intensity. Among the larger economies, Germany has witnessed a turnaround, resulting from renewed investment, the recovery of consumption in France, and steady growth in Spain. As well, some of the countries most affected by the crisis, including Cyprus, Slovenia and Ireland, have managed to correct their deficits and in this way emerge from the excessive deficit procedure. Currently, only six countries of the European Union are still covered by the excessive deficit procedure, namely: Croatia, France, Greece, Portugal, Spain and the United Kingdom.

■ Figure II.3 ■

### Latin America and the Caribbean and European Union: GDP growth, 2015-2016<sup>a</sup>

(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean*, 2016 (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", Institutional Paper, N° 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eip/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eip/pdf/ip025_en.pdf).

<sup>a</sup> The figure for 2016 is a projection.

■ Table II.2 ■

**Latin America and the Caribbean and European Union: GDP growth, 2007-2016***(Percentages)*

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 <sup>a</sup>
Latin America and the Caribbean	<b>5.9</b>	<b>4.1</b>	<b>-1.7</b>	<b>6.2</b>	<b>4.5</b>	<b>2.8</b>	<b>2.9</b>	<b>0.9</b>	<b>-0.5</b>	<b>-0.9</b>
Latin America	<b>5.9</b>	<b>4.1</b>	<b>-1.7</b>	<b>6.3</b>	<b>4.5</b>	<b>2.9</b>	<b>2.9</b>	<b>0.9</b>	<b>-0.5</b>	<b>-0.9</b>
Argentina	9.0	4.1	-6.0	10.4	6.1	-1.1	2.3	-2.6	2.4	-1.8
Bolivia (Plurinational State of)	4.6	6.1	3.4	4.1	5.2	5.1	6.8	5.5	4.8	4.5
Brazil	6.1	5.1	-0.1	7.5	3.9	1.9	3.0	0.1	-3.9	-3.4
Chile	4.6	3.7	-1.0	5.8	5.8	5.5	4.0	1.9	2.1	1.6
Colombia	6.9	3.5	1.7	4.0	6.6	4.0	4.9	4.4	3.1	2.3
Costa Rica	7.9	2.7	-1.0	5.0	4.5	5.2	2.0	3.0	3.7	4.2
Cuba	7.3	4.1	1.5	2.4	2.8	3.0	2.7	1.0	4.3	0.8
Dominican Republic	8.5	3.2	0.9	8.3	3.1	2.8	4.7	7.6	7.0	6.5
Ecuador	2.2	6.4	0.6	3.5	7.9	5.6	4.6	3.7	0.3	-2.5
El Salvador	3.8	1.3	-3.1	1.4	2.2	1.9	1.8	1.4	2.5	2.2
Guatemala	6.3	3.3	0.5	2.9	4.2	3.0	3.7	4.2	4.1	3.3
Haiti	3.3	0.8	3.1	-5.5	5.5	2.9	4.2	2.8	1.2	1.5
Honduras	6.2	4.2	-2.4	3.7	3.8	4.1	2.8	3.1	3.6	3.5
Mexico	3.2	1.4	-4.7	5.2	3.9	4.0	1.4	2.2	2.5	2.1
Nicaragua	5.3	2.9	-2.8	3.2	6.2	5.6	4.5	4.6	4.9	4.5
Panama	12.1	8.6	1.6	5.8	11.8	9.2	6.6	6.1	5.8	5.4
Paraguay	5.4	6.4	-4.0	13.1	4.3	-1.2	14.0	4.7	3.0	4.0
Peru	8.5	9.1	1.1	8.3	6.3	6.1	5.9	2.4	3.3	3.9
Uruguay	6.5	7.2	4.2	7.8	5.2	3.5	4.6	3.2	1.0	0.6
Venezuela (Bolivarian Republic of)	8.8	5.3	-3.2	-1.5	4.2	5.6	1.3	-3.9	-5.7	-8.0
<b>The Caribbean</b>	<b>6.5</b>	<b>1.4</b>	<b>-3.4</b>	<b>1.4</b>	<b>1.0</b>	<b>1.3</b>	<b>1.5</b>	<b>0.4</b>	<b>-0.5</b>	<b>-0.3</b>
Antigua and Barbuda	9.3	0.0	-12.0	-7.0	-1.8	3.8	-0.2	4.6	4.1	3.5
Bahamas	1.4	-2.3	-4.2	1.5	0.6	3.1	0.0	-0.5	-1.7	0.5
Barbados	1.7	0.3	-1.5	0.3	0.8	0.3	-0.1	0.2	0.9	1.6
Belize	1.1	3.2	0.8	3.3	2.1	3.7	1.3	4.1	1.2	0.8
Dominica	6.4	7.1	-1.2	0.7	-0.2	-1.1	0.8	4.2	-1.8	4.2
Grenada	6.1	0.9	-6.6	-0.5	0.8	-1.2	2.4	5.7	5.1	1.9
Guyana	7.0	2.0	3.3	4.4	5.4	4.8	5.2	3.8	3.0	4.4
Jamaica	17.1	-0.7	-4.4	-1.5	1.7	-0.6	0.5	0.7	0.8	1.2
Saint Kitts and Nevis	-0.2	6.3	-3.0	-2.2	2.4	-0.6	6.2	6.0	3.8	4.7
Saint Lucia	1.0	4.2	-0.4	-1.7	0.2	-1.4	0.1	0.4	2.4	1.2
Saint Vincent and the Grenadines	2.4	2.5	-2.1	-3.4	-0.4	1.4	1.8	1.2	1.6	2.3
Suriname	5.1	4.1	3.0	5.2	5.3	3.1	2.9	1.8	-2.0	-4.0
Trinidad and Tobago	4.5	3.4	-4.4	3.3	-0.3	1.3	2.3	-1.0	-2.1	-2.5
<b>European Union (28 countries)</b>	<b>3.1</b>	<b>0.5</b>	<b>-4.4</b>	<b>2.1</b>	<b>1.8</b>	<b>-0.5</b>	<b>0.2</b>	<b>1.4</b>	<b>1.9</b>	<b>1.9</b>
<b>European Union (15 countries)</b>	<b>2.9</b>	<b>0.2</b>	<b>-4.4</b>	<b>2.1</b>	<b>1.7</b>	<b>-0.6</b>	<b>0.1</b>	<b>1.2</b>	<b>1.8</b>	<b>1.8</b>
Austria	3.6	1.5	-3.8	1.9	2.8	0.8	0.3	0.4	9.0	1.5
Belgium	3.4	0.7	-2.3	2.7	1.8	0.2	0.0	1.3	1.4	1.2
Denmark	0.8	-0.7	-5.1	1.6	1.2	-0.1	-0.2	1.3	1.7	2.2
Finland	5.2	0.7	-8.3	3.0	2.6	-1.4	-0.8	-0.7	0.5	0.7

Table II.2 (concluded)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 <sup>a</sup>
France	2.4	0.2	-2.9	2.0	2.1	0.2	0.7	0.2	1.2	1.3
Germany	3.3	1.1	-5.6	4.1	3.7	0.4	0.3	1.6	1.7	2.2
Greece	3.3	-0.3	-4.3	-5.5	-9.1	-7.3	-3.2	0.7	-0.2	-0.3
Ireland	5.5	-2.2	-5.6	0.4	2.6	0.2	1.4	5.2	7.8	4.9
Italy	1.5	-1.1	-5.5	1.7	0.6	-2.8	-1.7	-0.3	0.8	1.1
Luxembourg	8.4	-0.8	-5.4	5.7	2.6	-0.8	4.3	4.1	4.8	3.3
Netherlands	3.7	1.7	-3.8	1.4	1.7	-1.1	-0.5	1.0	2.0	1.7
Portugal	2.5	0.2	-3.0	1.9	-1.8	-4.0	-1.1	0.9	1.5	1.5
Spain	3.8	1.1	-3.6	0.0	-1.0	-2.6	-1.7	1.4	3.2	2.6
Sweden	3.4	-0.6	-5.2	6.0	2.7	-0.3	1.2	2.3	4.1	3.4
United Kingdom	2.6	-0.5	-4.2	1.5	2.0	1.2	2.2	2.9	2.3	1.8
<b>New member States of the European Union (13 countries)</b>	<b>6.4</b>	<b>3.6</b>	<b>-3.7</b>	<b>2.0</b>	<b>3.1</b>	<b>0.5</b>	<b>1.2</b>	<b>2.7</b>	<b>3.2</b>	<b>3.0</b>
Bulgaria	7.7	5.6	-4.2	0.1	1.6	0.2	1.3	1.6	3.0	2.0
Croatia	5.2	2.1	-7.4	-1.7	-0.3	-2.2	-1.1	-0.4	1.6	1.8
Cyprus	4.9	3.7	-2.0	1.4	0.4	-2.4	-5.9	-2.5	1.6	1.7
Czechia	5.5	2.7	-4.8	2.3	2.0	-0.9	-0.5	2.0	4.2	2.1
Estonia	7.7	-5.4	-14.7	2.5	7.6	5.2	1.6	2.9	1.1	1.9
Hungary	0.4	0.8	-6.6	0.7	1.8	-1.7	1.9	3.7	2.9	2.5
Latvia	10.0	-3.6	-14.3	-3.8	6.2	4.0	3.0	2.4	2.7	2.8
Lithuania	11.1	2.6	-14.8	1.6	6.0	3.8	3.5	3.0	1.6	2.8
Malta	4.0	3.3	-2.5	3.5	2.1	2.5	2.6	3.5	6.3	4.1
Poland	7.2	3.9	2.6	3.7	5.0	1.6	1.3	3.3	3.6	3.7
Slovakia	10.8	5.7	-5.5	5.1	2.8	1.5	1.4	2.5	3.6	4.2
Slovenia	6.9	3.3	-7.8	1.2	0.6	-2.7	-1.1	3.0	2.9	1.7
Romania	6.9	8.5	-7.1	-0.8	1.1	0.6	3.5	3.0	3.8	4.2

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", *Institutional Paper*, Nº 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eeip/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip025_en.pdf).

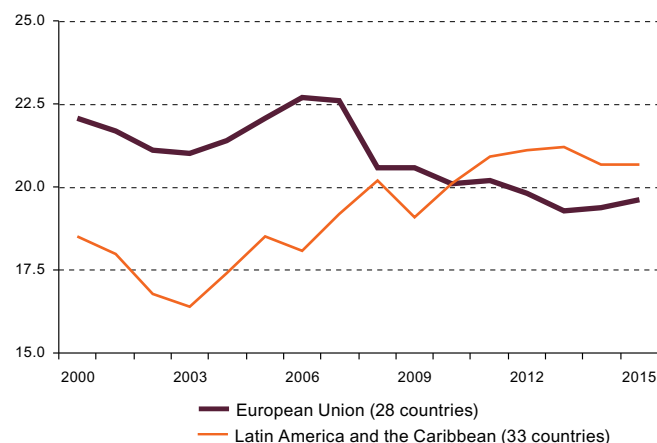
<sup>a</sup> Projections.

## 5. The investment rate in Latin America and the Caribbean is higher than in the European Union

- The European Union as well as Latin America and the Caribbean betray investment levels that fall short of the world average, and are far from those achieved in the developing countries of Asia.
- Until the international financial crisis, investment levels in the European Union were higher than those in Latin America and the Caribbean. Although the crisis hit both regions, investment has behaved differently in each. In the European Union, there has been a steady decline in gross fixed capital formation, which stood at 19.6% of GDP in 2015. By contrast, the investment performance in Latin America and the Caribbean was positive until the middle of 2014. Since that time, slower GDP growth, together with the complex international environment and less optimistic expectations, have produced a drastic reduction in the investment rate, most notably in some of the largest economies of South America, and in Brazil in particular. Yet despite this contraction, investment levels in CELAC still exceed those in the European Union.
- In both regions, the investment performance differs greatly across countries. In the European Union, the Czech Republic, Belgium and Sweden have the highest investment rates, while Italy, Greece and Portugal lag furthest behind. In Latin America, Panama, Ecuador (thanks in large part to public investment) and Mexico are posting high investment rates, in contrast to the low levels of investment recorded in Brazil, the Bolivarian Republic of Venezuela, Argentina and El Salvador.
- This pattern of gross fixed capital formation is of concern not only for its short-term effect on the behaviour of aggregate demand, but also because it severely compromises the future capacity of both regions to grow and to meet the goals of the 2030 Agenda for Sustainable Development.

■ Figure II.4 ■

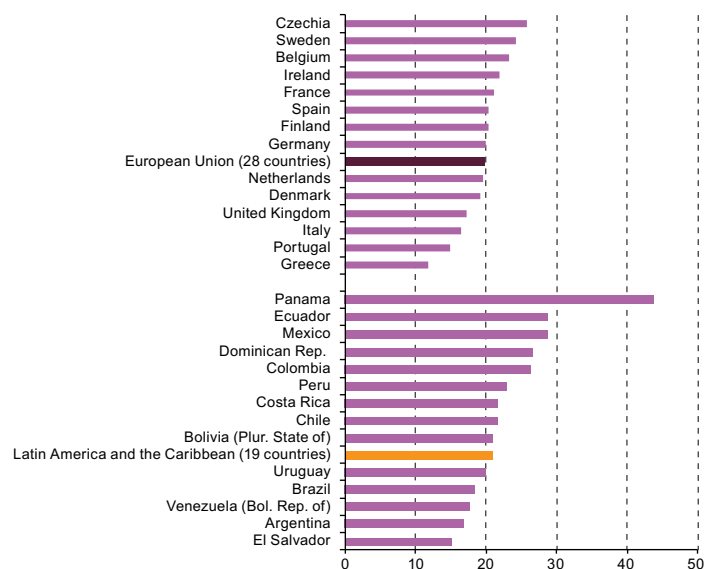
**Latin America and the Caribbean and European Union: gross fixed capital formation, 2000-2015**  
(Percentages of GDP)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", *Institucional Paper*, N° 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eeip/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip025_en.pdf).

■ Figure II.5 ■

**Latin America and the Caribbean and European Union: gross fixed capital formation, 2015**  
(Percentages of GDP)



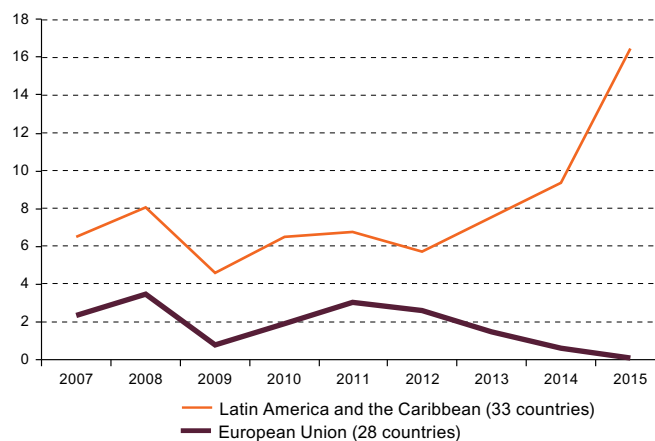
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", *Institucional Paper*, N° 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eeip/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip025_en.pdf).

## 6. The countries of Latin America and the Caribbean have witnessed a sharp increase in inflation, whereas inflation remains close to zero in the European Union

- In recent years, while Latin America and the Caribbean recorded steadily rising average inflation rates, price increases have been slowing systematically in the European Union. In 2015, inflation stood at 16.5% in Latin American and Caribbean countries as a whole, its highest level since 1996; in European countries, on the other hand, it reached an all-time low of 0.1%. In the European Union, these outcomes are in part a consequence of falling oil prices, moderating economic activity within the bloc, and idle excess capacity in several emerging economies, which is dampening price increases for many imported products.
- Yet these regional averages conceal some differences among countries, especially in Latin America and the Caribbean. On the one hand, inflation in Mexico, Central America and much of the Caribbean declined in 2015, while in South America prices rose vigorously, especially in the Bolivarian Republic of Venezuela (180.9%), Argentina (27.5%) and Brazil (10.7%). In this second group, characterized by depreciating currencies, inflation was driven by exchange rate volatility, growing fiscal dominance, and the consequent increase in monetary aggregates. On the other hand, in the great majority of European Union countries there was very little change in consumer prices. In fact, the highest inflation rate (1.2% in Malta) and the lowest (-2.2% in Cyprus) differed by only 3.4 percentage points.

■ Figure II.6 ■

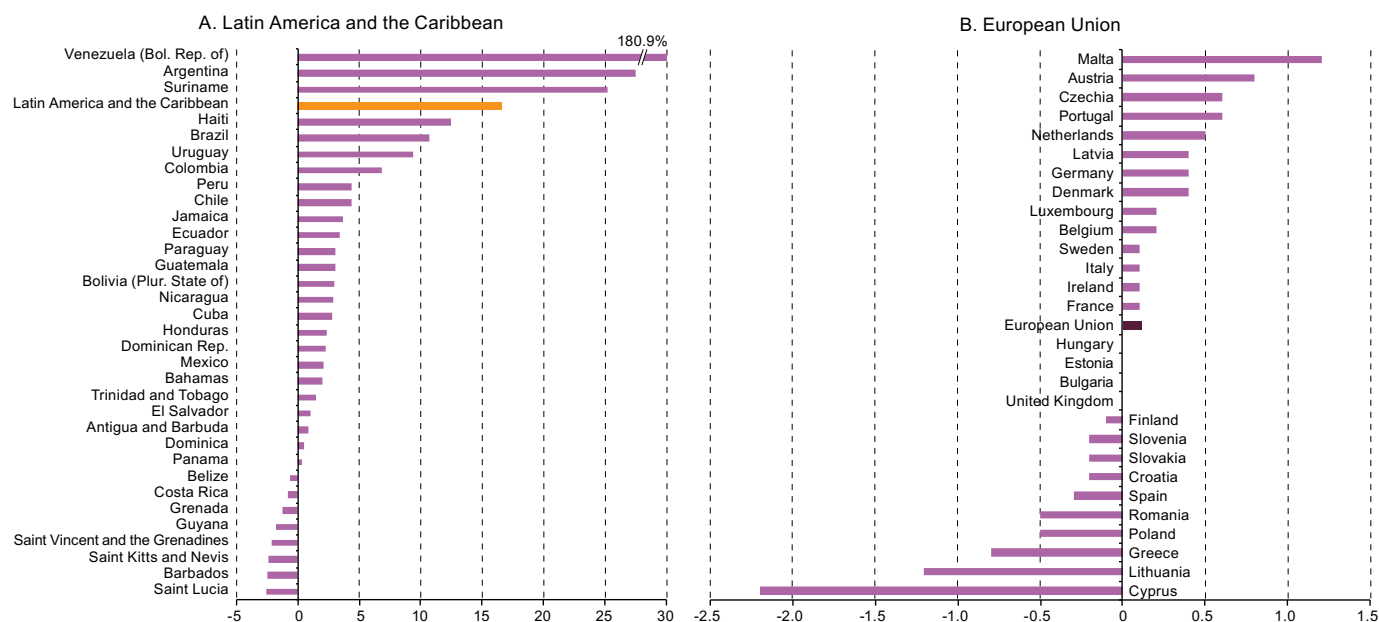
**Latin America and the Caribbean and European Union (weighted averages): 12-month changes in the consumer price index (CPI), 2007-2015**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", *Institutional Paper*, N° 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eeip/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip025_en.pdf).

■ Figure II.7 ■

**Latin America and the Caribbean and European Union: 12-month changes in the consumer price index (CPI), by country, 2015**  
(Percentages)



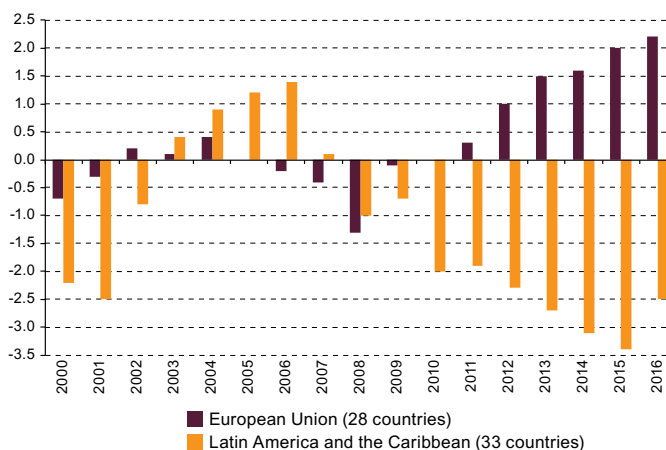
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", *Institutional Paper*, N° 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eeip/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip025_en.pdf).

## 7. Increasing exposure to the international economy has made it harder for Latin America and the Caribbean to deal with current account volatility

- Current account balances in Latin America and the Caribbean improved steadily between 2000 and 2007, after long periods of deficit. Subsequently, however, these balances have recorded a continuing and growing deterioration, as the trade surplus has withered. This could be attributed, on the one hand, to lower international prices for commodities and, on the other hand, to the sustained increase in goods imports, in response to an upturn in domestic demand. The negative balance on the current account rose almost steadily until 2015, when it reached 3.4% of GDP.
- For its part, the European Union improved its current account balance with the rest of the world between 2000 and 2004, only to have this trend reverse in the years up to 2008. Beginning in that year, as a result of the crisis-induced drop in domestic demand, the deficit began to decline, and the trade account has been in surplus since 2010. Most recently, the main factors explaining this performance are the steeper drop in commodity prices, competitiveness gains as a result of the euro's depreciation, and relatively sluggish domestic demand.
- Both regions reveal some differences across countries. In Latin America and the Caribbean, the great majority of countries showed deeper deficits on the current account. In the European Union, more than half of member countries had deficits, while a relatively small group of countries (Germany, Denmark and Sweden) recorded solid surpluses that tended to skew the aggregate outcomes.
- In 2016, the deficit in Latin America and the Caribbean is expected to narrow, as the drop in goods exports is likely to be less than that in imports. In the European Union, on the other hand, the trend is expected to remain steady, in a setting of gradually rising prices for basic products, and a modest appreciation of the euro.

■ Figure II.8 ■

**Latin America and the Caribbean and European Union: balance-of-payments current account, 2000-2016 <sup>a</sup>**  
(Percentages of GDP)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and United Nations, *World Economic Situation and Prospects 2016, Update as of mid-2016*, New York, May 2016 and European Commission, "European Economic Forecast, Spring 2016", *Institutional Paper*, N° 25, May 2016, Luxembourg [online] [http://ec.europa.eu/economy\\_finance/publications/eeip/pdf/ip025\\_en.pdf](http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip025_en.pdf).

<sup>a</sup> The figure for 2016 is a projection.

## 8. The two regions have similar levels of fiscal deficit, but the European Union has a heavier debt burden

- Between 2011 and 2015, there was an increase in the average fiscal deficit in the countries of Latin America and the Caribbean, reaching -2.8% of GDP in the latter year. In 2015, the overall outcome deteriorated in 17 of the 33 CELAC countries, with government revenues shrinking sharply, especially in those economies most dependent on natural resource exports. The worsening of the fiscal situation was most pronounced in Brazil.
- By contrast, the fiscal deficit in the European Union narrowed between 2013 and 2015. The great majority of countries recorded deficits, and only four (Germany, Estonia, Luxembourg and Sweden) achieved surpluses in 2015. Moreover, six economies exceeded the limits established in the Stability and Growth Pact (SGP) in the last four years: they were Greece (-7.2%), Spain (-5.1%), the

United Kingdom (-4.4%), Portugal (-4.4%), France (-3.5%) and Croatia (-3.2%). Generally speaking, fiscal policy has been contractionary, although it is expected to take on a slightly expansionary thrust soon.

- On the public debt front, the situation differs greatly between the two regions. In 2015, that debt, measured as a percentage of GDP, was close to 85% in the European Union, while in Latin America and the Caribbean it stood at 51%. In that same year, the level of indebtedness rose in 21 countries of CELAC, most notably in Brazil (66.5%), Argentina (53.3%), Uruguay (46%), and most of the Caribbean economies, whose debt amounted overall to 71.6% of GDP. In the European Union, on the other hand, debt levels have been persistently high, especially in those euro zone countries most affected by the crisis.

■ Figure II.9 ■

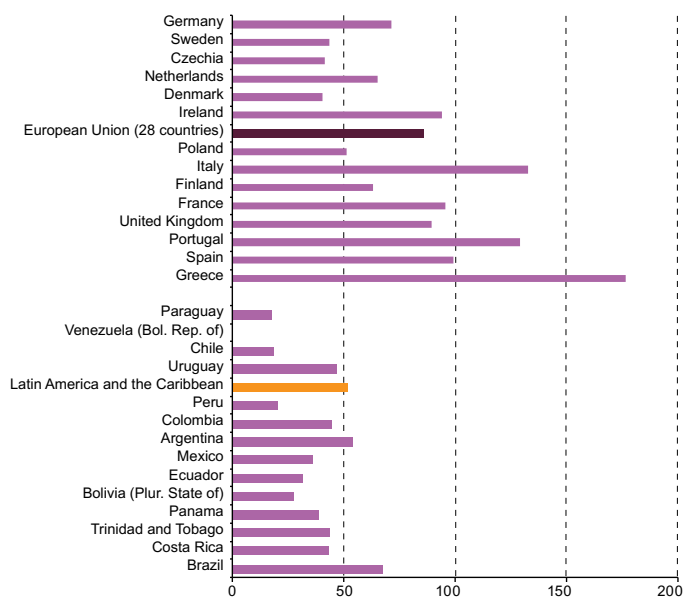
**Latin America and the Caribbean and European Union (selected countries): central government overall fiscal balance, 2015**  
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and Eurostat, "Government finance statistics", Luxembourg, April 2016 [online] [http://ec.europa.eu/eurostat/statistics-explained/index.php/Government\\_finance\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_finance_statistics).

■ Figure II.10 ■

**Latin America and the Caribbean and European Union (selected countries): central government gross public debt, 2015**  
(Percentages of GDP)



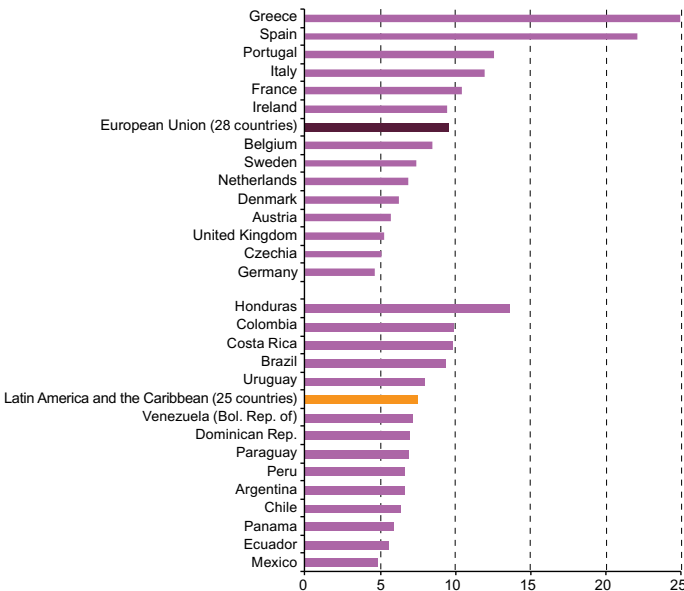
Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and Eurostat, "Government finance statistics", Luxembourg, April 2016 [online] [http://ec.europa.eu/eurostat/statistics-explained/index.php/Government\\_finance\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_finance_statistics).



## 9. The labour market has proven resilient in this unfavourable setting; however, it has made little headway in closing the income gap between the two regions

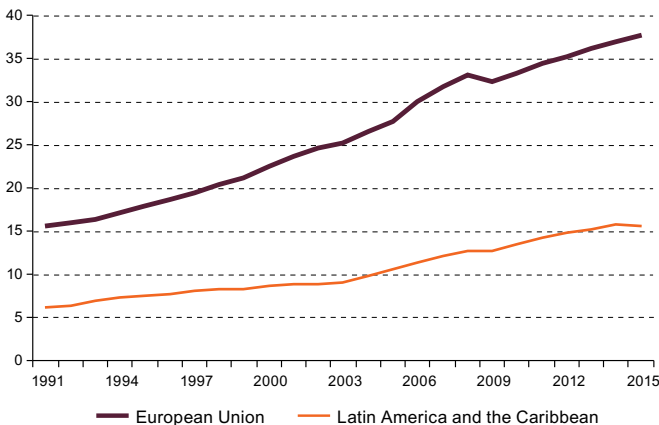
- The countries of the European Union, particularly those hardest hit by the crisis, have higher unemployment rates than those in the economies of Latin America and the Caribbean. Between 2011 and 2014, unemployment rates in both regions trended downwards, despite the slowdown in economic growth, in turn reflecting previous gains in employment generation, rising incomes, and enhanced social policies. Nevertheless, in 2015, in an even worse macroeconomic setting, there was a shift in this trend across Latin America and the Caribbean as a whole, indicating that the unfavourable context was undermining labour market resilience in several countries. Regional outcomes were heavily influenced by the performance of the Brazilian labour market.
- In 2015, GDP per capita in the European Union, measured on a purchasing power parity (PPP) basis, was close to US\$ 37,700, considerably higher than in Latin America and the Caribbean, where it was US\$ 15,600. In 2007, prior to the international financial crisis, per capita GDP stood at US\$ 31,800 and US\$ 12,200 respectively. Thus, although Latin America and the Caribbean performed better in terms of growth, investment and employment during much of the period under consideration, the income gap between the two regions has widened in absolute terms.
- With the shrinking of fiscal room, the decline in financing and the cutbacks in investment, there is an urgent need to mobilize domestic resources in order to move towards implementation of the 2030 Agenda for Sustainable Development. In this effort, taxation systems will clearly have a central role, especially in Latin America and the Caribbean, where the tax burden remains lower than would be expected given the region's level of development.

