Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release
Date: 17th December, 2023
Time of Issue: 1345 hours IST

Subject: Heavy to very heavy rainfall activity likely over south Tamil Nadu & Kerala during next 2 days and decrease thereafter.

Realized weather during past 24 hours till 0830 hours IST of today:

- **Minimum temperatures** are in the range of 5-10°C over most parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh and some parts of north Rajasthan, Madhya Pradesh, north Chhattisgarh, western parts of Gangetic West Bengal, north interior Odisha and Bihar.
- **Dense fog** observed in isolated pockets of Punjab, Assam & Meghalaya & Tripura.
- **Heavy to very heavy rainfall** observed at isolated places over Tamil Nadu, Puducherry & Karaikal.
- **Significant rainfall** (from 0830 hrs of yesterday to 0830 hrs of today): **Tamil Nadu, Puducherry & Karaikal**: Nalumukku (dist Tirunelveli) 19, Oothu (dist Tirunelveli) 17, Kakkachi (dist Tirunelveli) 15, Manjolai (dist Tirunelveli) 13, Kanniyakumari (dist Kanniyakumari) 11, Thirukuvalai (dist Nagapattinam), Orthanad (dist Thanjavur) 9 each, Theerthandathanam (dist Ramanathapuram), Muthupet (dist Thiruvarur) 8 each, Tiruvarur (dist Thiruvarur), Vattanam (dist Ramanathapuram), Manamelkudi (dist Pudukkottai), Tondi (dist Ramanathapuram), Thirupathisaram (dist Kanniyakumari), Ramnadu (dist Ramanathapuram), Needamangalam (dist Thiruvarur) 7 each.

Weather Systems and Forecast & Warnings during next 5 days: (graphics in Annexure I)

Weather Systems

- A Cyclonic Circulation lies over Comorin area & neighbourhood extends upto middle tropospheric levels.
- A Western Disturbance as a cyclonic circulation over Jammu & neighbourhood with trough aloft in middle tropospheric levels roughly along Long. 74°E and north of Lat. 32°N. An induced cyclonic circulation lies over north Haryana & neighbourhood in lower tropospheric levels.

Forecast & Warnings:

- Light to moderate rainfall at some places very likely over Tamil Nadu; at many places over Kerala & Mahe during 17th-18th and at most places over Lakshadweep during 17th - 19th December.
- **Isolated heavy rainfall** likely over south Tamil Nadu and south Kerala on 17th & 18th and over Lakshadweep on 18th December**. Isolated very heavy rainfall is also very likely over south Tamil Nadu on 17th & 18th and south Kerala on 17th December, 2023. Isolated Extremely Heavy rainfall also likely over south Tamil Nadu today, the 17th December.**
- Isolated light rainfall/snowfall is very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 17th December.
- **Strong off-shore winds speed reaching 25-35 kmph gusting to 45 kmph** are likely along & off Gujarat Coast on 17th & 18th December, 2023.

- No significant weather likely over remaining parts of the country during next 5 days.

Dense fog warning:

