

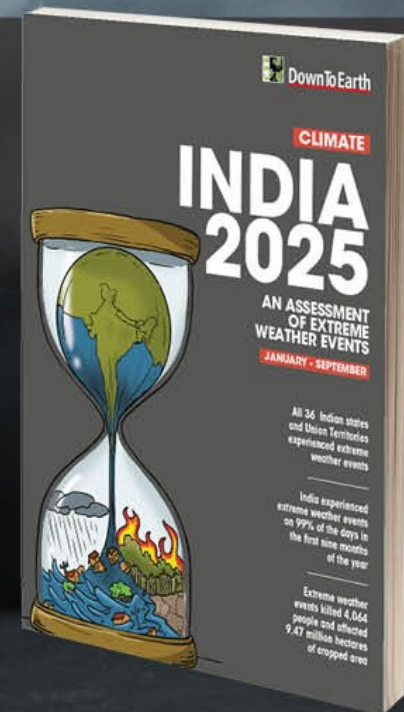


DownToEarth **WEBINARS**

A DISASTER A DAY

Release of Down To Earth's Annual Climate India 2025 Extreme Weather Assessment Report

Richard Mahapatra, Managing Editor, Down to Earth



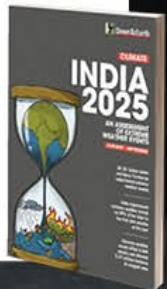


DownToEarth WEBINARS

Tracking the extreme: India Climate 2025

Four years: 2022-2025

- Nearly 1,500 days of daily monitoring
- Over years, seasonal/regional trends captured
- Over years, geography of disasters appearing
- Contrasting extremes and increasing loss and damages





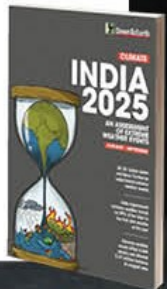
Tracking the extreme: Why and how

WHY we track

- Extreme weather events are the signs of the climate change
- To gauge the frequency and ferociousness of these events
- To create an atlas of India's weather disasters
- To equip authorities with patterns of disasters for better adaptation and responses

HOW (Sources)

- India Meteorological Department
- Daily press releases and All India Weather Summary and Forecast bulletins
- Climate Summary for the Month (loss and damage, temperature, rainfall)
- Disaster Management Division, Union Ministry of Home Affairs
- Situation report regarding flood/Heavy rainfall in the country (loss and damage)
- Media reports



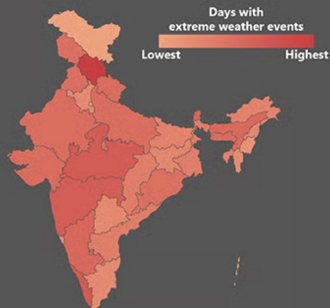


INDIA CLIMATE 2025

India's database on weather disasters ①

in 2025

On 270 out of 273 days
India experienced extreme weather
events. They were spread across
36 states / UTs



CSE | DOWN TO EARTH
DATA CENTRE

Created by: Kiran Pandey and Rajit Sengupta
Data source: Disaster Management Division,
India Meteorological Department and media reports
Data period: January 2022 to September 2025

Choose a season (All seasons are selected by default) ①

Select all Winter (Jan-Feb) Pre-Monsoon (Mar-May) Monsoon (Jun-Sep)

