

2022 Tied As the World's Fifth-Warmest On Record, U.S. Scientists Say: Daily Current Affairs

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Relevance: GS-3: Conservation, Environmental Pollution, and Degradation, Environmental Impact Assessment.

Key Phrases: *fifth-warmest year, U.S. National Oceanic and Atmospheric Administration, Weather extremes, drought-ravaged crops in Uganda, Pakistan floods, Paris Agreement.*

Why in News?

- Last year was the world's joint **fifth-warmest** on record and the last nine years were the nine warmest since pre-industrial times, putting the 2015 Paris Agreement's goal to limit global warming to 1.5C in serious jeopardy.



Findings of various organizations:

- **NASA:**
 - Last year tied with 2015 as the fifth-warmest year since record-keeping began in **1880, NASA said.**
 - That was despite the presence of the **La Nina** weather pattern in the Pacific Ocean, which generally lowers global temperatures slightly.
 - The world's average global temperature is now **1.1C to 1.2C higher than in pre-industrial times.**
- **U.S. National Oceanic and Atmospheric Administration:**
 - It had ranked 2022 as the sixth warmest since 1880.
- **European Union scientists:**
 - 2022 was the fifth warmest year in their records.

Why different rankings?

- Climate assessments produce slightly different rankings depending on the data sources used and the way records account for minor data alterations over time, for example, a weather station is moved to a new location.

Paris Agreement:

- The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015, and entered into force on 4 November 2016.
- Its goal is to limit global warming to **well below 2, preferably to 1.5 degrees Celsius**, compared to pre-industrial levels.
- To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate-neutral world by mid-century.
- The Paris Agreement is a landmark in the **multilateral climate change process because**, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects.

Increasing temperature:

- NASA said temperatures were increasing by more than **0.2C per decade**, putting the world on track to blow past the 2015 Paris Agreement's goal to limit global warming to 1.5C to avoid its most devastating consequences.
- At the rate that we're going, it's not going to take more than two decades to get us to that. And the only way that we're not going to do that is if we stop putting greenhouse gases into the atmosphere.
- 2023 will be slightly warmer than 2022, due to a weaker La Nina cooling phenomenon.
- The global mean temperature will be even higher 10 years from now, unless countries stopped burning CO2-emitting fossil fuels temperatures would continue to climb.

Weather extremes:

- The changing climate fuelled weather extremes across the planet in 2022. Europe suffered its hottest summer on record, while in Pakistan floods killed 1,700 people and wrecked infrastructure, drought-ravaged crops in Uganda and wildfires ripped through **Mediterranean countries**.

Rising CO2:

- Despite most of the world's major emitters pledging to eventually slash their net emissions to zero, global CO2 emissions continue to rise.
- Concentrations of CO2 in the atmosphere last year reached levels not experienced on earth for **3 million years**.

Hope from COP 28:

- At this year's COP28 climate conference, countries will formally assess their progress towards the Paris Agreement's 1.5C goal - and the far faster emissions cuts needed to meet it.
- **COP28 host the United Arab Emirates** appointed the head of its state-owned oil company as president of the conference, sparking concerns among campaigners and scientists about the fossil fuel industry's influence in the talks.

Way forward:

- **Transformative Systemic Change:**
 - Limiting warming to 1.5°C above pre-industrial levels would require **transformative systemic change, integrated with sustainable development**.

- Such change would require the upscaling and acceleration of the implementation of **far-reaching, multilevel and cross-sectoral climate mitigation and addressing barriers**.
- Such systemic change would need to be linked to complementary adaptation actions, including transformational adaptation, especially for pathways that temporarily overshoot 1.5°C.
- **Mitigation and Adaptation:**
 - A mix of mitigation and adaptation options implemented in a participatory and integrated manner can enable rapid, systemic transitions – in urban and rural areas – that are necessary elements of an accelerated transition consistent with **limiting warming to 1.5°C**.
 - Such options and changes are most effective when aligned with economic and sustainable development, and when local and regional governments are supported by national governments.
- **Behaviour change:**
 - Behaviour change and demand-side management can significantly reduce emissions, substantially limiting the reliance on **CDR to limit warming to 1.5°C**.
 - Political and financial stakeholders may find climate actions more cost-effective and socially acceptable if multiple factors affecting behaviour are considered, including aligning these actions with people's core values.
 - Behaviour- and lifestyle-related measures and **demand-side management** have already led to emission reductions around the world and can enable significant future reductions.

Source: [The Hindu](#)

Mains Question:

Q. "The world's average global temperature is now 1.1 to 1.2 degrees Celsius higher than in pre-industrial times." In this context, are the global efforts to limit global warming to 1.5C sufficient? Critically examine.