

SUSTAINABLE FOOD SYSTEMS

An Agenda for
Climate-risked
Times



Extreme Weather Events in India (2022 to 2025)

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What are extreme weather events

- They are occurrences of unusually severe weather or climate conditions that can cause devastating impacts on communities, livelihood, agriculture and natural ecosystems
- Extreme weather events are the most visible impact of climate change
- Climate change makes such events more frequent, widespread and in some cases more extreme
- Extreme weather events, amongst top risks according to World Economic Forum

2025 (8th warmest year), sets multiple 124-Year climate records

Monthly records broken nationwide and region by region

- January: **5th driest** in 124 years
- February: **Warmest** in 124 years | Minimum temperature was the highest
- March: **South Peninsula** region **3rd highest mean temperature** in 124 years
- July: East and northeast region (**4th warmest** in 124 years)
- August: Central India (**5th** highest minimum temperature)
- September: **Highest minimum temperature** on record

These are clear evidences of climate change's intensifying impacts

Year of extremes: India hit by **disasters** on **331** of **334** days in 2025

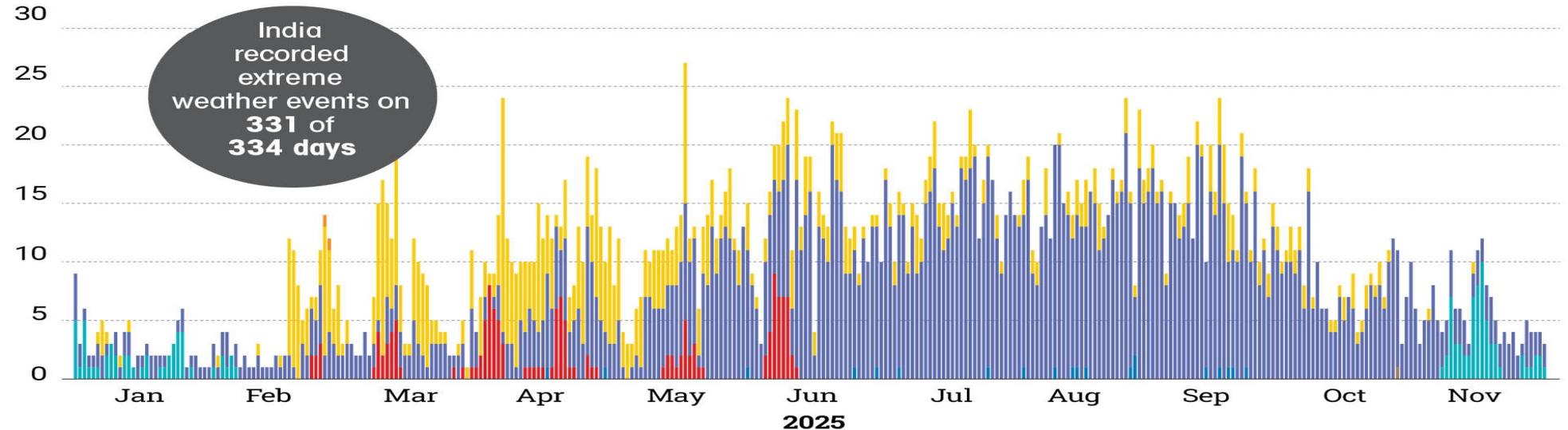
JANUARY - NOVEMBER 2025

Number of days per extreme weather event

- Lightning and storm
- Heavy rain, flood and landslide
- Heatwave
- Coldwave/cold day
- Cloudburst
- Snowfall
- Cyclone



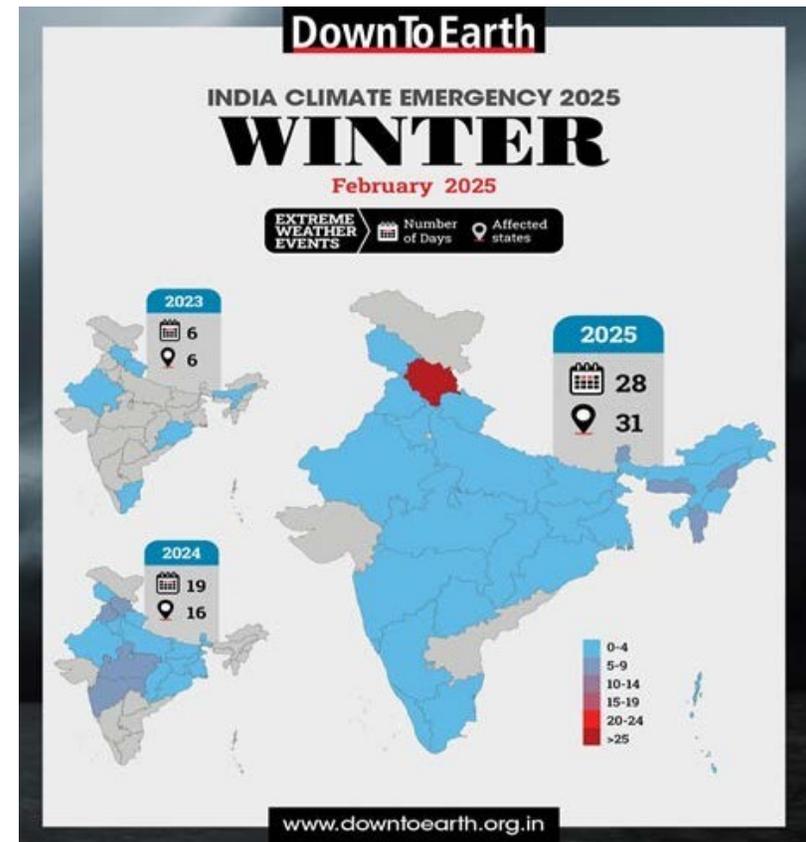
Extreme weather events across country, day-wise