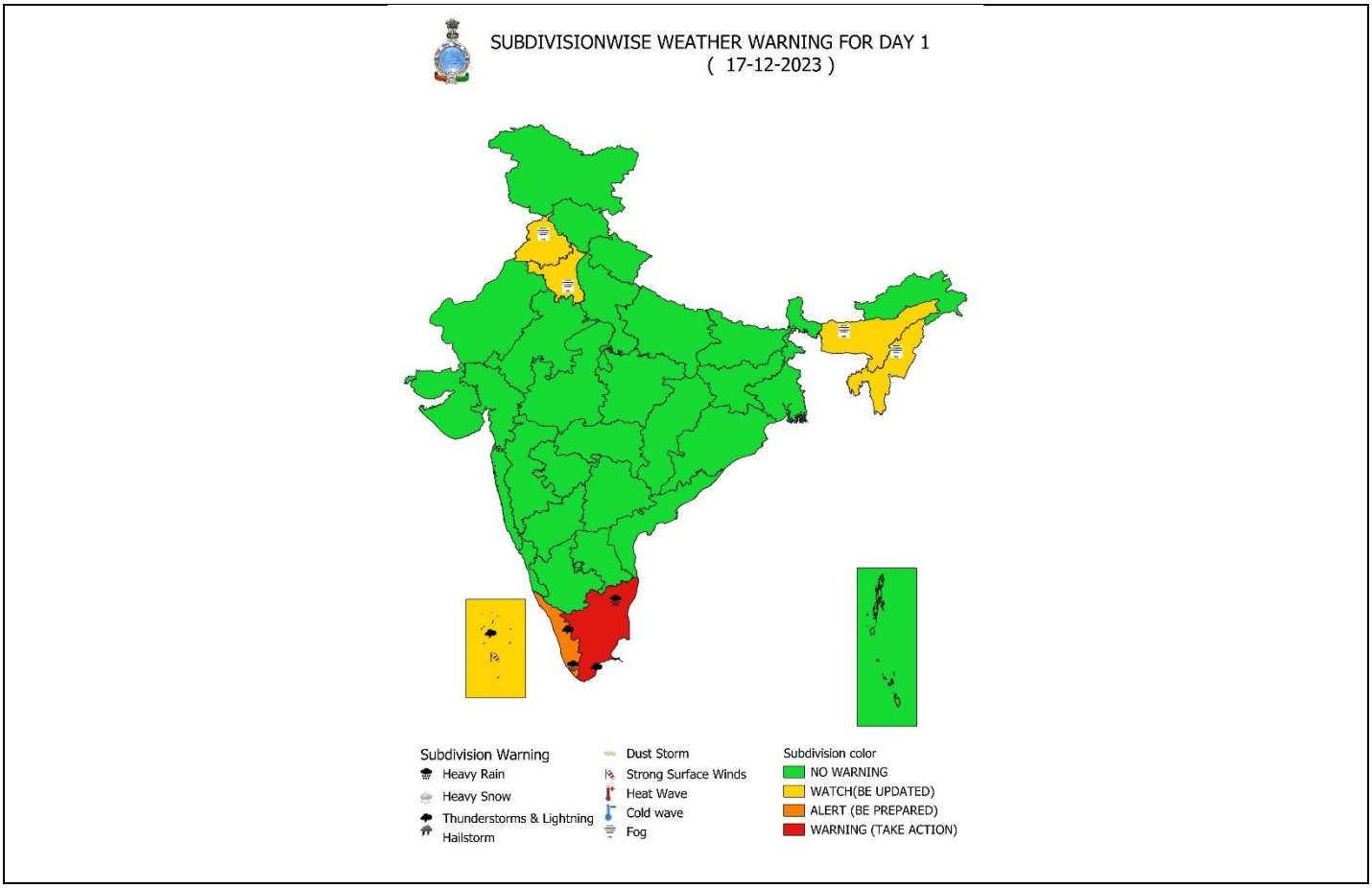
- **Dense fog** very likely in isolated pockets over Punjab and Haryana on 18th, 21st & 22nd and over Assam & Meghalaya & Tripura during 18th to 20th December, 2023 during morning hours.

Minimum Temperatures Forecast:

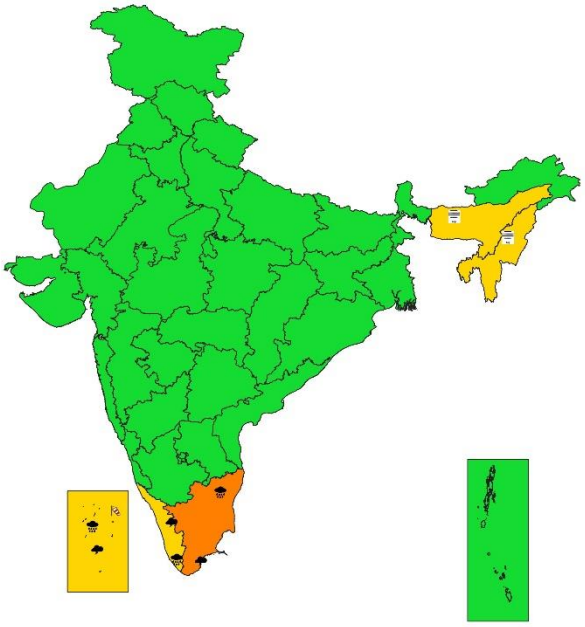
- Fall in minimum temperatures by about 2°C very likely over many parts of Northwest India during next 3 days and no significant change thereafter.
- Gradual fall in minimum temperatures by 2-3°C very likely over many parts of Madhya Pradesh during next 3 days and no significant change thereafter.
- No significant change in Minimum Temperatures likely over rest parts of the country during next 4-5 days.

For more details kindly refer: https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php and https://mausam.imd.gov.in/responsive/cycloneinformation.php

Annexure I



SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
(18-12-2023)

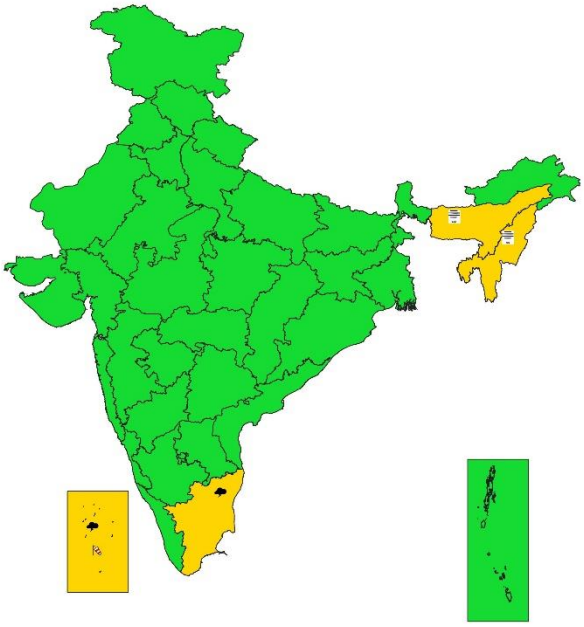


Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm

Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog

Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)

SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
(19-12-2023)



Subdivision Warning
Heavy Rain
Heavy Snow
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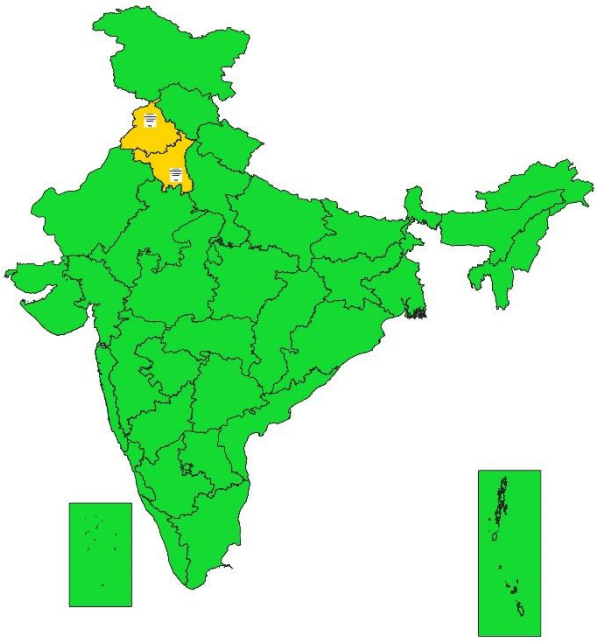
Hailstorm

Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog

Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)

SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
(20-12-2023)



Subdivision Warning
Heavy Rain
Heavy Snow
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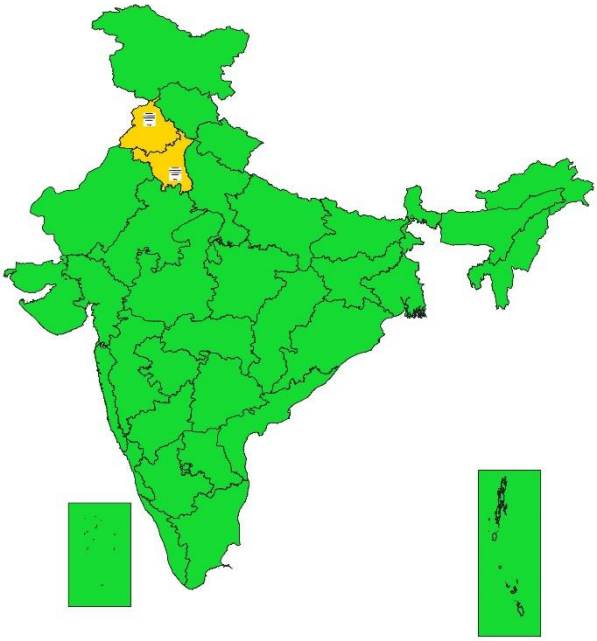
Hailstorm

Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog

Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)

SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
(21-12-2023)



Subdivision Warning
Heavy Rain
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Hailstorm

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Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION)

Impact & Action Suggested due to very/extremely heavy rainfall over south Tamil Nadu on 17th & 18th and south Kerala on 17th December, 2023.

A. Impact Expected

❖ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.

❖ Occasional reduction in visibility due to heavy rainfall.
❖ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
❖ Minor damage to kutcha roads.
❖ Possibilities of damage to vulnerable structure.
❖ Localized Landslides/Mudslides
❖ Damage to horticulture and standing crops in some areas due to inundation.
❖ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC).

B. Action Suggested

❖ Check for traffic congestion on your route before leaving for your destination.

❖ Follow any traffic advisories that are issued in this regard.
❖ Avoid going to areas that face the water logging problems often.
❖ Avoid staying in vulnerable structure.

Legends:

- **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.
- **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District: **NH:** National Highway; **KVK**: Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation
- **Region wise classification of meteorological Sub-Divisions:**
  - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
  - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
  - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
  - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
  - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

SPATIAL DISTRIBUTION (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)

Subdivision Warning		Subdivision color
Heavy Rain	Dust Storm	NO WARNING
Heavy Snow	Strong Surface Winds	WATCH(BE UPDATED)
Thunderstorms & Lightning	Heat Wave	ALERT (BE PREPARED)
Hailstorm	Cold wave	WARNING (TAKE ACTION)
	Fog	

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

Flash Flood Risk
High Risk (Take Action)
Moderate Risk (Be Prepared)
Low Risk (Be Updated)

Cold Wave

When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions.

(a). Based on departure

- **Cold Wave:** Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.
- **Severe Cold Wave:** Minimum Temperature Departure from normal ≤ -6.5 °C

(b) Based on actual Minimum Temperature (for Plains only)

- **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C
- **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C

(c) For Coastal Stations

When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

Cold Day

When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions

Based on departure

- **Cold Day:** Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.
- **Severe Cold Day:** Maximum Temperature Departure from normal ≤ -6.5 °C

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

- **Moderate Fog:** When the visibility between 500-200 metres
- **Dense Fog:** when the visibility between 50- 200 metres
- **Very Dense Fog:** when the visibility < 50 metres