

Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 01st December, 2024

Time of Issue: 1345 hours IST

Subject: (i) The Cyclonic Storm “FENGAL” [pronounced as FEINJAL] crossed North Tamil Nadu & Puducherry coasts near latitude 12.05°N and longitude 79.9°E, close to Puducherry, between 2230 hrs IST and 2330 hrs IST of yesterday, the 30th November 2024 as a cyclonic storm with a wind speed of 70-80 kmph gusting to 90 kmph.
(ii) Heavy to very heavy rainfall at a few places with isolated extremely heavy rainfall very likely over north Tamil Nadu & Puducherry on 01st December and over Kerala on 02nd December.

i. Realised weather during past 24 hours till 0830 hours IST of today

Rainfall realized over the country: (details in Annexure I)

- ❖ **Heavy to very heavy rainfall** at many places with **exceptionally heavy falls** at isolated places over Tamil Nadu, Puducherry & Karaikal; **heavy to very heavy rainfall** at isolated places over Rayalaseema and **heavy rainfall** at isolated places over Kerala and Coastal Andhra Pradesh.

Weather Systems:

- ❖ The **Cyclonic Storm “FENGAL” [pronounced as FEINJAL]** over north coastal Tamil Nadu & Puducherry crossed North Tamil Nadu & Puducherry coasts near latitude 12.05°N and longitude 79.9°E, close to Puducherry, between 2230 hrs IST and 2330 hrs IST of yesterday, the 30th November 2024 as a cyclonic storm with a wind speed of 70-80 kmph gusting to 90 kmph. It remained practically stationary during past 6 hours and lay centered at 0830 hours IST of today, the 1st December 2024 over the same region near latitude 12.0°N and longitude 79.8°E, close to Puducherry, about 30 km north of Cuddalore, 40 km east of Villupuram and 120 km south-southwest of Chennai. It is likely to move westwards very slowly and weaken gradually into a **deep depression** over north coastal Tamil Nadu and Puducherry during the next 6 hours.
- ❖ A **Western disturbance** lies as a trough in middle tropospheric westerlies along Long. 65°E to the north of Lat. 32°N.

Forecast & Warnings (upto 7 days) (Annexure II & III):

Tamil Nadu & Puducherry: Light to moderate rainfall at most places with **heavy to very heavy rainfall at a few places and extremely heavy rainfall (≥ 21 cm)** at isolated places is very likely over North Tamil Nadu & Puducherry on 01st December. Light to moderate rainfall at many places with **heavy to very heavy rainfall** at isolated places is very likely over interior Tamil Nadu on 02nd December & **heavy rainfall** at isolated places over the interior districts of Tamil Nadu adjoining to Kerala on 03rd December.

South Coastal Andhra Pradesh: Light to moderate rainfall at many places with **heavy rainfall** at isolated places is very likely on 01st December.

Rayalaseema: Light to moderate rainfall at many places with **heavy rainfall** at isolated places is very likely on 01st and 02nd December.

South Interior Karnataka: Light to moderate rainfall at many places with **heavy rainfall** at isolated places is very likely on 01st & 03rd December and heavy to very heavy rainfall at isolated places is very likely on 02nd December.

Coastal Karnataka: Light to moderate rainfall at many places with **heavy rainfall** at isolated places is very likely on 02nd and 03rd December.

Kerala: Light to moderate rainfall at a few places with isolated **heavy to very heavy rainfall** is likely on 01st December. Rainfall activity will increase with light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places & **extremely heavy** at isolated places on 02nd and heavy rainfall at isolated places on 03rd December.

Lakshadweep: Light to moderate rainfall at a few places with isolated **heavy rainfall** is likely on 03rd & 04th December.

ii. Temperature conditions and Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today

There was no significant change in minimum temperature over most parts of the country during past 24 hours. Minimum temperatures are **markedly above normal (5°C or more)** at isolated places over Telangana and Odisha; **appreciably above normal (3°C to 5°C)** at isolated places over Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Bihar, Punjab and Coastal Andhra Pradesh & Yanam; **above normal (1°C to 3°C)** at a few places over Andaman & Nicobar Islands, Kerala & Mahe and Telangana; at isolated places over West Rajasthan and Haryana. These are **appreciably below normal (-5°C to -3°C)** at a few places over West Madhya Pradesh; at isolated places over Assam & Meghalaya; **below normal (-3°C to -1°C)** at isolated places over Saurashtra & Kutch, Konkan & Goa and East Uttar Pradesh and near normal over rest parts of the country. Today, **the lowest minimum temperature of 7.2°C** is reported at **Nowgong (West Madhya Pradesh)** over the plains of the country.

