Climate Change and Extreme Weather in Latin America

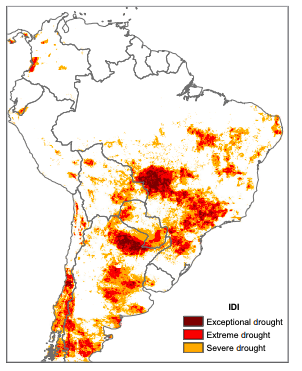
**Introduction:**

A key challenge facing Latin America in the twentieth century pertains to the extreme weather events in the Southern Hemisphere, which are becoming increasingly disruptive to the social and economic developments of the region, as climate change has worsened the magnitude of natural weather events that occur there. Over the past two decades, the threat of long-term droughts, hurricanes, sea-level rise, and coastal storms, and other related weather phenomena, have encroached upon the living conditions of inhabitants of the region, and have significantly impacted the economic output and GDP of countries most affected by the recent changes.

**How is climate change affecting the region?**

While climate change and its associated effects are not limited to Latin America, the region is uniquely susceptible to the effects of climate change due to the significant amount of carbon sinks located across several countries that effectively absorb the CO2 output of more than just Latin America. When preserved, carbon sinks, remove CO2 from the atmosphere, and slow the effects of climate change, yet when disturbed they can accelerate it. According to the World Resources Institute, in recent years, one of the world's largest carbon sinks, located in the Amazon River Basin, is at risk to become a “ net source [of carbon] if forest loss continues at current rates”(Harris). Though the Amazon River Basin covers approximately 9 countries in Latin America, a key country to examine as a case study is Brazil, which contains 60% of the Amazon rainforest, and by extension a significant amount of the region’s carbon sink.

* A 2021 report from INPE(Instituto Nacional de Pesquisas Espaciais), claims Brazil has reached a six-year high for deforestation
* Brazil’s System of Quarterly National Accounts reported that the country’s agricultural GDP decreased by .9% in 2022, due to the “the drought in the South, which reduced the production estimate of soybeans, the largest crop in Brazil” (IBGE)

The relevance of the Amazon River Basin to climate change is that its continued erosion due to deforestation and a lack of preservation, further places Latin America in jeopardy of increased extreme weather events and furthers the impacts of climate change. Furthermore, the deforestation directly impacts the indigenous communities living along the Amazon basin, as they are becoming increasingly displaced and put at further risk by extreme weather events.

**Extreme Weather Trends and Current Efforts to Combat Them**

In the past two decades, the amount of extreme weather events that have touched down in the region has increased dramatically, as well as their economic and humanitarian toll. A recent example is the devastation caused by Hurricane Iota in November of 2020, which the National Hurricane Center, reported as causing “67 direct deaths,17 indirect deaths, and 41 people missing”, in addition to the displacement of an estimated seven million people. (Stewart 10). During hurricane season in the region, coastal communities are at high risk, due to infrastructure failures, as well as a lack of preparedness and funds to aid communities during and after disaster.

* According to the World Meteorological Organization’s 2021 “State of the Climate in Latin America and the Caribbean”, the following are impacts of climate change on weather events and patterns in the region:
  + Anomalies in Rainfall Levels, approximately 20-60% below normal levels in Chile
  + Above Average rainfall in Mexico, Colombia, Costa Rica, and Panama
  + “The average rate of temperature increase in the region was around 0.2 °C per decade between 1991 and 2021” (WMO).
  + “The “Central Chile Mega Drought” continued in 2021 … this constitutes the longest drought in this region in at least one thousand years, exacerbating a drying trend and putting Chile at the forefront of the region’s water crisis” (WMO).

**Key Trends and Current situation in relevant countries/current approaches/key actors**

195 countries met up in Lima, Peru for the 20th Conference of Parties (COP 20) to discuss climate change.

Many policies like those in Chile include attaining a considerable amount of energy from various renewable energy sources such as hydropower and solar power. Others, such as Mexico’s General Law on Climate Change (GLCC), have initiated climate change policies geared towards reducing CO2 emissions.

Another key approach and actor in this climate discussion revolves around the Administration’s Energy and Climate Partnership for the Americas (ECPA) which has provided funds to start Latin America’s process towards energy projects and alternative energy development.

**Policy Solutions:**

Extreme weather in Latin America is increasingly becoming a threat to the region, as the effects of climate changes exacerbate the destruction caused to communities, in both the economic and social sectors. Efforts to rebuild in the aftermath of some extreme weather events, such as hurricanes and tropical storms, are both costly and time consuming, and have grave implications for residents whose entire lives have been destabilized and threatened. There are not enough preventive measures taken by governments in Latin America, to prevent destruction with updated infrastructure, equipped to withstand the stronger storms that have plagued the region in recent years. Since the region as a whole is not the greatest producer of the greenhouse gasses that majorly contribute to climate change, there should be a targeted focus on preserving the region’s large carbon sink in the Amazon River Basin, by enacting legislation preventing further deforestation of the Amazon Rainforest. Brazil, as the country covering a majority of this area, should take action under the newly elected President Luiz Inácio Lula da Silva, when he takes office in January, in order to lower the deforestation rate of the Amazon Rainforest.

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