■ **Figure II.11 ■**  
**Latin America and the Caribbean and European Union**  
**(selected countries): unemployment rates, 2015**  
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and World Bank.

■ **Figure II.12 ■**  
**Latin America and the Caribbean and European Union:**  
**per capita GDP, 1990-2015**  
(Thousands of dollars in purchasing power parity)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2016* (LC/G.2684-P), Santiago and World Bank.

## B. Trade relations between the European Union and Latin America and the Caribbean

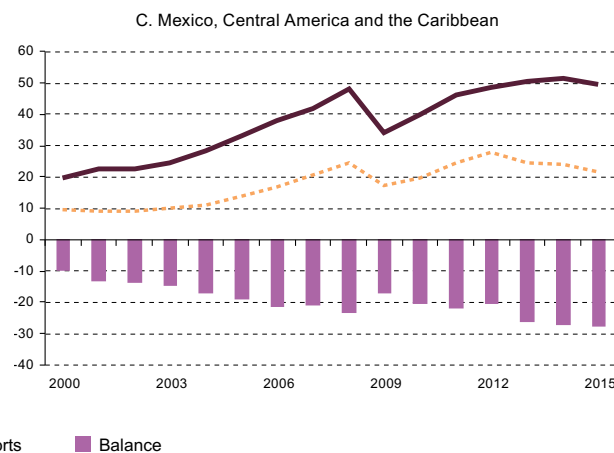
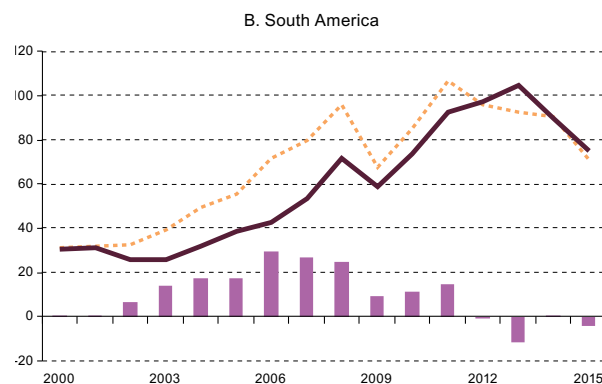
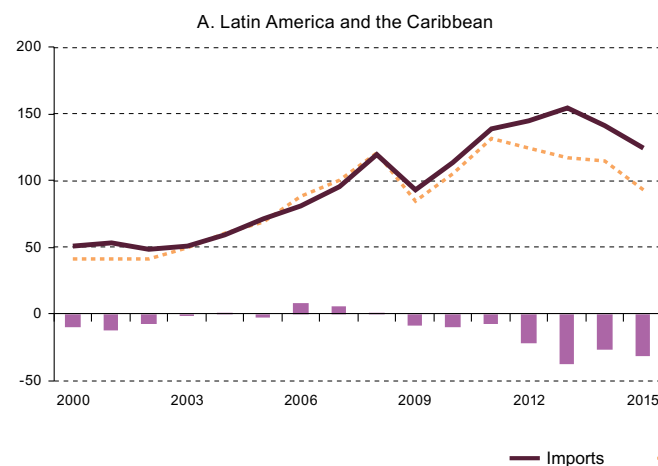
### 1. Trade between Latin America and the Caribbean and the countries of the European Union has contracted sharply in the last two years

- In 2015, the Latin America and Caribbean region's trade with the European Union amounted to barely US\$ 218 billion (including exports and imports), down by 15% from its peak of US\$ 272 billion, reached in 2013. While the region's exports dropped by 19% in this period, imports declined by 12%. This situation was due primarily to the sluggish economic performance of both regions in recent years, compounded in the case of Latin America and the Caribbean by lower commodity prices, which dominate the region's shipments to the European Union.
- At the aggregate level, trade with the European Union has been fairly balanced since 2000. Nevertheless, the trade deficit of Latin America and the Caribbean has risen since 2012, as imports have outweighed exports.
- In recent years, South America's trade with the European Union has shifted from a steady string of surpluses to a balance close to equilibrium. By contrast, the trade of Mexico, Central America and the Caribbean with the European group presents a persistent deficit. This difference can be explained primarily by the commodity exports of South American countries.

■ Figure II.13 ■

#### Latin America and the Caribbean: goods trade with the European Union, 2000-2015

(Billions of dollars)



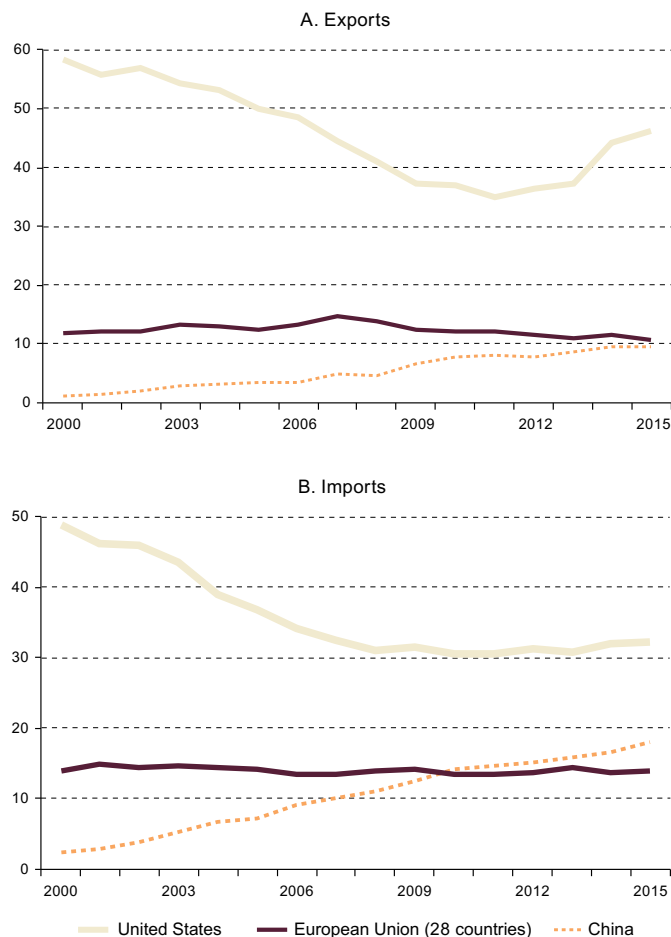
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Commodity Trade Statistics Database (COMTRADE).

## 2. China has now overtaken the European Union as the second-ranking trade partner of Latin America and the Caribbean

- The European Union's share of external trade with Latin America and the Caribbean has undergone no great change during this century. The EU market accounted for 12% of the region's exports in 2000, and 11% in 2015. On the import side, the European Union's share has remained stable at 14%.
- This situation stands in stark contrast to the inroads that China has been making in its external trade with Latin America and the Caribbean over the same period. Between 2000 and 2015, China's share of regional exports leapt from 1% to 9.5%, while its weight on the import side soared even further, from 2% to 18%.
- As a result of these contrasting performances, by 2014 China had displaced the European Union as the region's second most important trading partner (exports and imports combined) after the United States. The gap widened in 2015, when China accounted for 14% of the region's external trade (exports and imports), while the European Union share was slightly above 12%. Although the European Union remains the second most important market for Latin American and Caribbean exports, it has fallen considerably behind China since 2010 as a source of regional imports.

■ Figure II.14 ■

**Latin America and the Caribbean: selected partners' share of trade in goods, 2000-2015**  
(Percentages)

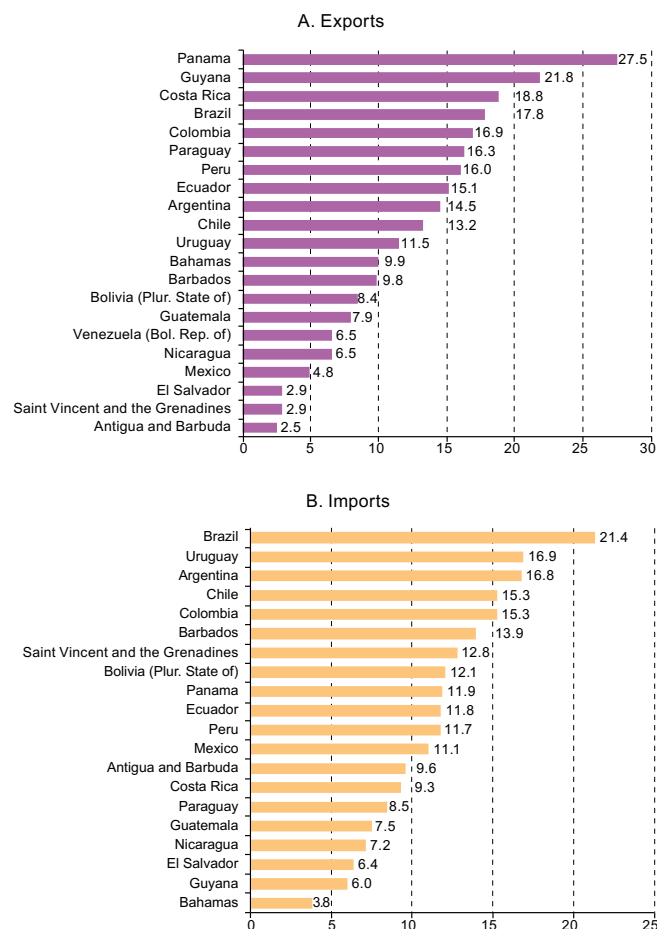


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Commodity Trade Statistics Database (COMTRADE).

### 3. The European Union's share in total trade varies widely among the countries of Latin America and the Caribbean, especially in the case of exports

- The European Union's share in goods trade with Latin American and Caribbean is highly heterogeneous.
- The European Union is a more important export destination for the South American countries, especially the members of the Southern Common Market (MERCOSUR). By contrast, the United States is the main export destination for Mexico and the Central American and Caribbean countries, owing to their specialization and geographical proximity.
- Imports from the European Union are also very important for the South American countries, especially the members of MERCOSUR.

■ **Figure II.15 ■**  
**Latin America and the Caribbean (21 countries):**  
**European Union's share of foreign trade in goods, 2015**  
(Percentages)



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

## 4. The share of Latin America and the Caribbean in the external trade of the European Union is below 3% in the case of goods, and 5% in the case of services

- The recession, in which many member States of the European Union have found themselves since the outbreak of the global financial crisis in 2008, has produced a steep loss of momentum in intra-community trade. In fact, the share of the intra-bloc market in total goods exports of the European Union fell 5 percentage points between 2008 and 2015, and currently stands at 61%. When it comes to services, the intra-bloc share in European Union exports to the world (55%) is less than that for goods, and has also declined since 2008.
- In recent years, China has gained a larger share of the European Union's external trade, as have Asia in general, and other developing regions. Conversely, the share of Latin America and the Caribbean in the European Union's external trade in goods and services has fluctuated marginally over the last five years.
- In 2015, excluding intra-community trade, Latin America and the Caribbean was the destination for 6.4% of the European Union's goods exports to the rest of the world, and the origin of 5.5% of its imports. In services, Latin America and the Caribbean was the destination for 8.9% of European Union exports to the rest of the world, and the origin of 11.6% of its imports, according to figures for 2014 (the last year for which statistics for all partners are available).
- In contrast to the performance in merchandise trade, Latin America and the Caribbean still outweighs China as a partner in services trade (measured both by exports and imports). This situation prevails even when China's share is expanded to include that of Hong Kong (Special Administrative Region of China), the traditional platform for that country's services.

■ Table II.3 ■

### European Union: share of selected partners in goods and services trade, 2010-2015

(Percentages)

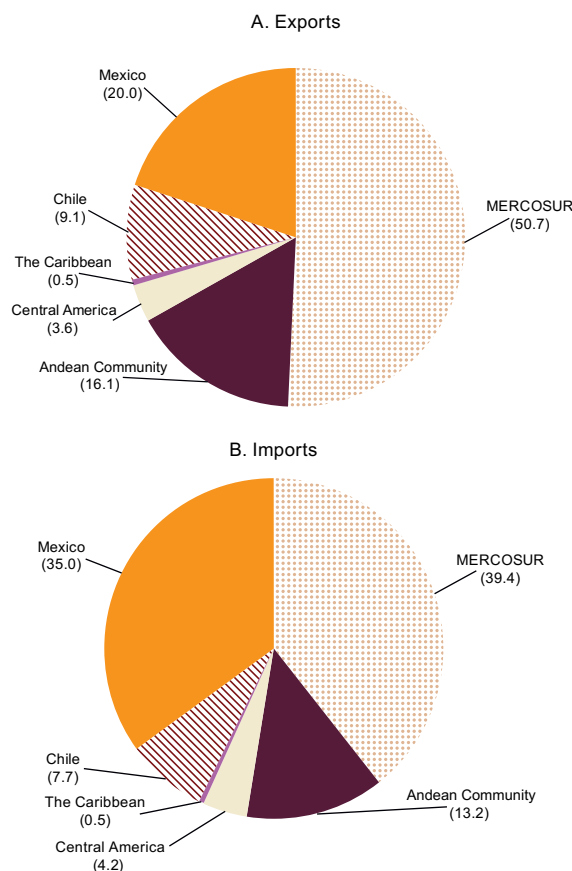
		2010	2011	2012	2013	2014	2015
<b>Goods</b>							
Exports	Latin America and the Caribbean	2.3	2.4	2.7	2.6	2.4	2.5
	China	3.0	3.2	3.3	3.3	3.6	3.5
	United States	6.4	6.2	6.6	6.4	6.8	7.8
	Japan	1.1	1.1	1.3	1.2	1.2	1.2
	European Union	64.4	63.3	61.6	61.1	62.3	61.2
Imports	Latin America and the Caribbean	2.5	2.6	2.6	2.4	2.3	2.3
	China	8.0	7.5	7.3	7.2	7.7	8.3
	United States	5.2	5.0	5.3	5.2	5.3	6.3
	Japan	2.1	2.0	1.8	1.6	1.5	1.6
	European Union	23.9	25.0	26.2	25.0	24.0	23.2
<b>Services</b>							
Exports	Latin America and the Caribbean	4.6	4.7	4.5	4.3	4.1	...
	China	1.5	1.6	1.7	1.8	1.7	...
	United States	10.7	10.9	11.5	11.6	11.7	...
	Japan	1.5	1.4	1.6	1.6	1.5	...
	European Union	56.3	56.1	54.8	54.4	54.6	...
Imports	Latin America and the Caribbean	3.9	3.9	4.0	3.9	4.9	...
	China	1.5	1.5	1.5	1.6	1.6	...
	United States	12.5	12.1	12.4	12.4	13.3	...
	Japan	1.2	1.3	1.2	1.1	1.1	...
	European Union	59.4	59.9	59.6	59.3	58.0	...

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Commodity Trade Statistics Database (COMTRADE) for trade in goods and Eurostat for trade in services.

## 5. MERCOSUR accounts for half of Latin American and Caribbean exports to the European Union, but Mexico has become the principal importer from that market

- In 2015, the five member countries of the Southern Common Market (MERCOSUR) exported goods worth US\$ 46.9 billion to the European Union, a figure that represents half of Latin American and Caribbean shipments to that market. Of the total exports from the region to the European Union, 36% came from Brazil, followed by Mexico with 20%. Mexico's share in Latin American and Caribbean exports to the European Union is on a par with the combined share of the four member countries of the Andean Community (Plurinational State of Bolivia, Colombia, Ecuador and Peru) plus the six countries of Central America (including Panama).
- In 2015, MERCOSUR accounted for 39% of total Latin American and Caribbean imports from the European Union, down six percentage points from its share in 2013. This reflects the severe economic downturn that has afflicted the principal economies of that grouping in recent years. On the contrary, over the same period, Mexico's share rose by eight percentage points, from 27% to 35%, placing that country ahead of Brazil as the most important destination of European Union shipments to CELAC. Mexico imports a broad range of intermediate goods from the European Union, and these are incorporated into final manufactured goods that the country exports to other markets, in particular the United States. A good example is offered by the automotive industry, where Mexico hosts plants installed by a broad range of European manufacturers.

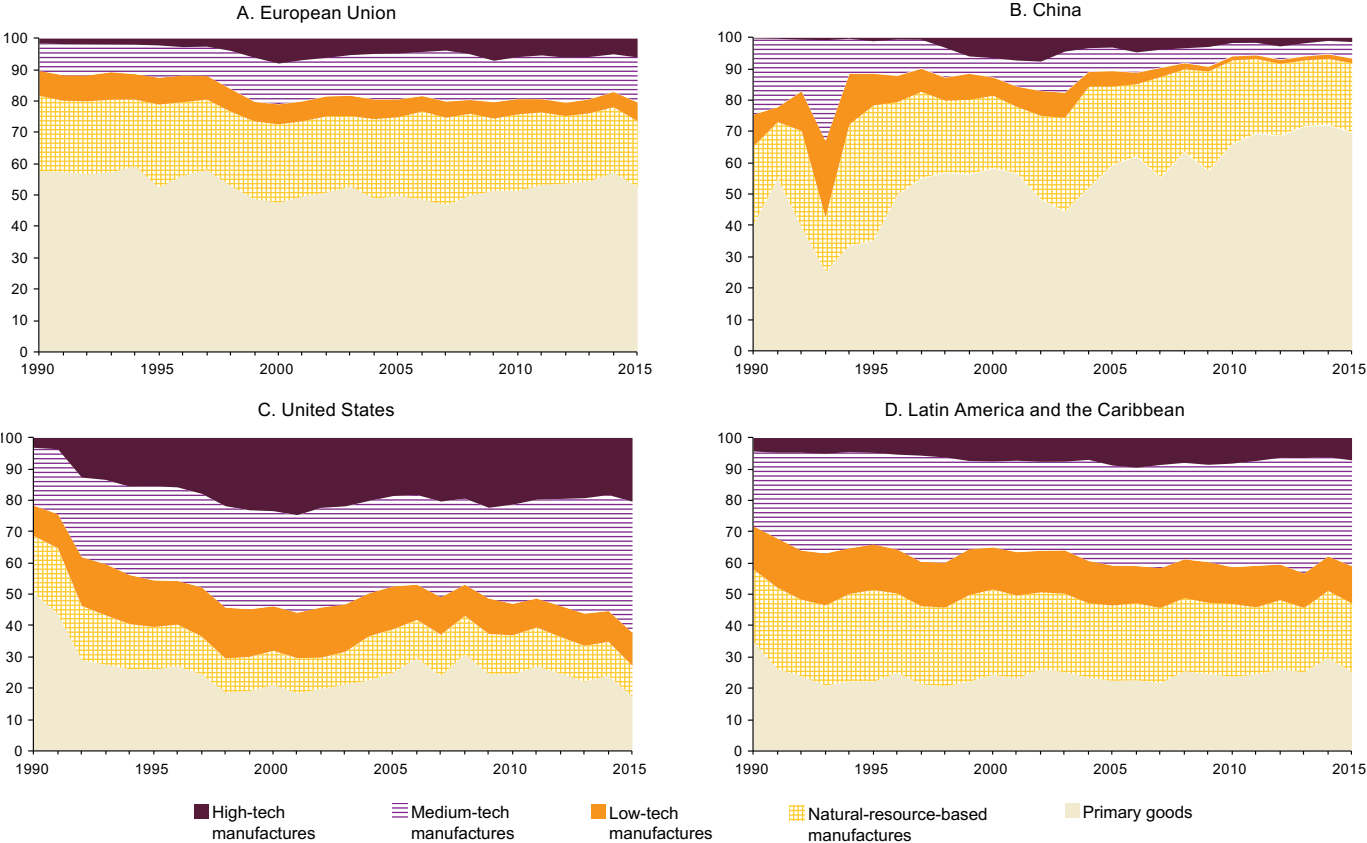
■ **Figure II.16 ■**  
**Latin America and the Caribbean: composition of trade in goods with the European Union, by selected countries and groupings, 2015**  
*(Percentages)*



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

6. In 2015, commodities represented 53% of the total value of Latin American and Caribbean exports to the European Union, a share far greater than that recorded in shipments to the United States (17%) and to the region itself (25%)

■ Figure II.17 ■  
Latin America and the Caribbean: composition of goods exports to selected destinations, by technology content, 1990-2015  
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Commodity Trade Statistics Database (COMTRADE).

## 7. The countries of Latin America and the Caribbean export a smaller number of products to the European Union than to other countries within the region, but a much larger number than to China and Japan

■ Table II.4 ■

**Latin America and the Caribbean (20 countries): number of products exported to selected destination, 2015<sup>a</sup>**

Country	Latin America and the Caribbean	United States	European Union	China	Japan
Antigua and Barbuda	343	415	420	4	2
Argentina	3 307	1 317	1 415	377	310
Bahamas	223	1 076	129	11	3
Barbados	1 165	1 186	493	38	11
Bolivia (Plurinational State of)	1 067	606	618	52	156
Brazil	3 834	2 905	3 001	1 417	1 233
Chile	3 649	1 355	1 542	375	289
Colombia	3 254	1 871	1 441	251	189
Costa Rica	2 722	1 817	975	157	101
Ecuador	1 844	1 123	871	127	91
El Salvador	2 536	1 088	511	65	48
Guatemala	3 204	1 368	725	135	163
Guyana	913	547	151	29	5
Mexico	3 777	4 133	2 840	1 359	1 396
Nicaragua	1 832	843	270	45	46
Panama	260	130	60	23	13
Paraguay	1 124	322	392	66	24
Peru	2 964	1 842	1 600	232	468
Uruguay	1 478	541	733	131	43
Venezuela (Bolivarian Republic of) <sup>b</sup>	1 765	407	1 131	50	34

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

<sup>a</sup>At the six-digit level of the Harmonized System of Designation and Codification of Goods.

<sup>b</sup>Data obtained from mirror statistics.



## 8. With rare exceptions, Latin American and Caribbean exports are concentrated in a few products, generally commodities

- Only Barbados, Costa Rica and Mexico have more than one product within the top five products exported to the European Union that is not a commodity.

■ **Table II.5 ■**

**Latin America and the Caribbean (17 countries): five main products exported to the European Union and share of each in total exports, 2015**

(Percentages)

Country	First		Second		Third		Fourth		Fifth		Sum of the five products
	Product	Percentage	Product	Percentage	Product	Percentage	Product	Percentage	Product	Product	
Argentina	Oilcake and other solid residues resulting from the extraction of soybean oil	41.0	Shrimps and prawns	5.0	Copper ore and concentrates	5.0	Fresh or chilled bovine meat, boneless	4.0	Groundnuts (peanuts)	3.0	58.0
Barbados	Spirits and spirituous beverages	40.8	Unrefined cane sugar	12.6	Other electrical resistors	8.3	Other instruments and apparatus	7.2	Cotton, not carded or combed	4.6	74.0
Bolivia (Plurinational State of)	Zinc ores and concentrates	27.0	Brazil nuts	17.0	Silver ores and concentrates	16.0	Tin and alloys of tin	6.0	Unground cereals	4.0	70.0
Brazil	Oilcake and other solid residues resulting from the extraction of soybean oil	9.9	Coffee, non-decaffeinated	8.6	Soybeans, whether or not broken	6.4	Sulfate wood pulp, non-coniferous	6.3	Non-agglomerated iron ores	3.9	35.0
Chile	Cathodes and sections of cathodes	22.6	Copper ore and concentrate	20.2	Grape wine in containers holding 2 litres or less	5.8	Sulfate wood pulp, non-coniferous	4.7	Unrefined copper; copper anodes for electrolytic refining	2.6	56.0
Colombia	Bituminous coal	34.5	Petroleum oils and oils obtained from bituminous minerals, crude	20.3	Coffee, non-decaffeinated	13.0	Bananas, including plantains, fresh or dried	10.4	Other petroleum products	2.8	81.0
Costa Rica	Bananas, including plantains, fresh or dried	25.0	Pineapples	20.0	Orthopedic appliances, artificial body parts and accessories	7.0	Medical instruments, except electrical instruments	7.0	Other medical instruments and devices	6.0	64.0
Ecuador	Bananas, including plantains, fresh or dried	31.0	Shrimps and prawns	21.0	Tunas, skipjack and bonito ( <i>Sarda</i> spp.)	14.0	Cocoa beans, whole or broken, raw or roasted	8.0	Flowers and flower buds	6.0	80.0
El Salvador	Tunas, skipjack and bonito ( <i>Sarda</i> spp.)	28.0	Coffee, non-decaffeinated	26.0	Unrefined cane sugar	6.0	Natural honey	5.0	Light oils and preparations	5.0	71.0

**Table II.5 (concluded)**

Country	First		Second		Third		Fourth		Fifth		Sum of the five products
	Product	Percentage	Product	Percentage	Product	Percentage	Product	Percentage	Product	Product	Percentage
Guatemala	Coffee, non-decaffeinated	16.0	Bulk oil	15.0	Lead ore and concentrates	8.0	Undenatured ethyl alcohol	7.0	Bananas, including plantains, fresh or dried	6.0	52.0
Mexico	Petroleum oils and oils obtained from bituminous minerals, crude	22.0	Passenger vehicles with a cylinder capacity exceeding 1,500 cm <sup>3</sup> but less than or equal to 2,500 cm <sup>3</sup>	6.0	Other apparatus, for carrier-current line systems or for digital line systems	4.0	Passenger vehicles with a cylinder capacity exceeding 1,000 cm <sup>3</sup> but less than or equal to 1,500 cm <sup>3</sup>	4.0	Passenger vehicles with a cylinder capacity exceeding 1,500 cm <sup>3</sup> but less than or equal to 3,000 cm <sup>3</sup>	4.0	39.0
Nicaragua	Coffee, non-decaffeinated	31.0	Shrimps and prawns	23.0	Groundnuts, not roasted or otherwise cooked, shelled, whether or not broken	11.0	Lobsters ( <i>Palinurus</i> spp., <i>Jasus</i> spp.)	7.0	Cane molasses	3.0	76.0
Panama	Bananas, including plantains, fresh	47.0	Shrimps and prawns	10.0	Pineapples	7.0	Watermelons	7.0	Other bovine or equine hides, tanned	6.0	77.0
Paraguay	Soybeans, whether or not broken	43.0	Oilcake and other solid residues resulting from the extraction of soybean oil	34.0	Full grains, unsplit and grain splits	6.0	Other vessels for the transport of goods and other vessels for the transport of both persons and goods	3.0	Soybean oil, whether or not degummed	2.0	88.0
Peru	Copper ore and concentrate	20.0	Coffee, non-decaffeinated	6.0	Cathodes and sections of cathodes	5.0	Zinc ore and concentrate	4.0	Avocado	4.0	40.0
Uruguay	Fresh or chilled bovine meat, boneless	27.0	Chilled bovine meat, boneless	13.0	Soybeans, whether or not broken	7.0	Other bovine or equine hides, tanned	7.0	Non-coniferous wood	6.0	60.0
Venezuela (Bolivarian Republic of)	Petroleum oils and oils obtained from bituminous minerals, crude	59.0	Other petroleum products	9.0	Ferrous products obtained by direct reduction of iron ore (ECSC)	7.0	Methanol (methyl alcohol)	6.0	Non-agglomerated iron ores	3.0	84.0
Latin America and the Caribbean	Oilcake and other solid residues resulting from the extraction of soybean oil	8.0	Petroleum oils and oils obtained from bituminous minerals, crude	7.0	Coffee, non-decaffeinated	5.0	Copper ore and concentrate	5.0	Soybeans, whether or not broken	3.0	28.0

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

## 9. With the wrap-up of negotiations with Ecuador in 2014, the European Union has continued to expand its network of trade agreements in Latin America and the Caribbean

- In July 2014, negotiations were concluded for Ecuador's accession to the multiparty trade agreement that has been in place since 2013 between the European Union and Colombia and Peru. The European Union now has trade agreements with 26 countries in Latin America and the Caribbean, making it the foreign trading partner with the largest portfolio of trade agreements in the region (followed by the United States, which has free-trade agreements with 11 countries).
- If the negotiations now underway between MERCOSUR and the European Union are successful, the European Union would have trade agreements with nearly all the countries of Latin America and the Caribbean. This could lay the basis for establishing mechanisms linking all these agreements, thereby allowing the countries of the region to cumulate origin with each other—and with the European countries—in their exports to the European Union.
- There is already a regime for the diagonal cumulation of origin between the European Union, the members of the European Free Trade Association (EFTA), certain countries in the Balkans, and several economies in North Africa and the Middle East. The application of a similar regime between the European Union and Latin America and the Caribbean could do much to strengthen production integration among the region's countries, and between them and Europe.
- The outcome of the June 2016 "Brexit" referendum in the United Kingdom has created uncertainty about the terms under which the countries of Latin America and the Caribbean will maintain their trading relations with that country, once it leaves the European Union. In any case, the Brexit negotiations are expected to begin in 2017 and to run for up to two years (unless the European Council and the United Kingdom decide to extend the timeframe), and until they are concluded the United Kingdom's participation in existing agreements will remain unchanged.