Forecast of temperature:

- ❖ No significant change in minimum temperatures likely over Northwest and East India during next 5 days.
- ❖ Gradual rise in minimum temperature over Central India by 2-3°C during next 3 days and no significant change thereafter.
- ❖ Gradual fall in minimum temperature over West India by 2-4°C during next 3 days and no significant change thereafter.

iii. Fishermen & Wind Warnings (Annexure IV):

Fishermen Warnings:

- ✓ Total suspension of fishing operations till evening of 1st December over southwest and adjoining westcentral Bay of Bengal.
- ✓ Fishermen are advised not venture into southwest Bay of Bengal adjoining areas of westcentral Bay of Bengal, Gulf of Mannar and along & off Tamil Nadu-Puducherry, South Andhra Pradesh and North Sri Lanka coasts till 01st December.

Wind Warnings:

- ❖ **Southwest Bay of Bengal and along & off North Tamil Nadu – Puducherry coasts:** Gale wind speed reaching 60-70 kmph gusting to 80 kmph is continuing to prevail over southwest Bay of Bengal. It is likely to decrease becoming squally wind speed reaching 50-60 kmph gusting to 70 kmph from evening of 1st December and decrease gradually thereafter.

- ❖ **Adjoining areas of westcentral Bay of Bengal and along & off South Andhra Pradesh coast:** Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail over adjoining areas of westcentral Bay of Bengal till evening of 1st December. It is likely to decrease thereafter.
- ❖ **Along & off South Tamil Nadu coast and Gulf of Mannar:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail till evening of 1st December and gradually decrease thereafter.

iv. Weather conditions and forecast over Delhi/NCR during 01st to 04th Dec. 2024 (Annexure V)

For more details, kindly refer National Weather Bulletin:

https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

For District wise warnings refer: <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

For updates on cyclonic storm “FENGAL” kindly refer:

<https://rsmcnewdelhi.imd.gov.in/>

<https://mausam.imd.gov.in/responsive/cycloneinformation.php>

ANNEXURE I

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 01.12.2024 (in cm):