Loss and damage ①

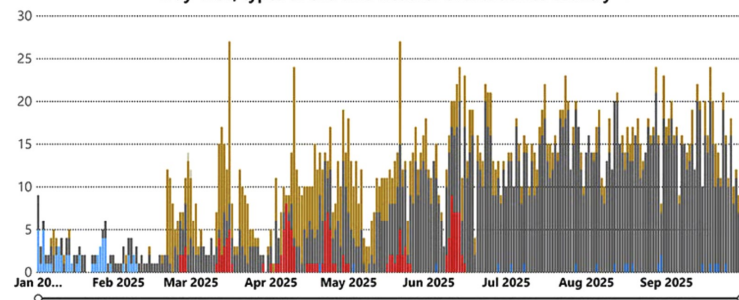
Human deaths	Crop area affected (hectares)	Houses damaged	Animal deaths
4,064	9,468,468	99,533	58,982
Madhya Prad... 532	Maharashtra 8,400.4	Assam 25,870	Himachal Pra... 24,590
Andhra Prade... 484	Punjab 262,831.00	Gujarat 9,841	Assam 14,269
Jharkhand 478	Uttar Pradesh 210,528.00	Jharkhand 8,654	Jammu and K... 11,318
Himachal Pra... 380	Himachal Pra... 167,000.00	Punjab 7,260	Gujarat 3,235
Uttar Pradesh 321	Jammu and Ka... 141,329.00	Himachal Pra... 6,105	Madhya Prad... 1,799
Maharashtra 283	Haryana 125,910.00	Kerala 5,352	Punjab 1,253
Jammu and K... 244	Karnataka 62,586.00	Tripura 4,487	Karnataka 944

States unknown means loss and damage happened across multiple states and individual break-up was not available.

Number of days per extreme weather event ①

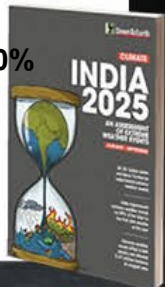
Heavy rains, floods and landslides	Lightning and storms	Heatwav...	Cold w...
259	204	52	Cloudb...

Day-wise, types of extreme weather events across country ①



January to September 2025

- Number of days with Extreme Weather events (270 out of 273 days)/ **HIGHEST IN 4 YRS**
- Number of states/UTs with extreme events: **36 states/UTs/ FIRST TIME**
- 9 months; in each records broken
- Loss and damage
4,064 human deaths/**RISE OF 48% IN 4 YRS**
9.47 million ha cropped area affected/ **400% INCREASE IN 4 YRS**
58,982 animals (includes livestock)
99,533 houses damaged



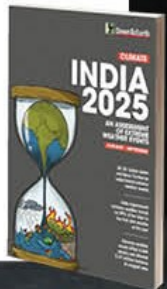


INDIA CLIMATE 2025

5 states with highest number of days with extreme weather

(January-September, 273 days)

- HP: 217
- KERALA: 147
- MP: 144
- MAHA: 140
- SIKKIM: 125





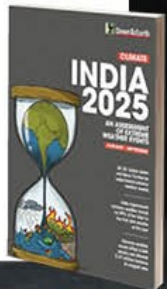
INDIA CLIMATE 2025

10 states with highest human casualties

- MP: 532
- AP: 484
- JHR: 478
- HP: 380
- UP: 321
- MAHA: 283
- UK: 169
- BIR: 146
- GUJ: 128
- KAR: 117

10 states with highest crop areas affected

- MAHA: 8.4 million Ha
- PUN: 0.26 million Ha
- UP: 0.21 million Ha
- HP: 0.16 million Ha
- J&K: 0.14 million Ha
- HAR: 0.12 million Ha
- KAR: 62,586 Ha
- ASSAM: 42,627 Ha
- RAJ: 20,436 Ha
- MP: 12,000 Ha





Region-wise extreme weather events

📅 Number of days ☠ Deaths 🌾 Crop area affected (ha) 🐄 Total animal deaths (big and small)
🏠 Houses damaged (fully and partially)

Northwest region

It recorded extreme weather events on **257** of the **273** days, which claimed **1,342** lives, damaged **928,079** ha of crop area

	📅	☠	🌾	🐄	🏠
Chandigarh	7	1	0	0	0
Delhi	11	15	0	0	0
Haryana	50	34	125,910	22	686
Himachal Pradesh	217	380	167,000	24,590	6,105
Jammu and Kashmir	102	244	141,329	11,318	4,335
Ladakh	4	0	0	0	0
Punjab	102	71	262,831	1,253	7,260
Rajasthan	107	107	20,436	47	25
Uttar Pradesh	106	321	210,528	0	0
Uttarakhand	110	169	45	122	480



