



The State of the Climate in Asia 2023

For Prelims: [World Meteorological Organization](#), [Heatwaves](#), [Glacial lake outbursts](#), [Sundarbans](#), [National Action Plan on Climate Change](#), [National Adaptation Fund on Climate Change](#)

For Mains: Effects of Climate Change, Government initiatives, Conservation

Source: [IE](#)

Why in News?

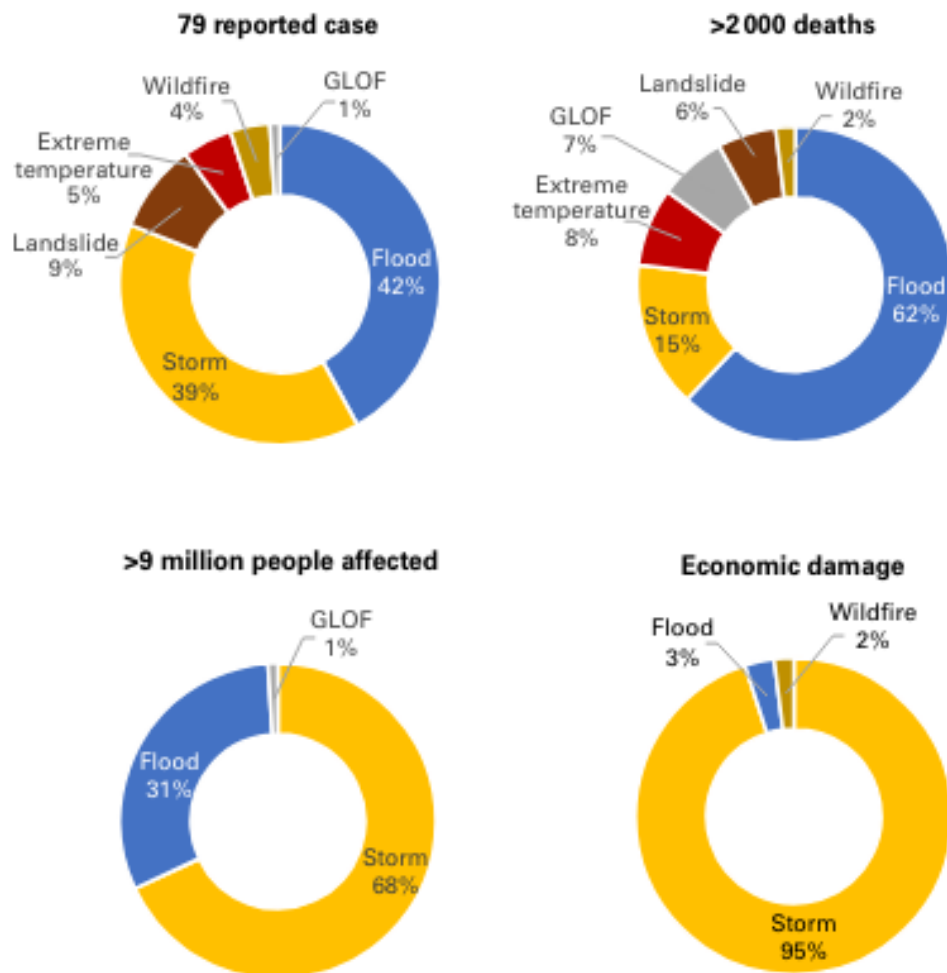
The [World Meteorological Organization \(WMO\)](#) has released a report titled "***The State of the Climate in Asia 2023***," which sheds light on the alarming impact of [climate change](#).

- The report highlights the severe consequences of extreme weather events, rising temperatures, and environmental changes in the Asian continent.

What are the Key Highlights of the Report?

- **Asia as Most Disaster-Prone Region:**
 - Asia experienced 79 [extreme weather events](#) in 2023, affecting over nine million people.
 - Over 2,000 deaths were directly attributed to these disasters.
 - **Floods** and storms caused the highest number of casualties and economic losses in Asia in 2023.
 - The report noted that Asia has **warmed faster than the global average** and the **warming trend has nearly doubled since the 1961-1990 period**.
 - The accelerating rate of key climate change indicators such as surface temperatures, [glacier retreat](#) and **sea level rise** will have major consequences for Asia, its economy and ecosystems, the report emphasised.

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▪ Impacts on India:

- India faced severe [heatwaves](#), rainfall-induced floods, [glacial lake outbursts](#), and [tropical cyclones](#).
- In April and June 2023, severe heat waves led to approximately 110 deaths due to **heatstroke**, with temperatures reaching 42-43 degrees Celsius in certain regions.
 - A **prolonged heatwave also affected much of Southeast Asia in April and May**, extending westwards in Bangladesh and eastern India, and parts of China too.
- Flood events in August 2023 resulted in significant deaths in Himachal Pradesh and Uttarakhand, **causing extensive damage to infrastructure and agriculture**.
- Six tropical cyclones formed in the North Indian Ocean, with four making landfall in India.
 - The cyclone activity was slightly above the average, the report noted. Four out of the six cyclones - [Mocha](#), [Hamoan](#), [Midhili](#) and [Michaung](#) - formed over the Bay of Bengal and two - Biparjoy and Tej - formed over the [Arabian Sea](#).
- The eastern and northern parts of India witnessed the highest temperature rise compared to the 1991-2021 average.
- The Sea level rise in the **Bay of Bengal was 30% above the global average**, particularly in the [Sundarbans](#) region, and was among the highest in the region.

