# How Much Will It Cost to Achieve the Climate Goals in Latin America and the Caribbean?

Luis Miguel Galindo, Bridget Hoffman, Adrien Vogt-Schilb

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# INTRODUCTION

- Latin America and the Caribbean must respond, simultaneously, to climate change impacts and progress in the mitigation strategy towards a carbon net cero economy.
- This requires urgent and large structural changes to the actual economic growth.
- How much will it cost to take on these challenges?
- Climate transition is integrated in the transition to a sustainable development path: Economic, social and political coalition.
- **Objective:** General overview of the costs in Latin America and the Caribbean to address the climate change challenge while also making progress with other sustainable development goals.

# GENERAL FRAMEWORK:

- Climate change has significant negative effects, these impacts are non-linear, with some potential irreversible effects they are larger in low-income countries and in regions with higher temperatures.
- These impacts can affect the long-term perspectives of economic growth in several countries and regions.
- Paris Agreement proposes to reduce these impacts by limiting the rise in global temperature between 1.5$^{o}$C and 2$^{o}$C.
- Meeting these targets requires that all countries should transit to a climate-resilient and decarbonized economy by 2050-2070 (IPCC, 2018).
- Nationally Determined Contributions (NDCs) contain mitigation and adaptation targets, typically for 2030 and they are not aligned with full resilience and deep decarbonization targets and lack a specific public policy strategy.

# METHODOLOGY:

There are already several estimations of these economic costs but these calculations are very difficult to compare and they do not include all costs.

1. Provision of infrastructure services (mobility, energy services and access to water and sanitation, and food production—and work to conserve its ecosystems and biodiversity)
2. High poverty rates, high income distribution concentration and significant health, education or social protection gaps.
3. Just transition, transitions risks (i.e. stranded assets).
4. Consistent public policies, expenditure patterns (not additional expenditure but the reorientation of the total actual spending) and financial flows.

# COSTS FOR A CLIMATE TRANSITION

- Global infrastructure costs around 4.5% of the global GDP with a range between 2% and 8%. Higher in development countries and with adaptation costs.
- The annual investment in infrastructure in Latin America and the Caribbean is around 5% of GDP with a probable range from 2% to 8% of GDP. This represented between US$111 billion and US$447 billion annually in 2019.
- The required social spending in the region is between 5% and 11%.
- Filgueira and Espíndola (2015) estimate that about 5.2% of GDP (universal cash transfer system for the over-65s and households with children under age 18) and single benefit under the poverty line: 2.8% of GDP
- Castellani et al. (2019): infrastructure gap and eliminate extreme poverty is 10.6% of the GDP by 2030 (approximately US$715 billion in 2030) and increases 16% of GDP in 2030 (US$1,079 billion in 2030) including reduction of under-5 child mortality and secondary school completion.

# POLICIES AND EXPENDITURES

- Fossil fuel consumption subsidies persist in the region and are counterproductive to a decarbonization process. These subsidies represented US$44 billion in 2017, about 1% of GDP in the average country in the region (Coady et al., 2019, Delgado et al., 2021).

- The use of environmental taxes in the region is incipient. Environmental tax revenues in the region represented about 1.2% of GDP in 2019, below the OECD average (OECD, 2021a).

- Carbon price: Argentina, Chile, Colombia and Mexico in a range below US$6ton/$CO_2$

- Elimination of energy subsidies, the revenue associated with a carbon tax (of \$40/t$CO_2$), and the revenue associated with other green taxes—such as taxes to internalize the cost of air pollution and vehicle congestion—the region could raise US$224 billion per year (Coady et al. 2019).

- FDI accounted for 3.2% (US$179 billion) of regional GDP in 2019 but it is not yet fully aligned with climate goals.

- Financing from multilateral development banks in Latin America and the Caribbean totaled US$40 to US$45 billion annually in 2019.

# CONCLUSIONS

Requirements 7% to 19% of GDP by 2030 (US$472 billion to US$1,281 billion).

- Electricity.
- Transport.
- Agricultural and industrial activities.
- Building and urban areas.
- Forests, ecosystem services and nature-base solutions.
- Infrastructure and water and sanitation.
- Waste and circular economy.