- ❖ **Tamil Nadu:** Mylam AWS (dist Villupuram) 51, Puducherry AWS (dist Puducherry) 49, Puducherry (dist Puducherry) 48, Patthukannu (dist Puducherry) 45, Thirukkanur (dist Puducherry) 43, Puducherry Town (dist Puducherry) 40, Tindivanam (dist Villupuram) 37, RSCL-2 Nemoor (dist Villupuram) 35, Bahour (dist Puducherry), RSCL Vallam (dist Villupuram) 32 each, RSCL-3 Semmedu (dist Villupuram) 31, RSCL-2 Valavanur (dist Villupuram), RSCL-2 Koliyanur (dist Villupuram) 28 each, Villupuram (dist Villupuram) 27, Gingee (dist Villupuram), RSCL-2 Kedar (dist Villupuram) 25 each, RSCL-3 Valathy (dist Villupuram), Vanur (dist Villupuram), RSCL-2 Soorapattu (dist Villupuram), Marakkanam (dist Villupuram) 24 each, Cuddalore (dist Cuddalore), RSCL-3 Avalurpettai (dist Villupuram) 23 each, Tiruvannamalai AWS (dist Tiruvannamalai), Chetpet (dist Tiruvannamalai) 22 each, Jamunamarathur (dist Tiruvannamalai), Cuddalore Collector Office (dist Cuddalore), RSCL-3 Anandhapuram (dist Villupuram), Uthiramerur (dist Kancheepuram) 21 each, Maduranthagam (dist Chengalpattu), Keelpennathur (dist Tiruvannamalai), Gummidipoondi (dist Tiruvallur), Chengalpattu (dist Chengalpattu) 20 each, Avadi (dist Tiruvallur), Thirukalukundram (dist Chengalpattu), Vanamadevi (dist Cuddalore) 19 each, Tiruttani (dist Tiruvallur), Arani (dist Tiruvannamalai), BASL Mugaiyur (dist Villupuram), Arcot (dist Ranipet) 18 each, SRC Kudithangi (dist Cuddalore), Cheyyar ARG (dist Tiruvannamalai) 17 each, Thirukoilur ARG (dist Kallakurichi), Vandavasi (dist Tiruvannamalai), Thamaraipakkam (dist Tiruvallur), Kalasapakkam (dist Tiruvannamalai), RSCL-2 Kanjanur (dist Villupuram), Tambaram (dist Chengalpattu) 16 each, Thandarampettai (dist Tiruvannamalai), Kallakurichi (dist Kallakurichi), Kancheepuram (dist Kancheepuram), Wallajah (dist Ranipet), Cheyyur (dist Chengalpattu), MGR Nagar (dist Chennai), Ayanavaram Taluk Office (dist Chennai), RSCL-2 Mundiampakkam (dist Villupuram), Kalavai PWD (dist Ranipet) 15 each, Yercaud (dist Salem), Cheyyar (dist Tiruvannamalai), Arakonam (dist Ranipet), Sholingur (dist Ranipet), Vembakkam (dist Tiruvannamalai), Panruti (dist Cuddalore), Pallipattu (dist Tiruvallur), Kallakurichi ARG (dist Kallakurichi), Mahabalipuram (dist Chengalpattu), Jaya Engg College AWS (dist Tiruvallur) 14 each, Koratur (dist Tiruvallur), Palar Anicut (dist Ranipet), Uthukottai (dist Tiruvallur), Chembarabakkam_REV (dist Tiruvallur), Kaveripakkam (dist Ranipet), R.K. Pet ARG (dist Tiruvallur), DSCL Madampoondi (dist Kallakurichi), Sriperumbudur (dist Kancheepuram), Panapakkam (dist Ranipet), Walajabad (dist Kancheepuram), Red Hills (dist Tiruvallur), Poondi (dist Tiruvallur), BASL Manampoondi (dist Villupuram), R.K. Pet (dist Tiruvallur), Minnal (dist Ranipet), Tiruvallur (dist Tiruvallur) 13 each, Zone 12 Meenambakkam (dist Chennai), Ambathur Rev (dist Chennai), Valasaravakkam (dist Chennai), Cholvaram (dist