Source: Based on India's database of weather disasters dashboard by CSE-DTE Data Centre. Data sourced from the Disaster Management Division Union Ministry of Home Affairs, India Meteorological Department and media reports

Longest duration and geographically wide spread in 4 years

- India experienced extreme weather events **every day on 9** of the **11 months**. They are February, April, May, June, July, August, September, October and November ; January (29 days) and March (30 days).
- In 2022 and 2023 (**5** of the 11 months) | In 2024 (**6** out of 11 months)
- For the **third consecutive year** — 2023, 2024 and 2025 — **all 36 states and Union Territories** experienced extreme weather events during the January to November period.
- **February 2025**: Longest and widest geographical spread of extreme events | Geographical spread of extreme events increased from **6 states/UTs in 2023** to 16 in 2024 and now **31 states/UTs in 2025**



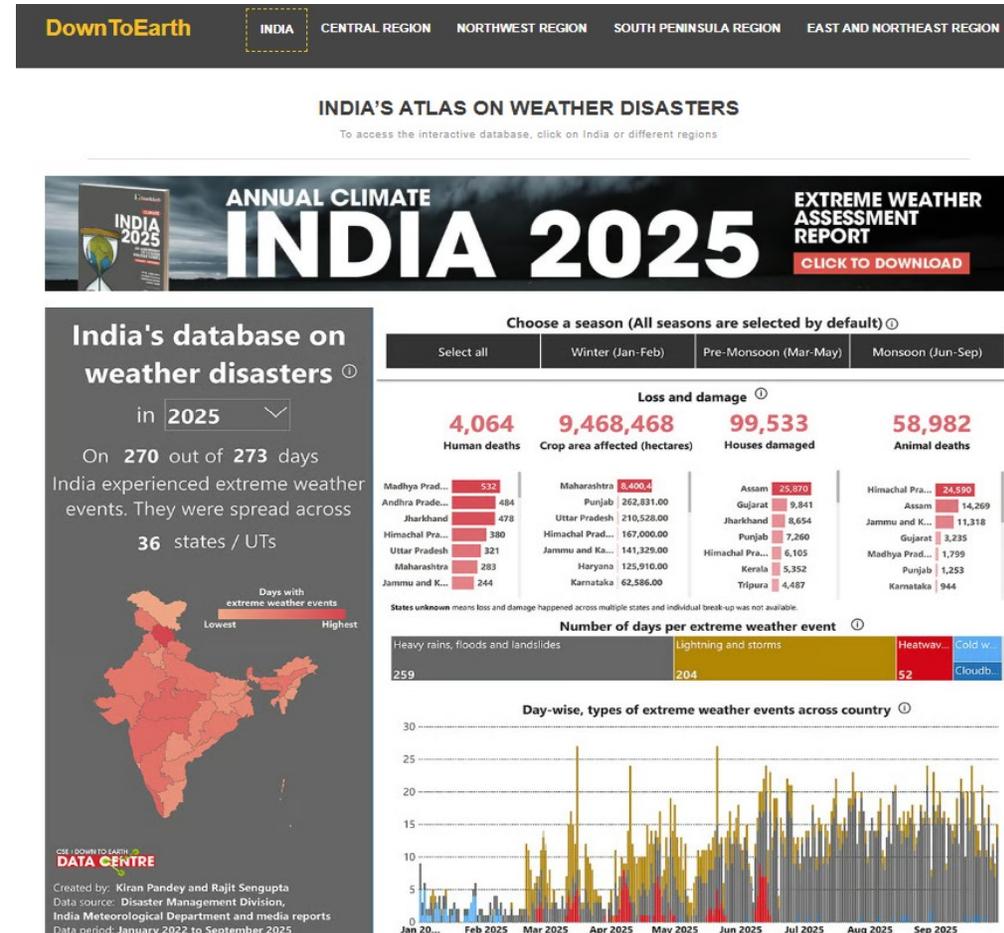
India's atlas on extreme weather events, a key resource

India's atlas on extreme weather events, an initiative of the Centre for Science and Environment