EXTREME WEATHER EVENTS IN INDIA LAST YR

■ **APRIL-JUNE:** Severe heatwave, 110 people dead from heatstroke.

■ **AUGUST:** Floods in Himachal, Uttarakhand; 25 deaths, agri, infra damaged.

■ **OCTOBER:** Glacial lake outburst flood in Sikkim; 40 deaths

■ **DECEMBER:** Cyclone Michuung makes landfall in Andhra; 22 deaths

- **Soaring Temperatures and Melting Glaciers:**
 - The annual mean near-**surface temperature** over Asia in 2023 was the second-highest on record.
 - **The High Mountain Asia region**, containing the largest volume of ice outside of the polar regions, is under threat due to melting glaciers.
- **Below-Normal Precipitation and Killer Floods:**
 - Precipitation was below normal across almost the entire Asian region in 2023.
 - Despite overall less precipitation, over **80% of reported hydrometeorological hazards in Asia were flood and storm events**, leading to fatalities and affecting millions.
 - Floods were the leading cause of death in reported events, particularly in India, Yemen, and Pakistan.
- **Need for Robust Climate Finance:**
 - The report emphasises the need for robust climate finance mechanisms to scale up adaptation and address loss and damage in developing countries of Asia.

World Meteorological Organisation

- The WMO is a **specialised agency of the [United Nations](#)**, serving as the authoritative voice on Earth's atmosphere, oceans, climate, and water resources.
- The WMO originated from the **International Meteorological Organisation (IMO)**, a non-governmental organisation that became a specialised agency of the United Nations in 1951.
 - This transformation allowed it to better address the international aspects of meteorology.
- WMO's primary **headquarters is located in Geneva, Switzerland**, and it boasts a membership of 192 Member States and Territories, **including India**.
- The governance structure of WMO comprises the **[World Meteorological Congress](#)** as the supreme body.
- WMO is organised into six regional associations and eight technical commissions, each focusing on specific aspects of meteorology, hydrology, and related sciences.
- On 23rd March, the WMO celebrates the establishment of the Convention on 23 March 1950 as **World Meteorological Day**.
 - It highlights the important role of National Meteorological and Hydrological Services for society's safety and well-being and is marked with global activities.

What are the Initiatives Related to Climate Change Mitigation?

- **India:**
 - [National Action Plan on Climate Change \(NAPCC\).](#)
 - [State Action Plan on Climate Change \(SAPCC\).](#)
 - [National Adaptation Fund on Climate Change \(NAFCC\).](#)
 - [Nationally Determined Contributions \(NDC\).](#)
- **Global:**
 - [Loss and Damage Fund](#)
 - **Global Climate Change Alliance (GCCA):**
 - The GCCA is an **European Union initiative** to form an alliance with poor developing countries most affected by climate change.
 - It operates through the European Commission's political channels and in 2015 evolved into the **GCCA+ to support the Paris Agreement** and the **2030 Agenda for Sustainable Development.**
 - **Momentum for Change: Climate Neutral Now**
 - It is an initiative launched in 2015 by the **United Nations Framework Convention on Climate Change (UNFCCC) Secretariat.**
 - The initiative aims to encourage and support governments, organisations, and businesses to take action towards achieving climate neutrality.

India's Climate Target

- Reach 500 GW of Non-fossil energy capacity by 2030.
- 50% of its energy requirements from renewable energy by 2030.
- Reduction of total projected carbon emissions by 1 billion tonnes from now to 2030.
- Reduction of the carbon intensity of the economy by 45% by 2030, over 2005 levels.
- Achieving the target of net zero emissions by 2070.

Drishti Mains Question:

Q. Analyse the impacts of climate change on vulnerable countries in Asia, with a focus on India. How do various climate factors exacerbate existing vulnerabilities?

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. Which of the following best describes/describe the aim of 'Green India Mission' of the Government of India? (2016)

1. Incorporating environmental benefits and costs into the Union and State Budgets thereby implementing the 'green accounting'.
2. Launching the second green revolution to enhance agricultural output so as to ensure food security to one and all in the future.
3. Restoring and enhancing forest cover and responding to climate change by a combination of adaptation and mitigation measures.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Ans: (c)

Q. With reference to 'Global Climate Change Alliance', which of the following statements is/are

correct? (2017)

1. It is an initiative of the European Union.
2. It provides technical and financial support to targeted developing countries to integrate climate change into their development policies and budgets.
3. It is coordinated by World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD).

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Ans: (a)

Q. “Momentum for Change: Climate Neutral Now” is an initiative launched by (2018)

- (a) The Intergovernmental Panel on Climate Change
- (b) The UNEP Secretariat
- (c) The UNFCCC Secretariat
- (d) The World Meteorological Organisation

Ans: (c)

Mains

Q. Describe the major outcomes of the 26th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the commitments made by India in this conference? **(2021)**

Q. ‘Climate Change’ is a global problem. How will India be affected by climate change? How Himalayan and coastal states of India will be affected by climate change? **(2017)**