



Provisional Report on the State of the Global Climate 2020: WMO

Why in News

According to the latest **State of the Global Climate provisional report by the [World Meteorological Organization \(WMO\)](#)**, the year **2020 is set to be among the three warmest** on record. Also, the **decade 2011-2020 would be the warmest** ever.

- The **final report** will be published in **March 2021**. The **State of the Global Climate report** is published **annually** to keep a track of global warming.
- **WMO** is one of the specialized agencies of the [United Nations \(UN\)](#).

Key Points

▪ Rise in Global Temperature:

- The global mean surface temperature for January-October 2020 was **1.2 degree Celsius higher** than the pre-industrial baseline (1850-1900).
 - There is at least a one in five chance of it **temporarily exceeding 1.5 °C** by 2024.
 - The [Paris Agreement](#) central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
- **2020 will be one of the three hottest**, just behind **2016 and 2019**.
 - The record heat in 2020 has been **despite near-La Niña** conditions prevailing in the equatorial Pacific Ocean since August and **moderate La Niña** conditions prevailing since October.
 - The **La Niña phase of the [El Niño Southern Oscillation \(ENSO\)](#)** phenomenon generally has a cooling effect on many parts of the world.

▪ High Temperature over Ocean Surfaces:

- **80%** of ocean areas have experienced at least one **marine heat wave (MHW)** so far in 2020.
 - [Heat wave](#) is a period of prolonged abnormally high surface temperatures relative to those normally expected.
 - At the time of **MHW**, the average temperature of the ocean surface (up to a depth of 300 feet or more) rises by **5-7°C** above normal.
 - MHWs can be **caused by** locally formed heat fluxes between the atmosphere and the ocean or due to large-scale drivers of the Earth's climate like the **ENSO**.
 - There were also much more strong MHWs (**43%**) over the oceans in 2020 than moderate ones (**28%**).
- **Global sea-level rise** was also similar to 2019 value. This was mainly **due to the increased melting of the ice sheets in Greenland and Antarctica**.

- **Reasons:** Scientific evidence indicates **increasing temperatures** are a direct result of **human-led global warming** which is an impact of the **emission of greenhouse gases (GHG)**.
 - After **record GHG levels of 2019**, there has been a slight **dip this year** due to measures taken by many countries to fight the ongoing **novel coronavirus disease (Covid-19 pandemic)**.
 - However, data from specific locations, including Mauna Loa (Hawaii) and Cape Grim (Tasmania) indicate that levels of **Carbon dioxide (CO₂), Methane (CH₄) and Nitrogen dioxide (N₂O) continued to increase** in 2020.
- **Consequences of Global Warming in 2020:**
 - **Extreme weather events** such as **tropical cyclones, floods, heavy rainfall and droughts** impacted many parts of the world and **cases of wildfire** have also increased this year.
 - **Atlantic Hurricane Season:** The **season** witnessed **30 named storms** from June to November which is the **highest number ever** recorded.
 - **Heavy Rains:** There was heavy rainfall and flooding in many parts of **Asia and Africa**.
 - **Droughts:** South America experienced **severe droughts** with northern Argentina, Paraguay and western areas of Brazil being some of the worst affected.
 - **Sea-level rise:** Melting of ice resulted in sea level rise which is an existential concern for the small island nations.
 - A significant sea-level rise by the end of the century will mean that these countries will drown in the oceans and their respective populations will be homeless.
 - **Loss to Humanity:**
 - **Population Movements:** The climate and weather events have triggered significant population movements and have severely affected vulnerable people on the move, including in the Pacific region and Central America.
 - **Agricultural Losses:** Brazil alone recorded agricultural losses of 3 billion American dollars.
 - **Loss of Human lives, Property and Livelihoods:** The most affected were the Sahel and Greater Horn regions of Africa and China, India, Korea and Japan regions of Asia.

Way Forward

- Environmental ethics should take precedence over other issues like national and strategic interest or economic interest.
- **Oil, gas and coal production must fall six percent a year** in order to limit catastrophic global warming, as per the **UN's annual Production Gap assessment**, which measures the difference between the Paris goals and countries' fossil fuel production plans.
- There needs an enhanced commitment from nations more than their pledged INDCs (Intended Nationally Determined Contributions) under the **Paris Agreement**. However, it must not be used to pressurize developing countries to ramp up their global warming mitigation targets.

Source:IE