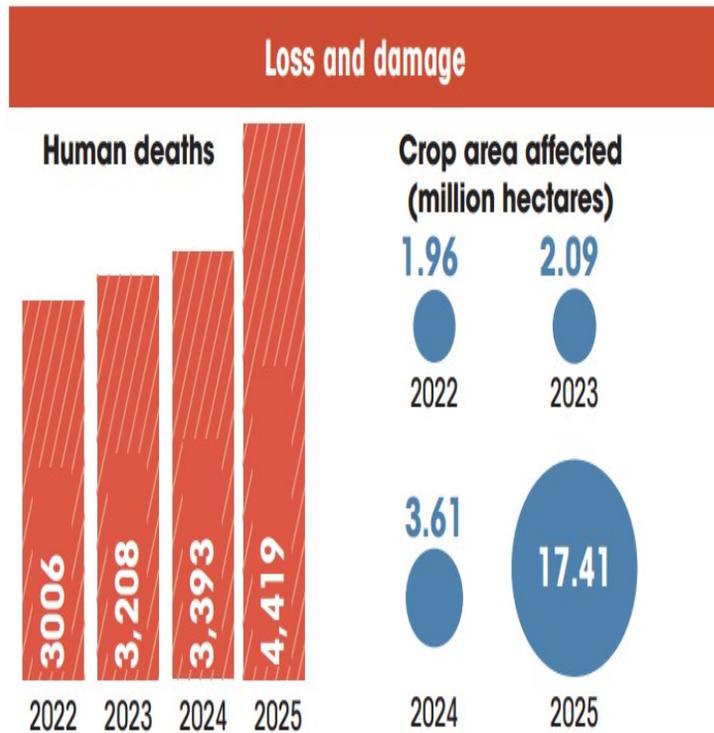
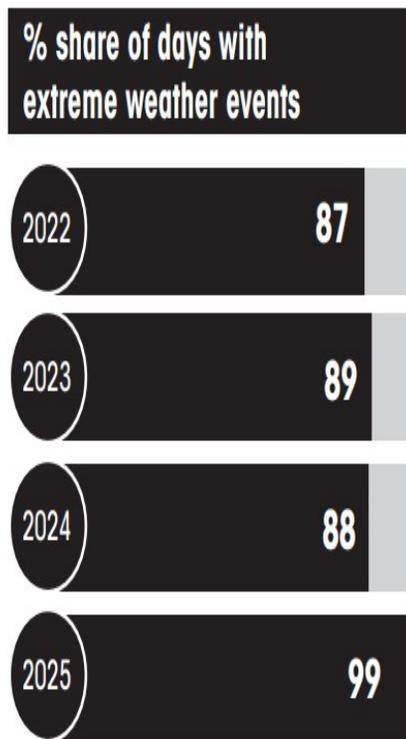
See the atlas for informed actions/decisions https://www.downtoearth.org.in/weather_disasters_in_dia

This shows

- Loss and damage
- Number of days per extreme weather events
- Daily number of states/UTs with extreme events
- State/UT wise break up
- It can be filtered by year, month, state and extreme weather event-wise