Tiruvallur), DSCL Thirupalapandal (dist Kallakurichi), DSCL Kalayanallur (dist Kallakurichi), LMOIS Kolapakkam ARG (dist Chengalpattu), Zone 07 Ayapakkam (dist Chennai), Ranipet AWS (dist Ranipet), Tirukoilur (dist Kallakurichi), Zone 11 Maduravoyal (dist Chennai), Tiruttani AWS (dist Tiruvallur), Ambattur MW (dist Chennai) 12 each, Chennai (AP) (dist Chennai), Tiruttani PTO (dist Tiruvallur), Alandur (dist Chennai), BASL Manalurpet (dist Kallakurichi), KCS Mill-1 Ariyalur (dist Kallakurichi), BASL Vengur (dist Kallakurichi), Meenambakkam AWS (dist Chennai), Zone 11 Valasaravakkam (dist Chennai), Anna Nagar (dist Chennai), Ammoor (Walajah Railway) (dist Ranipet), Nctpl Marg ECR AWS (dist Chengalpattu), Vellore (dist Vellore), Thiru-Vi-Ka Nagar (dist Chennai), Ponneri (dist Tiruvallur), Chennai Collector Office (dist Chennai), Kattumayilur (dist Cuddalore), Sankarapuram (dist Kallakurichi), Perambur (dist Chennai), Chennai(N) AWS (dist Chennai), Kundrathur (dist Kancheepuram), Zone 10 Vadapalani (dist Chennai), ACS Medical College ARG (dist Kancheepuram), Ulundurpet (dist Kallakurichi), Sholinganallur (dist Chennai), Kodambakkam (dist Chennai), DSCL Virugavoor (dist Kallakurichi), Chennai(N) (dist Chennai) 11 each, Alangayam (dist Tirupathur), DGP Office (dist Chennai), Poonamallee (dist Tiruvallur), Ponnai Dam (dist Vellore), CD Hospital Tondiarpet (dist Chennai), Thiruvalangadu (dist Tiruvallur), Zone 12 D156 Mugalivakkam (dist Chennai), Ariyalur Camp Area (dist Kallakurichi), DSCL Sulangurichi (dist Kallakurichi), Zone 18 Aminjikarai (dist Chennai), DSCL Thiyagadurgam (dist Kallakurichi), DSCL Keelpadi (dist Kallakurichi), Zone 05 Basinbridge (dist Chennai), Ammundi (dist Vellore), Zone 14 Madipakkam (dist Chennai) 10 each, Puzhal ARG (dist Tiruvallur), Anna University (dist Chennai), Pambar Dam (dist Krishnagiri), Chembarambakkam ARG (dist Tiruvallur), Zone 03 Puzhal (dist Chennai), Attur (dist Salem), Zone 03 Madhavaram (dist Chennai), Harur (dist Dharmapuri), Chengam (dist Tiruvannamalai), DSCL Rishivandhiyam (dist Kallakurichi), Zone 04 Tondiarpet (dist Chennai), Zone 06 Kolathur (dist Chennai), Zone 01 Thiruvottiyur (dist Chennai), Tirupattur AWS (dist Tirupathur), Madhavaram (dist Chennai), Zone 09 Nungambakkam (dist Chennai), VIT_Chennai AWS (dist Chengalpattu), YMCA Nandnam ARG (dist Chennai), Virudhachalam KVK AWS (dist Cuddalore), Anna University ARG (dist Chennai), Virudachalam (dist Cuddalore), Royapuram (dist Chennai), Ranipet (dist Ranipet), Subramania Siva Co.Op Sugar Mill (dist Dharmapuri), Katpadi (dist Vellore), DSCL Eraiyur (dist Kallakurichi), KCS Mill-1 Kadavanur (dist Kallakurichi), Zone 08 Anna Nagar West (dist Chennai), Kuppanatham (dist Cuddalore), Thirupporur (dist Chengalpattu) 9 each, Tirupattur PTO (dist Tirupathur), Zone 05 Chennai central (dist Chennai), Veeraganoor (dist Salem), Virinjipuram AWS (dist Vellore), Tondairpet (dist Chennai), NIOT_Pallikaranai ARG (dist Chennai), Manimutharu Dam PWD (dist Kallakurichi), Virudhachalam ARG (dist Cuddalore), Me Mathur (dist Cuddalore), Zone 13 Adyar (dist Chennai), Adyar (dist Chennai), Vadakuthu (dist Cuddalore), Mahabalipuram AWS (dist Chengalpattu), Vadapudupattu (dist Tirupathur), KCS Mill-2 Moorarpalayam (dist Kallakurichi), Zone 12 Alandhur (dist Chennai), SCS Mill Arasoor (dist Villupuram), KCS Mill-1 Moongilthuraipattu (dist Kallakurichi), Perungudi (dist Chennai) 8 each, Pappireddipatti (dist Dharmapuri), Tiruvannamalai (dist Tiruvannamalai), Vepur (dist Cuddalore), Kollidam (dist Mayiladuthurai), SCS Mill Thiruvannamalai (dist Villupuram), Hindustan_University (dist Chengalpattu), Thiruvottiyur (dist Chennai), Zone 07 Ambattur (dist Chennai), Zone 02 D15 Manali (dist Chennai), Uthangarai (dist Krishnagiri), Parangipettai (dist Cuddalore), Zone 01 Kathivakkam (dist Chennai), Zone 15 Sholinganallur (dist Chennai), Kelambakkam (dist Chengalpattu), Polur (dist Tiruvannamalai), Zone 13 Raja Annamalaipuram (dist Chennai), Srimushnam (dist Cuddalore), Zone 09 Ice House (dist Chennai), Zone 15 Uthandi (dist Chennai), Ennore AWS (dist Tiruvallur), Sholinganallur MW (dist Chennai), Satyabama Uty ARG (dist Chengalpattu), Thammampatty (dist Salem), Kurinjipadi (dist Cuddalore), Rasipuram (dist Namakkal) 7 each;