■ Table II.6 ■

### European Union: trade agreements with Latin American and Caribbean countries and groupings, September 2016

	In effect	Signed/negotiations concluded	Under negotiation
<b>Groupings</b>			
Caribbean Forum of African, Caribbean and Pacific States (CARIFORUM) <sup>a</sup>	X		
Central America <sup>b</sup>	X		
Southern Common Market (MERCOSUR) <sup>c</sup>			X
<b>Countries</b>			
Chile	X		
Colombia	X		
Ecuador		X	
Mexico	X		
Peru	X		

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official information.

<sup>a</sup> Includes the 14 member countries of the Caribbean Community (CARICOM) and the Dominican Republic.

<sup>b</sup> Including Panama.

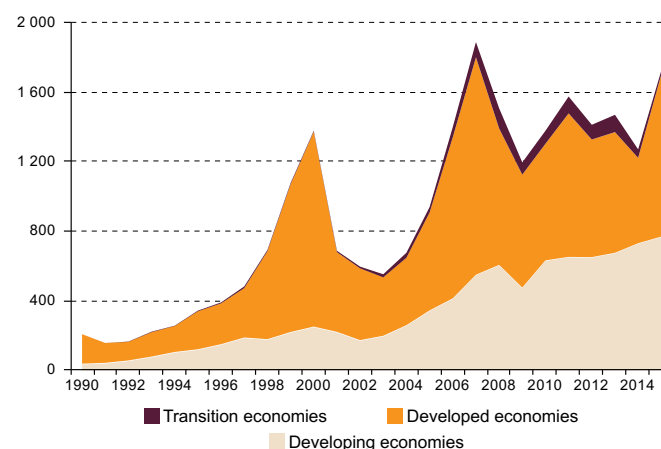
<sup>c</sup> The Bolivarian Republic of Venezuela is not participating in the negotiations.

## C. Direct investment flows between the countries of the European Union and those of Latin America and the Caribbean

### 1. Worldwide flows of foreign direct investment rose in 2015, driven primarily by the increase in mergers and acquisitions in developed countries

- Despite the recessionary trend in the world economy, foreign direct investment (FDI) flows were up by 38% in 2015, to a level of US\$ 1.76 billion, the highest recorded since the 2008 crisis. This vigorous growth can be explained by the increase in investment targeted at developed countries, where there was strong growth in cross-border mergers and acquisitions. High liquidity in the private sector and favourable conditions for access to credit placed firms in an advantageous position for making new acquisitions.
- In addition, this trend was reinforced by the economic recovery in the United States and the process of consolidation in some sectors not closely tied to the economic cycle, such as telecommunications and the pharmaceutical industry. Thus, in contrast to the record of previous years, the advanced economies regained their leadership, accounting for 55% of worldwide FDI inflows in 2015. Foreign direct investment flows to the United States practically tripled, while investment into the European Union rose by 50%.
- Among developing economies, the only region that saw a positive trend was Asia, which recorded a historic high of FDI inflows in 2015. With growth of 15%, developing countries in Asia accounted for 31% of worldwide flows. Flows to Latin America and the Caribbean dropped by 9%, and those to Africa by 7%; FDI flows to these two regions represented 10% and 3% of the worldwide total, respectively. To a large extent, these outcomes could be traced to a fall in commodity prices and the consequent decline in the profitability of sectors linked to natural resources. The worst performance was to be found in the transition economies, where FDI fell by 38% and accounted for only 2% of the global total.

■ **Figure II.18 ■**  
**Global direct foreign investment flows by groups of economies, 1990-2015**  
(Billions of dollars)

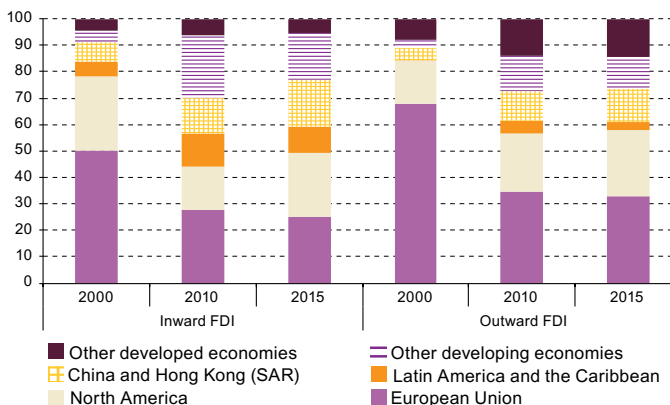


Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Foreign Direct Investment in Latin America and the Caribbean, 2016* (LC/G.2680-P), Santiago, 2016.

## 2. Latin America and the Caribbean receives around 10% of global FDI flows, while the European Union is the destination for 25% and the origin of 33% of global FDI flows

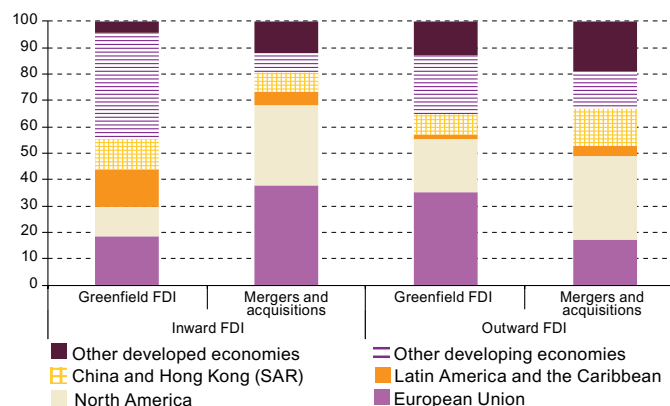
- In 2015, foreign direct investment inflows to Latin America and the Caribbean amounted to US\$ 179.1 billion, their lowest level since 2010. Consequently, the region's share in the global total declined from 15% to 10% between 2014 and 2015. The main factors behind this drop were the decline in investment in natural resource sectors and the slowing of the region's economies, particularly that of Brazil.
- On the other hand, the Latin American and Caribbean region has steadily become a more important source for direct investment. In 2015, trans-Latin firms invested US\$ 47.36 billion, representing 3.2% of the global total. This phenomenon is increasingly widespread among developing countries. For example, in recent years China has witnessed a notable international expansion of its firms. In 2015, FDI flows into China represented 18% of the global total, while investments abroad by Chinese firms amounted to 12% of that total.
- The picture in the European Union is quite different. In 2015, inflows of foreign direct investment amounted to US\$ 440 billion, representing 25% of the worldwide total, while investments abroad by transnational European firms reached US\$ 480 billion, or 33% of worldwide FDI outflows.
- This trend is confirmed, with some nuances, by an analysis of announcements of greenfield investments and of cross-border mergers and acquisitions. Between 2010 and 2015, 17% of the total announced amounts of new investments were destined for countries of the European Union, while those countries were the origin of around 33% of announced amounts. By contrast, the countries of Latin America and the Caribbean had relatively similar shares in terms of the origin and destination of amounts linked to worldwide mergers and acquisitions, highlighting the vigorous performance of the region's firms in this area.

■ **Figure II.19 ■**  
**Distribution of global FDI flows by region, 2000-2015**  
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2016. Investor Nationality: Policy Challenges*, Geneva, June 2016 [online] [http://unctad.org/en/PublicationsLibrary/wir2016\\_en.pdf](http://unctad.org/en/PublicationsLibrary/wir2016_en.pdf).

■ **Figure II.20 ■**  
**Distribution of value of new investment announcements and new cross-border mergers and acquisitions, by region, 2010-2015**  
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2016. Investor Nationality: Policy Challenges*, Geneva, June 2016 [online] [http://unctad.org/en/PublicationsLibrary/wir2016\\_en.pdf](http://unctad.org/en/PublicationsLibrary/wir2016_en.pdf).

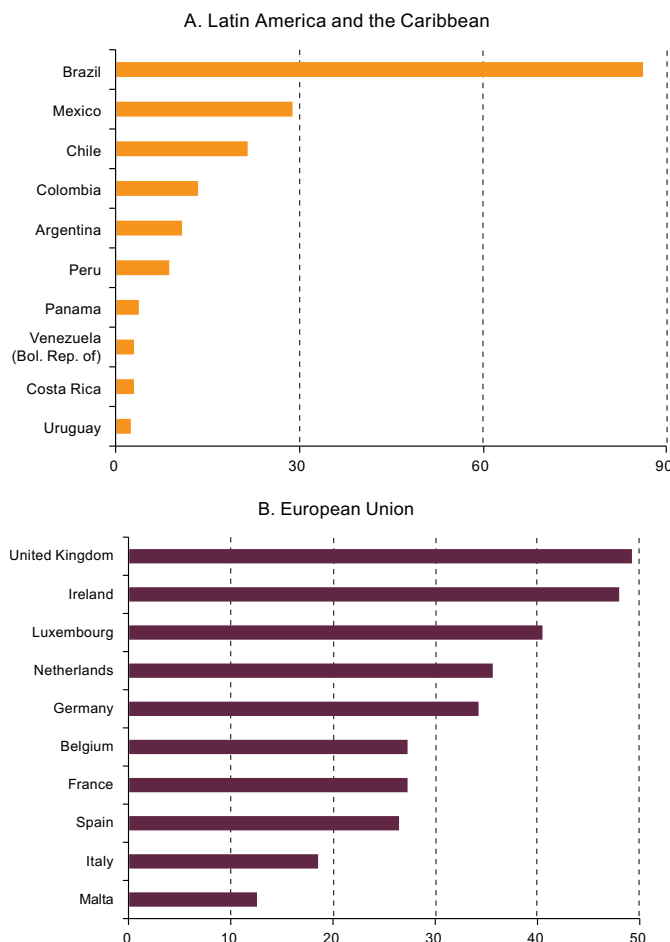
### 3. Both the CELAC region and the European Union show divergent trends in foreign direct investment

- Two opposing trends are evident in Latin America and the Caribbean: while FDI declined in the countries of the Southern Cone, due to the collapse of commodity prices and the economic slowdown, FDI rose in Mexico and Central America, bolstered by the recovery in the United States. In 2015, Brazil remained the region's principal recipient of FDI (with 42% of the total), followed by Mexico, which recorded the greatest inflows over the last seven years, destined primarily for the medium- and high-tech sectors, and the automotive industry in particular. Some distance behind came Chile, Colombia, Argentina and Peru. Between 2010 and 2015, FDI inflows to Latin America and the Caribbean were highly concentrated, while capital flows to the European Union are more broadly dispersed between countries.
- In the European Union, the principal economies of the euro zone have received the bulk of foreign direct investment, although with some significant differences among them. The leading recipients of FDI are those countries that have more sophisticated production systems, such as Germany, France and the United Kingdom, followed by those that have transformed themselves into major export platforms, such as Ireland and Spain, and lastly countries such as the Netherlands and Luxembourg that, with their favourable tax systems, have served as transit points for the global operations of transnational firms from around the world.

■ Figure II.21 ■

**Latin America and the Caribbean and European Union: leading host economies for foreign direct investment, average 2010-2015**

(Billions of dollars)

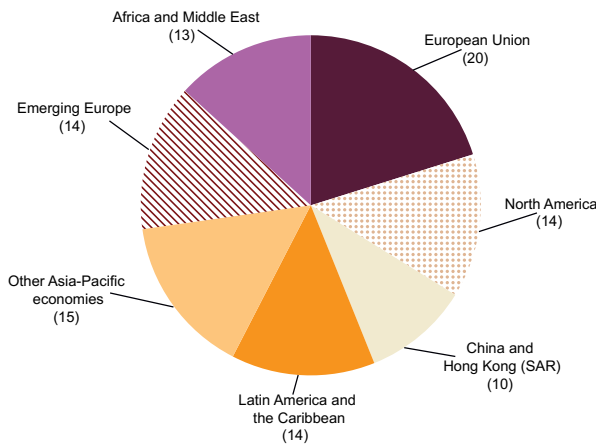


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Foreign Direct Investment in Latin America and the Caribbean, 2016* (LC/G.2680-P), Santiago and United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2016. Investor Nationality: Policy Challenges*, Geneva, June 2016 [online] [http://unctad.org/en/PublicationsLibrary/wir2016\\_en.pdf](http://unctad.org/en/PublicationsLibrary/wir2016_en.pdf).

#### 4. As a bloc, the European Union is the principal investor in Latin America and the Caribbean

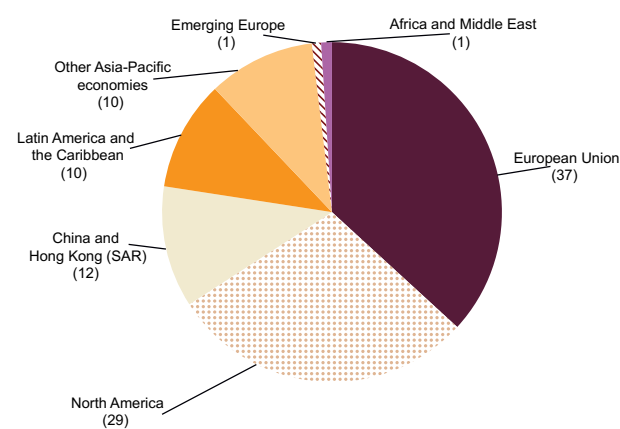
- European transnationals are the leading investors in Latin America and the Caribbean. Between 2010 and 2015, 37% of announced investments in the region originated from countries of the European Union. Next in importance were investments from North America (29%), China and Hong Kong (Special Administrative Region of China) (12%) and those by firms from the region itself, i.e. trans-Latin firms (10%).
- During this same period, European transnationals pursued fairly diversified strategies of internationalization, in which their main destinations were the developing countries of Asia (25%), the European Union itself (20%), North America (14%), and Latin America and the Caribbean (14%).

■ **Figure II.22 ■**  
**European Union: distribution of outward investments announced, by destination country or region, 2010-2015**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Financial Times, fDi Markets.

■ **Figure II.23 ■**  
**Latin America and the Caribbean: distribution of investment inflows announced, by country or region of origin, 2010-2015**  
(Percentages)



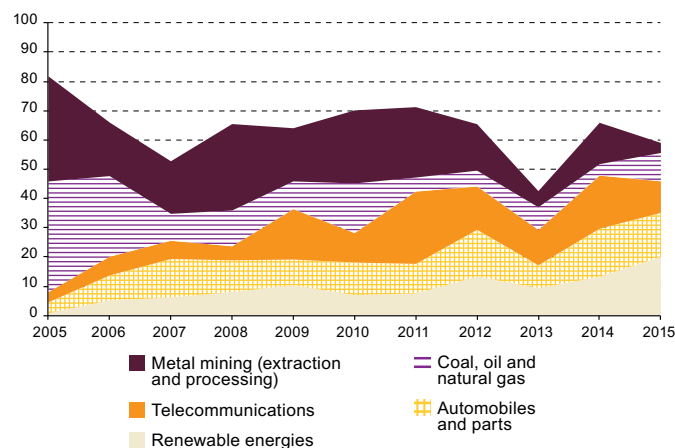
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Financial Times, fDi Markets.

## 5. Latin America and the Caribbean has seen a decline in FDI associated with the exploitation of natural resources, but there has been a sharp jump in some investments that could promote achievements towards the 2030 Agenda for Sustainable Development, by supporting the creation of infrastructure and the production of clean energies

- Between 2005 and 2015, there was a very significant shift in the sectoral composition of announced investments: the share of natural resources dropped from 74% to 13% of the total, while the shares of the automotive sector, renewable energies and telecommunications showed a rising trend.
- Announced investment in the vehicle assembly and autopart production sector rose from 4% to 15% of the total between 2005 and 2015. This represents an important advance in terms of investment in medium technology-intensive sectors, and is helping to diversify the economy, create decent jobs and promote greater complexity in the production structure, as proposed by SDG 8 of the 2030 Agenda for Sustainable Development (which calls upon States to “promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”).
- During this same period, announced FDI in the telecommunications sector rose from 4% to 11% of the total, contributing to the deployment of new infrastructure that has served to improve the coverage and the quality of modern services in Latin America and the Caribbean. These developments should also help in achieving the Sustainable Development Goals, in particular SDG 9 (“Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”).
- Lastly, announced amounts of FDI devoted to the development of renewable energy projects have risen sharply, jumping from 1% to 20% of the total between 2005 and 2015. This sector has in fact been positioning itself as the most outstanding performer in terms of FDI over the last year, with announced investments of US\$ 13.5 billion. This is a key factor in helping the countries of the region to develop a sustainable and non-polluting energy matrix, and to move toward compliance with SDG 7 (“Ensure access to affordable, reliable, sustainable and modern energy for all”).
- Despite the recessionary bias of the economy, the promotion of investment in telecommunications and renewable energies shows that firms are aligning themselves with the new forces that are transforming the global economy: on the one hand, the imperative of moving toward a digital economy—which requires major investments to upgrade infrastructure and guarantee public access—and, on the other hand, an understanding of the tremendous risks associated with climate change, which will demand enormous investments for the development of sustainable, clean and efficient energy sources.

■ Figure II.24 ■

**Latin America and the Caribbean: distribution of announced FDI projects by sector, 2005-2015**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Financial Times, fDi Markets.

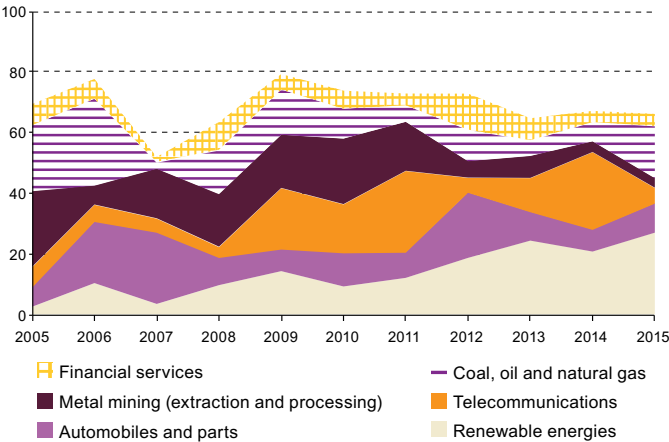
**Note:** This analysis excludes the 2013 announcement of the Nicaragua Canal, for a value of US\$ 40 billion.



## 6. European firms have become key players in moving Latin America and the Caribbean towards the digital economy and towards a sustainable energy matrix

- Between 2005 and 2015, European firms took the lead in announcing investments in renewable energy projects in Latin America and the Caribbean, accounting for 63% of the total announced amount of US\$ 58.8 billion. This sector has accounted for an increasing share in the total of European investments in the region, jumping from 2% in 2005 to 27% in 2015. The principal investing countries have been Spain (48%), Germany (12%), France (11%), and Italy (11%), while the major recipients were Chile (36%), Mexico (20%) and Brazil (20%).
- Over the same period, European firms also announced significant investments in the telecommunications sector, accounting for 44% of the announced total of US\$ 54.3 billion. Spanish firms have been the most active in terms of announcements (46%), followed by Italy (18%), the United Kingdom (11%), and France (11%). Announced European investments in telecommunications were concentrated in Brazil (41%), Argentina (12%), Chile (9%), Mexico (7%) and (Colombia 5%). The automotive industry and metal mining are other areas where European firms have focused their investment interests in Latin America and the Caribbean.

**Figure II.25 ■**  
**Latin America and the Caribbean: distribution of FDI projects announced by European Union firms, by amount, 2005-2015**  
(Percentages)



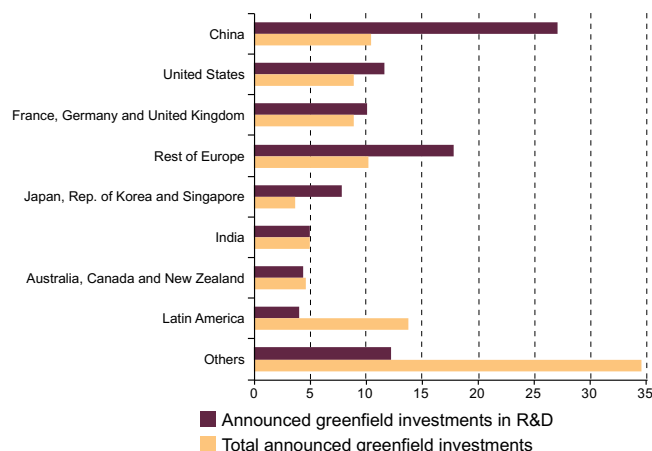
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Financial Times, fDi Markets.

## 7. European firms are responsible for the biggest announced investments in research and development in Latin America and the Caribbean

- The Latin America and Caribbean region has received less investment in R&D than other regions of the world. Between 2012 and 2015, the region was the destination for only 4% of announced cross-border investments in R&D, while at the same time it received 14% of total cross-border investments announced worldwide. On the other hand, the European Union's share of announced investments in R&D is larger than its share in global FDI, as is also true of other economies, such as China, Japan, the Republic of Korea, Singapore and the United States.
- European firms have been key players in R&D investments in Latin America and the Caribbean. Over the last 10 years, they have announced some 100 R&D projects in the region, for a total of approximately US\$ 4.3 billion. Around half of these projects, representing 70% of total announced R&D investments in Latin America and the Caribbean, where headed by European firms.
- The amounts of investment in R&D in Latin America and the Caribbean are still small, but they show a relatively broad sectoral distribution. European firms are present in traditional sectors such as hydrocarbons and mining, as well as in biotechnology, telecommunications, pharmaceuticals, chemicals, the automotive industry, information technologies and machinery and equipment, among other sectors.

■ Figure II.26 ■

**Global distribution of announced greenfield investment, total and in R&D, by country or region of destination, 2012-2015**  
(Percentages)



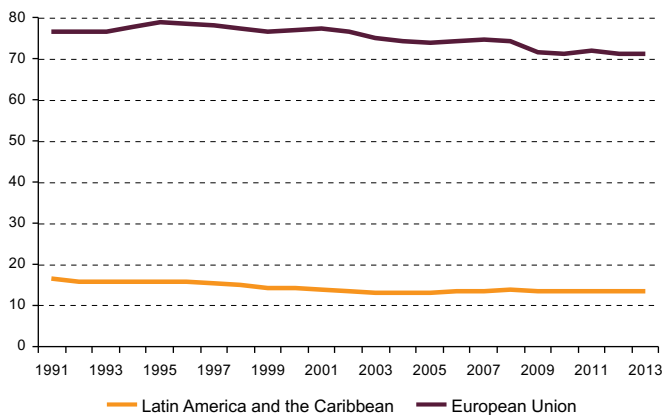
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Financial Times, fDi Markets.

## D. The production sectors of the countries of the European Union and of Latin America and the Caribbean

### 1. Productivity remains the Achilles' heel of Latin American and Caribbean economies

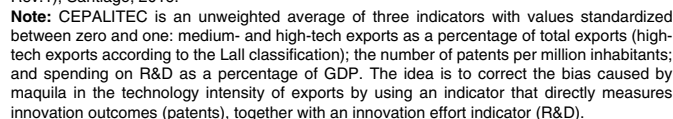
- In order to move towards achievement of the Sustainable Development Goals, the production environment is of particular importance. Progress toward development is inseparable from progress on the production, technology and employment fronts, and it is essential to consider how innovation can contribute to achieving the objectives of growth, social inclusion and environmental sustainability.
- In this respect, the high rates of economic growth achieved by Latin America and the Caribbean in recent years have not been accompanied by improvements in productivity, which remains one of the limiting factors for achieving productive, sustainable and inclusive economies.
- A comparison of productivity performance in countries of Latin America and the Caribbean and of the European Union relative to the United States shows that those two regions have lost ground in this area. At the beginning of the 1990s, productivity in Latin America and the Caribbean was 15% of that in the United States, a proportion that had dropped to 13% by 2013. At the same time, the productivity of European Union countries vis-à-vis the United States recorded a relative loss of five percentage points (bringing the ratio down from 77% to 71%).
- Although productivity in both regions has experienced setbacks, the situation in Latin America and the Caribbean is of particular concern: not only is the region's productivity low, it has in fact been in retreat (by 18.5% over the period in question). By contrast, productivity in the countries of the European Union dropped significantly less (by approximately 7%).

■ **Figure II.27 ■**  
**European Union and Latin America and the Caribbean: relative productivity with respect to the United States, 1991-2013**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the World Bank and International Labour Organization (ILO).

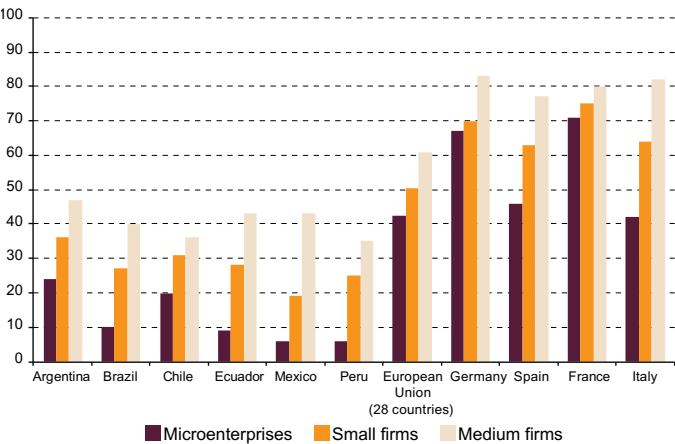
- **Figure II.28** ■  
Selected countries: relative productivity with respect to the United States and CEPALITEC technology intensity indicator, 2012



### 3. Another critical aspect of lagging productivity in Latin America and the Caribbean can be seen in the discrepancies by firm size

- In Latin America and the Caribbean there are enormous productivity discrepancies between micro, small and medium-sized enterprises, on one hand, and larger firms. In the case of micro-enterprises, these differences frequently exceed 80 or 90 percentage points. In general, small firms do not reach 40% of the productivity of large firms, and the medium-sized ones achieve only 50% of the large-firm level.
- In all countries around the world, firms of different sizes attain different levels of productivity. However, in the most industrialized countries, such as those of the European Union, these differences are much less pronounced. In the European Union, on average, micro-enterprises exceed 40% of the labour productivity of large companies, while small enterprises do better than 50%, and the medium-sized ones 60%. In Germany and France, for example, the productivity of all smaller firms is at least 60% or 70% of the level of the largest firms.
- These great discrepancies in labour productivity between firms of different sizes impede the development of efficient relationships between firms and obstruct the creation of dynamic economic systems based on the rapid dissemination of knowledge among producers, suppliers and consumers.

■ **Figure II.29 ■**  
**Latin America and the European Union (selected countries):**  
**labour productivity with respect to large firms, by firm size, 2011<sup>a</sup>**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of P. Santoleri and G. Stumpo, "Microempresas y pymes en América Latina: características de las firmas y políticas de apoyo", Working Document, Santiago, ECLAC, 2014, unpublished; for the European Union: figures provided by the Organization for Economic Cooperation and Development (OECD).

<sup>a</sup> Or latest year for which data are available.

#### 4. Productivity gaps between firms of different size in Latin America and the Caribbean and in the European Union can be attributed in part to differences in sector specialization and the diversity of firms' innovation strategies

- From the structural viewpoint, micro-enterprises and SMEs in Latin America and the Caribbean generally operate in sectors of low technology intensity, while in the European Union a significant percentage of these firms compete successfully in technology-intensive branches. In Germany, the Czech Republic and Italy, for example, more than 40% of SMEs are specialized in engineering-intensive sectors.
- Another important element for explaining productivity gaps is the technological and innovation strategies pursued by firms. While the SMEs of Latin America and the Caribbean focus their innovation efforts on acquiring machinery and equipment—for the most part imported—European SMEs innovate more broadly and invest greater percentages in research and development, as well as in generating their own technological capacities.

■ Table II.7 ■

**European Union (selected countries): share in SME value added of different manufacturing sectors, classified by technology intensity, average 2008-2014**

(Percentages)

Sector	Germany	Czechia	Spain	France	Hungary	Italy	Romania
Engineering-intensive sectors, excluding automobiles	46	42	29	30	24	40	24
Automobiles	3	4	4	5	4	3	4
<b>Total for engineering-intensive sectors</b>	<b>50</b>	<b>47</b>	<b>34</b>	<b>35</b>	<b>28</b>	<b>42</b>	<b>28</b>
Food, beverages and tobacco	11	11	20	23	17	11	17
Other natural-resource-intensive sectors	24	28	29	25	27	25	27
<b>Total for natural-resource-intensive sectors</b>	<b>35</b>	<b>39</b>	<b>49</b>	<b>48</b>	<b>44</b>	<b>36</b>	<b>44</b>
<b>Labour-intensive sectors</b>	<b>15</b>	<b>14</b>	<b>18</b>	<b>17</b>	<b>28</b>	<b>22</b>	<b>28</b>
<b>Total for the manufacturing industry</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Eurostat.