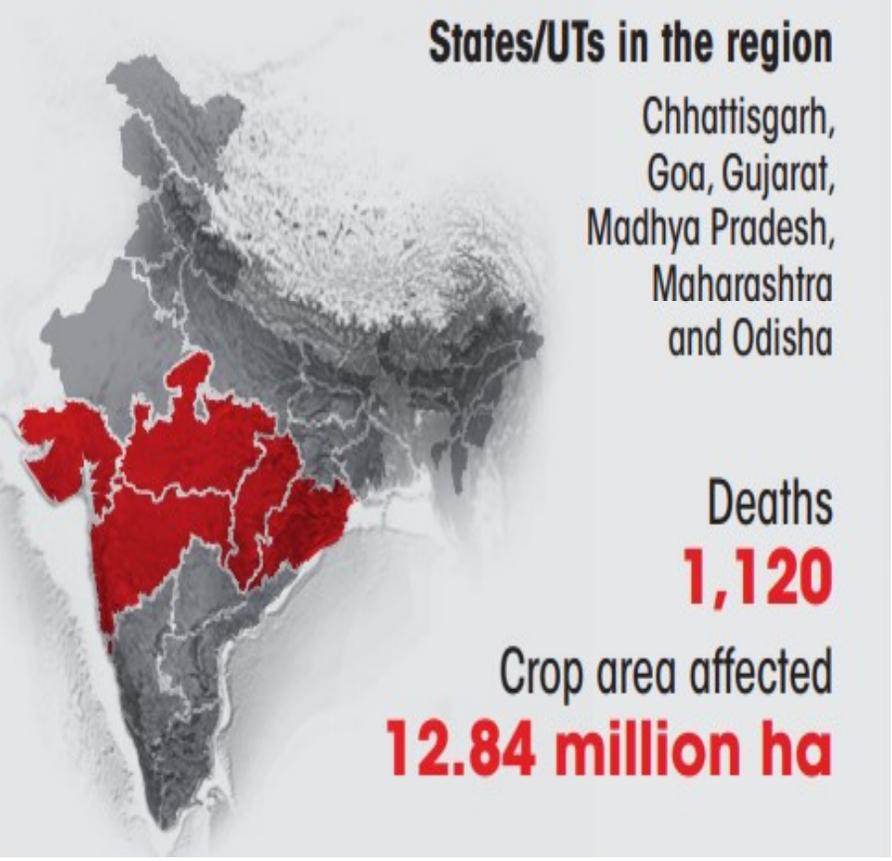


India's **new normal**: extreme weather event almost **every day**



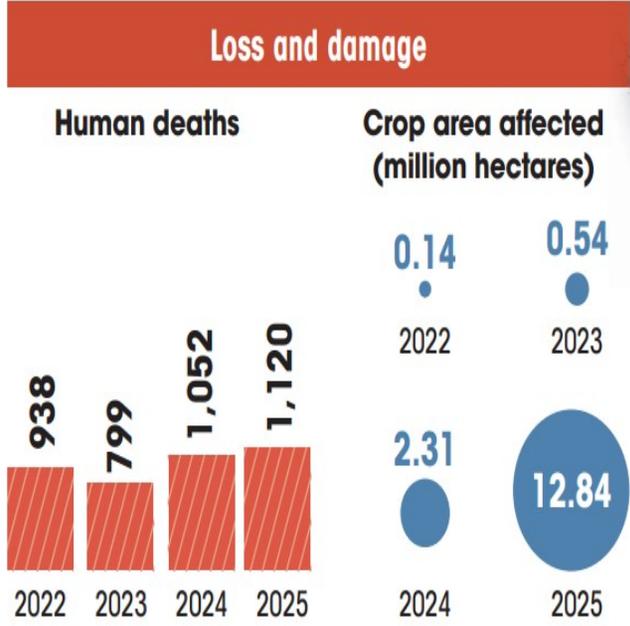
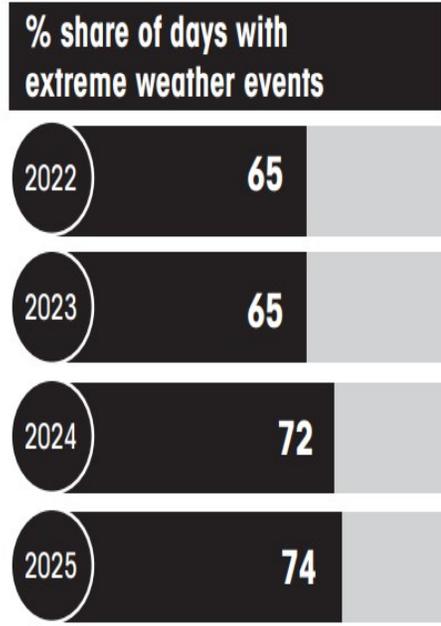
- The first eleven months of 2025 saw a **notable increase** in the **frequency** and **severity** of extreme weather events across India compared to the same period in years—2022, 2023 and 2024.
- **Human fatalities** increased **by—47 per cent** between 2022 and 2025
- **Cropped area** impacted has **risen** even more steeply, from **1.96 million hectares** in 2022 to nearly **nine times** that area in 2025

Central region recorded extreme weather events on 246 of the 334 days (Jan to Nov, 2025). Madhya Pradesh was the worst hit with events on 162 days

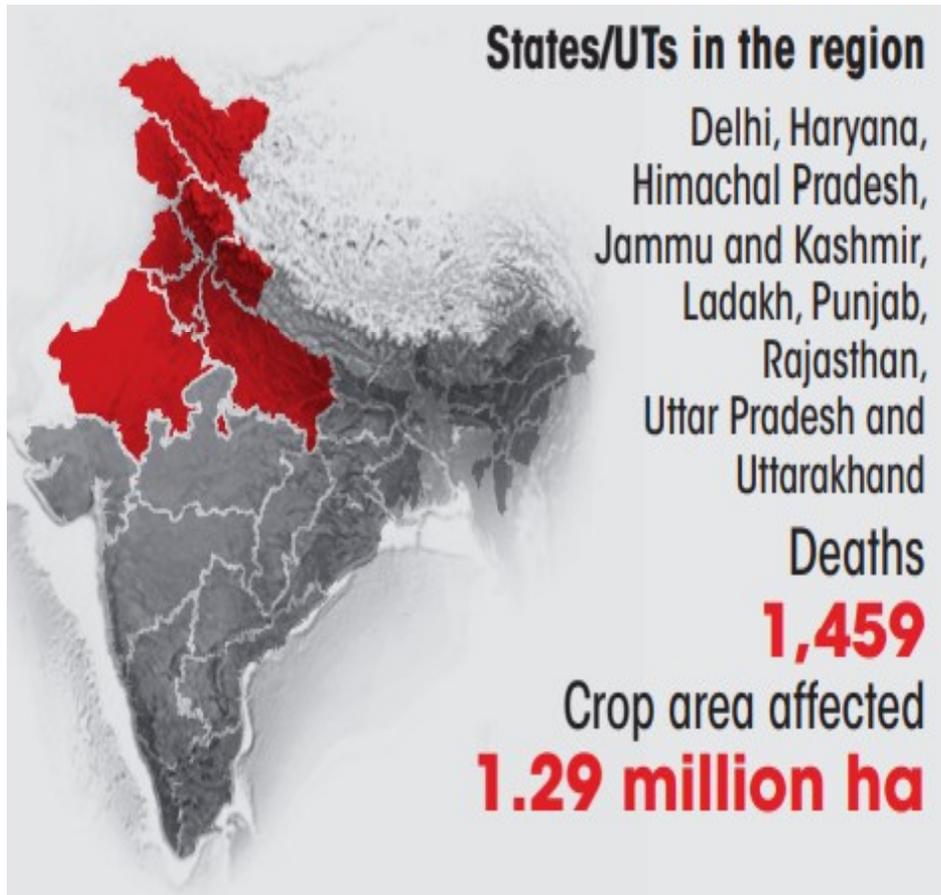


CENTRAL INDIA

The region witnessed a sharp rise in extreme weather events and their impacts. In 2025, human deaths increased by 19%, while cropped area damaged was nearly 90 times the area affected in 2022

