

# The climate emergency in Latin America and the Caribbean

The path ahead – resignation or action?



## PROBLEMS

## IMPACTS

## ALTERNATIVES

### PUBLIC POLICY INSTRUMENTS

The increase in greenhouse gas emissions resulting from global production and consumption decisions is already having a noticeable effect on the climate



There are two main obstacles to meeting the goals proposed by the Paris Agreement and the SDGs:



Problems with public policy instruments and problems with productive sectors



### PRODUCTIVE SECTORS

The economic and social problems in the Latin American and Caribbean region increase the gap to achieve sustainability.



The limit to carbon emissions or the carbon budget frames the window of opportunity that should determine the speed of change in such fundamental areas as energy production, transport and mobility, the way cities are built and the limits set on the transformation of nature.

Achieving this transformation far transcends specific sectoral or technological policies, requiring a worldwide economic shift towards a great environmental effort that must be the dominant purpose and goal of technology configurations and public policy tools, from the implementation of adaptation and mitigation measures in the different productive sectors.

## MITIGATION



Mitigation measures for technological innovation and risk management in different sectors.

## MIXED

Any investment aimed at restoring the natural heritage and ecosystem services will bring benefits on both the adaptation and the mitigation fronts.

## ADAPTATION



Redirect investments towards adaptation through technological innovation and solutions based on nature in the different productive sectors.

Goal 13 (climate action), It highlights the urgent need to adopt measures to combat climate change and its effects, and the consequences of these changes may be irreversible if action is not taken immediately



PARIS2015  
UN CLIMATE CHANGE CONFERENCE  
COP21-CMP11

For our region, the nationally determined contributions (NDCs) of the Paris Agreement and the Sustainable Development Goals (SDGs) are clear benchmarks for efforts to seize the opportunity to progress likewise with the quality and sustainability of national and local development, while helping to mitigate the climate emergency

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Sustainable Development

UNITED NATIONS  
ECLAC  
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13 CLIMATE ACTION



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## THE 2030 AGENDA FOR THE DEVELOPMENT OF THE PARIS AGREEMENT

**Article 2:**  
“Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C ...”

**Article 3:**  
“...nationally determined contributions (NDCs) ...”

## GLOBAL CARBON BUDGET

2°C = 1.070 Gt de CO<sub>2</sub> (would run out in about 2 decades)  
1,5°C = 370 Gt CO<sub>2</sub> (would run out in less than 1 decade)  
Reduction of current emissions, and make them compatible with the targets:

2 °C = Reduction of current 50 to about 40 Gt of CO <sub>2</sub> eq by 2030.	Reducing the current 7 to less than 5 tons per capita and achieving neutrality by 2070.	1,5 °C = Reduction of current 50 to about 24 Gt of CO <sub>2</sub> eq by 2030.	Reducing the current 7 to less than 3 tons per capita and neutrality should be achieved by the middle of this century
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## REGIONAL CARBON BUDGET: LATIN AMERICA AND THE CARIBBEAN (ALC)

The region contributes 8.3% of global emissions, that is, 4.2 Gt of CO<sub>2</sub> eq

If the carbon budget were distributed in accordance with the current global emissions share of LAC, the region would have a budget of around 47 Gt of CO<sub>2</sub> eq and 110 Gt of CO<sub>2</sub> eq to meet the 1.5 °C and 2 °C targets, respectively.

The budget compatible with the 1.5 °C objective would be used up in about 11 years and that compatible with the 2 °C objective in just over 23 years.

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## PUBLIC POLICY INSTRUMENTS

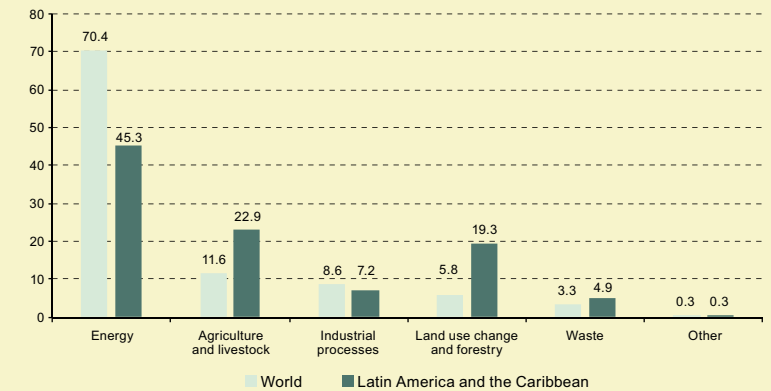
In Latin America and the Caribbean, emissions from all sectors continue to rise and, as in the rest of the world, the greatest increase has been in the energy sector. As a result, the energy component is becoming increasingly important in the region's emissions, and transport has been one of the fastest-growing sectors within this.