■ Table II.8 ■

**Latin America and the European Union (selected countries): investment in capital goods and in research and development, by firm size, 2012<sup>a</sup>**

(Percentages of total investment for respective firm size)

Country	Firm size	Domestic research and development (R&D)	Foreign research and development (R&D)	Acquisition of machinery and equipment
Brazil	Small	4.4	1.9	26.2
	Medium	14.9	5.0	34.5
	Large	34.4	12.8	38.4
Chile	Small	2.1	0.5	6.8
	Medium	10.9	4.3	20.5
	Large	23.1	7.1	21.6
Uruguay	Small	4.8	0.2	9.4
	Medium	12.1	3.6	25.1
	Large	22.8	8.9	46.1
Germany	Small	51.7	16.3	63.8
	Medium	68.8	30.7	74.2
	Large	89.3	61.3	79.4
Spain	Small	36.1	16.7	26.4
	Medium	61.6	31.8	21.4
	Large	75.0	50.2	29.4

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of ECLAC/ EU-Latin America and the Caribbean Foundation, *Reinforcing production cooperation and dialogue spaces: the role of SMEs* (LC/L.4020), Santiago, May 2015 [online] [http://repositorio.cepal.org/bitstream/handle/11362/38243/S1500521\\_en.pdf](http://repositorio.cepal.org/bitstream/handle/11362/38243/S1500521_en.pdf).

<sup>a</sup>Or latest year for which data are available.

## 5. Low productivity levels and wide gaps among companies keep the smaller firms trapped in a vicious circle of slow growth

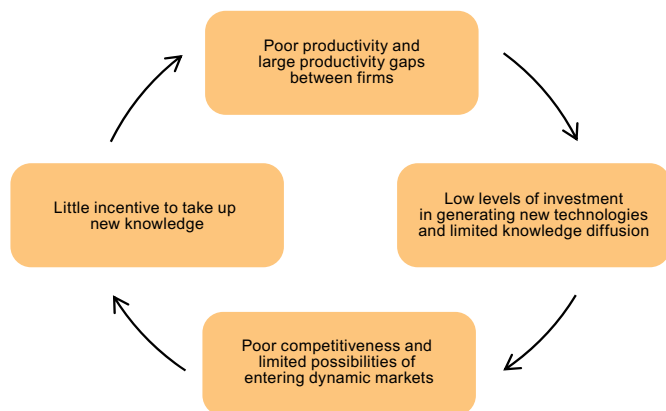
- On the one hand, small firms' specialization in sectors of low technology intensity results in less demand for innovation and development; on the other hand, productivity gaps obstruct the dissemination of knowledge among firms of different sizes.
- This translates into the adoption of competitive strategies that are focused primarily on reducing costs, and it is difficult to adjust those strategies to the dynamics of more demanding markets. The tendency of smaller firms to gravitate to less competitive markets, in turn, reduces

incentives to incorporate new technologies, thus closing the circle of low relative productivity.

- One of the most obvious effects of this situation is the low degree of penetration in international markets on the part of Latin American micro-enterprises and SMEs. In contrast to their European peers, which account for between 30% and 60% of the total value of direct exports, Latin American micro-enterprises and small firms contribute less than 10% (with a few exceptions).

■ Diagram II.1 ■

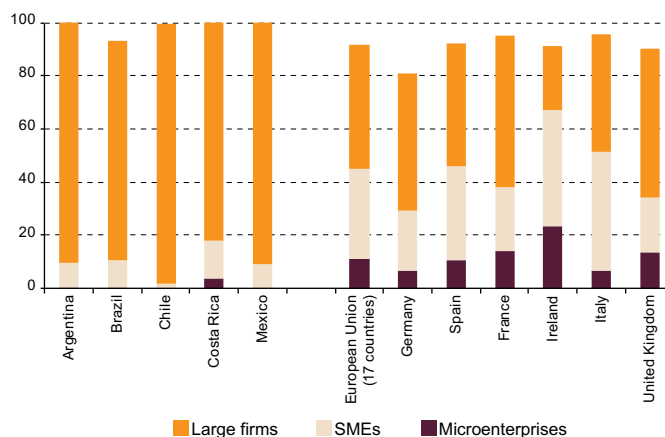
### The vicious cycle of SMEs



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

■ Figure II.30 ■

### Latin America and the European Union (selected countries): share of different firm sizes in total exports, 2011<sup>a</sup> (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of ECLAC/ EU-Latin America and the Caribbean Foundation, *Reinforcing production cooperation and dialogue spaces: the role of SMEs* (LC/L.4020), Santiago, May 2015 [online] [http://repositorio.cepal.org/bitstream/handle/11362/38243/S1500521\\_en.pdf](http://repositorio.cepal.org/bitstream/handle/11362/38243/S1500521_en.pdf).

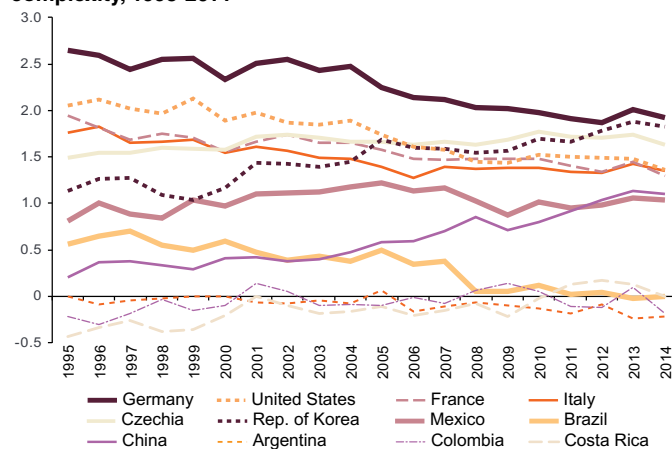
<sup>a</sup> Or latest year for which data are available.

## 6. The Latin America and Caribbean region failed to catch the “tailwind” and is a decade late in moving toward structural change

- Dynamic comparative advantages—based on technological leadership or on rapid catch-up with new products and processes—will prevail in the long run over static comparative advantages, i.e. those based on reallocating factors with a given technological level. This is particularly important in a world where the international technology frontier is moving ever more quickly. That movement is redefining the productivity gaps between firms and between sectors. Firms that lag behind technologically and countries that have no policies to encourage learning and structural change tend to lose ground in the most dynamic sectors. The significance now attached to the debate on offshoring and global value chains, where developing countries achieve entry only in segments of low technology intensity, confirms the prevalence of dynamic over static advantages.
- Moving into more technology-intensive sectors is key for growth over the long term. One indicator here is the evolution of complexity in a country’s economic structure. An economy will be more complex if it has a diversified production structure with sectors or activities that few other countries have. Those activities are not widespread because they require sophisticated technological capacities that are beyond the reach of many countries.
- With the exception of Mexico—which has an important export manufacturing industry even though it has not succeeded in developing strong supply chains or large-scale knowledge spill-over processes within the economy—the economies of Latin America and the Caribbean betray low complexity. Particularly noteworthy is the case of Brazil, whose economy seems to be undergoing something of a reprimarization.
- Advanced economies such as those of the European Union have levels of complexity that remain high, even if they are backsliding to some extent.
- Conversely, some emerging economies, such as China and the Republic of Korea, are boosting their complexity significantly thanks to their industrial policy strategies

under which they are concentrating their investment efforts in new technology sectors and areas of greater knowledge intensity, for example the digital economy, and are thereby progressively narrowing the productivity gap with the more advanced economies.

■ Figure II.31 ■  
Selected countries: Hidalgo-Hausmann index of economic complexity, 1995-2014



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of ECLAC, *Horizons 2030: Equality at the Centre of Sustainable Development* (LC/G.2660/Rev.1), Santiago, 2016 and R. Hausmann and others, *The Atlas of Economic Complexity*, Cambridge, Puritan Press, 2011.

**Note:** The Hidalgo-Hausmann index of economic complexity combines indicators of the diversification and sophistication of a country’s capacities.

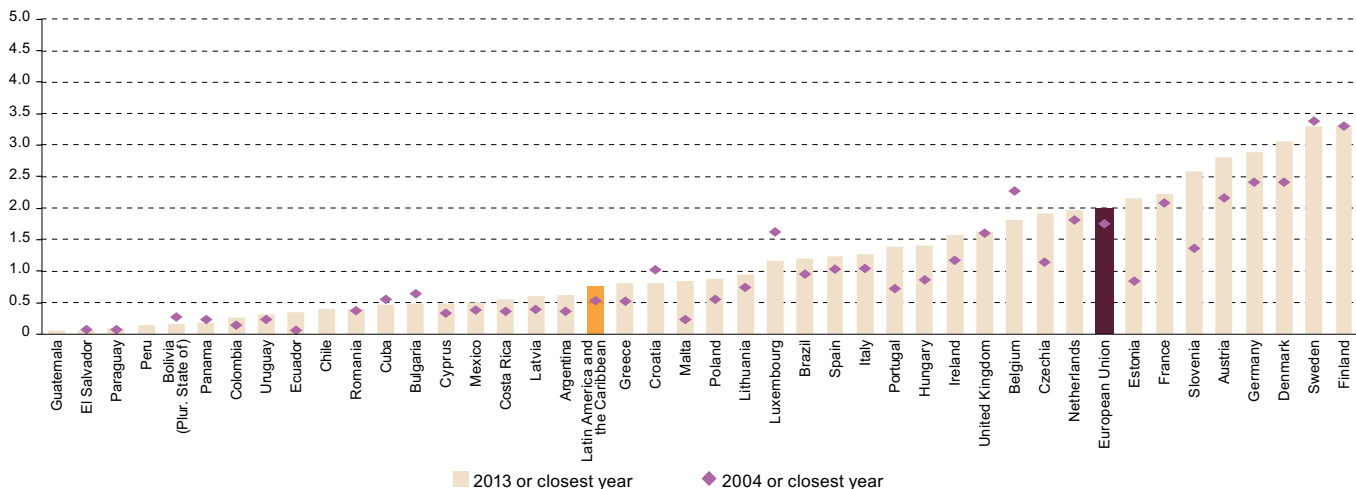


## 7. The Latin America and Caribbean region has boosted investment in R&D, but it still falls far short of levels in the European Union (2% of GDP)

- Although there are many factors that influence an economy's capacity to innovate, investment in R&D is highly correlated with technological complexity and is a fundamental factor.
- Over the last decade, R&D investment in countries of the region has improved, but with the exception of Brazil it has not been very impressive in terms of GDP.
- In 2013, Latin America and the Caribbean spent on average 0.75% of GDP on research and development, a figure well below that in the European Union (2% of GDP). As a benchmark, it may be noted that the United States invested 2.8% of GDP and the Republic of Korea 4% of GDP, while R&D investment in Israel exceeded 4.25% of GDP.
- There are some significant differences between countries in Latin America and the Caribbean and in the European Union. In the first case (considering countries for which information is available), the country that invests the most is Brazil (1.2% of GDP), while the lowest percentage is to be found in Guatemala (0.05% of GDP). In the European Union, the performance extremes are Finland and Sweden (3.3% of GDP) and Romania (0.4% of GDP). Thus, in the European Union, the ratio between countries that invest the most and the least as a proportion of GDP is 8:1, while the equivalent ratio in Latin America and the Caribbean is 25:1, demonstrating the great heterogeneity of the latter region.
- Another differentiating factor in the area of innovation is the source of financing. In Latin American and Caribbean countries, the bulk of financing comes from the public sector (which in many cases accounts for more than 60% of the total), while in the European Union, where firms are more committed to innovation, the private sector is the main source of financing for R&D activities.

■ Figure II.32 ■

**Latin America and the Caribbean and European Union: investment in research and development, around 2004 and 2013**  
(Percentages of GDP)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from United Nations Educational, Scientific and Cultural Organization (UNESCO) and Ibero-American Network of Science and Technology Indicators (RICYT).

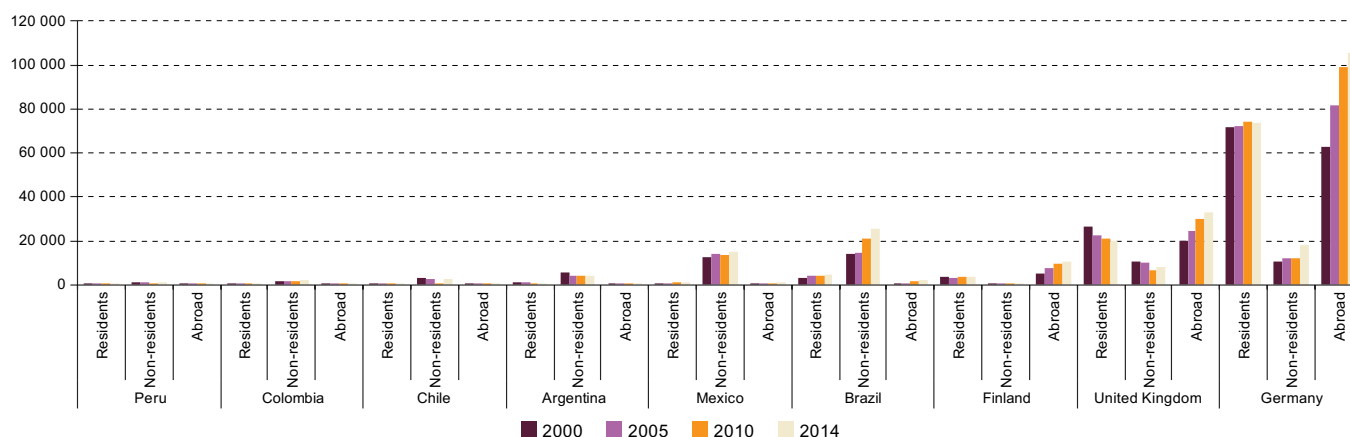
## 8. The scant commitment of CELAC countries to innovation means that the region has only a marginal presence in the global knowledge market

- The steady advance of the technological paradigm and the growing importance of technologies in determining the prospects for higher incomes and better services reinforce the importance of knowledge generation and accessibility for achieving the Sustainable Development Goals.
- There are many ways to estimate countries' capacities and their participation in the knowledge economy. Statistics on foreign patent applications, for example, reveal how countries are doing in generating knowledge for development of new technologies.
- According to patent statistics, the technologically most advanced countries have seen a substantial increase in the number of patent applications filed abroad by residents. This is the case with countries of the European Union, as well as with some emerging economies (China and the Republic of Korea).
- By contrast, in Latin America and the Caribbean foreign patent filings remain at very low levels, highlighting the need for mechanisms and incentives to boost the development of scientific and technological capacities that can create new knowledge. Between 2000 and 2014, patent applications filed abroad from Brazil and from Mexico increased from 604 to 2,058 and from 340 to 951, respectively, whereas the number of such filings from Germany jumped from 62,863 to 105,709. These figures reveal how countries are performing in their capacities to generate new technologies, and the degree to which they are ready to take advantage of technological progress.

■ Figure II.33 ■

### Latin America and the Caribbean and European Union (selected countries): patent applications, 2000-2014

(Numbers)

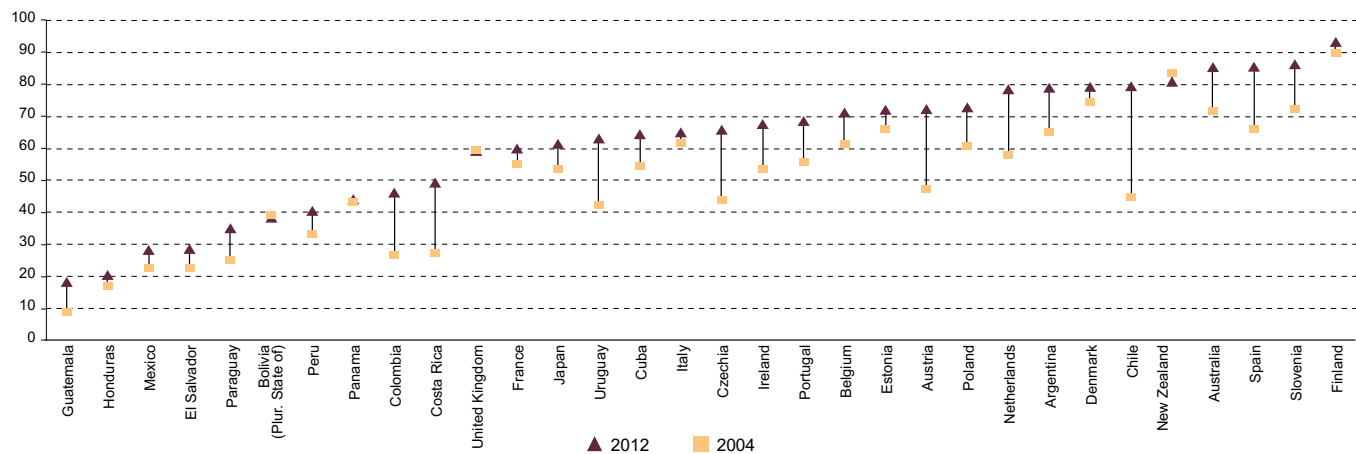


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from World Intellectual Property Organization (WIPO), Statistics [online database] <http://www.wipo.int/ipstats/en/>.

## 9. The countries of Latin America and the Caribbean need to commit to greater and better qualification of their human resources if they hope to move toward sustainable and inclusive development

- The new context of knowledge-based economies and the advance of the digital economy have highlighted the importance of human capital for underpinning countries' ability to innovate. Quite apart from the social imperative of universal education coverage, the formation of advanced human capital must be a central element of the technology development strategies of countries and firms, without which it will be impossible to meet the Sustainable Development Goals.
- Although enrolment rates in tertiary education have risen substantially in Latin America and the Caribbean, great discrepancies persist among countries and there is broad room for increasing access to education, particularly among the most disadvantaged sectors of society. For example, enrolment rates in El Salvador, Guatemala, Honduras and Mexico represent less than 30% of the student-age population. That performance stands in contrast with Chile and Argentina, where the rates are similar to those of European countries.
- In addition, the quality of education remains a problem in CELAC countries, constraining the possibilities of boosting the exchange of knowledge and the development of new capacities. In the mathematics test under the Programme for International Student Assessment (PISA), students from Latin America and the Caribbean score poorly, especially in comparison with those from the emerging economies of Eastern Europe and the developing countries of Asia, where outcomes are even better than those of Germany or the United Kingdom.

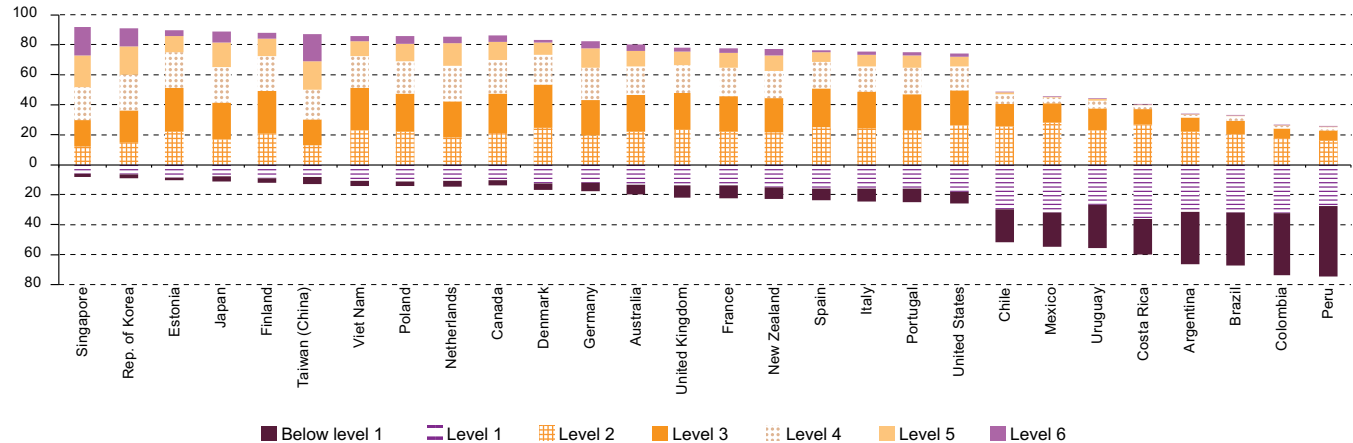
■ **Figure II.34 ■**  
**Selected countries: gross enrolment rate in tertiary education, 2004 and 2012**  
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of UNESCO Institute for Statistics (UIS).

■ Figure II.35 ■

**Selected countries: distribution of students by level achieved in the math test of the Programme for International Student Assessment (PISA), 2012**  
(Percentages)

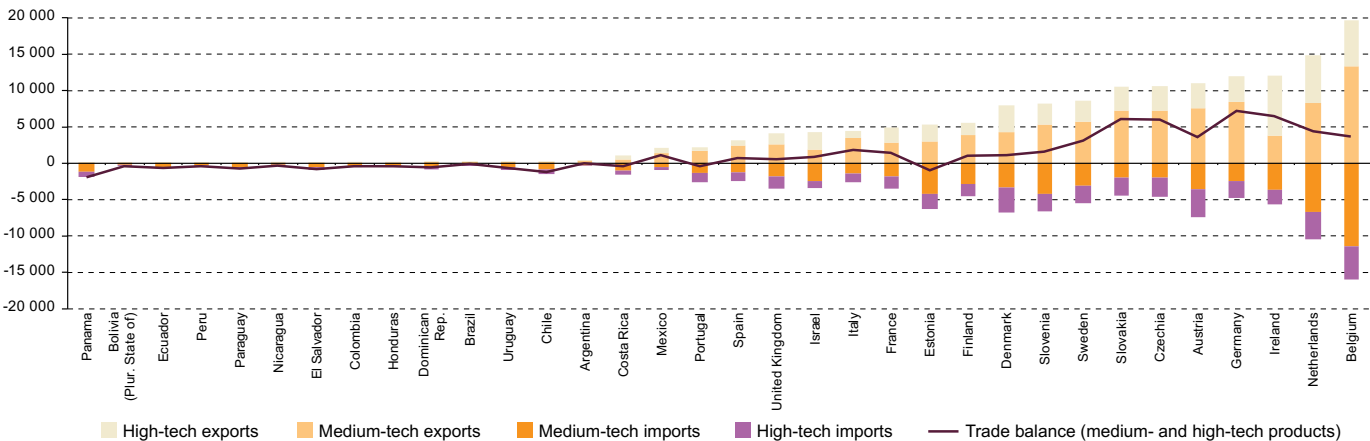


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Organization for Economic Cooperation and Development (OECD), Programme for International Student Assessment (PISA).

10. Exports of products of high and medium technology intensity from European countries exceed US\$ 5,000 per capita, whereas those from Latin American and Caribbean countries, with the exceptions of Mexico and Costa Rica, amount to no more than US\$ 400 per capita

- The scant complexity of production structures and the low level of capabilities are correlated with a limited diversification of exports. Countries that base their competitiveness on exporting products of high technology intensity require advanced skills on the part of their workers, and heavy investment in R&D, and at the same time they maintain close linkages between production and the science and technology system. The high technology-intensive sectors are less exposed to the entry of competitors, and they generate greater profits. Thus, the export of technologically advanced products is a characteristic feature of nearly all developed countries.
- Countries with the greatest exports of high technology-intensive products will need greater numbers of qualified scientists and technicians. The sectors that export technologically advanced goods will have trouble surviving without human resources capable of developing those products. At the same time, workers in any economy will have no incentive to specialize or to invest in upgrading their human capital if there is no market demand for skills. Given this relationship, countries that are not now exporting technology-intensive goods will have trouble doing so in the future unless they adopt a suitable strategy for technological and industrial development.
- There are great differences between the two regions on this score. While European Union countries are very active in exporting and importing high- and medium-tech goods, few economies in Latin America and the Caribbean have any capacity for marketing this type of goods. Moreover, in contrast to Latin American and Caribbean economies, the European countries, being substantially more advanced in terms of technology, have a surplus on their trade balance in high- and medium-tech goods.

■ Figure II.36 ■  
Selected countries: per capita exports and imports of medium- and high-technology-intensity products, 2014  
(Current dollars)



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

11. Lastly, the productivity gaps between firms have a profound impact in the social sphere, by skewing income distribution and perpetuating poverty

- Micro-enterprises and SMEs employ between 60% and 65% of the region’s labour force. Yet, because of low relative labour productivity, they pay lower wages than big firms do.

Once again, the gap between firms of different sizes is much more pronounced in the countries of Latin America and the Caribbean than in those of the European Union.

■ Table II.9 ■

Latin America and European Union (selected countries): wage gaps with respect to large firms, by firm size, 2011  
(Percentages)

Country	Microenterprises	Small firms	Medium firms	Large firms
Argentina	46	56	65	100
Brazil	43	49	74	100
Chile	-	52	69	100
Mexico	30	45	66	100
Germany	69	73	81	100
Spain	63	74	89	100
France	-	88	91	100
Italy	-	69	79	100

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of ECLAC/ EU-Latin America and the Caribbean Foundation, *Reinforcing production cooperation and dialogue spaces: the role of SMEs* (LC/L.4020), Santiago, May 2015 [online] [http://repositorio.cepal.org/bitstream/handle/11362/38243/S1500521\\_en.pdf](http://repositorio.cepal.org/bitstream/handle/11362/38243/S1500521_en.pdf).



### III. The social situation: progress early in the decade





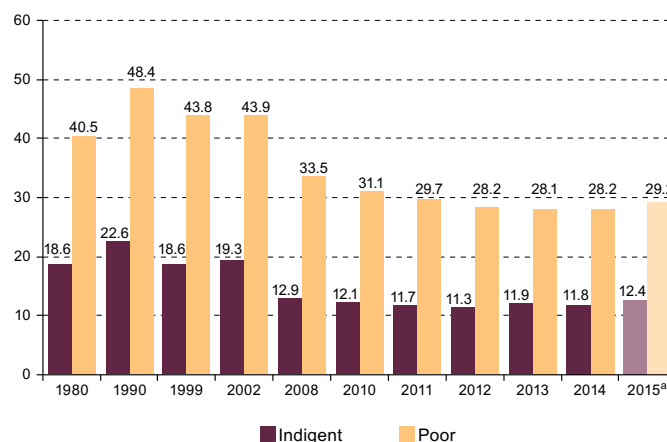
## A. No let-up in the battle against poverty and inequality

### 1. The progress made in reducing absolute poverty in Latin America and the Caribbean in recent years appears to have begun to go into reverse in 2015

- Unlike in the European Union, poverty and indigence in Latin America have traditionally been measured using the cost of basic needs method, which compares the per capita income of each household with the value of the indigence line (the value of a basic basket of foodstuffs) or the poverty line (the minimum amount needed to meet essential needs). Notwithstanding the recent shift in trend, the overall change in these indicators since the 1990s is positive. In 25 years, poverty fell by 19 percentage points and indigence by 10 percentage points.
- The factors helping to bring down poverty in the region have included the increase in employment and in labour income per employed person, rises in minimum wages, the promotion of employment formalization, and the expansion of pension and retirement systems and conditional transfer programmes.
- In 2014, 28.2% of the region's population, or 168 million people, were poor. Of these, 70 million were living in extreme poverty or indigence. Both the poverty and the indigence rates are projected to rise in the 2015 figures, by 1.0 and 0.6 percentage points, respectively. If these projections are borne out, 175 million people would be considered to be income-poor in 2015, 75 million of whom would be indigent.
- The number of poor in the region increased by about 2 million between 2013 and 2014, this figure being the balance resulting from a rise of some 7 million recorded or projected mainly in the Bolivarian Republic of Venezuela, Guatemala and Mexico and a decline of 5 million occurring mainly in Brazil, Colombia and Ecuador.

■ Figure III.1 ■

**Latin America (19 countries): poverty and indigence, 1980-2015<sup>a</sup>**  
(Percentages and millions of persons)



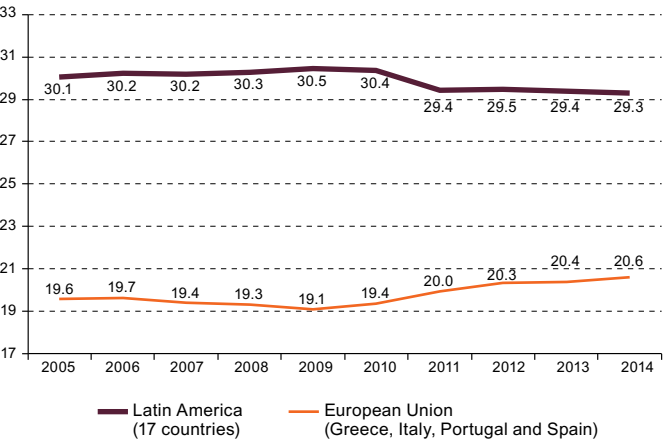
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America, 2015. Briefing paper*, Santiago, March 2016 [online] <http://www.cepal.org/en/publications/39964-social-panorama-latin-america-2015-briefing-paper>.

<sup>a</sup> Projections.

## 2. In the case of the European Union, the lengthy crisis has increased the numbers at risk of poverty or social exclusion: between 2008 and 2014, those at risk of poverty increased from 116 million to 122 million

- In the European Union, poverty is measured by a relative yardstick, taking a threshold of 60% of the median income in the economy. A comparable calculation for 17 countries of Latin America reveals that the region's relative poverty level (29.3%) was approximately 1.4 times higher than in the four European Union countries worst affected by the 2009 crisis (Greece, Italy, Portugal and Spain).
- In those four European countries relative poverty has risen by 1.5 percentage points since the crisis of 2009, whereas in Latin American it has fallen slightly (1.2 percentage points).

