



**Government of India
Ministry of Earth Sciences
India Meteorological Department**

Press Release

Date: 18th December, 2023

Time of Issue: 1200 hours IST

Subject: Extremely heavy rainfall likely over south Tamil Nadu and very heavy rainfall over Kerala today and decrease significantly 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 northwest Rajasthan, East Madhya Pradesh, north Chhattisgarh and west Bihar.
- **Dense to very dense fog** observed in isolated pockets of Punjab.
- **Heavy to very heavy rainfall with extremely heavy falls** observed at some places over south Tamil Nadu and **heavy rainfall** at isolated places over south Kerala.
- **Exceptionally heavy rainfall observed over Thoothukudi (95 cm) and Tirunelveli (62 cm) districts of south Tamil Nadu.**
- **Significant rainfall** (from 0830 hrs IST of yesterday to 0830 hrs IST of today) is given in Annexure- I

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

Weather Systems

- A Cyclonic Circulation lies over Comorin area & neighbourhood and extends upto middle tropospheric levels.

Forecast & Warnings:

- Light to moderate rainfall at many places very likely over south Tamil Nadu and Kerala & Mahe on 18th; at most places over Lakshadweep on 18th & 19th December and decrease significantly thereafter.
- **Isolated extremely heavy rainfall very likely to continue over south Tamil Nadu today, the 18th and isolated heavy rainfall on 19th December, 2023.**
- Isolated **very heavy rainfall** is very likely over south Kerala on 18th and isolated **heavy rainfall** likely over Lakshadweep on 18th & 19th December, 2023.
- No significant weather likely over remaining parts of the country during next 5 days.

Fishermen warning:

- **Squally weather** with wind speed reaching 30-40 kmph very likely over Comorin Area on 18th and over Lakshadweep area on 18th & 19th December, 2023.
- **Fishermen are advised not to venture into these areas.**

Dense fog warning:

- **Dense to very dense fog** very likely in isolated pockets over Punjab during next 5 days. **Dense fog** in isolated pockets very likely over Haryana during next 5 days and over Assam & Meghalaya during 19th to 21st December, 2023 during morning hours.

Cold Wave warning:

- **Cold wave conditions** very likely in isolated pockets over Punjab on 19th & 20th December, 2023.