There are two main obstacles to meeting the goals proposed by the Paris Agreement and the SDGs:

Problems with public policy instruments and problems with productive sectors

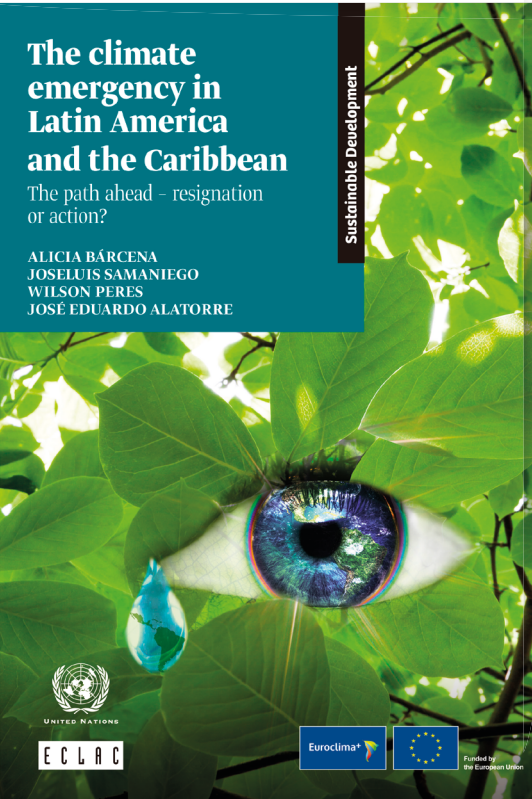
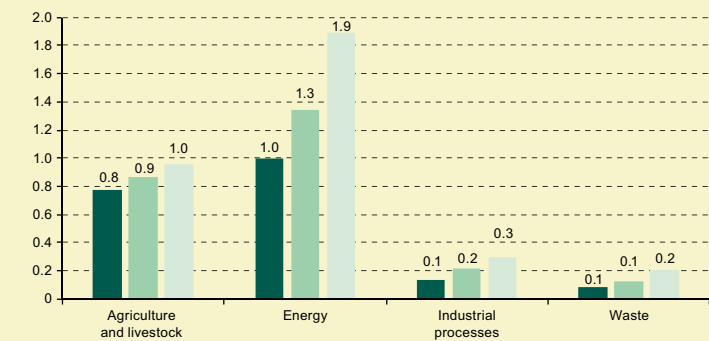
## PRODUCTIVE SECTORS

Latin America and the Caribbean and the world: sectoral shares of greenhouse gas emissions, 2016 (Percentages)



Latin America and the Caribbean: greenhouse gas emissions, 1990, 2000 and 2016

A. Latin America and the Caribbean: greenhouse gas emissions by sector, 1990, 2000 and 2016 (gigatons of CO<sub>2</sub> equivalent)



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### PUBLIC POLICY INSTRUMENTS

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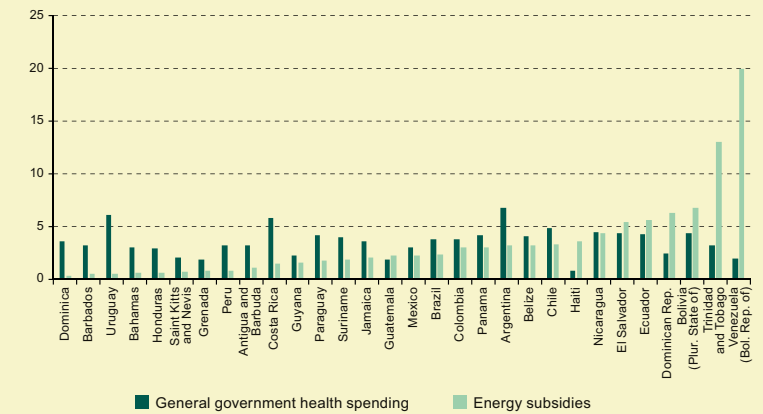
Problems with public policy instruments and problems with productive sectors