■ **Figure III.2 ■**  
**European Union (4 countries) and Latin America (17 countries):**  
**incidence of relative poverty, 2005-2014<sup>a</sup>**  
(Percentages)

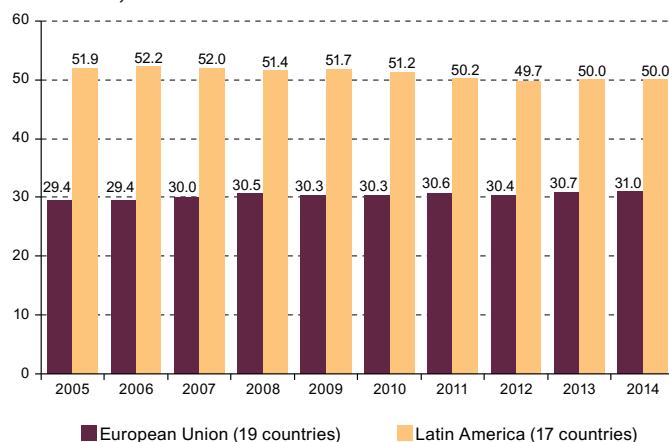


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of special tabulations of household surveys of the respective countries; and Eurostat.  
<sup>a</sup> Simple averages for the groups of countries.

### 3. Income inequality has come down in Latin America and the Caribbean, but has held steady in the European Union, albeit at much lower levels

- Latin America and the Caribbean has one of the highest income inequality figures in the world. Income inequality erodes well-being and reduces possibilities of economic and social development. Starting in the year 2000, many countries in the region began efforts—which are still ongoing—to reduce this inequality. Between 2010 and 2014, the annual largest drops in the Gini index were seen in Uruguay (-2.7%), Argentina (-2.3%) and Ecuador (-2.2%).
- In 2014, the Gini index, calculated on the basis of equivalent per capita income, was 1.6 times higher in Latin America than in the European Union.
- Between 2005 and 2014, the Gini index calculated on the basis of equivalent per capita income dropped by 3.8% in Latin America, but rose by 5.4% in the European Union. Between 2010 and 2014, the Gini fell at an annualized rate of 0.6% in Latin America and rose by a similar magnitude (0.5%) in the European Union.

■ **Figure III.3 ■**  
**European Union (19 countries) and Latin America (17 countries):**  
**Gini index, 2005-2014<sup>a</sup>**



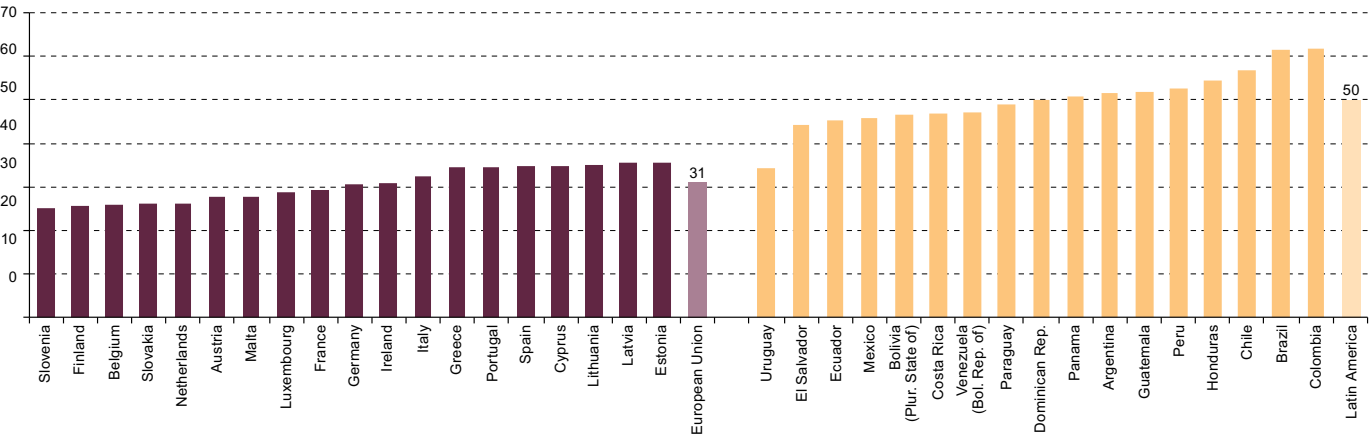
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of special tabulations of household surveys of the respective countries; and Eurostat.

<sup>a</sup> Gini index calculated on the basis of equivalent per capita income (modified Organization for Economic Cooperation and Development (OECD) scale).

## 4. Inequality is much more uneven across Latin America than in the European Union

- Within Latin America, the Gini index calculated on the basis of equivalent per capita income varies from 34.3 in Uruguay to 61.8 in Colombia. Across 19 European Union countries, the lowest Gini values occur in Slovenia (25.0) and Finland (25.6), and the highest in Cyprus (34.8), Lithuania (35.0), Latvia (35.5) and Estonia (35.6).
- In the context of the Europe 2020 strategy, the European Union created the European platform against poverty and social exclusion, with a view to guaranteeing economic, social and territorial cohesion. As well as mitigating the effects of the economic crisis, the platform is designed to lift 20 million people from the risk of poverty.
- The platform was launched in 2010 and will remain active until 2020. By July 2013, 64 poverty reduction initiatives had been presented, including minimum income schemes, pension systems, health services, reduction of child poverty and early school dropout, school meals, housing, support for social enterprise, social innovation and access to basic financial services. The main objectives include working in collaboration with civil society and achieving better policy coordination among the member countries.
- The European Commission has proposed that 20% of the European Social Fund be earmarked for fighting poverty and social exclusion.

■ **Figure III.4** ■  
**European Union (19 countries) and Latin America (17 countries): Gini index, around 2014<sup>a</sup>**



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of special tabulations of household surveys of the respective countries; and Eurostat.  
<sup>a</sup> Gini index calculated on the basis of equivalent per capita income (modified Organization for Economic Cooperation and Development (OECD) scale).

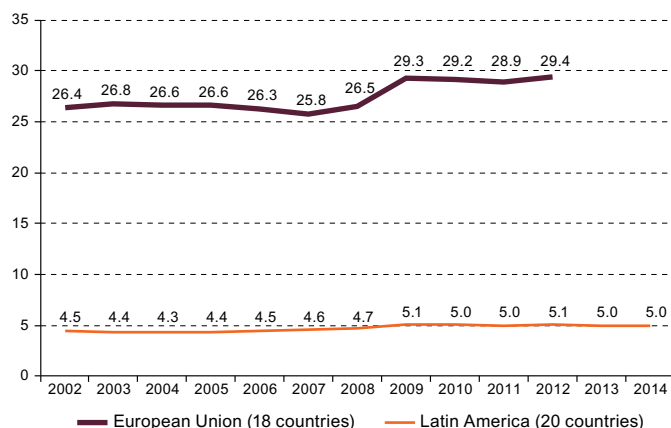
## B. Social protection: a difficult gap to close

### 1. Social spending has risen considerably in Latin America and the Caribbean: from 15.9% of GDP in 2001-2002 to 19.5% in 2013-2014. However, in the current conditions, this spending appears to be declining owing to the lower tax take on the back of the economic slowdown

- In Latin America and the Caribbean, social spending came to account for 48.4% of total public spending in the 2013-2014 biennium, as a simple average for the countries (3.2 percentage points more than in the 2001-2002 biennium).
- Social protection spending increased in both the European Union and Latin America in the last decade.
- Between 2002 and 2014, average spending on social protection increased by 11% in relation to GDP in Latin America and the Caribbean.
- Between 2008 and 2009, social spending picked up considerably. It declined slightly in the European countries up till 2007, then rose sharply in 2008 and 2009. Despite the tough adjustment policies in place, levels of investment in social protection in the European Union remained practically unchanged, at around 29% of GDP.
- Notwithstanding these trends, social protection spending as a percentage of GDP remains much lower in Latin America than in the European Union. While social protection spending in the former represented 5.1% of GDP in 2012, in the 15 European Union countries considered the average was almost five times that (29.4% of GDP).
- The rise in social spending has not benefited all social functions equally in Latin America and the Caribbean (in the simple average for the countries). Gradual population ageing is progressively increasing the amount of resources devoted to financing social security, which is exceeded only by the rise in education spending.

■ Figure III.5 ■

**European Union (18 countries) and Latin America (20 countries): social protection spending, 2002-2014<sup>a</sup>**  
(Percentages of GDP)

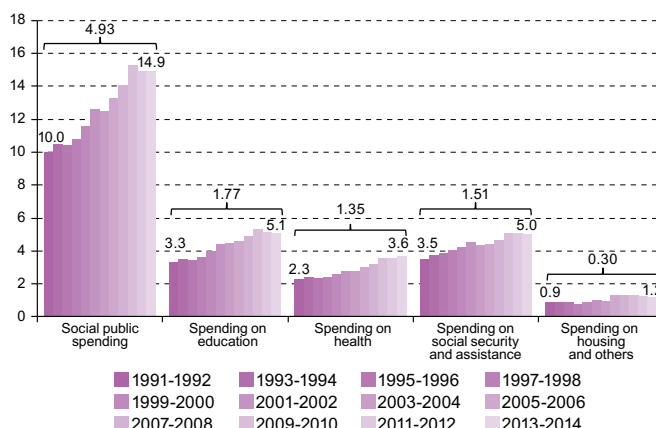


Source: Economic Commission for Latin America and the Caribbean (ECLAC), social expenditure database; and EuroStat.

<sup>a</sup>Simple average for the countries.

■ Figure III.6 ■

**Latin America and the Caribbean (21 countries): social public spending by sector, 1991-1992 to 2013-2014<sup>a</sup>**  
(Percentages of GDP)



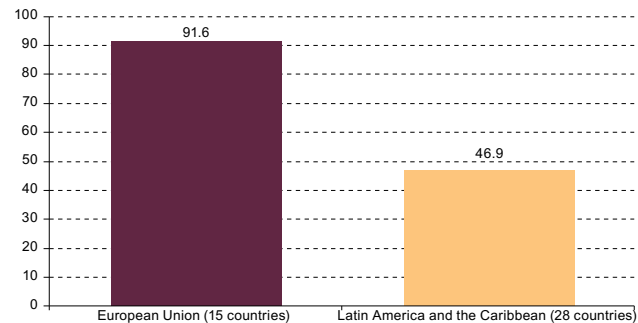
Source: Economic Commission for Latin America and the Caribbean (ECLAC), social expenditure database.

<sup>a</sup>Simple average for the countries.

## 2. There are sharp differences between the two regions in social security coverage, both in working life and in retirement

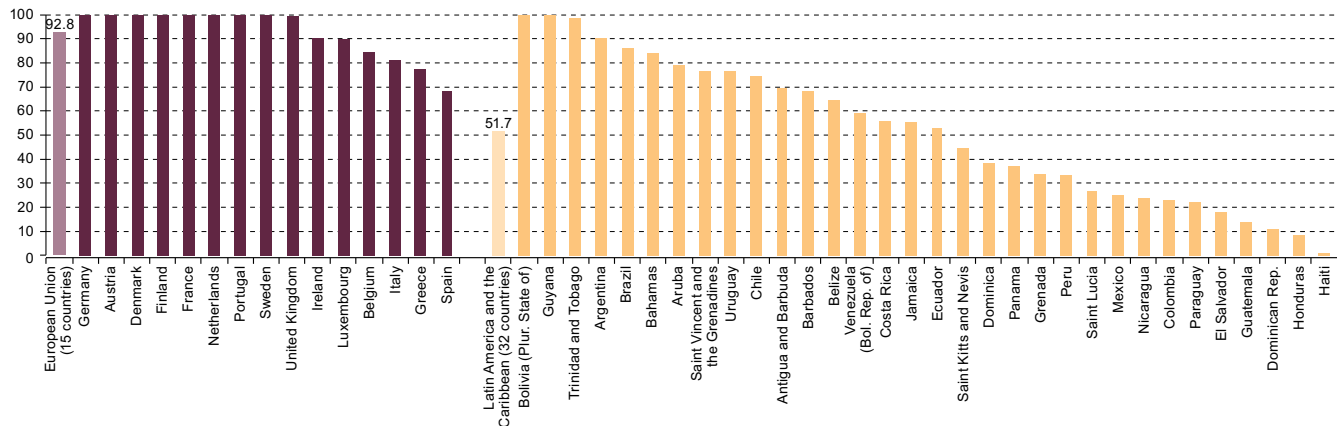
- Around 2010, nearly all (91.6%) of the economically active population was enrolled in social protection systems guaranteeing a pension in the 15 European Union countries considered, compared with under half (46.9%) of that population in Latin America and the Caribbean.
- A similar gap is seen in respect of the proportion of the retirement-age population receiving a pension or retirement benefit: on average, 92.8% of people of retirement age receive a pension in the European Union, compared with only around half (51.7%) in Latin America and the Caribbean.
- Some countries in Latin America have universal pension coverage for adults of retirement age, but in others coverage is very low (in Haiti, 1%). Whereas coverage in most of the 15 European Union countries is universal, in Spain, Greece and Italy it is 68%, 77% and 81%, respectively.
- Despite progress, in 2013, the increased enrolment in pension systems in Latin America is occurring among the upper deciles of the income distribution: 76.8% among the employed in the tenth decile, compared with 15.1% in the first decile. About two thirds of the employed population is enrolled in a health system (ranging from 64.6% in the first decile to 85.5% in the tenth decile).

■ **Figure III.7 ■**  
**European Union (15 countries) and Latin America and the Caribbean (28 countries): economically active population aged 15 years or over enrolled in social security systems with a pension entitlement, around 2010**  
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Labour Organization (ILO), *World Social Protection Report 2014/15. Building economic recovery, inclusive development and social justice*, Geneva, 2014.

■ **Figure III.8 ■**  
**European Union (15 countries) and Latin America and the Caribbean (32 countries): retirement-age population in receipt of a pension, around 2010**  
(Percentages)



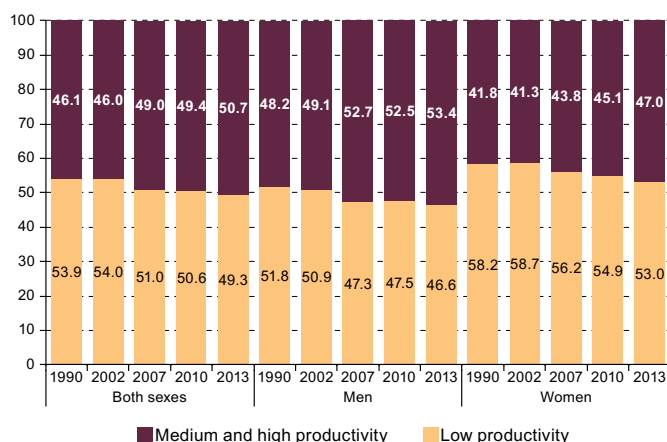
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Labour Organization (ILO), *World Social Protection Report 2014/15. Building economic recovery, inclusive development and social justice*, Geneva, 2014.

## C. Inequality transmission mechanisms

### 1. Despite the progress made, almost half of all jobs in the countries of the Community of Latin American and Caribbean States (CELAC) are created in low-productivity sectors

- In Latin America and the Caribbean, almost half the employed population works in low-productivity sectors, typically without social protection, under precarious hiring conditions and with low income.
- Employment in low-productivity sectors in Latin America declined by almost five percentage points between 1990 and 2013, for men and women alike, and in 2013 represented 49.3% of workers of both sexes, compared with 53.9% in 1990. However, the proportion of women employed in such sectors (53.0%) that year remained higher than the proportion of men (46.6%).

■ **Figure III.9 ■**  
**Latin America (18 countries): distribution of employed population aged 15 and over by level of productivity and sex, national total, 1990-2013<sup>a</sup>**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America, 2015. Briefing paper*, Santiago, March 2016 [online] <http://www.cepal.org/en/publications/39964-social-panorama-latin-america-2015-briefing-paper>.

<sup>a</sup> Weighted average.

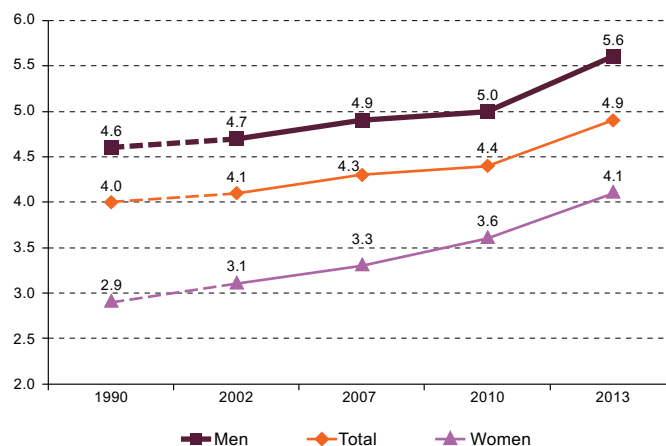


## 2. Gender differences in labour income are greater in Latin America and the Caribbean than in the European Union

- In the European Union, women are estimated to earn around 16% less than men per hour (2011 figures). In Latin America, around 2012, men's hourly income was higher than women's in 13 countries, with differences of as much as 40% in the Plurinational State of Bolivia and 50% in Peru, although in five countries —Argentina, El Salvador, Nicaragua, Costa Rica and Honduras— women earned more per hour than men.
- In Latin America, men's monthly labour income was 1.4 times higher than women's in the 2013 figures. The differences in income earned by men and women occur systematically across all occupational categories.
- Labour income increased in Latin America between 1990 and 2013, with a very slight reduction in the gender gap.
- Labour income in Latin America also reflects disparities in other dimensions, including by geographical areas of residence and by race or ethnic identity.

■ **Figure III.10 ■**

**Latin America (18 countries): labour income of the employed population aged 15 and over, by sex, national total, 1990-2013<sup>a</sup>**  
(Multiples of the poverty line)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America, 2015. Briefing paper*, Santiago, March 2016 [online] <http://www.cepal.org/en/publications/39964-social-panorama-latin-america-2015-briefing-paper>.

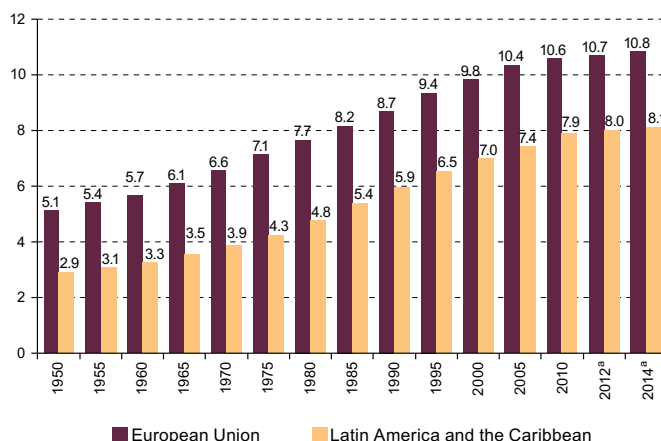
<sup>a</sup>Weighted average.

### 3. Latin America and the Caribbean continues to lag behind the European Union on education

- Capacity-building via the formal education system is one of the primary avenues for the social inclusion of young people.
- Although the countries of Latin America and the Caribbean have achieved substantial improvements in education in recent decades, they still lag well behind countries in the European Union.
- The average number of years of education completed by the population aged 25 and over in the countries of Latin America and the Caribbean rose from 2.9 years in 1950 to 8.1 in 2014. This indicator also rose strongly in the countries of the European Union over the same period, from 5.1 years to 10.8 years. The ratio of the average length of education in the European Union to the average in Latin America and the Caribbean therefore narrowed from 1.8 to 1.3 in 62 years.
- In Latin America and the Caribbean there is a high degree of heterogeneity in education, with differences between urban and rural areas, between students from different socioeconomic strata and between indigenous and non-indigenous people, among other factors of discrimination.

■ Figure III.11 ■

**European Union and Latin America and the Caribbean: average years of education of population aged 25 and over, 1950-2014**  
(Years of education)



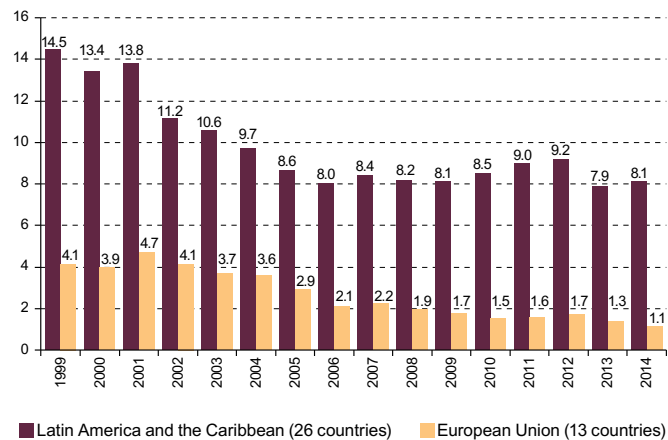
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of UNESCO Institute for Statistics (UIS), Statistical Yearbook, various years.

<sup>a</sup> Estimate.

#### 4. The percentage of adolescents outside the education system has decreased in both the European Union and Latin America and the Caribbean, but large gaps between the two regions remain

- The proportion of adolescents outside the formal education system in the countries of Latin America and the Caribbean is much higher than in the European Union. The proportions were significantly reduced in both regions between 2000 and 2006, but progress has stagnated since then, and the proportion in Latin America and the Caribbean had increased slightly by 2012.
- Reasons for school dropout in Latin America and the Caribbean vary by sex. Boys tend to enter the labour market early and drop out of the education system for financial reasons, chiefly to supplement insufficient household income. Dropout among girls reflects financial reasons as well, but also reflects the demands of caregiving, pregnancy, motherhood and domestic work in the household.

■ **Figure III.12 ■**  
**European Union (13 countries) and Latin America and the Caribbean (26 countries): school-age children and adolescents outside the education system, 1999-2014**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of UNESCO Institute for Statistics (UIS).

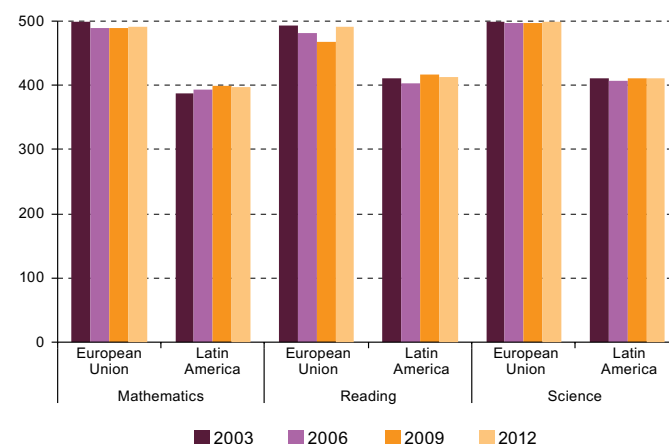
## 5. In terms of educational outcomes, PISA tests show that students in European Union countries perform better across the board than their peers in Latin America

- In respect of educational outcomes, students in European Union countries perform better across the board. On average, European students perform 21% better on the standardized tests of the Programme for International Student Assessment (PISA). The largest differences occur in mathematics (24%), followed by science (22%) and reading (19%).
- The gap between the two regions in mathematics and reading narrowed between 2003 and 2012, but there has been no major variation in the overall averages.
- In Latin America, results vary by students' socioeconomic status, with those from poor families failing to attain minimal levels of competency.

■ Figure III.13 ■

**European Union and Latin America: test results for the Programme for International Student Assessment, 2003, 2006, 2009 and 2012**

(Standardized test scores)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the Organization for Economic Cooperation and Development (OECD), Programme for International Student Assessment (PISA).



## IV. New vectors of transformation: the digital economy and climate change



## A. Advances in infrastructure

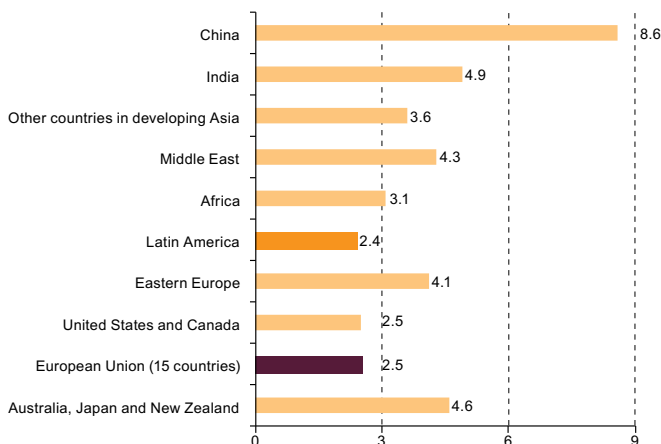
### 1. The European Union and Latin America and the Caribbean must step up the pace of investment in infrastructure in order to achieve the Sustainable Development Goals

- There is a broad consensus that good-quality infrastructure and services play a key role in economic and social development. Some estimates point to a high socioeconomic rate of return for infrastructure, close to 20%, which stems mainly from an increase in productivity owing to reduced travel time and costs, reliable access to electricity and broadband connectivity that allows people and businesses to join the global digital economy.
- Worldwide, US\$ 2.5 billion per year are spent on transport, energy, water and telecommunications infrastructure. In the past two decades, investment has averaged 3.5% of global GDP (2.4% in Latin America and 2.5%-3.0% in the European Union). Since the global financial crisis, investment has fallen in most of the world, in both developing and advanced economies, despite the clear socioeconomic

benefits of infrastructure construction. The current trajectory indicates a deficit of US\$ 350 billion per year, or triple that figure when factoring in the investment needed to achieve the Sustainable Development Goals.

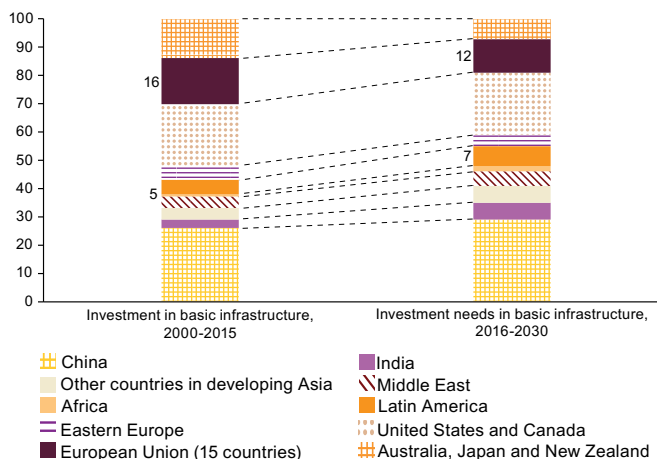
- Roughly US\$ 3.3 billion per year (at constant 2015 prices) would need to be invested between 2016 and 2030, mainly in developing countries (60%), just to maintain the projected pace of economic growth. Moreover, this amount would still not be enough to cover estimated needs. The United Nations Conference on Trade and Development (UNCTAD) anticipates that developing countries alone will need between US\$ 3.3 billion and US\$ 4.5 billion in annual investment in basic infrastructure, food security, climate change mitigation and adaptation, health and education.

■ **Figure IV.1 ■**  
Selected regions and countries: investment in basic infrastructure, annual average, 1992-2013  
(Percentages of GDP)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of McKinsey Global Institute, *Bridging Global Infrastructure Gaps*, June 2016 [online] <http://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/bridging-global-infrastructure-gaps>.

■ **Figure IV.2 ■**  
Selected regions and countries: investment needs and actual investment in basic infrastructure, 2000-2015 and 2016-2030  
(Percentages)



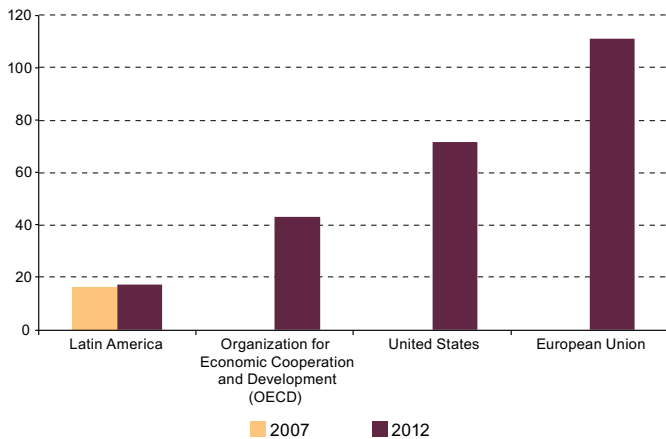
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of McKinsey Global Institute, *Bridging Global Infrastructure Gaps*, June 2016 [online] <http://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/bridging-global-infrastructure-gaps>.



## 2. Land transport networks in Latin American and Caribbean countries lag behind those in the European Union in terms of coverage and quality

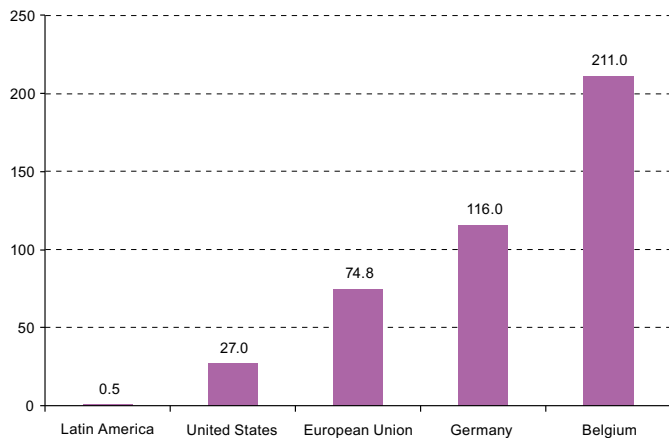
- In 2012, the average density of the total road network in Latin America stood at 17.2 km per 100 km<sup>2</sup>. With a regional average density of 3.2 km of paved road networks per 100 km<sup>2</sup> (18.6% of the total), the region falls well short of the quality of infrastructure in various European Union countries such as Austria, Denmark, France, Germany, Ireland and Italy, where 100% of the road network is paved. Little progress was made in this regard between 2007 and 2012.
- In Latin America and the Caribbean, use of rail networks—which are more sustainable—is very limited and shows no sign of growing. The average density of the rail network in the region stood at 0.5 km per 100 km<sup>2</sup> in 2012, much lower than the European Union average (74.8 km per 100 km<sup>2</sup>).