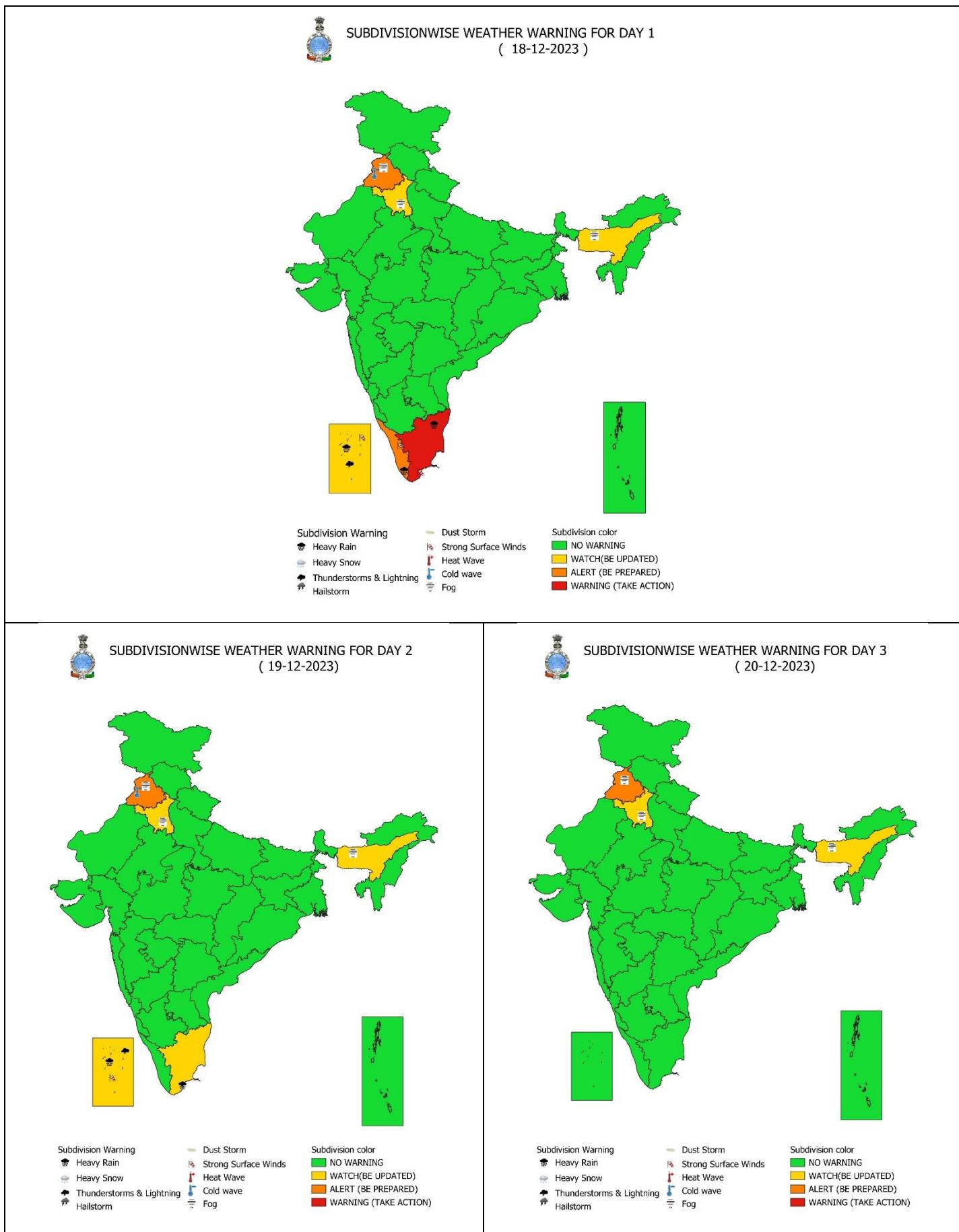
Minimum Temperatures Forecast:

- Fall in minimum temperatures by about 2°C very likely over many parts of Northwest & Central India during next 2-3 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>