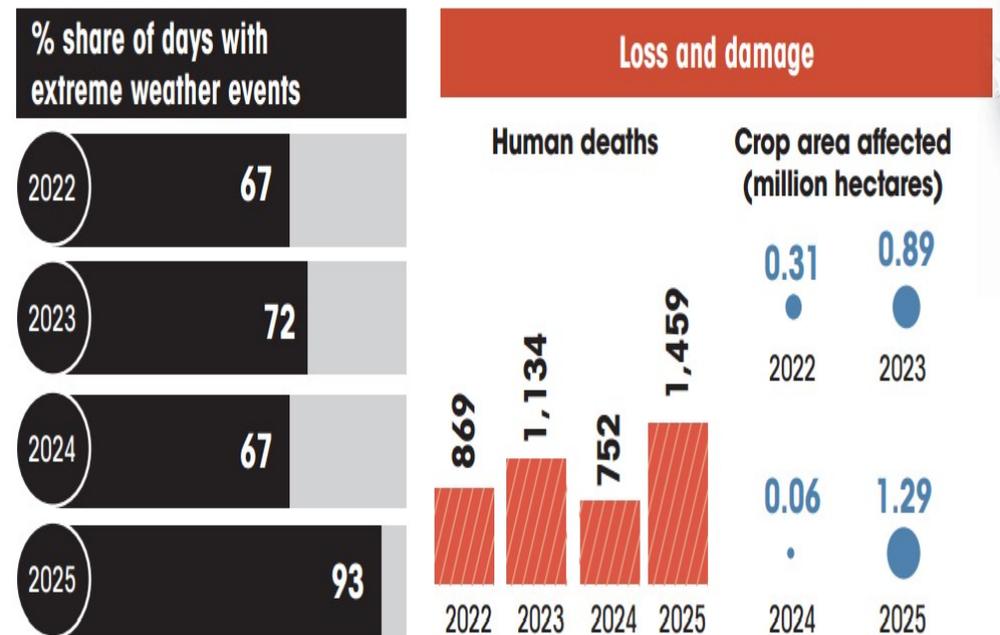


Northwest region recorded extreme weather events on **311** of the **334** days (Jan to Nov, 2025). **Himachal Pradesh** was the **worst hit** with events on **267**-days