■ **Figure IV.3 ■**  
**Selected countries and groupings: density of total road network, 2007 and 2012**  
(Kilometres per 100 km<sup>2</sup>)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Latin American Railways Association (ALAF); Organization for Economic Cooperation and Development (OECD); Food and Agriculture Organization of the United Nations (FAO) and World Bank.

■ **Figure IV.4 ■**  
**Selected countries and groupings: density of total rail network, 2012**  
(Kilometres per 100 km<sup>2</sup>)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Economic Commission for Europe (ECE), Latin American Railways Association (ALAF); Korea Rail Corporation and Food and Agriculture Organization of the United Nations (FAO).

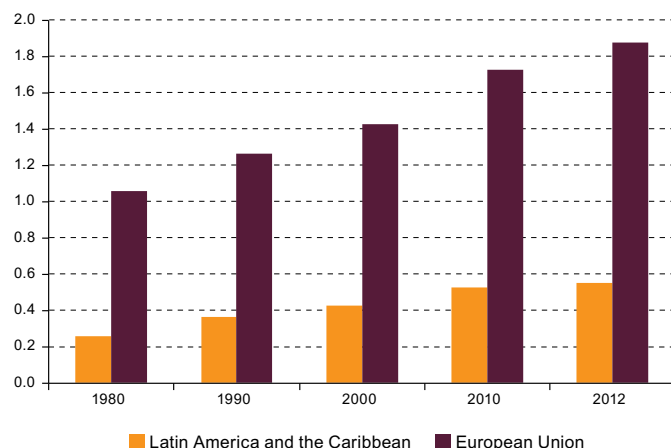
### 3. Latin America and the Caribbean has improved electricity generation and coverage, but still lags behind the European Union

- In Latin America and the Caribbean, fossil fuels are the main source of primary energy. In 2013, oil and natural gas accounted for 39% and 29% of total primary energy supply, respectively.
- With respect to secondary energy, installed capacity for electricity generation in Latin America and the Caribbean grew by 4.1% per year on average between 1980 and 2012, from 86 gigawatts to 310 gigawatts. This growth was stronger than in the European Union (2.1% over the same period). Nonetheless, average electricity generating capacity per 1,000 inhabitants for the Community of Latin American and Caribbean States (CELAC) is still much lower than that of European Union members.
- Hydroelectricity is the main energy source in Latin America and the Caribbean, although fossil fuel use has grown sharply since the 1990s. By contrast, the use of oil, natural gas and coal has diminished in the European Union, and these energy sources have been replaced by nuclear energy, or more recently, by non-conventional renewable energy sources.
- Despite the progress made, some population segments in Latin America and the Caribbean still lack access to electricity. In 2012, just seven Latin American countries had full coverage, compared with 100% of the European Union.

■ Figure IV.5 ■

#### European Union and Latin America and the Caribbean: electricity generating capacity, 1980-2012

(Megawatts per 1,000 inhabitants)

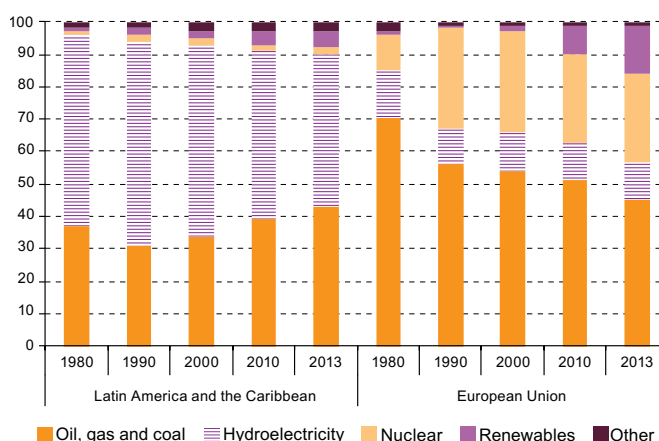


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the Latin American Energy Organization (OLADE); Energy Information Administration (IEA) and World Bank.

■ Figure IV.6 ■

#### European Union and Latin America and the Caribbean: electricity production, by source, 1980-2013

(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank.

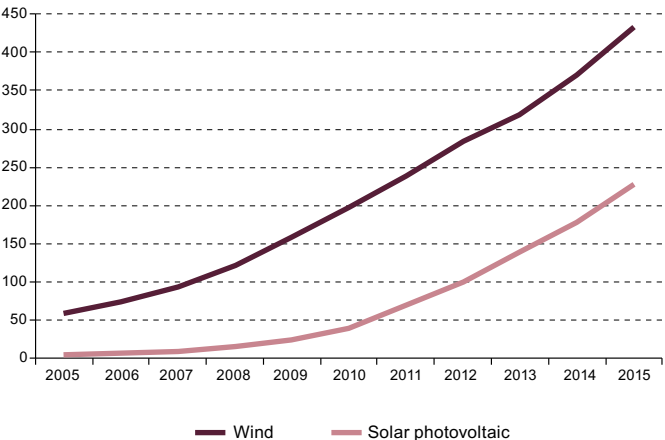
## 4. The European Union is the world leader in non-conventional renewable energy

- Renewable energy sources currently represent a larger percentage of new electricity generating capacity than fossil fuels, and accounted for roughly 60% of new capacity in 2015. At the end of 2015, renewable energy represented about 28.9% of global electricity generation capacity, and hydroelectricity accounted for 16.6% of that total, followed by wind, bio and solar energy (3.7%, 2% and 1.6%, respectively).
- The European Union leads the field: in 2015, five countries (France, Germany, Italy, Spain and the United Kingdom)

were among the 10 economies with the highest installed wind power capacity, as well as those with the highest installed solar photovoltaic capacity. With respect to installed generating capacity, Germany is the second-highest in solar energy after China, and the third-highest in wind power, behind China and the United States.

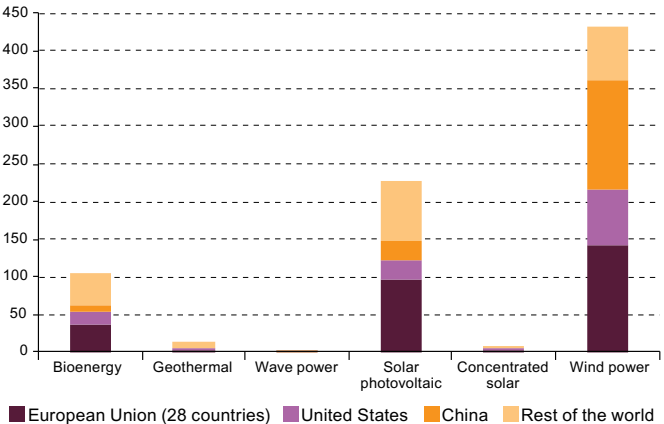
- But Latin America and the Caribbean is working to catch up. Brazil, Chile and Uruguay have significantly increased their wind power capacity, and Chile has made great strides in solar photovoltaic power.

■ **Figure IV.7 ■**  
**Global installed capacity of wind and solar photovoltaic power generation, 2005-2015**  
(Gigawatts)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Red de Políticas de Energía Renovable para el siglo XXI (REN21).

■ **Figure IV.8 ■**  
**Selected regions and countries: installed capacity of non-conventional renewable sources, 2015**  
(Gigawatts)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Red de Políticas de Energía Renovable para el siglo XXI (REN21).

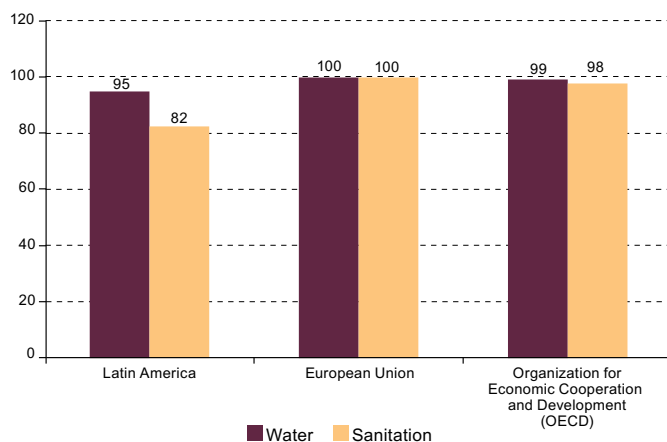
## 5. CELAC countries have made notable progress in providing safe drinking water and sanitation, but continue to lag far behind the European Union and are unable to keep pace with development

- In Latin America, safe drinking water and sanitation services improved steadily between 1990 and 2012, although it still lags far behind European Union countries, where coverage is almost 100%. Between 1990 and 2015, the region reduced the proportion of the population without sustainable access to safe drinking water by more than half, from 15% to 5%, and of those without sustainable access to basic sanitation by a similar amount (from 34% to 18%), bringing it very close to achieving the respective targets of the Millennium Development Goals.
- Progress in Latin America in these two areas pushed the region above the global average and that of various other developing regions. Nonetheless, there is still some concern about the proportion of the population without access to these improved services and the stark difference between conditions in urban and in rural areas.

■ Figure IV.9 ■

**European Union and Latin America: population with access to safe drinking water and improved sanitation, 2012**

(Percentages)

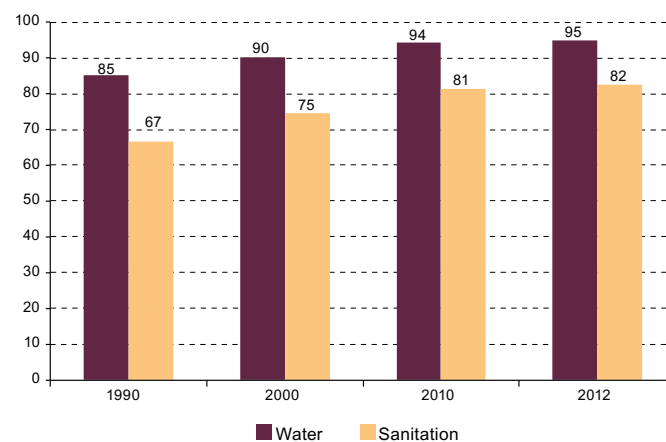


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the World Bank.

■ Figure IV.10 ■

**Latin America: population with access to safe drinking water and improved sanitation, 1990-2012**

(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the World Bank.

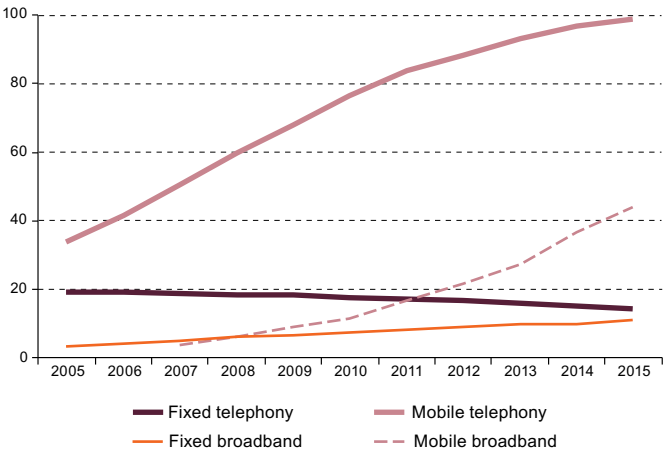
## 6. The gap in sophisticated telecommunications services between the European Union and Latin America and the Caribbean is narrowing

- Over the past few years, mobile services have been the main driver of the telecommunications services market. Between 2005 and 2015, global mobile telephony penetration rates jumped from 34% to 98.6%, representing roughly 7.3 billion subscribers. This rapid growth was driven mainly by developing countries, where penetration rose from 23% to 93% over the same period.
- With the ever-increasing importance attached to connectivity and mobility, broadband services have posted the strongest growth in recent times. Technological development and the extensive roll-out of network

infrastructure have allowed Internet service to expand rapidly throughout the world. Between 2010 and 2015, global fixed broadband penetration climbed from 7.6% to 11.2%, while mobile broadband penetration jumped from 11.5% to 44%. In 2015, developing countries posted penetration rates of 7.4% and 35.2% in fixed and mobile broadband, respectively.

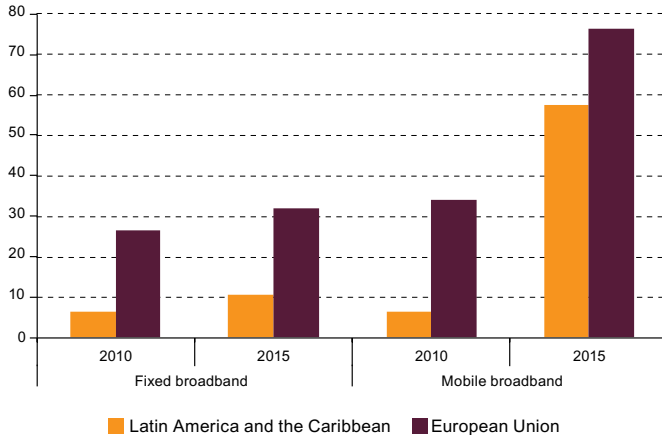
- In Latin America and the Caribbean, mobile broadband penetration jumped from 4.8% to 57.6% between 2010 and 2015, allowing the region to rapidly close the gap with advanced economies such as European Union countries.

■ **Figure IV.11 ■**  
**Penetration of communications services, by segment, 2005-2015**  
(Number of subscribers per 100 inhabitants)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the International Telecommunication Union (ITU).

■ **Figure IV.12 ■**  
**European Union and Latin America and the Caribbean: penetration of fixed and mobile broadband, 2010-2015**  
(Number of subscribers per 100 inhabitants)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the International Telecommunication Union (ITU).

## B. Climate change challenges

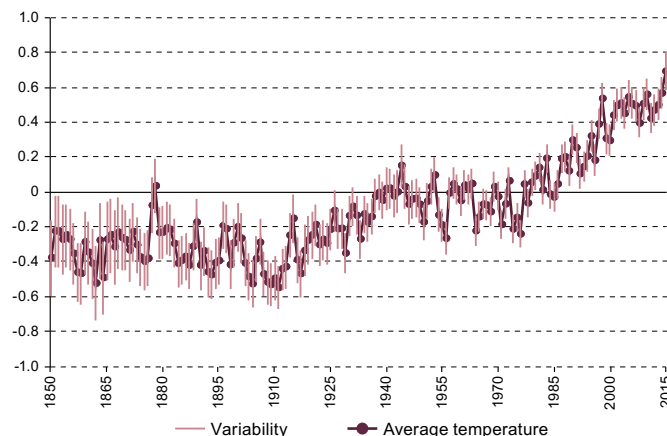
### 1. The current development model poses mounting risks to the environment

- There is consensus among the scientific community that the current development model could lead to environmental catastrophe in the long term, with the potential to compromise the development possibilities of future generations. Furthermore, given the non-linear dynamics of environmental systems, the situation could already be close to a point of no return, at which environmental damage would become irreversible. The economist Nicholas Stern has referred to pollution and climate change as “the greatest market failure the world has ever seen”.
- The behaviour of land and ocean surface temperatures and Arctic sea ice extent in the summer in the reflect these environmental trends.
- Land and ocean surface temperatures have been rising steadily since the early twentieth century, but this process has become faster since the 1960s. This has gone hand-in-hand with a shrinking of the Arctic ice cap and rising sea levels that put coastal cities in greater danger.

■ Figure IV.13 ■

#### Anomalies in the combined land and ocean surface temperatures, 1850-2015

(Degrees Celsius, temperature difference per year with respect to the average for 1961-1990)

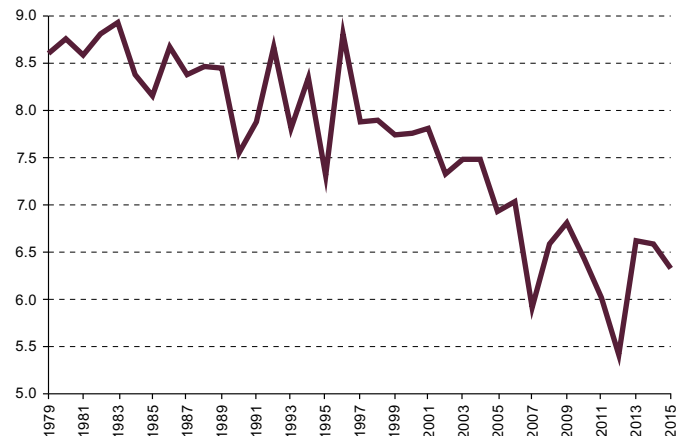


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, World Development Indicators (WDI) and International Union for Conservation of Nature (IUCN).

■ Figure IV.14 ■

#### Arctic sea ice extent in the summer, 1979-2015

(Millions of square kilometres)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, World Development Indicators (WDI) and International Union for Conservation of Nature (IUCN).

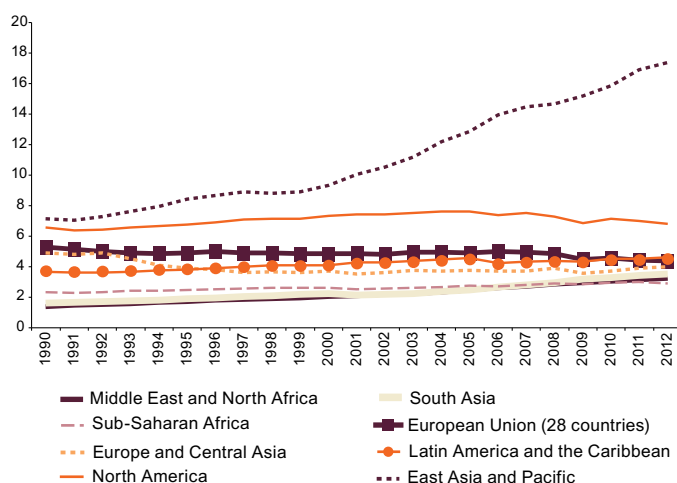
## 2. Levels of greenhouse gas emissions, which cause global warming, are similar in Latin America and the Caribbean and in the European Union

- Historically, greenhouse gas emissions have been lower in Latin America and the Caribbean than in the European Union. However, stronger economic growth in the former and mitigation measures in the latter, among other factors, have brought emissions to similar levels in the two regions.
- Over the past 30 years, greenhouse gas emissions in the European Union have trended downward, and since 1990 have fallen 0.8% per year on average. By contrast, Latin America and the Caribbean shows a steady increase of 1.1% per year, which is nonetheless one of the lowest levels among emerging regions.
- The increase in greenhouse gas emissions worldwide is due in large part to strong growth in some Asian emerging economies, mainly China and India. Although advanced economies are responsible for a large portion of emissions, they have not grown as much as developing economies. In the near future, emission trends are expected to track economic growth, sectoral development and population trends.

■ Figure IV.15 ■

### Greenhouse gas emissions by region, 1990-2012

(Gigatons of CO<sub>2</sub>-equivalent)

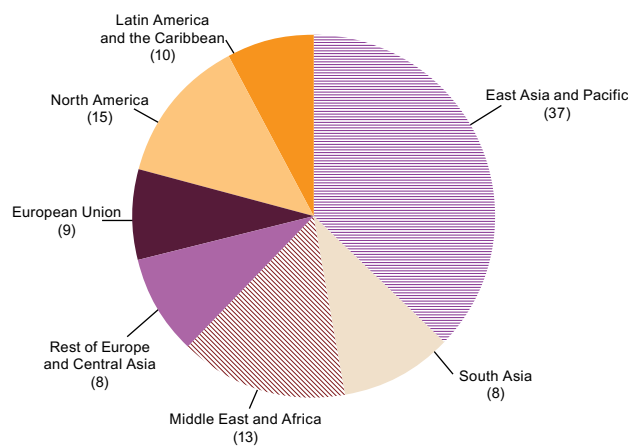


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Resource Institute (WRI), "Climate Analysis Indicators Tool (CAIT) 2.0" Washington, D.C. [online] <http://cait2.wri.org>.

■ Figure IV.16 ■

### Distribution of greenhouse gas emissions by region, 2012

(Percentages of world total)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Resource Institute (WRI), "Climate Analysis Indicators Tool (CAIT) 2.0" Washington, D.C. [online] <http://cait2.wri.org>.

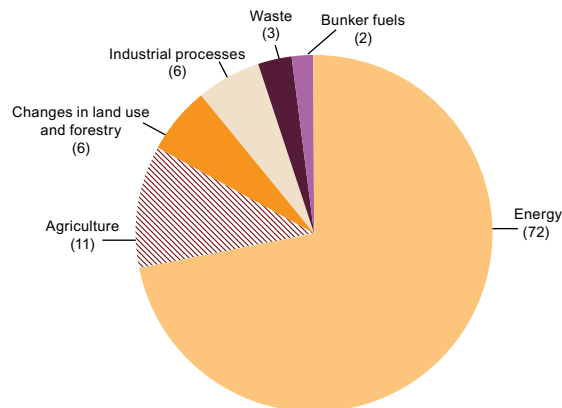
### 3. The bulk of the European Union's emissions come from the energy sector, whereas agriculture and activities associated with land-use change continue to account for a large proportion in Latin America and the Caribbean

- The burning of fossil fuels is the main source of greenhouse gas emissions worldwide. Emissions from the energy sector —electricity and heating, manufacturing and construction, transport, other burning of fossil fuels and fugitive emissions— currently account for almost three quarters of total greenhouse gas emissions.
- The primary source of greenhouse gas emissions in Latin America and the Caribbean is the energy sector (40%), followed by land-use change and forestry (31%) and agriculture (19%). In the European Union, the energy sector is responsible for 83% of total emissions.
- The European Union has cut its total greenhouse gas emissions through the implementation of policies consistent with the Kyoto Protocol targets. As outlined in its intended nationally determined contributions (INDC), the European Union aims to cut emissions by 40% by 2030, compared with 1990. Most countries in Latin America and the Caribbean have now presented their INDCs as well, but their mitigation targets differ considerably.

■ Figure IV.17 ■

#### Global greenhouse gas emissions by sector, 2012

(Percentages)

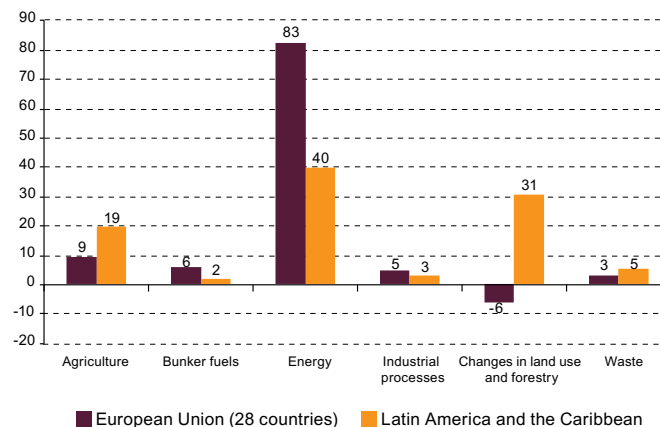


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Resource Institute (WRI), "Climate Analysis Indicators Tool (CAIT) 2.0" Washington, D.C. [online] <http://cait2.wri.org>.

■ Figure IV.18 ■

#### European Union and Latin America and the Caribbean: greenhouse gas emissions by sector, 2012

(Percentages)



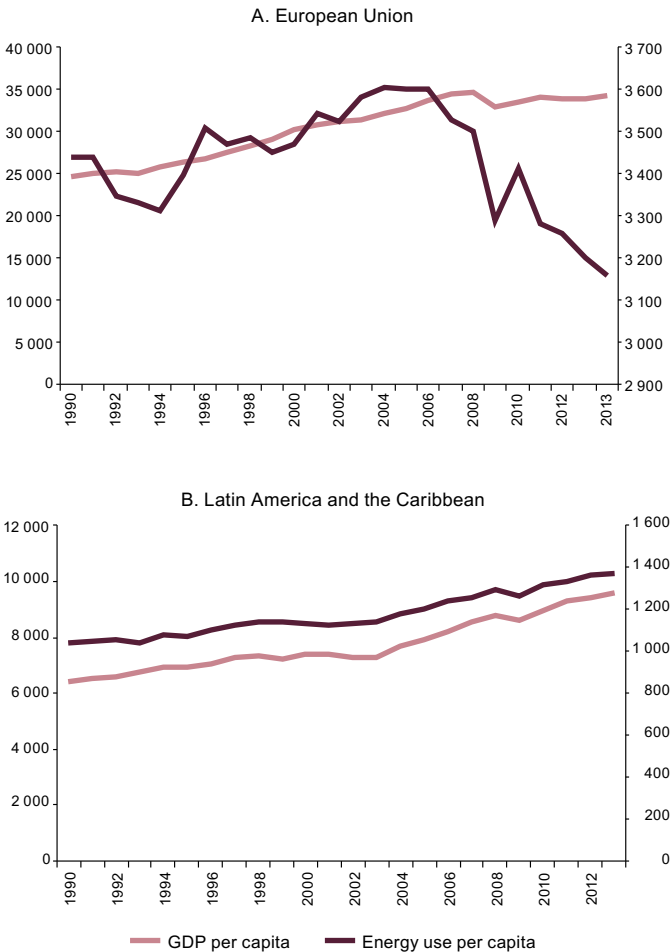
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Resource Institute (WRI), "Climate Analysis Indicators Tool (CAIT) 2.0" Washington, D.C. [online] <http://cait2.wri.org>.



## 4. The energy sector is crucial in the fight against climate change

- Economic growth tends to be accompanied by an increase in energy consumption. Hence, as long as fossil fuels remain the primary energy sources, economic growth will continue to generate higher levels of emissions.
- In the past few years, population and per capita GDP have grown more rapidly in Latin America and the Caribbean than in the European Union. This highlights the need to adopt energy-efficiency policies and to encourage greater use of renewable energy.
- On average, each European Union inhabitant consumes approximately 3,200 kg of oil equivalent, compared to just 1,400 kg for Latin Americans.
- At present, energy use in both Latin America and the Caribbean and the European Union stands at roughly 93 kg (in kilograms of oil equivalent) per US\$ 1,000 of GDP. Worldwide, this figure is 131 kg; hence both regions are relatively energy-efficient.
- Globally, energy intensity is trending downward, falling 30% since 1990. Over this period, energy use in the European Union has declined from 135 kg (in kilograms of oil equivalent) to 93 kg today, which also implies a 30% reduction. Meanwhile, energy use in Latin America and the Caribbean has remained relatively stable, down from 107 kg in 1990 to 93 kg at present, reflecting a 13% decline.

■ **Figure IV.19 ■**  
**European Union and Latin America and the Caribbean:**  
**GDP per capita and energy use per capita, 1990-2013**  
*(Dollars at constant 2010 prices and kilograms of oil equivalent)*

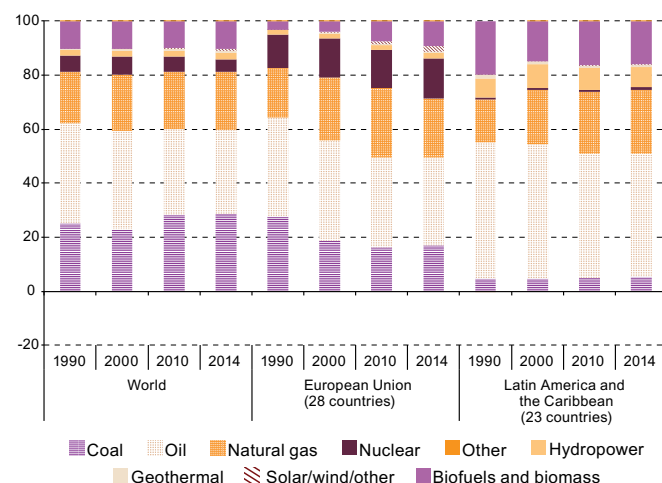


**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, World Development Indicators (WDI).

## 5. Fossil fuels make up a similar proportion of the energy mix in the European Union and Latin America and the Caribbean. Nonetheless, while coal use is still significant in the European Union, it is more limited in Latin America and the Caribbean

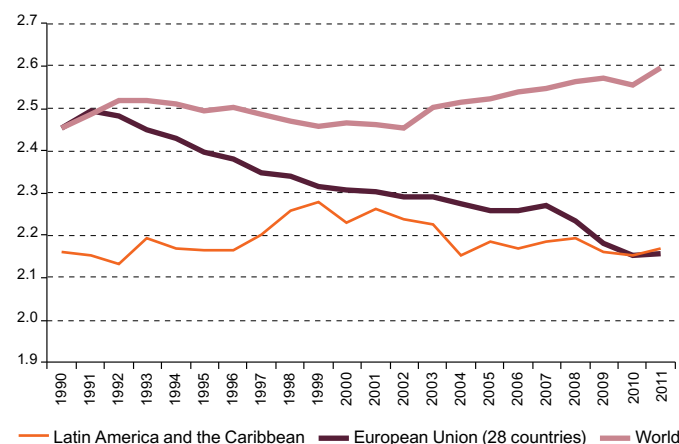
- The share of fossil fuels (coal, oil and natural gas) in the energy mix determines to a large extent the amount of greenhouse gas emissions. At present, fossil fuels account for 75% of the energy matrix in Latin America and the Caribbean (coal: 5%; oil: 46%; and natural gas: 24%).
- Meanwhile the use of fossil fuels in the European Union stands at 72%: 17% coal, 33% oil and 22% natural gas. Fossil fuels generate 81% of the total energy supply worldwide, a figure that chiefly reflects their relative weight in Asia's energy mix.
- The proportion of the energy mix made up of fossil fuels determines the amount of CO<sub>2</sub> emissions generated per unit of energy consumed. In Latin America and the Caribbean, emissions have held steady at about 2.2 kg of CO<sub>2</sub> per unit of energy (in kilograms of oil equivalent) since the 1990s. The European Union has reduced this indicator of emissions from 2.5 kg to 2.2 kg of CO<sub>2</sub> per unit of energy in the past 30 years.
- Changing the energy mix requires major medium- and long-term investment and, since the useful life of infrastructure spans decades, the process tends to be very gradual. In this respect, changing the energy mix will take a long time.
- The European Union has set itself the target of increasing the share of renewable energies in its energy mix to 20% by 2020. Hydroelectric, solar and wind power, together with biofuels and biomass, currently account for 14% of its energy mix, while in Latin America and the Caribbean they make up 24%.