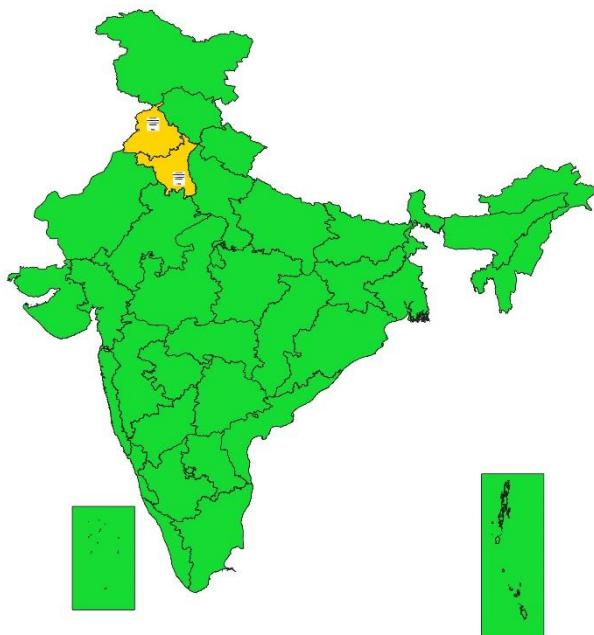
Annexure I

- **Significant rainfall** (from 0830 hrs of yesterday to 0830 hrs of today): **Tamil Nadu:** Kayalpattinam (dist Thoothukudi) 95, Tiruchendur (dist Thoothukudi) 69, Old Taluk Office Srivaikuntam (dist Thoothukudi) 62, Thiruchendur AWS (dist Thoothukudi), Moolaikaraipatti (dist Tirunelveli) 61 each, Manjolai (dist Tirunelveli) 55, Kovilpatti (dist Thoothukudi) 53, Gundar Dam (dist Tenkasi) 51, Oothu (dist Tirunelveli) 50, Nalumukku (dist Tirunelveli) 47, Palayamkottai (dist Tirunelveli) 44, Ambasamudram (dist Tirunelveli) 43, Maniyachi (dist Thoothukudi) 42, Cheranmahadevi (dist Tirunelveli) 41, Kannadaian Anicut (dist Tirunelveli) 41 each, Ottapadiram (dist Thoothukudi), Kadambur (dist Thoothukudi) 37 each, Kakkachi (dist Tirunelveli), Nambiyar Dam (dist Tirunelveli) 36 each, Papanasam (dist Tirunelveli) 35, Nanguneri (dist Tirunelveli), Kulasekarapattinam (dist Thoothukudi), Manimutharu (dist Tirunelveli) 33 each, Kalakadu (dist Tirunelveli) 32, Tirunelveli (dist Tirunelveli) 31, Kodumudiyaru Dam (dist Tirunelveli), Shencottah (dist Tenkasi), Mylaudy (dist Kanniyakumari), Vedanatham (dist Thoothukudi) 30 each, Radhapuram (dist Tirunelveli), Servalar Dam (dist Tirunelveli), Kayathar (dist Thoothukudi) 27 each, Vilathikulam (dist Thoothukudi) 26, Gadana Dam (dist Tenkasi), Vaippar (dist Thoothukudi) 22 each, Ayikudi (dist Tenkasi), Ramanadhi Dam Section (dist Tenkasi) 21 each, Sattur (dist Virudhunagar) 20;
- **Kerala & Mahe:** Pampadumpara Aws (dist Idukki) 9, Vattavada Aws (dist Idukki) 8, Kovilkadavu Aws (dist Idukki) 8, Myladumpara_agri (dist Idukki) 7, Kundala Dam Aws (dist Idukki) 7, Thattathumala Aws (dist Thiruvananthapuram) 7,





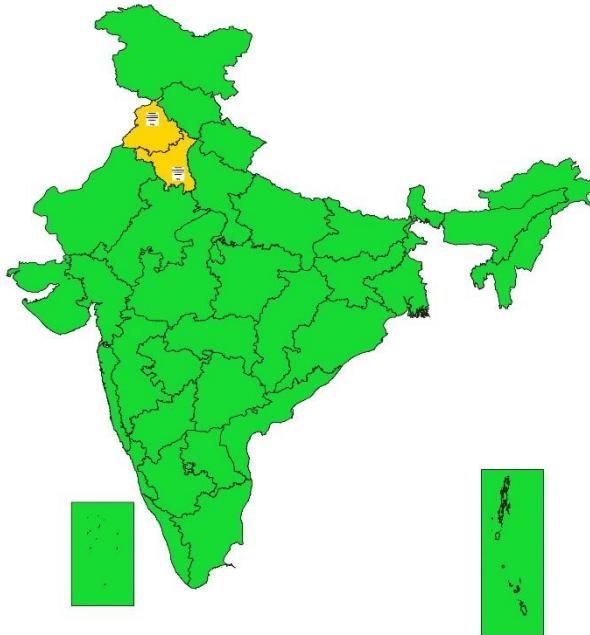
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
(21-12-2023)



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



SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
(22-12-2023)



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

Impact & Action Suggested due to extremely heavy rainfall over south Tamil Nadu and **very heavy rainfall** over south Kerala on 18th 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 kutch 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)

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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)	

When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ 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 $\leq -6.5^{\circ}\text{C}$

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

Cold Wave : When Minimum Temperature is $\leq 4.0^{\circ}\text{C}$

Severe Cold Wave: When Minimum Temperature is $\leq 2.0^{\circ}\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^{\circ}\text{C}$ & actual Minimum Temperature is $\leq 15^{\circ}\text{C}$

When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ 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 $\leq -6.5^{\circ}\text{C}$

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

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