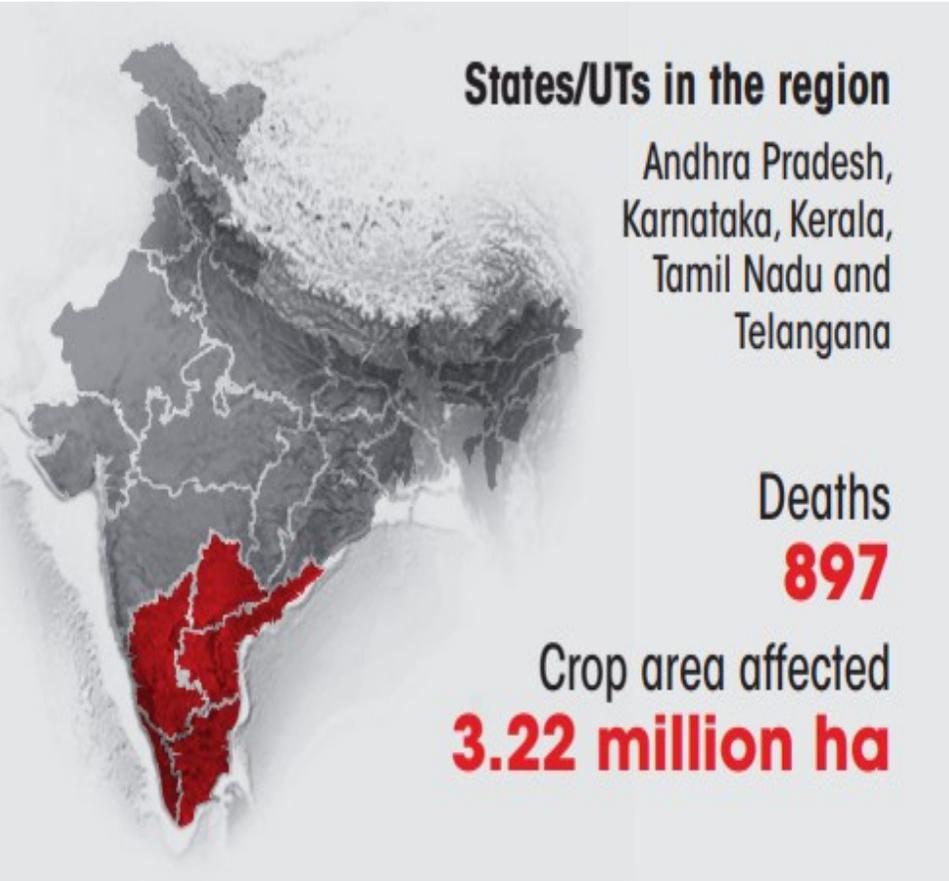


NORTHWEST INDIA

The region recorded the highest share of extreme weather days, increasing sharply from 67% in 2022 to 93% in 2025. This surge was accompanied by the highest losses, marked by a significant rise in human fatalities and extensive damage to cropped areas

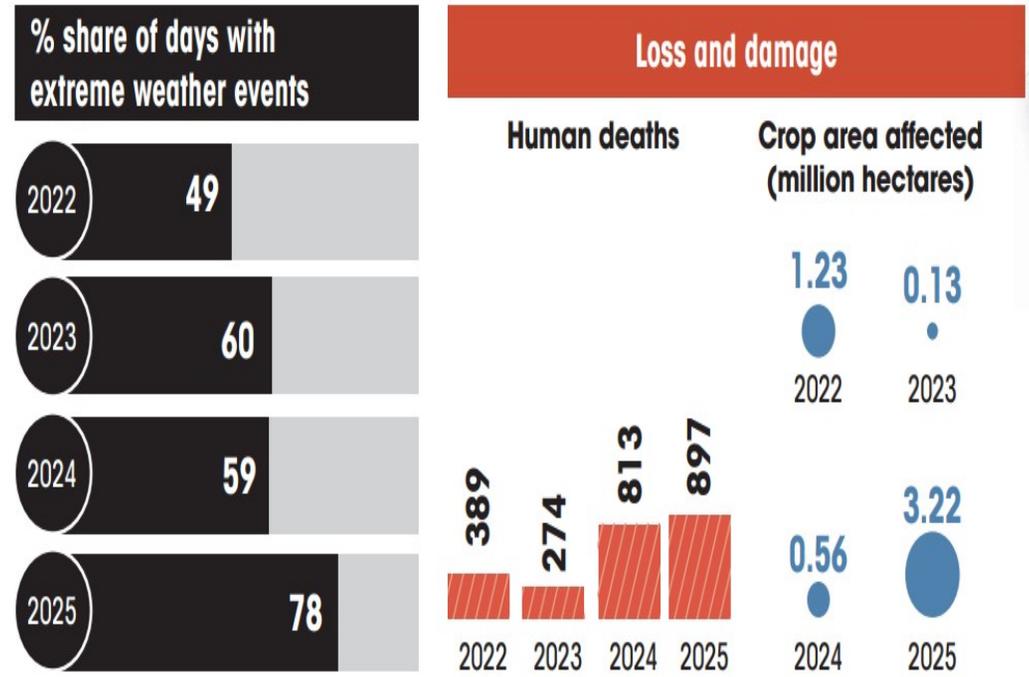


South Peninsula recorded extreme weather events on 261 of the 334 days (Jan to Nov, 2025). Kerala was the worst hit with events on 173 days



SOUTH PENINSULA

The region recorded its highest extent of crop area affected in 2025



East and Northeast region recorded extreme weather events on 275 of the 334 days (Jan to Nov, 2025). Sikkim was the worst hit with events on 151 days



States/UTs in the region

- Arunachal Pradesh
- Assam
- Bihar
- Jharkhand
- Manipur
- Meghalaya
- Mizoram
- Nagaland
- Sikkim**
- Tripura
- West Bengal