### PRODUCTIVE SECTORS

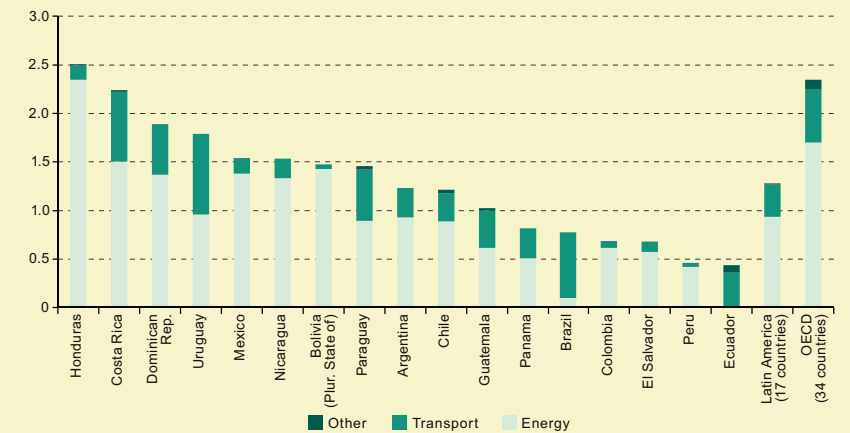
Emissions of CO<sub>2</sub> by producers and consumers are cost-free: Only 4 LAC countries have a CO<sub>2</sub> tax and it is very low: Argentina, Colombia, Chile and Mexico.

The consumption or production of fossil fuels is encouraged through subsidies or tax spending, and the destruction of nature does not show up in the economic accounts

Latin America and the Caribbean: energy subsidies and general government health spending, 2015  
(Percentages of GDP)



Latin America: structure of taxation related to the environment, 2016  
(Percentages of GDP)



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## IMPACTS

The increase in greenhouse gas emissions resulting from global production and consumption decisions is already having a noticeable effect on the climate

- INCREASES IN ATMOSPHERIC AND OCEAN TEMPERATURES**
- CHANGES IN PRECIPITATION PATTERNS**
- REDUCTIONS IN THE VOLUMES OF ICE AND SNOW**
- RISING SEA LEVELS**
- CHANGES IN EXTREME WEATHER EVENT PATTERNS**

## PHYSICAL

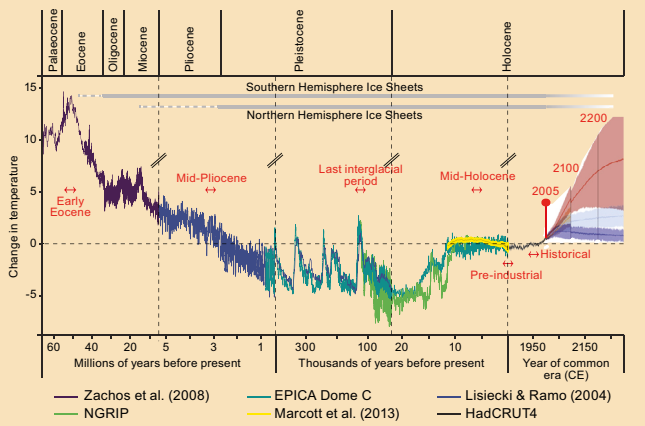
## SOCIAL

The economic and social problems in the Latin American and Caribbean region increase the gap to achieve sustainability.

