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State of the Climate on Latin America and the Caribbean 2020: WMO

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Why in News

Recently, the **World Meteorological Organization (WMO)** has released a report on the impacts of climate change and extreme weather in Latin America and the Caribbean.

- 2020 was a year of **unprecedented heatwaves, droughts, forest fires, cyclones and food insecurity** for the region.
- The **Intergovernmental Panel on Climate Change** in its sixth assessment report had highlighted the impact of climate change on the Indian Subcontinent.

World Meteorological Organization

- **About:**
 - It is an **intergovernmental organization** with a membership of 192 Member States and Territories. **India is a member.**
 - It originated from the **International Meteorological Organization (IMO)**, which was established after the 1873 Vienna International Meteorological Congress.
- **Establishment:**

Established by the **ratification of the WMO Convention on 23rd March 1950**, WMO became the specialized agency of the **United Nations** for meteorology (weather and climate), operational hydrology and related geophysical sciences.
- **Headquarters:**

Geneva, Switzerland.
- **Reports released by WMO:**
 - **State of the Global Climate**
 - Greenhouse Gas Bulletin

Key Points

- **Rise in Temperature:**
 - **2020 was among the three warmest years** in Central America and the Caribbean and the second warmest year in South America.
 - **Sea surface temperature in the Tropical North Atlantic Ocean** was significantly warmer than normal throughout the year.
 - **Severe heat waves dominated the region** through most of the year, with temperatures soaring above 40°C several days in a row.
- **Intense Rainfall:**

Intense rainfall resulted in **landslides, floods and flash floods** in the rural as well as urban areas of Central and South America towards the end of 2020.
- **Forest Fires and Cyclones:**
 - **Deforestation** has only increased in the last four years due to **clearing for cattle pasture and degradation from fires**.
 - Deforestation in the **Amazon River Basin**, which stretches across nine countries in South America and stores 10% of global carbon, has already led to a decline in its ability to regulate climate.
 - The Atlantic basin **recorded as many as 30 cyclones in 2020** — the highest so far in a single year.
- **Impact:**

Extreme weather events affected over **8 million people across Central America**, exacerbating food insecurity in countries already crippled by economic shocks, **Covid-19** restrictions, and conflict.
- **Suggestions:**
 - **Hazard-specific monitoring systems such as FAO's Agricultural Stress Index System (ASIS)** is an example of a useful tool to allow governments to issue early warning alerts for specific sectors like agriculture.
 - **Develop Early Warning Systems (EWS)** and contingency plans.
 - Early warning systems were underdeveloped in the region, particularly in South America.
 - **Planting of the mangroves**, an ecosystem of which can help sequester three-four times more carbon than most forests.
 - Area under mangrove plantation declined 20% between 2001 and 2018 in the region.
 - **Greater political commitment and more financial support** is needed to strengthen EWS and operational weather, climate and hydrological services to support risk management and adaptation.

Latin America and Caribbean (LAC) Region

- **About:**
 - Latin America is generally **understood to consist of the entire continent of South America** in addition to **Mexico, Central America, and the islands of the Caribbean.**
 - It **encompasses 33 countries.**
- **Geographical Features:**

Amazon River, Caribbean Sea, Gulf of Mexico, Pacific Ocean, Panama Canal, Andes Mountains, Sierra Madre Mountains, and Atacama Desert.
- **Major Economic Blocs:**
 - **MERCOSUR:** The Southern Common Market consists of five countries in southern Latin America: Argentina, Brazil, Paraguay, Uruguay and Venezuela.
 - **CARICOM:** The Caribbean Community consisting of 19 island groups: Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.
 - **CAN:** The Andean Community consists of four countries: Bolivia, Colombia, Ecuador and Peru.
 - **SICA:** The Central American Integration System consisting of seven countries: Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama.

Physical Features of Latin America



Source: DTE