(January 1- September 30, 2025)

- It recorded extreme weather events on **257 of the 273 days**
- **1,342** lives lost
- **928,079 ha** of crop area affected





Region-wise extreme weather events

📅 Number of days ☠ Deaths 🌾 Crop area affected (ha) 🐄 Total animal deaths (big and small)
🏠 Houses damaged (fully and partially)

East and Northeast region

It recorded extreme weather events on 229 of the 273 days, which claimed 878 lives, damaged 56,046 ha of crop area

	📅	☠	🌾	🐄	🏠
Arunachal Pradesh	63	43	1,722	369	602
Assam	113	47	42,627	14,269	25,870
Bihar	63	146	379	0	363
Jharkhand	56	478	2,390	0	8,654
Manipur	35	7	1,895	0	4,190
Meghalaya	109	26	6,439	31	695
Mizoram	46	34	0	0	99
Nagaland	53	8	586	76	1,774
Sikkim	125	24	8	1	1,430
Tripura	65	31	0	7	4,487
West Bengal	73	34	0	0	0



(January 1- September 30, 2025)

- It recorded extreme weather events on 229 of the 273 days
- 878 lives lost
- 56,046 ha of crop area affected





Region-wise extreme weather events

📅 Number of days ☠ Deaths 🌾 Crop area affected (ha) 🐄 Total animal deaths (big and small)
🏠 Houses damaged (fully and partially)

South Peninsula region

It recorded extreme weather events on 205 of the 273 days, which claimed 745 lives, damaged 67,321 ha of crop area

	📅	☠	🌾	🐄	🏠
A&N Islands	9	1	0	0	3
Andhra Pradesh	74	484	0	0	289
Karnataka	120	117	62,586	944	3,849
Kerala	147	114	0	0	5,352
Lakshadweep	6	0	0	0	0
Puducherry	24	0	0	0	16
Tamil Nadu	49	6	162	0	93
Telangana	51	23	4,573	0	0



(January 1- September 30, 2025)

- It recorded extreme weather events on 205 of the 273 days
- 745 lives lost
- 67,321 ha of crop area affected





Region-wise extreme weather events

📅 Number of days ☠ Deaths 🌾 Crop area affected (ha) 🐄 Total animal deaths (big and small)
🏠 Houses damaged (fully and partially)

Central region

It recorded extreme weather events on **200** of the **273** days, which claimed **1,093** lives, damaged **8.42 million** ha crop area

	📅	☠	🌾	🐄	🏠
Chhattisgarh	74	96	0	344	2,095
DNH&DD*	1	0	0	0	0
Goa	42	4	0	0	35
Gujarat	110	128	0	3,235	9,841
Madhya Pradesh	144	532	12,000	1,799	4,089
Maharashtra	140	283	8,400,429	550	3,370
Odisha	103	50	4,592	5	3,446



(January 1- September 30, 2025)

- It recorded extreme weather events on **200 of the 273 days**
- **1,093** lives lost
- **8.42 million ha** of crop area affected