■ **Figure IV.20 ■**  
**Energy mix, 1990-2014**  
(Percentages)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the International Energy Agency (IEA).

■ **Figure IV.21 ■**  
**Carbon dioxide emissions per unit of energy consumed, 1990-2011**  
(Kg of CO<sub>2</sub> per kilogram of oil equivalent of energy consumed)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, World Development Indicators (WDI).

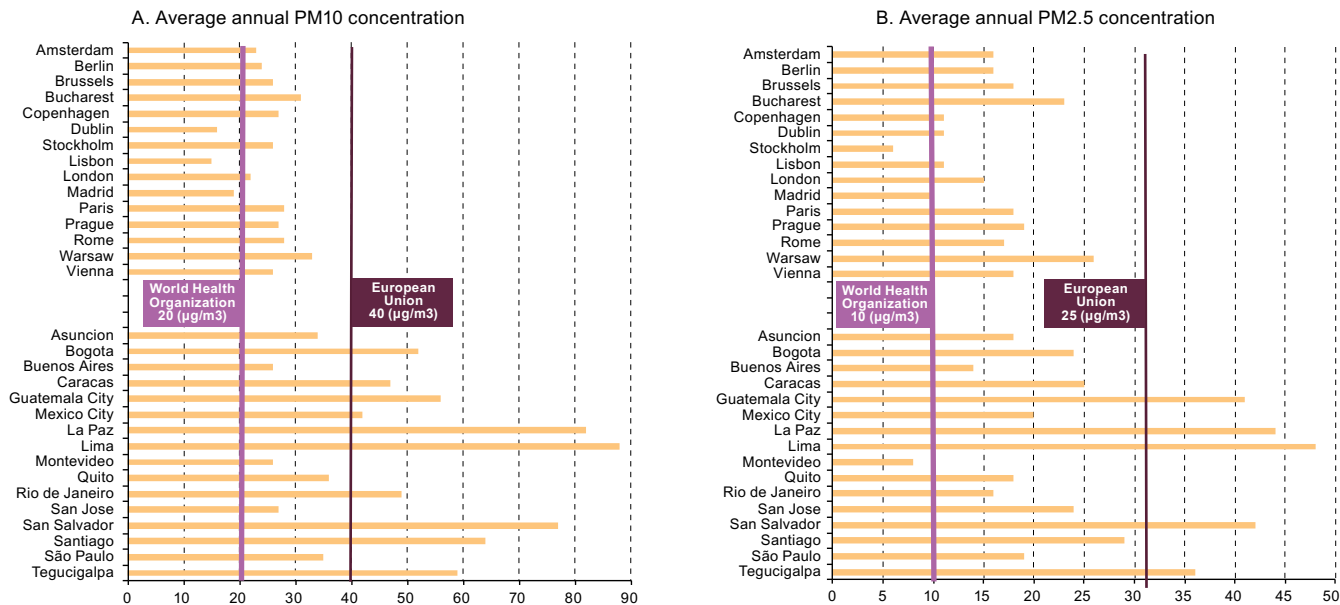
## 6. Air quality in Latin American cities is worse than in European cities

- Urban air pollution is worse in Latin America than in the European Union. This is shown by the number of cities exceeding the thresholds set by the World Health Organization (WHO) and the European Union for the concentration of airborne pollutants, such as PM10 and PM2.5 particulate matter.
- Poor air quality in cities is a further risk factor for human health. Children and adults aged over 65 years are at greatest risk of respiratory diseases, asthma, bronchitis and respiratory mortality.
- Climate change will aggravate the problems associated with poor air quality. Higher local surface temperatures in polluted regions will trigger regional chemical and emissions feedback loops that will drive up peak levels of ozone and particulate matter.
- The high levels of pollution, and their health effects, are an issue of greater concern in Latin America, where the vehicle fleet and gasoline consumption are all growing rapidly in urban areas. Furthermore, rates of car ownership in large cities are expected to increase as a result of stronger economic growth.

■ Figure IV.22 ■

**European Union and Latin America (selected cities): PM10 and PM2.5 concentrations and recommended thresholds, 2013**

(Micrograms per cubic metre)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Health Organization (WHO), Ambient Air Pollution Database, May 2016.

**Note:** Data on concentrations for Asunción are from 2010. Data for Caracas are from 2012. Data for Tegucigalpa, San Jose, Quito, Lima, La Paz, Guatemala City, Vienna, Warsaw, Rome, Prague, Madrid, London, Stockholm, Dublin, Copenhagen, Bucharest, Brussels, Berlin and Amsterdam are from 2013. Data for São Paulo, Santiago, San Salvador, Rio de Janeiro, Montevideo, Mexico City, Bogota, Paris, Lisbon and Buenos Aires are from 2014.

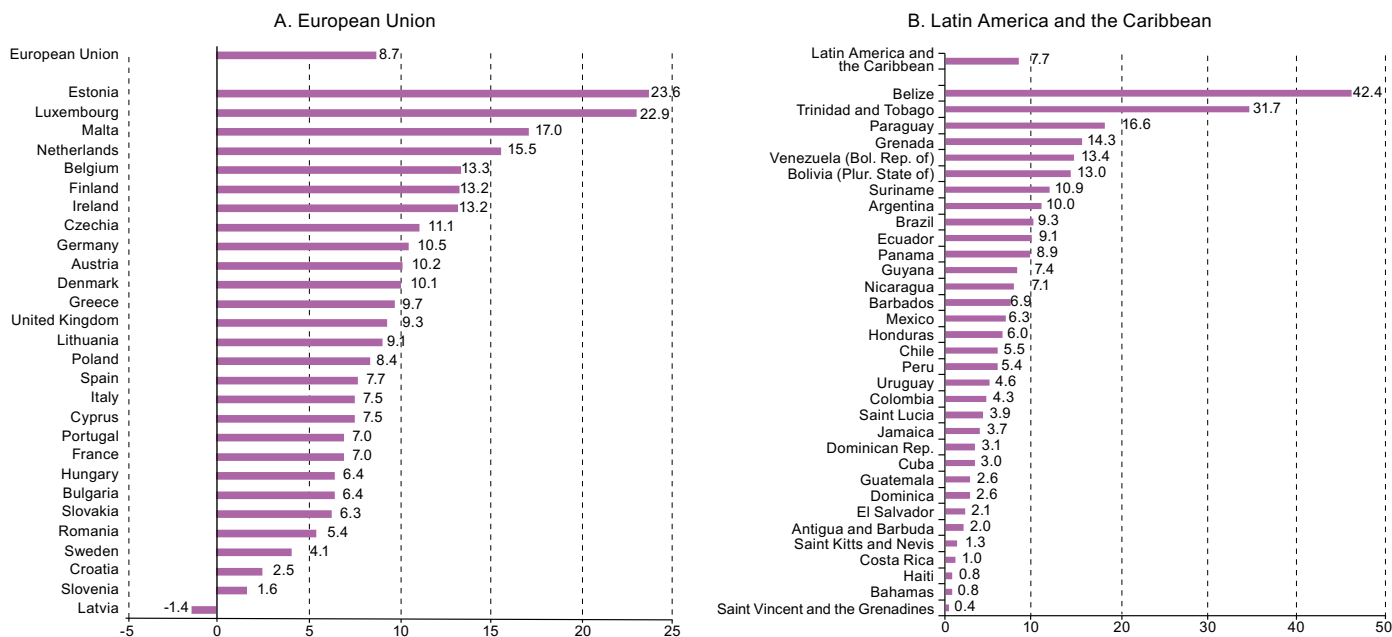
## 7. The emissions reduction targets set out in intended nationally determined contributions (INDC) are not enough to keep the global temperature rise well below 2°C during this century

- Although significant progress has been made thanks to INDC, it is far from enough. Even if these targets are achieved, emissions per capita would still stand at roughly 7 tons of CO<sub>2</sub>-equivalent in 2030.
- In order to avoid a catastrophic rise in temperature, global emissions must be cut from 7 tons of CO<sub>2</sub>-equivalent per person at present to a maximum of 2 tons of CO<sub>2</sub>-equivalent per person by 2050. By the end of the century, that must come down to nearly zero, or even to a level where emissions are being absorbed.
- Latin America and the Caribbean currently emits 8 tons of CO<sub>2</sub>-equivalent per person per year, compared with 9 tons in the European Union. At present, levels of around 2 tons of CO<sub>2</sub>-equivalent per person per year are produced only in Antigua and Barbuda, the Bahamas, Costa Rica, Haiti, Saint Kitts and Nevis, and Saint Vincent and the Grenadines in Latin America and the Caribbean, and only in Latvia and Slovenia in the European Union.

■ Figure IV.23 ■

### European Union and Latin America and the Caribbean: greenhouse gas emissions per inhabitant, 2012

(Tons of CO<sub>2</sub>-equivalent per inhabitant)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Resource Institute (WRI), "Climate Analysis Indicators Tool (CAIT) 2.0" Washington, D.C. [online] <http://cait2.wri.org>.

## 8. The signing of the Paris Agreement is a crucial step towards a sustainable future

- The 2030 Agenda for Sustainable Development adopted by United Nations Member States in New York in September 2015 is based on the understanding that climate change and development are inseparable.
- On 12 December 2015, more than 190 countries adopted the Paris Agreement at the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21). This is the first agreement in which both industrialized countries and developing countries have committed to managing the transition to a low-carbon economy.
- The central aim of the Paris Agreement is to keep the global temperature rise this century well below 2 degrees Celsius and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius above pre-industrial levels. The Agreement also aims to boost countries' capabilities to deal with the impacts of climate change and set a goal to offset emissions with removals, thus achieving carbon neutrality, towards 2050.
- The Agreement enters into force 30 days after it has been ratified by at least 55 countries that account for at least 55% of global emissions of greenhouse gases.

■ Table IV.1 ■  
Main elements of the Paris Agreement

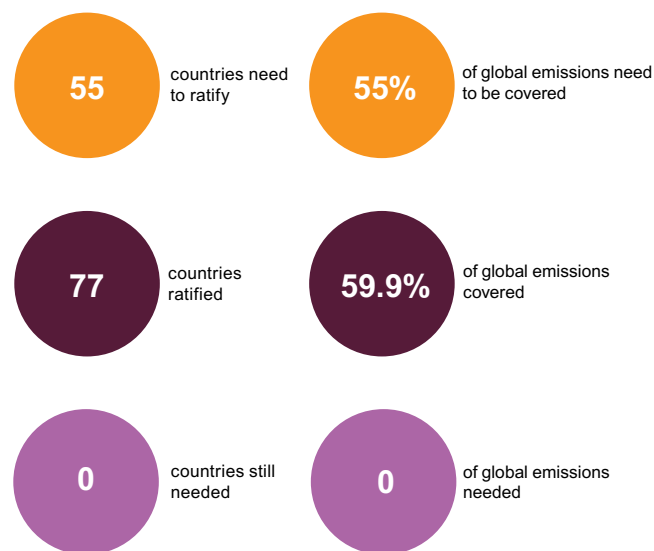
1. Objectives	<ul style="list-style-type: none"><li>• Keep a global temperature rise this century well below 2 degrees Celsius</li><li>• Pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius</li></ul>
2. Legal form	<ul style="list-style-type: none"><li>• Although some aspects of the Paris Agreement are legally binding, others are not, for example the nationally determined contributions</li><li>• The review of emissions reduction targets for each country is legally binding</li></ul>
3. Emissions reduction	<ul style="list-style-type: none"><li>• In Paris, 188 of the 195 countries party to the United Nations Framework Convention on Climate Change submitted national climate action plans detailing their future climate change objectives</li><li>• Every five years, countries will review and update their nationally determined contributions</li></ul>
4. Long-term targets	<ul style="list-style-type: none"><li>• Countries aim to reach the global peak of greenhouse gas emissions as soon as possible</li><li>• Countries aim to achieve a balance between emissions and removals in the second half of this century</li></ul>
5. Review	<ul style="list-style-type: none"><li>• Reduction targets will be reviewed every five years</li></ul>
6. Compliance	<ul style="list-style-type: none"><li>• No sanctions</li><li>• A transparent system and periodic global stocktaking to follow up progress</li></ul>
7. Financing	<ul style="list-style-type: none"><li>• Advanced economies will provide support to developing countries in climate change adaptation</li><li>• Developed countries have committed to preparing a road map to increase climate financing to US\$ 100 billion by 2020, and to establish a new financing target above the US\$ 100 billion base before 2025</li></ul>
8. Loss and damage	<ul style="list-style-type: none"><li>• A mechanism for loss and damage associated with adverse climate change impacts is needed</li></ul>
9. Adoption	<ul style="list-style-type: none"><li>• 22 April 2016, at a high-level signing ceremony at United Nations Headquarters in New York</li></ul>
10. Entry into force	<ul style="list-style-type: none"><li>• When at least 55 countries that account for at least 55% of global emissions ratify the agreement</li></ul>

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

## 9. The Paris Agreement is entering into force much earlier than anticipated owing to a ratification “domino effect”

- On 22 April 2016, in the framework of International Mother Earth Day, senior representatives of 174 States and the European Union signed the Paris Agreement in New York, setting a record for first-day signatures to an international agreement. From that date, the agreement remains open for signature by other countries for one year.
- The signatories in New York included the 28 member States of the European Union and 29 of the 33 CELAC member countries. Ecuador signed the agreement on 26 July 2016, followed by Chile on 20 September 2016. Nicaragua is the only country of the region that has yet to sign.
- During the signing ceremony, 15 countries submitted their ratifications of the agreement. These were mainly small island and coastal States, which are the most vulnerable to rising sea levels and the effects of climate change, and together account for just 0.18% of global greenhouse gas emissions. They included the Caribbean nations of Barbados, Belize, Grenada, Saint Kitts and Nevis and Saint Lucia. Between May and early October 2016, five other Caribbean countries ratified the agreement, namely Antigua and Barbuda, the Bahamas, Dominica, Guyana and Saint Vincent and the Grenadines.
- On 25 July 2016, Peru became the first South American country to ratify the agreement, while Norway became the first industrialized country to do so on 20 June 2016.
- On 3 September 2016, on the eve of the Summit of the Group of Twenty major economies (G20), China and the United States, which together generate 40% of total carbon emissions, ratified the agreement. The G20 heads of government committed to speeding up the ratification of the Paris Agreement in a move that echoed the European Union’s support for the initiative.
- At 11 October 2016, 76 of the 197 signatory countries had ratified the agreement, including 17 Latin American and Caribbean countries —Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Brazil, Dominica, Grenada, Guyana, Honduras, Mexico, Panama, Peru, Plurinational State of Bolivia, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines— and the European Union and eight of its member States (Austria, France, Germany, Hungary, Malta, Poland, Portugal and Slovakia). The 76 parties that ratified the agreement (including the European Union) represent 59.9% of greenhouse gas emissions.
- Lastly, the Paris Agreement enters into force on 4 November 2016, 30 days after at least 55 signatories accounting for at least 55% of greenhouse gas emission deposited their instruments of ratification, acceptance, approval or accession.

■ Figure IV.24 ■  
Paris Agreement: targets and ratifications, 17 October 2016



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Climateanalytics [online] <http://climateanalytics.org/hot-topics/ratification-tracker.html>.

## 10. Latin America and the Caribbean is making progress in developing climate change policies and instruments, but has still not caught up to the European Union

- The Latin American and Caribbean region is particularly vulnerable to the effects of climate change, although unevenly from one country to the next. The countries are thus making diverse efforts to develop public policies focused on climate change mitigation and adaptation.
- The sectors most targeted by adaptation strategies are water resources, infrastructure, human settlements, agriculture, biodiversity, health and energy. Priority mitigation sectors include energy, transport, agriculture, forestry and waste.
- In addition to climate change policy strategies, the region is making progress in developing measures and instruments to reduce the effects.
- Mexico, for example, levies taxes on fuels and electricity as well as on coal, and on vehicle and fertilizer use. Nonetheless, engagement in the carbon market and the use of fiscal instruments such as emission taxes are still not common in the region, applying only in Chile and Mexico.

■ Table IV.2 ■

### Recent climate change public policy strategies

Country	Strategy	Country	Strategy
Argentina	Second development phase of the National Climate Change Strategy (2013) and the Manual on Vulnerability and Adaptation to Climate Change for Domestic Management and Planning (2011)	Guatemala	National Climate Change Policy (2009 and 2014) Framework Law on reducing vulnerability, mandatory adaptation to climate change effects and greenhouse gas mitigation (2014)
Bolivia (Plurinational State of)	National Strategy for Forests and Climate Change (2009) National Climate Change Adaptation Mechanism (2007)	Honduras	National Climate Change Strategy (2011)
Brazil	National Climate Change Plan (2008)	Mexico	National Climate Change Strategy. Vision 10-20-40 (2013)
Caribbean Community (CARICOM)	A Regional Framework for Achieving Development Resilient to Climate Change: 2009-2015 (2009) and Delivering Transformational Change 2011-21 (2012)	Nicaragua	National Environmental and Climate Change Strategy, 2010-2015 Action Plan (2010)
Chile	National Climate Change Action Plan: 2008-2012 (2008) and National Climate Change Adaptation Plan (2014)	Panama	Action Plan for the Implementation of National Climate Change Policy (2011)
Colombia	National Climate Change Adaptation Plan (2012)	Paraguay	National Climate Change Policy (2012)
Costa Rica	National Climate Change Strategy (2009)	Peru	National Climate Change Strategy (first draft 2014)
Dominican Republic	Guidelines for the National Climate Change Strategy (2008) National Adaptation Plan (2008)	Uruguay	National Climate Change Response (2010)
Ecuador	National Climate Change Strategy of Ecuador 2012-2025 (2012)	Venezuela (Bol. Rep. of)	First National Climate Change Plan (2005)
El Salvador	National Climate Change Strategy (2013)		

**Source:** L. Sánchez and O. Reyes, "Medidas de adaptación y mitigación frente al cambio climático en América Latina y el Caribe. Una revisión general", *Project Documents* (LC/W.675), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2005 [online] [http://repositorio.cepal.org/bitstream/handle/11362/39781/1/S1501265\\_es.pdf](http://repositorio.cepal.org/bitstream/handle/11362/39781/1/S1501265_es.pdf).

## 11. Climate change is a top priority for the European Union, as outlined in the Europe 2020 strategy for smart, sustainable and inclusive growth

- The European Union's main instrument is the "2020 climate and energy package", which aims to meet climate and energy goals.
- The following goals are included in the Europe 2020 strategy: (a) reduce greenhouse gas emissions by 20% (from 1990 levels), (b) increase the share of renewable energy sources in final energy consumption to 20%, and (c) increase energy efficiency by 20%.
- In 2014, the European Union also adopted another initiative for 2030, based on the 2020 package. The key objectives are to: (a) reduce greenhouse gas emissions by at least 40%, (b) increase the share of renewable energy sources in final energy consumption to 27%, and (c) increase energy efficiency by at least 27%.

■ Table IV.3 ■

### European Union: some actions to achieve 2020 package goals

Action	Description	Objective
Emissions trading system (ETS)	The European Union's emissions trading system is its key tool for cutting greenhouse gas emissions from large-scale facilities in the power and industry sectors, as well as the aviation sector. ETS covers around 45% of the European Union's greenhouse gas emissions.	In 2020, the target is for the emissions from these sectors to be 21% lower than in 2005.
National emissions reduction targets	This covers the sectors not in ETS —accounting for some 55% of total European Union emissions— such as: housing, agriculture, waste and transport (excluding aviation). European Union countries have taken on binding annual targets until 2020 for cutting emissions in these sectors (compared with 2005), under the "effort-sharing decision". Countries must provide yearly updates of their emissions.	The targets differ according to national wealth, from a 20% cut for the richest countries to a maximum 20% increase for the least wealthy (although they still have to make efforts to limit emissions).
Renewable energy national targets	European Union member countries have also taken on binding national targets for raising the share of renewables in their energy consumption by 2020. These targets also vary, to reflect countries' different starting points for renewables production and ability to further increase it – from 10% in Malta to 49% in Sweden.	The overall effect will enable the European Union as a whole to reach: its 20% renewable energy target for 2020 (more than double the 2010 level of 9.8%) and a 10% share of renewables in the transport sector.
Other	Innovation and financing: the European Union supports the development of low-carbon technologies through the NER300 programme for renewable energy technologies and carbon capture and storage, and Horizon 2020 funding for research and innovation, for example. Energy efficiency: measures are included in the energy efficiency plan and the energy efficiency directive.	

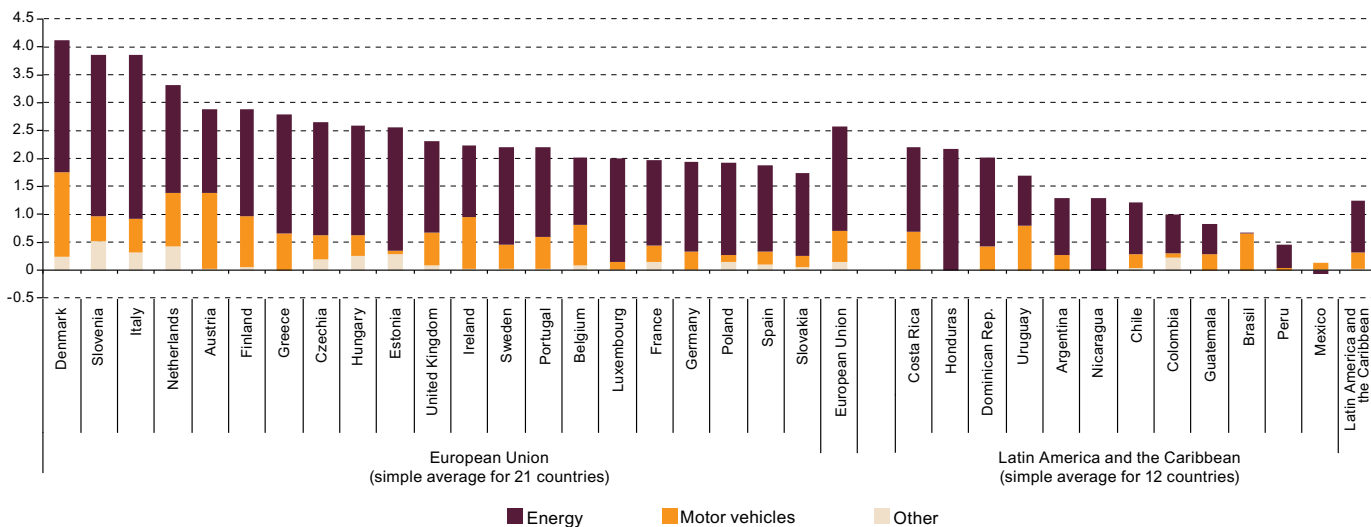
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the European Union [online] [http://ec.europa.eu/clima/policies/strategies/2020/index\\_en.htm](http://ec.europa.eu/clima/policies/strategies/2020/index_en.htm).



12. European Union countries’ experience in environmental tax reforms could serve as an example for the implementation of such measures in Latin America

- Regulatory and market-based instruments, such as environmental taxes, negotiable permits or targeted subsidies, are profit-yielding methods of protecting the environment and contributing to a healthier society. Other effective instruments include standards for vehicles with more environmentally-friendly engines (Euro 6 standard) and energy efficiency measures.
- European Union countries levy environmental taxes in the areas of energy, transport, pollution and resources. Since 1995, these taxes have ranged from 5.5% to 7% of total tax income and social contributions.
- In 2014, environmental taxes accounted for 6.3% of tax revenue, with the highest levels seen in Slovenia (10.6%), Croatia (10.5%) and Greece (10.2%), while the figure stood at just 5.2% in Germany, Luxembourg and Sweden.
- Within this category, energy taxes were the highest, at 76.5% (transport taxes stood at 20%), with the top figures seen in Lithuania (94%), Czechia (92.6%) and Luxembourg (92.2%).
- In 2014, environmental tax revenue came to 2.5% of GDP on average in the European Union, but just 1.3% in Latin America and the Caribbean. In the European Union, Denmark and Lithuania posted the highest and lowest figures (4.1% and 1.7% of GDP, respectively), while in Latin America and the Caribbean the highest and lowest levels were seen in Costa Rica and Mexico (2.2% and 0.05% of GDP, respectively).

Figure IV.25 ■  
European Union and Latin America and the Caribbean: revenue from environmental taxes, 2014  
(Percentages of GDP)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of statistical information from the Organization for Economic Cooperation and Development (OECD), European Economic Association (EEA) and environmental public policy instruments.  
**Note:** The data for France, Honduras, Ireland and Uruguay are from 2013.

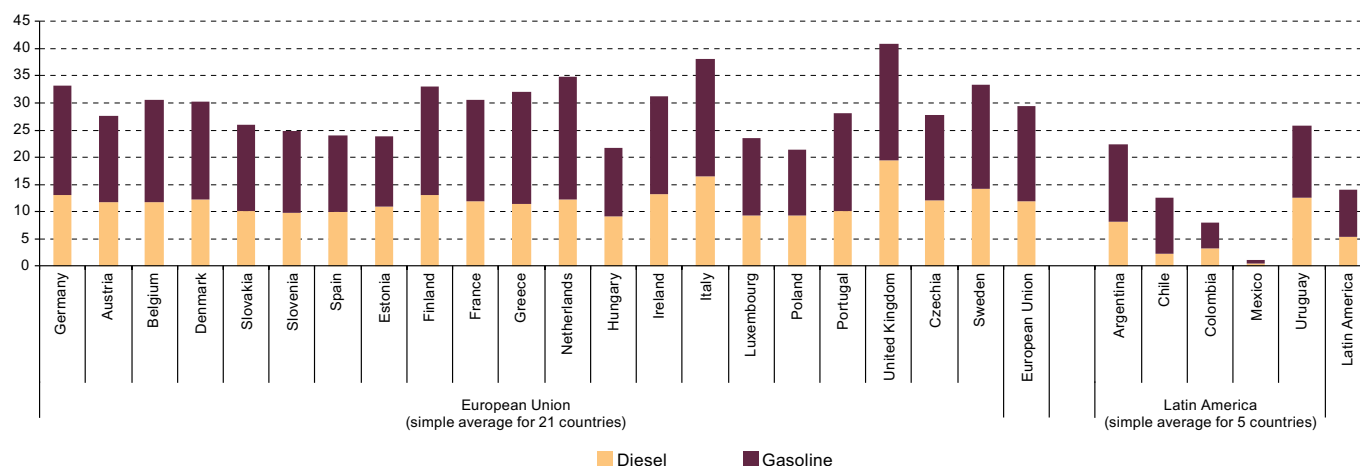
### 13. Historically, gasoline taxes have made up the bulk of environmental taxes

- Public policies can influence attitudes and behaviour towards transport and can explicitly discourage vehicle use in order to reduce gasoline consumption and thus limit greenhouse gas emissions.
- In the European Union, taxes on diesel and gasoline consumption range from 12 to 17 euros per gigajoule. In some Latin American and Caribbean countries, taxes range from 5 to 8 euros per gigajoule on average for diesel and gasoline consumption, respectively.
- Fuel taxes would be a good means of mitigating global warming if they were applied to fossil content, but they are generally based on the volumes consumed.
- In 2014, taxes levied on transport accounted for roughly 20% of the environmental tax take in the European Union overall, and more than one third in Austria, Belgium, Denmark, Ireland and Malta.

■ Figure IV.26 ■

#### European Union and Latin America: taxes on road transport, gasoline and diesel

(Euros per gigajoule)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Organization for Economic Co-operation and Development (OECD), *Taxing Energy Use 2015: OECD and Selected Partner Economies*, Paris, OECD Publishing, 2015.