Latin America: expected impact of climate change on biodiversity, 2050



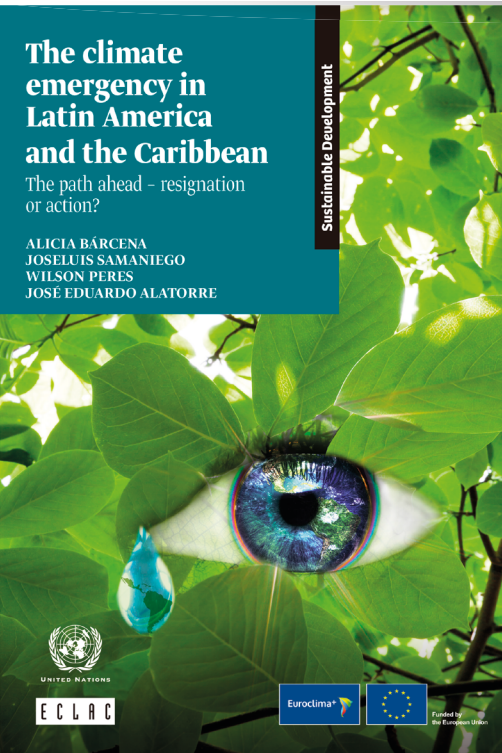
Anomalies in the Earth's average temperature during the past 65 million years and potential geohistorical analogues for future climates up to 2300 CE relative to the period 1961–1990 (Degrees centigrade)



BACK

# The climate emergency in Latin America and the Caribbean

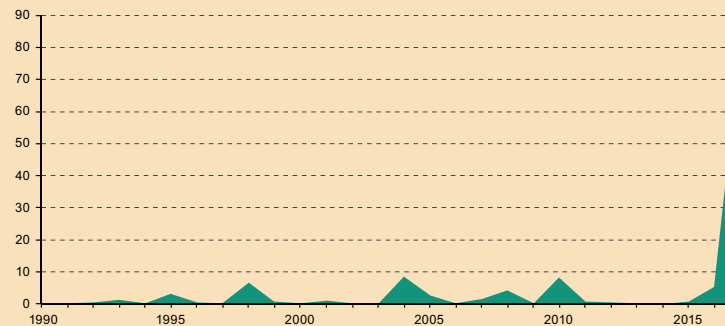
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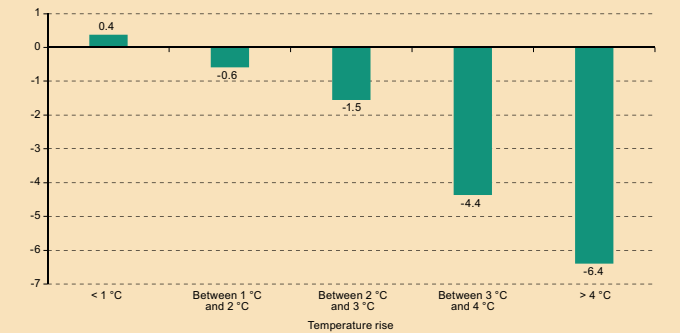
## IMPACTS

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The Caribbean: damage caused by disasters, 1990–2017  
(Billions of 2017 dollars)



Impact of climate change on world gross domestic product (GDP), by temperature range, according to different studies  
(Percentages of global GDP)



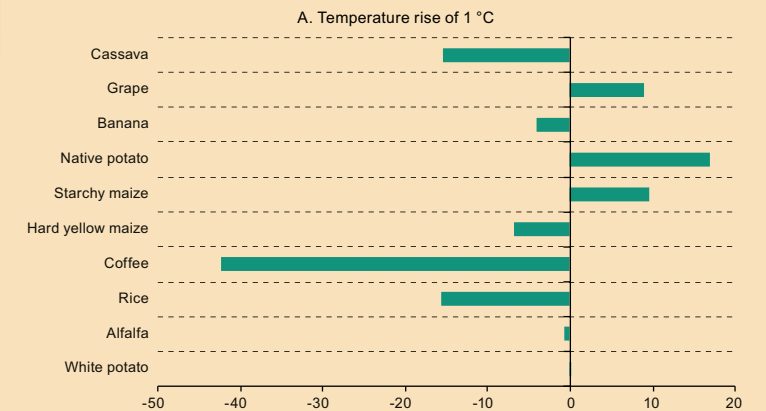
## PHYSICAL

## SOCIAL

The economic and social problems in the Latin American and Caribbean region increase the gap to achieve sustainability.