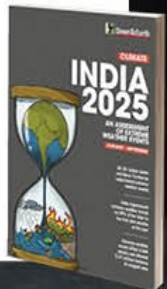




INDIA CLIMATE 2025

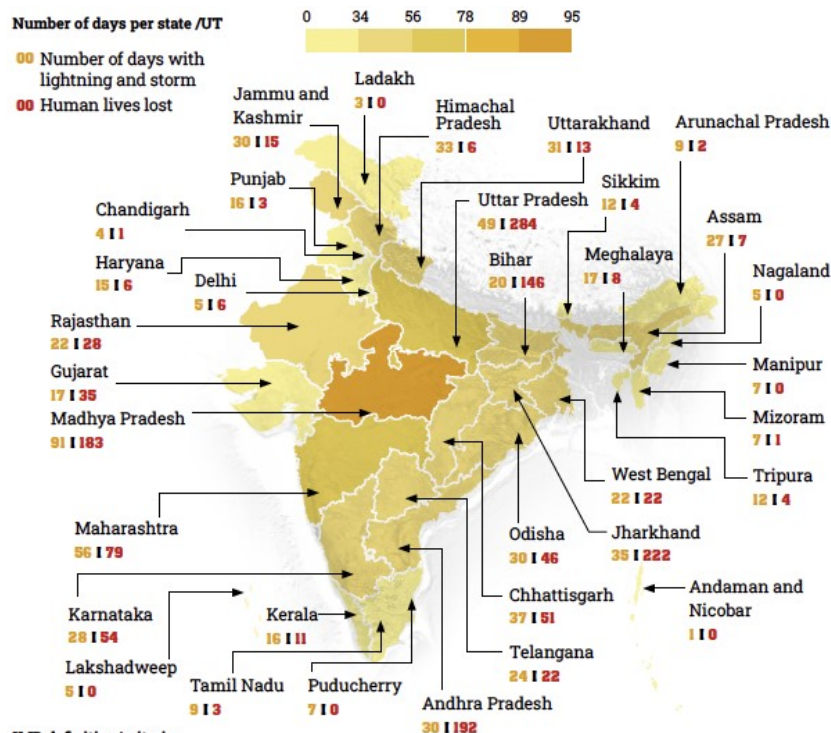
Which disasters killed the most (January-September, 273 days)

- Heavy rain/floods/landslides: 2,440
- Lightning and storms: 1,456
 - Cloudbursts: 135
 - Heatwaves: 21
 - Snowfall: 12





LIGHTNING AND STORM



IMD definition/criteria

Lightning is an electrical discharge caused by imbalances between storm clouds and the ground or within the clouds themselves. Storm includes duststorms (caused by thunderstorms or strong pressure gradients associated with cyclones which increase wind speed over a wide area), hailstorms (an outgrowth of a severe thunderstorm in which balls or irregularly shaped lumps of ice fall with the rain), thunderstorms and gales (a very strong wind).

(January 1- September 30, 2025)

- Number of days: 204 of 273 days
- Human deaths: 1,456

Regions affected: 35 states/UTs

- Madhya Pradesh (91 days)
- Maharashtra (56 days)
- Uttar Pradesh (49 days)
- Chhattisgarh (37 days)
- Jharkhand (35 days)