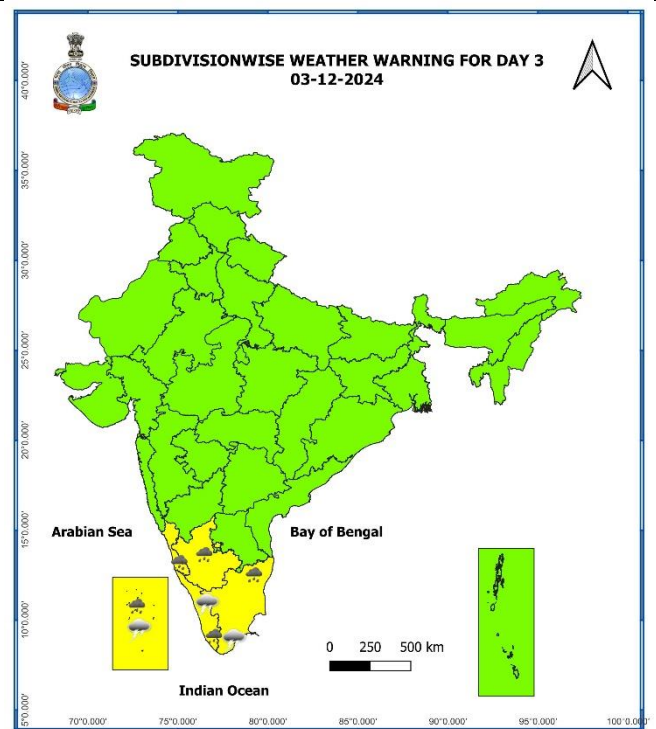
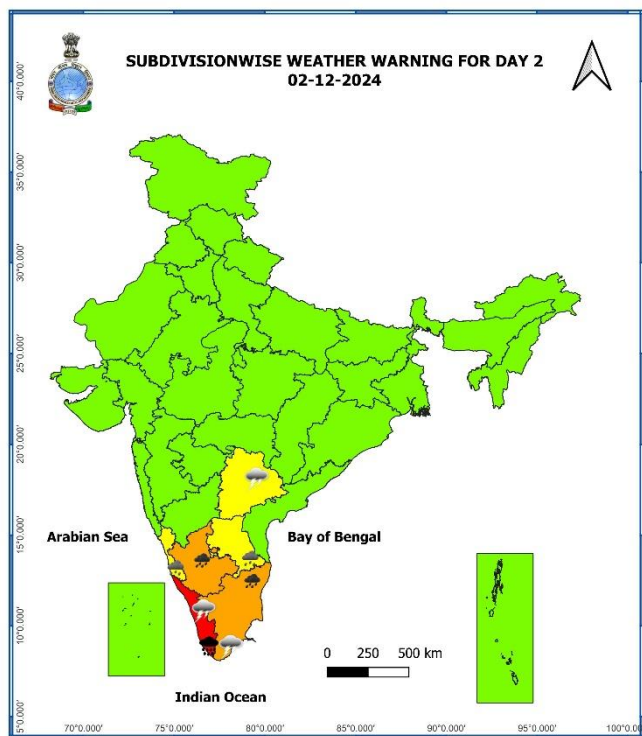
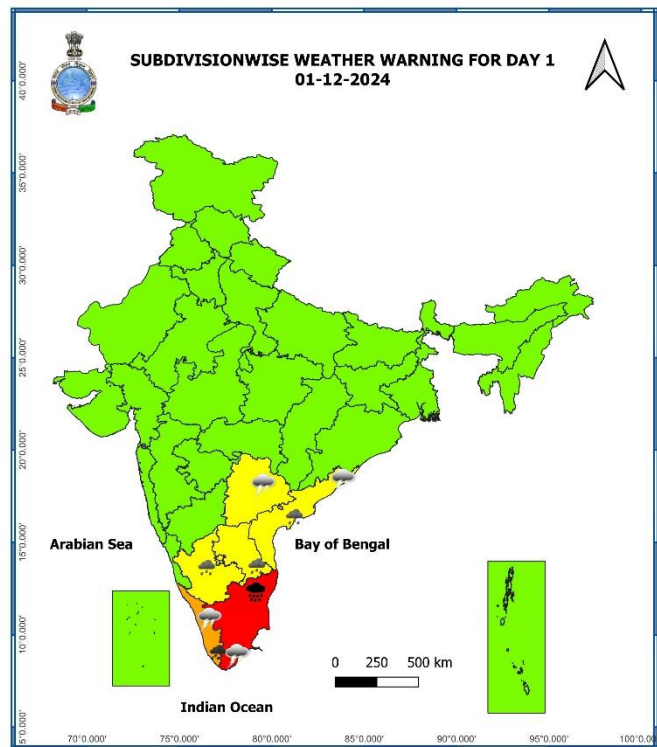
- ❖ **Rayalaseema:** Sullurpeta (dist Tirupati) 17, Tada (dist Tirupati) 15, Nagari (dist Chittoor) 13, Kodur (dist Ysr District) 12, Satyavedu (dist Tirupati) 11, Venkatagiri (dist Tirupati) 11, Palasamudram (dist Chittoor) 10, Thottambedu (dist Tirupati) 9, Srikalahasti (dist Tirupati) 9, Tirupati Aero (dist Tirupati) 9;
- ❖ **Coastal Andhra Pradesh:** Rapur (dist Spsr Nellore) 9, Nellore (dist Spsr Nellore) 8;
- ❖ **Kerala:** Ulanad (Pathanamthitta district) 9, Enadimangalam (Pathanamthitta district) 7.