Deaths

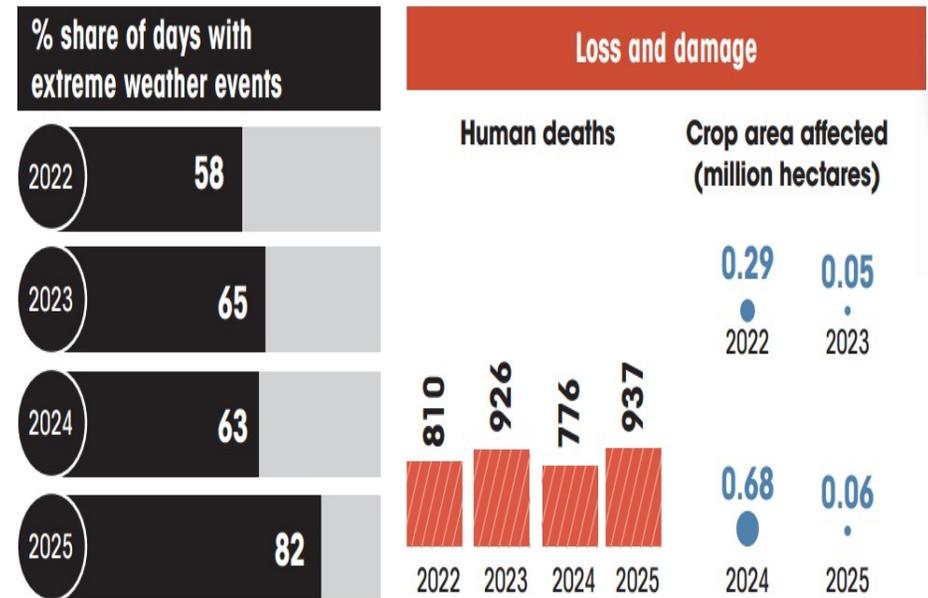
937

Crop area affected

56,978.44 ha

EAST AND NORTHEAST INDIA

The region saw the highest number of extreme weather days in four years



Source: India's database on weather disasters dashboard by CSE-DTE Data Centre; Data sourced from the Disaster Management Division of Union Ministry of Home Affairs, India Meteorological Department and media reports

Between January and November 2025, **15 states and Union Territories** saw their **highest** number of extreme weather days **since 2022**



No Seasonal Breaks: Extreme weather in 2025 was not only persistent but intensified as the year progressed

WINTER

64 Human deaths | **20,234 ha** Crop area affected



Extreme weather occurred on 57 of 59 days in January–February across 31 states and UTs. Despite a drier winter, rain, floods and landslides occurred on 51 days, reflecting short, intense rainfall. Himachal Pradesh was worst hit (52 days), followed by Punjab and Sikkim (12 each). February recorded three heatwave days.

PRE-MONSOON

993 Human deaths | **6,028 ha** Crop area affected



Extreme weather occurred on 91 of 92 days between March and May across 35 states and UTs, rising from 88 per cent of days in 2022 to 99 per cent in 2025. Himachal Pradesh was worst hit (62 days), followed by Kerala (60) and Madhya Pradesh (45). Heatwaves affected 19 states, including Himalayan regions such as Himachal Pradesh and Jammu and Kashmir.

MONSOON

3,007 Human deaths | **110,284,21 ha** Crop area affected



All 122 days from June to September recorded extreme weather nationwide. Heavy rain, floods and landslides occurred daily; lightning and storms on 104 days, cloudbursts on 17, and heatwaves on eight. Himachal Pradesh was worst hit (103 days), followed by Gujarat and Madhya Pradesh (94 each). In season with above-normal rainfall, 147 districts reported deficient rainfall.

POST-MONSOON

359 Human deaths | **6,352,317 ha** Crop area affected

All 61 days of October–November saw extreme weather across 34 states and UTs. Himachal Pradesh was the worst affected (50 days), followed by Andhra Pradesh (38) and Kerala (26). The South Peninsula recorded its 13th-wettest October since 1901. Cold waves arrived earlier than in the past four years, affecting 13 states.

Extreme weather events: the seasonal trends (2022 to 2025)

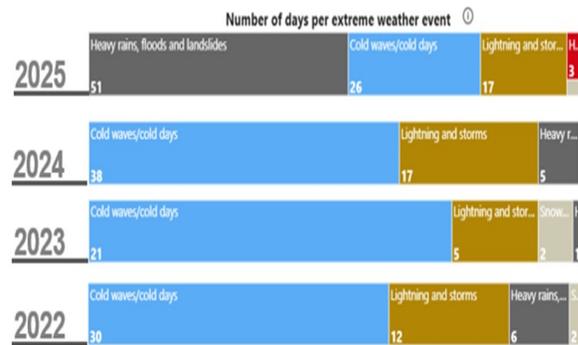
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Winter season (Jan to Feb): 2022 to 2025



- Despite being **drier than usual**, the winter season recorded **51 days of heavy rain, floods and landslides**, pointing to **localised, short but intense** rainfall episodes.
- The season also recorded **three heatwave days (in Feb)**— the earliest such occurrence since 2022

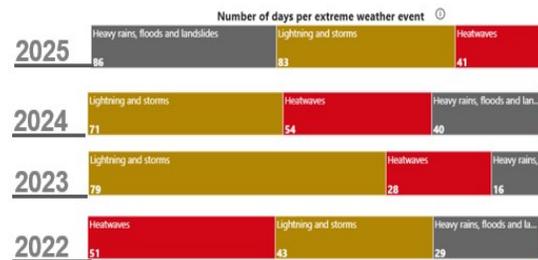
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Pre-monsoon season (March to May): 2022 to 2025



- Heavy rain, floods and landslides were again the most frequent events — **a shift from previous years** when hailstorms, classified under lightning and storms, dominated.
- Heatwaves were reported in 19 states and UTs, including the Himalayan regions of Himachal Pradesh, Jammu and Kashmir, and Ladakh.