**Note:** Taxes are from August 2014 for the countries of Latin America (except Argentina and Mexico, which are from April 2012) and from 1 April 2012 for the countries of the European Union.

## 14. In order to advance towards achieving the Sustainable Development Goals, it is essential to decouple growth from consumption and raw material extraction

- With a view to taking new paths to development that combine economic, social and environmental upgrading, it is essential to achieve decoupling, which implies reducing the use and consumption of resources (including raw materials, energy, water and land) per unit produced and limiting their environmental impact without lowering production or productivity levels. This means reducing pressure on the environment while improving production and social benefits.
- The quantity of materials extracted, harvested and consumed has increased notably worldwide over the past few decades and in 2010 came to 72 billion metric tons per year, which is double the amount consumed in 1980. Even more worrying are the projections that the figure will exceed 100 billion

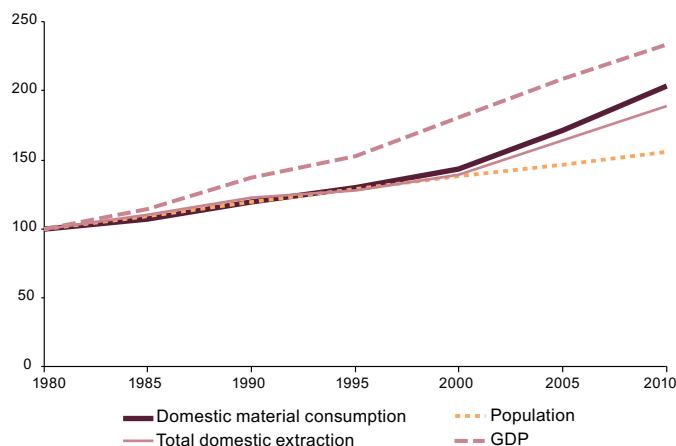
metric tons per year in 2030 if current consumption trends continue. It is thus crucial to adopt strategies to “dematerialize” economies, thus reducing pressure on the environment and the effects of climate change.

- Although consumption has increased worldwide over the years, the speed at which this has occurred varies significantly from one region or country to the next. While European Union nations reflect a downward trend in consumption even as production levels increase, Latin American and Caribbean countries have not managed to decouple these two indicators, so the sustained increase in growth is accompanied by a steady increase in consumption, which is closely linked to the region’s production structures and technology lag.

■ Figure IV.27 ■

**Global trends in the consumption and extraction of materials, GDP and population, 1980-2010**

(Index: 1980=100)



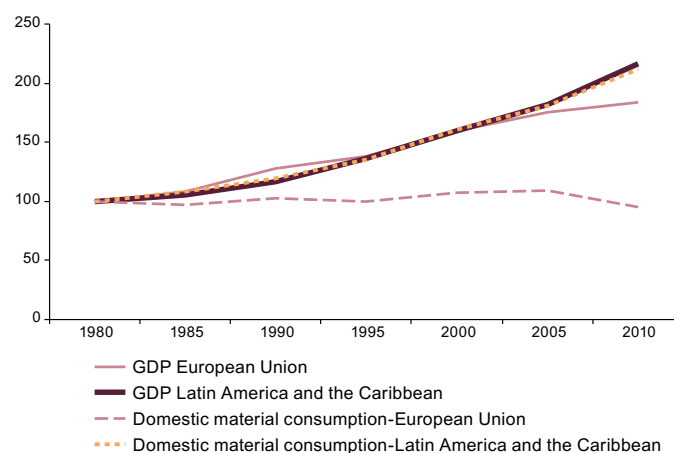
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of “Material flow data” [online database] <http://www.materialflows.net/home/>.

**Note:** Domestic material consumption is defined as the annual quantity of raw materials extracted from the domestic territory, plus all physical imports minus all physical exports. It includes: biomass and its products; metallic minerals and concentrates, raw and processed; non-metallic minerals, raw and processed; crude oil and processed oil resources; other products; and imported waste for treatment and final disposal.

■ Figure IV.28 ■

**European Union and Latin America and the Caribbean: domestic material production and consumption, 1980-2010**

(Index: 1980=100)



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank [online database] <http://data.worldbank.org/region/european-union> and “Material flow data” [online database] <http://www.materialflows.net/home/>.

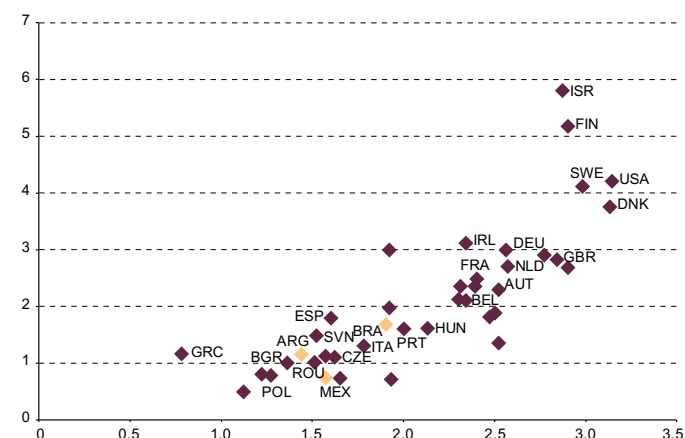
**Note:** Domestic material consumption is defined as the annual quantity of raw materials extracted from the domestic territory, plus all physical imports minus all physical exports. It includes: biomass and its products; metallic minerals and concentrates, raw and processed; non-metallic minerals, raw and processed; crude oil and processed oil resources; other products; and imported waste for treatment and final disposal.

## 15. Clean technology innovation plays a key role in decoupling and there is room for Latin America and the Caribbean to grow in this area

- Green technology generation and distribution and more sustainable production models can bring about technological change and new innovation cycles that support the development of more environmentally friendly and inclusive processes and products, for which human capital, science and technology development are key inputs.
- The Global Cleantech Innovation Index reviews countries' potential to produce entrepreneurial clean technology start-ups that can be commercialized successfully. The index evaluates 40 countries on the basis of 15 indicators that measure inputs and outputs of innovation creation related to clean technology (in particular, general and specific drivers and evidence of the emergence and commercialization of innovation).
- Israel topped the list of countries in this index in 2014, followed by Finland, the United States and Sweden. Of the 40 countries included, Brazil was ranked first in the region (No. 25), followed by Argentina and Mexico (Nos. 32 and 36, respectively). A review of the composition of subindices for these Latin American countries compared with the global average reveals large gaps, particularly in areas relating to the innovation climate and available inputs for innovation in the countries of the region.
- European countries, for their part, are much more dynamic in this respect, which means that they harbour more potential for generating and developing clean technology. This allows them not only to create new businesses and products based on this type of technology, but also to strengthen progress in decoupling.

■ Figure IV.29 ■

**Selected countries: Global Cleantech Innovation Index, 2014**



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of M. Parad, *The Global Cleantech Innovation Index 2014*, 2014.

16. There is significant room for cooperation between the European Union and CELAC in climate change mitigation, innovation and technology, and good environmental practices

- The European Union is a key player in international cooperation and its experience and expertise in environmental issues, climate change adaptation and mitigation, science and innovation, and technology and renewable energy, provide valuable inputs for recipient countries.
- There is a wide range of cooperation projects relating to the environment, some jointly funded with other donors. They address areas such as solar energy development, study visits and conferences with experts, improved forest management, energy efficiency and urban low-emission development strategies.
- The EUROCLIMA project, financed by the European Union and partly executed by ECLAC, has produced significant benefits for the region, allowing the integration of climate change mitigation and adaptation strategies into public development policies and plans.
- Socioeconomic development in Latin America and the Caribbean is stagnating, owing to low productivity levels, slowing international trade, structural imbalances and low raw material prices, among other things.
- The fourth industrial revolution currently unfolding across the world is a major challenge that presents significant opportunities if countries prepare to embrace this new paradigm, and requires new human skills and alternative business models and industrial policies.
- Hence, new cooperation modalities are needed to incorporate this structural change, in addition to a general review of cooperation mechanisms with upper-middle-income countries, such as the economies of the region.

■ Table IV.4 ■  
Examples of cooperation projects between the European Union and Latin America

Project	Coverage	Description
EUROCLIMA	Argentina, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia, and Uruguay	Regional cooperation programme focused on climate change. The programme's objective is to facilitate the integration of climate mitigation and adaptation strategies and measures into public policies in Latin America.
Latin American Investment Facility (LAIF)	Argentina, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia, Uruguay and the region as a whole	A financial mechanism that combines subsidies with other resources in order to obtain additional development funds and increase the impact of European Union assistance. The Latin American Investment Facility acts as a catalyst to pool resources and improve the coordination and consistency of donors' actions.
Low Emission Capacity Building Programme	Global project. In Latin America: Argentina, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru and Trinidad and Tobago	Joint cooperation between the United Nations Development Programme (UNDP), the European Union, the Federal Ministry for Economic Cooperation and Development (Federal Republic of Germany) and Australia. It supports 25 countries in improving capacity in the public and private sectors to broaden mitigation measures through the creation of low emission development strategies and nationally appropriate mitigation actions (NAMAs), among other measures.
EUROSOLAR	The entire region, but countries with projects are: Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, Peru and Plurinational State of Bolivia	Helps promote human development in isolated rural communities, providing these with a system of photovoltaic panels, in some cases combined with small wind panels, in order to generate electricity.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the European Union.

## C. Advances in the digital economy

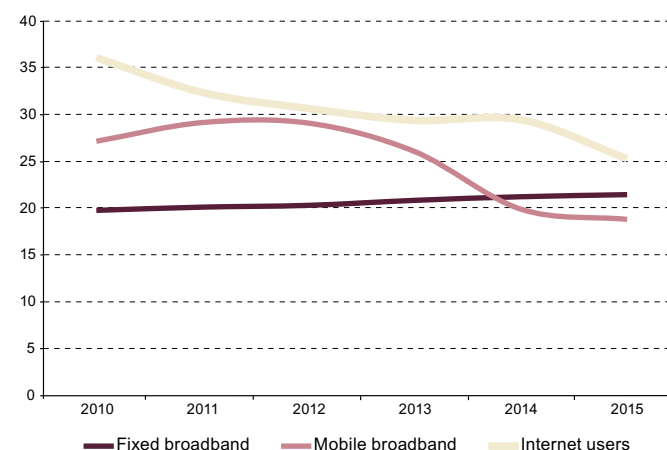
### 1. Latin America and the Caribbean have made great strides in access to digital technology and use of global platforms, which have allowed the region to narrow the gap with the European Union

- Digital technology has achieved astonishing penetration in Latin America and the Caribbean in the past few years. In mobile telephony, for example, the penetration rate stands at more than 100% and more than 50% of the region's population use the Internet on their mobile phones. Similarly, mobile broadband subscription penetration has soared by 154% per year on average, to around 58% today.
- As regards Internet use and penetration, in 2010-2015, Latin America and the Caribbean narrowed the gap with the European Union in terms of both the number of users (down from 36 percentage points to 25) and the number of mobile broadband subscriptions (down from 22 percentage points to 13). In fixed broadband, the gap remained relatively stable with a slight increase from 19 to 21 percentage points. In both regions, the change in fixed broadband penetration was much smaller than that in mobile broadband.
- Latin American Internet users spend more time on social networks than users in the United States and the European Union. This confirms widespread accessibility in the region and the ability to access applications and know-how, which allow more productive use of these technologies.
- Although Latin America and the Caribbean has managed to narrow the gaps with the European Union in terms of Internet access and use, there are still major differences between these two regions, especially in the countries that lag the furthest behind.

■ **Figure IV.30** ■

**Latin America and the European Union: gaps in fixed and mobile broadband use and penetration, 2010-2015**

(Percentage points)



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

■ **Table IV.5** ■

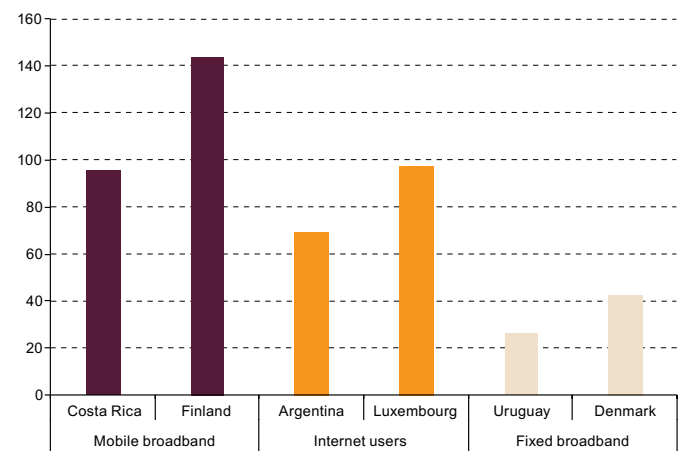
**Social network subscribers, by region, 2013**

Region	Number of social network subscribers	Social network subscribers (as a percentage of Internet users)
Western Europe	178 490 451	54.47
Eastern Europe	82 286 947	70.89
North America	192 685 415	64.64
Latin America	223 174 613	78.42
Asia-Pacific	891 194 019	73.19
Commonwealth of Independent States and Russian Federation	46 020 576	32.23
Sub-Saharan Africa	37 118 175	25.64
Middle East and North Africa	64 898 306	38.59
World	1 715 868 503	63.55

Source: Telecom Advisory Services (TAS), on the basis of Internet World Stats.

■ Figure IV.31 ■

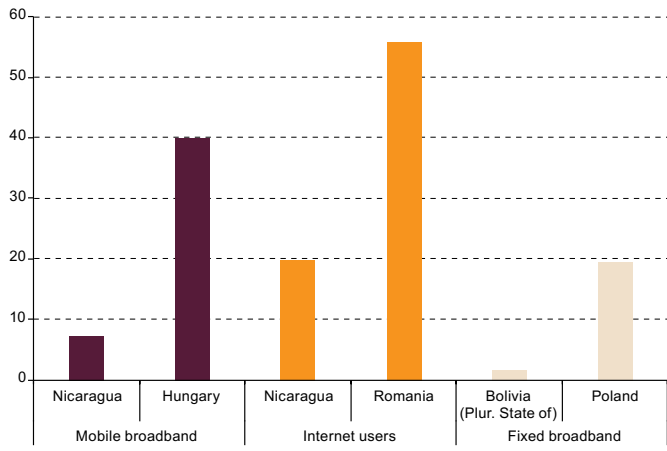
**European Union and Latin America and the Caribbean:  
Internet use and access in the countries with the highest  
rates in each region**  
(Percentages)



Source: Regional Broadband Observatory (ORBA) of ECLAC, 2016.

■ Figure IV.32 ■

**European Union and Latin America and the Caribbean:  
Internet use and access in the countries with the lowest  
rates in each region**  
(Percentages)



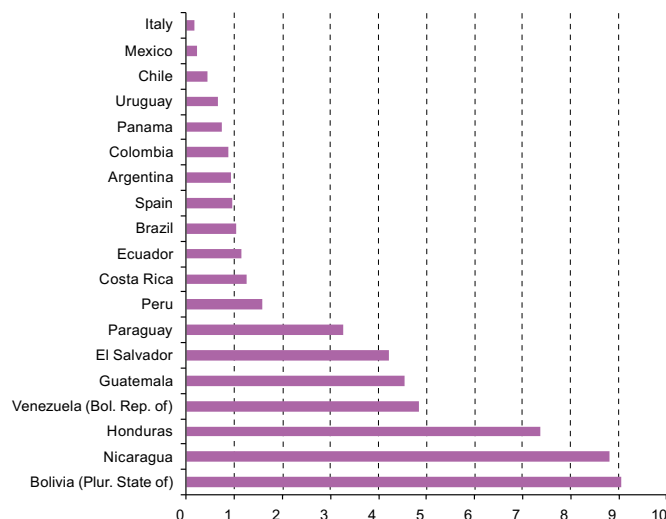
Source: Regional Broadband Observatory (ORBA) of ECLAC, 2016.

## 2. The decrease in Internet tariffs have played a key role in access, but costs must continue to come down and quality must be improved

- As regards affordability, Latin American and Caribbean countries have significantly reduced the cost of access to Internet and some enjoy conditions similar to European Union countries. However, there are significant differences between Latin American countries. For example, in Chile just 0.44% of per capita GDP per month is needed, on average, for fixed broadband service of 2 Mbps, whereas 9% is needed in the Plurinational State of Bolivia.
- Three Latin American and Caribbean countries continue to exceed the affordability threshold of 5% of GDP per person for broadband service proposed by the United Nations Broadband Commission for Digital Development.
- Despite progress in penetration and use, there are still problems with the quality of Internet access. The top-performing countries in Latin America and the Caribbean provide connection speeds almost three times slower than those offered by the top performers in the European Union. And no more than 5% of users in any Latin American country have access to connection speeds higher than 15 Mbps, whereas almost 50% of users in advanced countries do. This difference is significant, as it reflects limitations on access to advanced applications and services.

■ Figure IV.33 ■

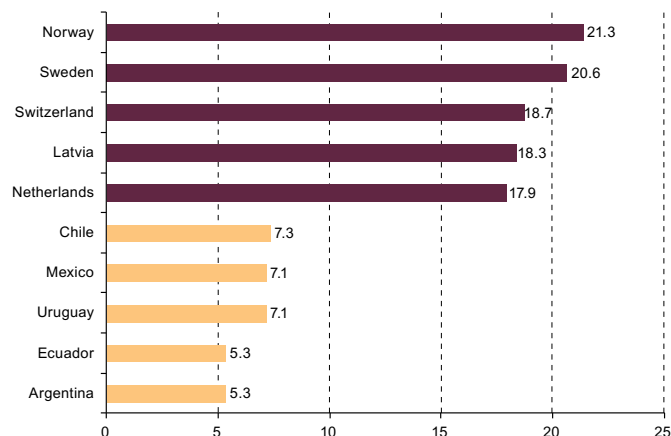
**European Union and Latin America (selected countries): fixed broadband tariffs, January 2016**  
(Percentages of monthly GDP per capita)



Source: Regional Broadband Observatory (ORBA) of ECLAC, 2016.

■ Figure IV.34 ■

**European Union and Latin America (selected countries): average broadband download speed, first quarter of 2016**  
(Megabits per second)



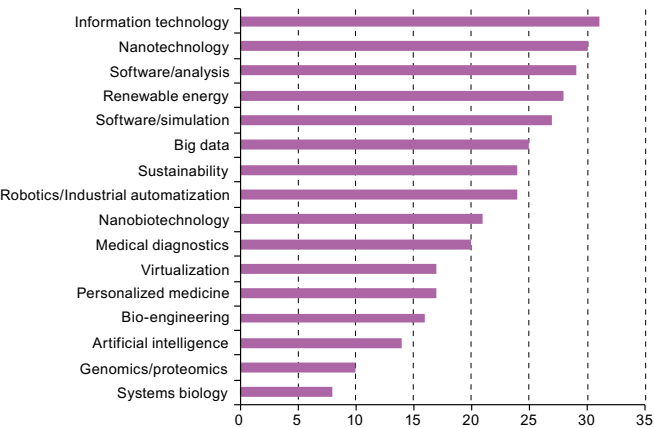
Source: Regional Broadband Observatory (ORBA) of ECLAC, on the basis of Akamai, 2016.



### 3. Digital economy capacities will determine countries' participation in the fourth industrial revolution and fulfilment of the 2030 Agenda for Sustainable Development

- Although infrastructure is a key factor in the development of the digital economy, the current trajectory of technology is broader and is based on the ability to understand the structure and behaviour of materials from their most basic elements and scales to their aggregation in complex structures and systems. These features are the building blocks of the four scientific-technological platforms that make up the nano-bio-info-cogno (NBIC) convergence paradigm combining nanoscience and nanotechnology, biotechnology and life sciences, information and communications technologies and sciences, and cognitive science and related technologies.
- This convergence gives renewed value to the role of advanced manufacturing and its importance in achieving the Sustainable Development Goals, as it has significant impacts on human health, education, communication and cognition, productivity, physical infrastructure, society and sustainability and the possibility of achieving innovative and responsible societal governance.
- In the past few years, the progress of advanced manufacturing and the Internet of Things have brought drastic changes in the sectors mentioned, in the technologies that they use and develop and in market share and concentration.
- Some of the most significant changes experienced and expected in the next few years stemming from technological advances are related to the continuity of the technological revolution in the information technology and nanotechnology sector.
- Worldwide, there is a group of sectors which represent more than 50% of the total amounts invested in R&D, are highly innovative and have already been identified as the key technologies for 2018: ICTs, life sciences (including pharmaceuticals, biotechnology and medical instruments), chemistry and new materials, aerospace and defence, automobiles and transport systems, and energy.

■ **Figure IV.35 ■**  
**Main emerging technologies, 2018**  
(Importance assigned by the researchers surveyed, in percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Industrial Research Institute.

## 4. New technologies require the development of new capacities that Latin America and the Caribbean must consider

- The world is undergoing a new technological revolution driven by mobile Internet and cloud technology, big data analysis, the Internet of Things, advanced robotics, artificial intelligence and automatic learning, advanced manufacturing and 3D printing, which provide significant opportunities for innovation in service delivery and in business models, leading to disruptive innovation in production processes, value chains and industrial organization models.
- Increasing digitalization is transforming economic, political, institutional and social structures worldwide at a faster pace than previous industrial revolutions. This presents opportunities and challenges, particularly with respect to employment in the medium and long terms.
- As artificial intelligence evolves from algorithm-based programming to pattern recognition, in certain areas humans are being replaced by robots, primarily collaborative robots (cobots).
- In fact, not all workers will have to compete with machines, but instead learn to work more closely with them, as they will be intelligently connected to cyberphysical systems.
- This transformation has given way to new production and consumption models —the zero marginal cost economy, industrial Internet and sharing economy— which has implications for capacity requirements and potential effects on employment.

■ Table IV.6 ■

### The new industrial revolution and its impact on employment

Consumption and production patterns	Characteristics	Implications for employment	New skills needed
Zero marginal cost in the digital economy	<ul style="list-style-type: none"> <li>• New Internet-based business models of production, distribution of digital goods and services</li> <li>• Low marginal cost of distribution and production</li> <li>• Co-production by firms and consumers</li> </ul>	Robots and machine learning to replace labour	<ul style="list-style-type: none"> <li>• New jobs that require new knowledge and skills</li> <li>• New skills in the field of software development and data analysis</li> </ul>
Industrial Internet	New industrial and production models that use: <ul style="list-style-type: none"> <li>• Machines and sensors connected through the Internet</li> <li>• Robots and machine learning</li> <li>• Cyberphysical systems</li> </ul>	<ul style="list-style-type: none"> <li>• Replacement of jobs involving routine and repetitive tasks</li> <li>• New production capacities that require digital and industrial capabilities, data analysis, R&amp;D, technicians and specialists to create and manage advanced and automated production systems, solution architects, industrial data scientists, advanced manufacturing engineers</li> </ul>	<ul style="list-style-type: none"> <li>• Cognitive skills, resolution of complex problems and data analysis, social skills, critical thinking, literacy and active learning</li> </ul>
Gig economy	<ul style="list-style-type: none"> <li>• Business models that make frequent use of temporary contracts and self-employment on short-term tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Jobs that are not adapted to the existing legal definitions on employment and the status of self-employed contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Basic digital skills</li> </ul>

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



## V. Final considerations



- The 2030 Agenda for Sustainable Development is directed towards attaining an array of simultaneous objectives and, in particular, it means achieving economic growth in tandem with social and environmental development. To this end, it is essential to move towards full employment, promote inclusive industrialization and encourage innovation, keeping in mind its environmental impacts.
- In this regard, ECLAC has underlined the urgency of shifting to a new development pattern: a progressive structural change centred on equality and environmental sustainability and based on social coalitions and compacts for governance at the global, regional and national levels. The viability of shifting to such a model rests on a long-term vision and a new correlation of social and political forces. It will also require means of implementation such as financing, technology, fair trade and an institutional architecture.
- At the international level, the new development pattern will require global public goods such as stable growth for full employment, and environmental stewardship in the fourth industrial and technology revolution. For this to be feasible, at least four governance mechanisms will need to be put into operation and supported by political coalitions.
  - The international coordination of economies in favour of sustained investment growth, based on fiscal policies that prioritize low-carbon, more energy-efficient projects.
  - A new international financial architecture that reduces both real-economy and price volatility, regulates the impacts of capital flows, better represents the weight of the emerging economies and makes progress towards the reform of the international monetary system.
  - Multilateral trade and technology governance that facilitates and extends access to technology and financing so as to decouple growth from environmental impacts, helping close the gaps between countries and regions.
  - Shared governance of the key components of the digital economy at the global level.
- But there are barriers standing in the way of the necessary partnerships. In this regard, the values shared by the countries of the European Union and the Community of Latin American and Caribbean States could generate the momentum to identify and ultimately overcome these challenges.
- First, the implementation of the Paris Agreement may clash with the constraints imposed by bilateral and regional trade and investment agreements, and even with some of the rules of the World Trade Organization (WTO). Development and the environment are often the weakest dimensions of these agreements, which can often reduce governments' leeway to incentivize or disincentivize particular activities or technologies. And, while trade and investment agreements are binding and contain dispute settlement regulations, the Paris Agreement contains no such enforcement mechanisms.
- Second, a new international financial architecture is urgently needed. The ability of international financial agents to move capital and resources across borders and between currencies constrains governments and effectively gives capital veto power over an array of policies. The fact that capital movements are still unregulated, and that tax evasion continues to undermine States, despite the prospect of a new financial crisis in the making, is a testament to the political power of capital.
- Third, the difficulties in establishing domestic partnerships are no less acute than those that hamper the construction of global public goods. Most obvious is the contrast between the need for long-term policies and the short-term horizon that predominates among many major stakeholders. The environmental big push requires agreement between political actors, business, trade unions and social stakeholders to maintain and develop activities, institutions and policies that extend beyond electoral cycles.
- Such accords are crucial for locking in the new development pattern. Institutions and incentives need to be stable over time in order to encourage the emergence of business activities and innovations that provide workers with sustained employment and social protection. Otherwise, there will be little chance of new interests or stakeholders gaining a foothold, or of moving away from disputes over distribution of revenues towards cooperation to raise productivity, reduce inequality and protect the environment.
- Despite the difficulties and the distance that separate us from the proposed objective, neither the Latin American and Caribbean region nor the European Union is starting

from scratch. Awareness of the constraints of the status quo; the resurgence of planning; the implementation of progressive social policies with a universalist approach; the signature of multilateral commitments, such as the Paris Agreement and the 2030 Agenda for Sustainable Development, and of national accords, such as intended nationally determined contributions (INDC); and the promotion of regional integration initiatives all form part of the response to the prevailing development pattern.

- A final, and not insignificant, consideration is that the Latin American and Caribbean region and the European Union must embark on this process amid adverse conditions on the international, regional and national levels. Slower global growth and the threat of a new international financial crisis could hit both regions hard, especially if regional integration weakens and the fiscal space to respond through countercyclical policies narrows further. These factors have two

possible—contrary—effects on the chances of building new partnerships. On the one hand, the more limited availability of resources tends to intensify distributive tensions and thus hinder accords; on the other, as the prevailing development pattern becomes unviable, pressure will build for a paradigm shift and for new partnerships.

- Progressive structural change will depend on each society's choice between two paths: either a return to the old, unsustainable path, associated with an increasingly fierce conflict over distribution and with social, institutional and political fragmentation; or a transition to a new development pattern, in which collective action and long-term compacts in democratic societies drive equality, transparency and participation, with a focus on productivity, good-quality employment and environmental stewardship based on the dissemination of new technologies and an environmental big push.

All over the world there are alarming signs that point to an increase in inequality and a worsening of the environmental crisis, particularly in terms of climate change. New factors currently emerging include large-scale migratory movements, the acceleration of the technological revolution, the arrival of new actors on the international economic stage —particularly China and, more recently, India— and the negotiation of mega-agreements to regulate international trade, investment and intellectual property.

Given the complexity of the situation, the international community has mobilized via a wide-ranging multilateral debate to provide a broad and ambitious response. In the past few months, a series of collective actions have been taken towards the definition of a new, more sustainable and egalitarian development paradigm. In September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals, recognizing that climate change and development are inseparable. Accordingly, with the signing of the Paris Agreement in December 2015, both industrialized nations and developing countries undertake to manage the transition towards a low-carbon economy. As of early October 2016, the Agreement had been ratified by 77 parties, which are jointly responsible for 59.9% of global greenhouse gas emissions. Thanks to this “domino effect” of ratifications, the Paris Agreement will enter into force much earlier than expected: on 4 November 2016.

For the countries of the Community of Latin American and Caribbean States (CELAC) and the European Union, the 2030 Agenda and the Paris Agreement highlight the need to move towards levels of consumption and production that are compatible with the environment. Shared values and the strong complementarity that exists between the two regions could help to generate an environmental big push, enabling a move towards new development paths; in other words, progress towards an investment pattern that fosters innovation and structural change while decoupling economic growth from carbon emissions.

In this document, the Economic Commission for Latin America and the Caribbean (ECLAC) and the EU-LAC Foundation offer an overview of the main determinants of economic, production, social and environmental conditions in the countries of the two regions, as a contribution to the Meeting of Foreign Ministers of CELAC and the European Union, to be held in Santo Domingo on 25 and 26 October 2016.



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