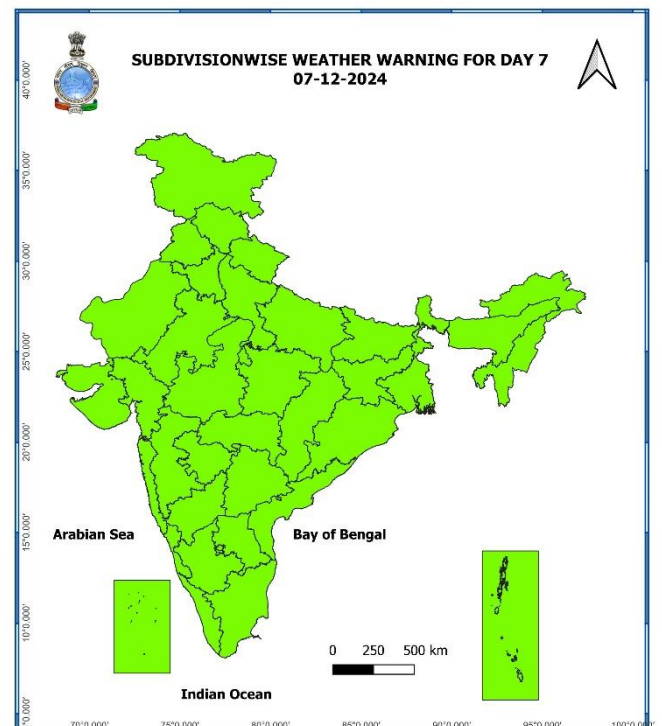
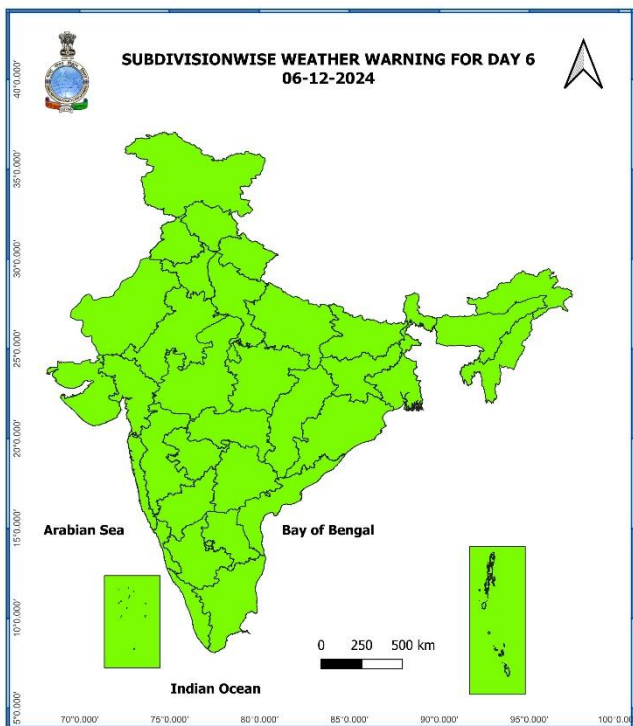
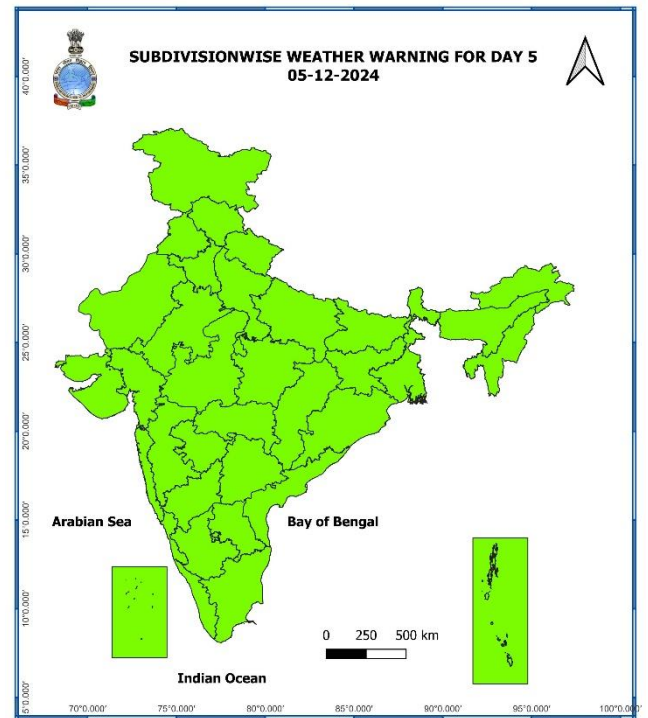
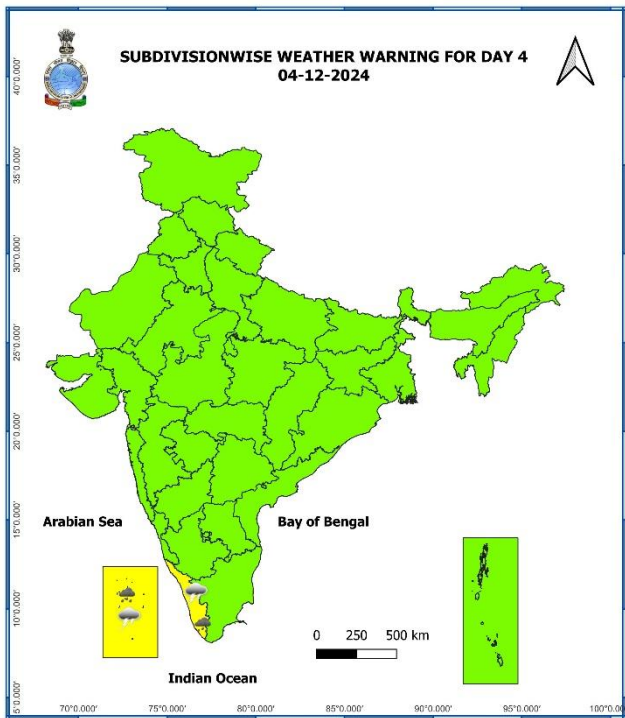
ANNEXURE II