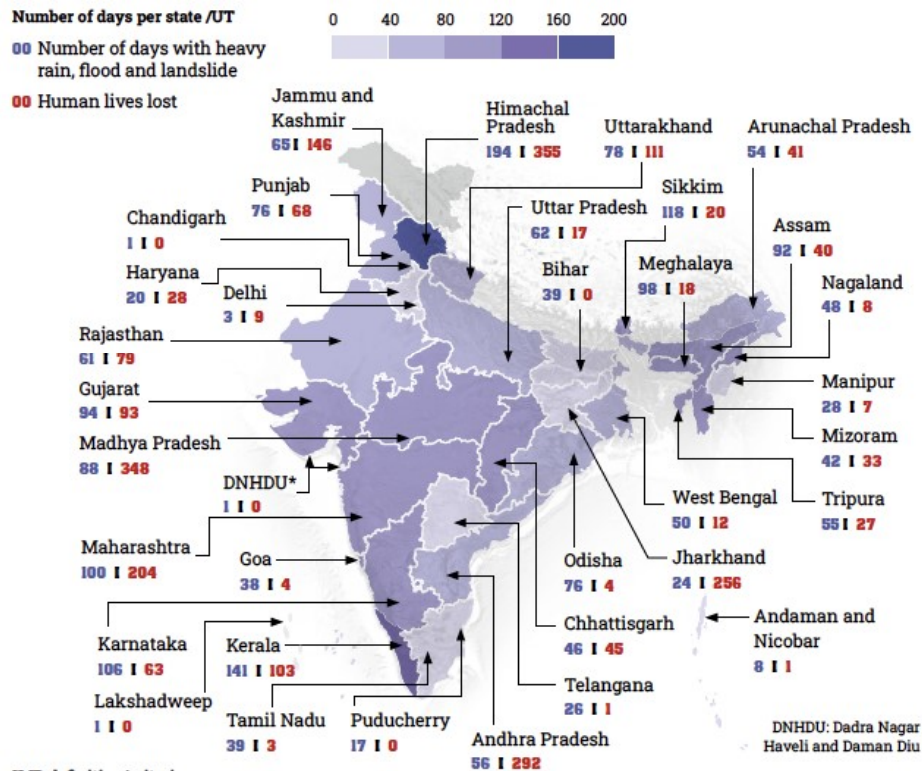
FREQUENCY TRACKER

Number of days lightning and storm were recorded in India





HEAVY RAIN, FLOOD AND LANDSLIDE



IMD definition/criteria

Heavy rainfall happens when a region receives 64.5-115.5 mm rain in 24 hours. In the case of very heavy rainfall, the threshold increases to 115.6-204.4 mm and in extremely heavy rainfall it is 204.5 mm or more. The report has considered all very heavy and extremely heavy rainfall events, and heavy rainfall events only when they have caused damages.

(January 1- September 30, 2025)

- Number of days: 259 of 273 days
- Human deaths: 2,440

Regions affected: 35 states/UTs

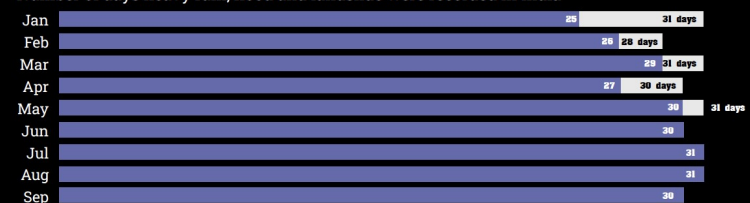
- Himachal Pradesh (194 days)
- Kerala (141 days)
- Sikkim (118 days)

Human deaths

- Himachal Pradesh (355)
- Madhya Pradesh (348)
- Andhra Pradesh (292)