-  **STRUCTURAL GAPS IN INFRASTRUCTURE**
-  **SOCIAL AND DISTRIBUTIVE INEQUALITY**
-  **HEIGHTENED PATTERNS OF EXTREME WEATHER EVENTS**
-  **DISASTER RISK AND ITS SOCIO-ECONOMIC CONSEQUENCES**

Peru: percentage changes in income per crop  
(Percentages)



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### MITIGATION

### MIXED

### ADAPTATION

### MITIGATION BENEFITS

Mitigation measures for technological innovation and risk management in different sectors



TECHNOLOGICAL ADVANCE



QUALITY OF LIFE

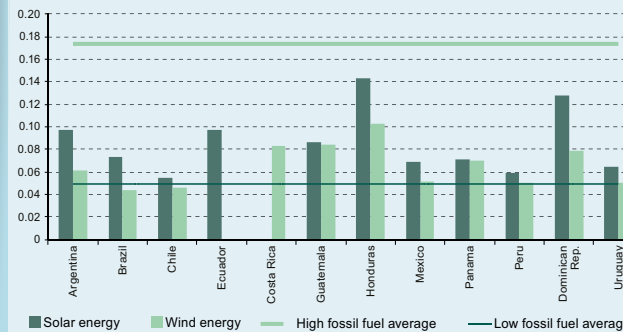


ECONOMIC DYNAMISM

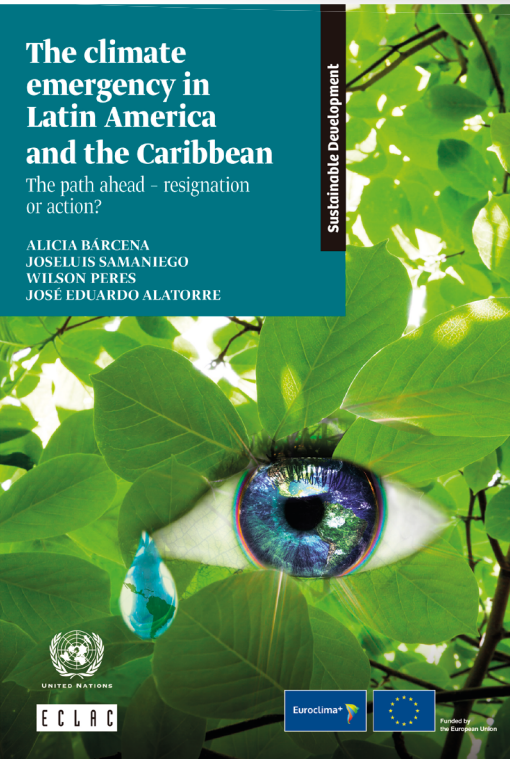
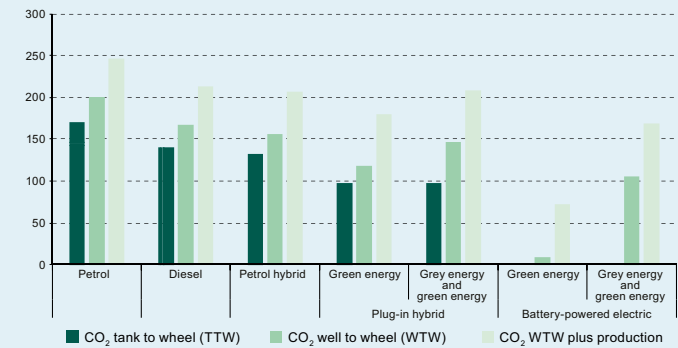


GREATER EQUALITY: BETTER PUBLIC TRANSPORT OR NATURE-BASED SOLUTIONS IN POOR COMMUNITIES

Latin America and the Caribbean (12 countries): average normalized cost of solar and wind energy, 2018 (Dollars per kWh)



CO<sub>2</sub> emissions of conventional and electric vehicles over a distance of 220,000 km, 2015 (Grams per kilometre)



Sustainable Development

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### MITIGATION

### MIXED

### ADAPTATION

### ADAPTATION DILEMMAS

- a. People/territories
  - b. Sectors
- For contribution to the economy
- For contribution to the foreign exchange
- For contribution to employment
- Due to its effect on economic dynamism

### BENEFICIOS SUSTANTIVOS DE LA ADAPTACIÓN

- Well-being of current and future populations
- The security of assets and the maintenance of ecosystem goods
- Functions and services now and in the future
- Economic dynamism

### BENEFITS AND COSTS OF ADAPTATION INVESTMENTS

- Strengthening early warning systems
- Making new infrastructure resilient
- Improving dryland agriculture crop production
- Protecting mangroves
- Making water resources management more resilient