7 Days Rainfall Forecast

S. No.	Subdivision	01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	SCT	SCT	SCT	FWS	FWS	FWS
2	ARUNACHAL PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	DRY	DRY	DRY	DRY	DRY	DRY	DRY
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
8	JHARKHAND	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY	DRY	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	ISOL	SCT	ISOL	DRY	DRY	DRY	DRY
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	DRY	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	ISOL	DRY	DRY
26	VIDARBHA	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
27	CHHATTISGARH	ISOL	ISOL	ISOL	ISOL	ISOL	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	FWS	FWS	SCT	ISOL	ISOL	ISOL	ISOL
29	TELANGANA	ISOL	SCT	SCT	SCT	ISOL	ISOL	ISOL
30	RAYALASEEMA	FWS	FWS	SCT	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	FWS	FWS	FWS	SCT	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	SCT	WS	FWS	SCT	ISOL	ISOL	DRY
33	NORTH INTERIOR KARNATAKA	ISOL	SCT	ISOL	ISOL	ISOL	ISOL	DRY
34	SOUTH INTERIOR KARNATAKA	FWS	WS	FWS	SCT	ISOL	ISOL	DRY
35	KERALA & MAHE	WS	WS	FWS	FWS	SCT	ISOL	ISOL
36	LAKSHADWEEP	SCT	SCT	FWS	WS	FWS	SCT	SCT

- As the lead period increases forecast accuracy decreases.