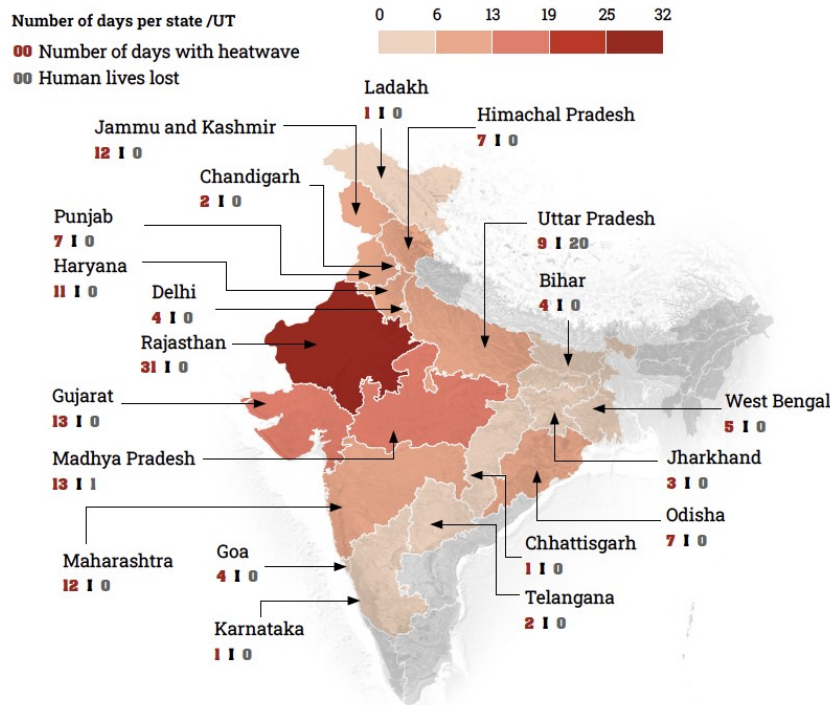
FREQUENCY TRACKER

Number of days heavy rain, flood and landslide were recorded in India





HEATWAVE



IMD definition/criteria

Heatwave conditions signify a certain amount of rise in temperature at a given place with respect to normal climatological value. The report has considered heatwaves (4.5°C to 6.4°C departure of the maximum temperature from normal), and severe heatwaves (departure of more than 6.4°C).

(January 1- September 30, 2025)

- Number of days: 52 of 273 days
- Human deaths: 21

Regions affected: 20 states/UTs

- Rajasthan (31 days)
- Gujarat (13 days)
- Madhya Pradesh (13 days)

Human deaths

- Uttar Pradesh (20)

Heatwave in April (22 out of 30 days)

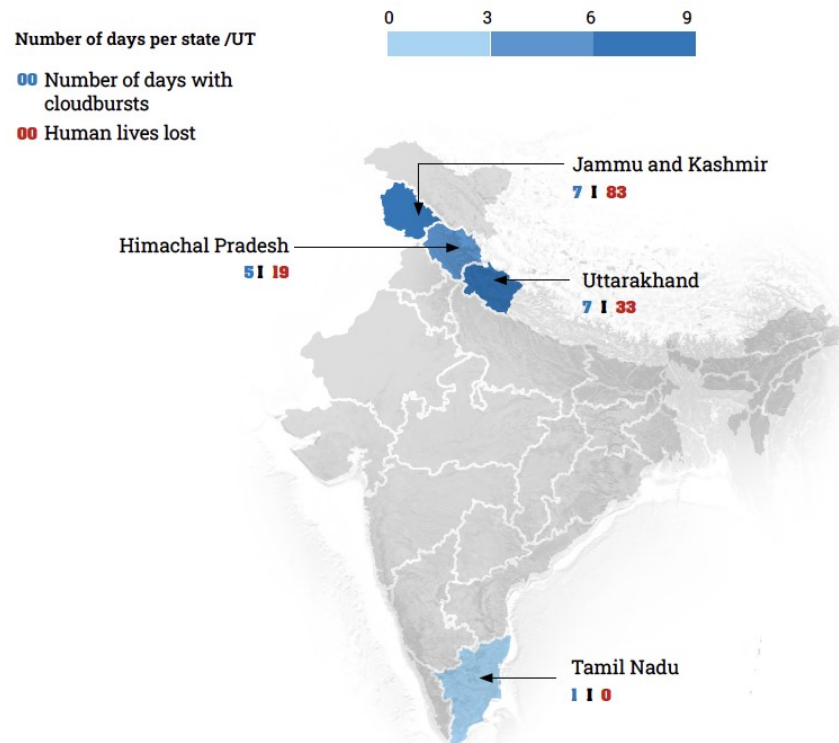
FREQUENCY TRACKER

Number of days heatwave were recorded in India





CLOUDBURST



IMD definition/criteria
Cloudburst is very heavy rainfall (100 mm per hour) over a localised area.
It is accompanied with strong winds and lightning.

(January 1- September 30, 2025)

- Number of days: 19 of 273 days
- Human deaths: 135

Regions affected: 4 states/UTs

- Jammu and Kashmir (7 days)
- Uttarakhand (7 days)
- Himachal Pradesh (5 days)
- Tamil Nadu (1 day)

Human deaths

- Jammu and Kashmir (83)
- Uttarakhand (33)
- Himachal Pradesh (19)

FREQUENCY TRACKER

Number of days with cloudburst