No Seasonal Breaks: Extreme weather in 2025 was not only persistent but intensified as the year progressed

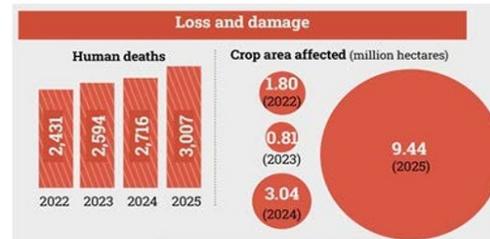
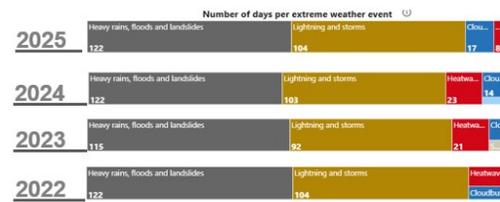
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Monsoon season (June to Sep): 2022 to 2025



- **Monsoon** remains the **most devastating season**, with at least **one major disaster every single day since 2022**;
- **Human deaths** : **24 % increase** in 4 years; (from **2431** in 2022 to **3007** in 2025)
- **Cropped area affected** increase from 1.80 million hectares in 2022 to 9.44 million hectares in 2025 (**424 % increase in 4 years**)

POST-MONSOON

359 | **6,352,317 ha**
Human deaths | Crop area affected

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Extreme weather struck almost every cropping season in 2025; cold wave in 2026 too had an impact

Cold wave affects crops and livestock in Mysuru, Chamarajanagar

INN / Dec 18, 2025, 05:07 IST



between mid-Oct and mid-Nov have shown signs of stunted growth in temperatures, attributed to climate change and other factors:

Farmers devastated as unexpected weather destroys key crops: 'Cold chamber'

Mysuru: Lower supply can drive up food prices.

Chamarajanagar districts over the past few

days has begun to take a toll on people,

livestock, and state concerns among

While harvesting crops is under way

Extreme Cold In North India Could Push Up Food Prices By February: Experts

Prolonged ground frost and biting cold at a critical stage of growth have raised fears of sharp yield losses, directly affecting farmers' income.

Edited by: [NDTV News Desk](#) | [Business News](#) | Jan 14, 2026 12:08 pm IST ⓘ

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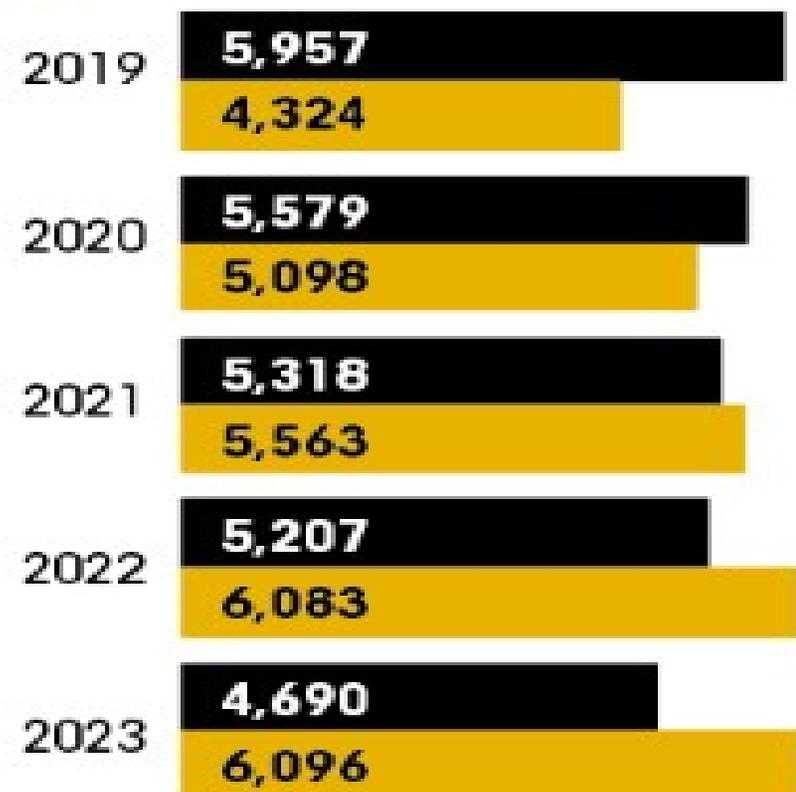
State of farmers in climate vulnerable India

- In 2023, the farm sector witnessed 10,786 suicides (or nearly 30 farmers commit suicide every day)
- **Maharashtra** (38.5%), **Karnataka** (22.5%), Andhra Pradesh (8.6%), Madhya Pradesh (7.2%); Maharashtra and Karnataka have remained the **epicentres** of farmer suicides in India for more than two decades
- **Protests: 195** major **farmer protests** occurred across **22 states** in 2023 and early 2024; Crop insurance and compensation for disasters (**at least 13 protests**)

TOTAL NUMBER OF SUICIDES IN LAST 5 YEARS

■ Farmers/Cultivators

■ Agricultural Labourers



Agriculture sector and farmers at risk, due to extreme weather events

- Data from India's atlas on **extreme weather** developed and managed by CSE/DTE, shows a **clear rise** in the **number, spread and intensity** of extreme events across the country.
- Climate risk is **no longer regional** or **seasonal**.
- Extreme weather is no longer an occasional disruption to Indian agriculture; it has become a permanent feature of the farming landscape
- **Economic Survey (2025-26)**, too admitted how agriculture was increasingly facing weather-related shocks, causing heavy crop yield losses for farmers.