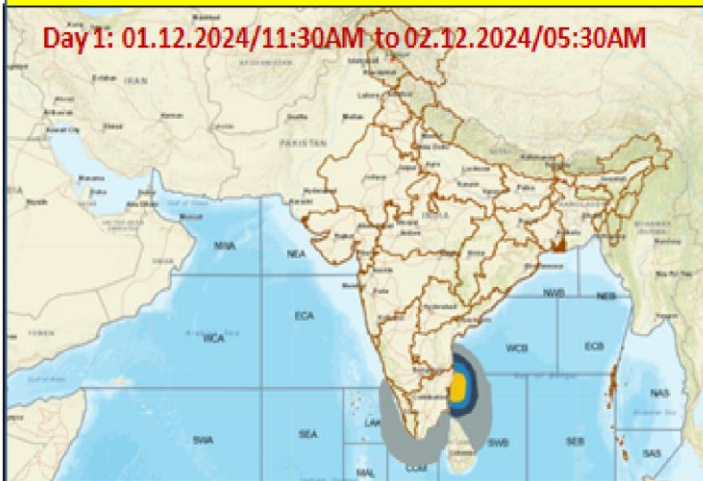


- Action may be taken based on **ORANGE AND RED COLOUR** warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

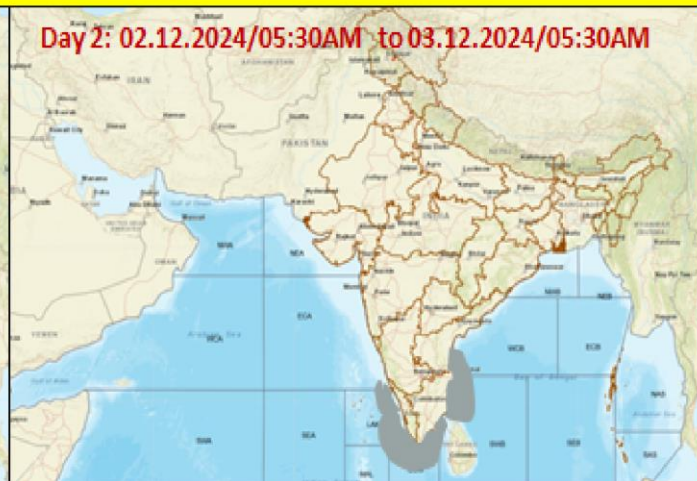


Fishermen Warning Graphics

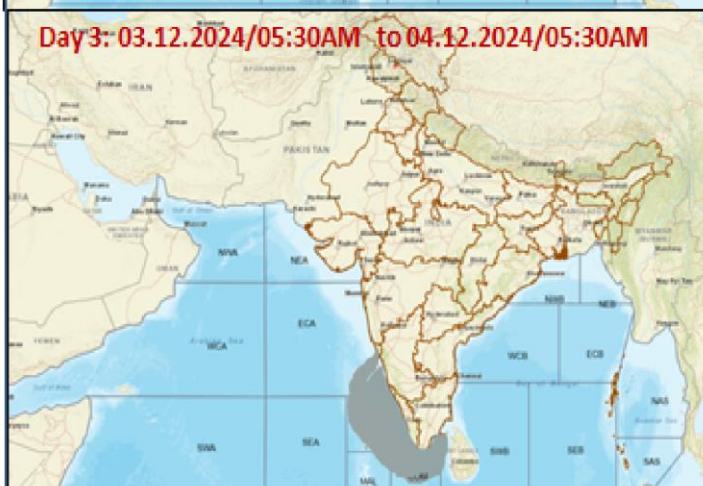
Day 1: 01.12.2024/11:30AM to 02.12.2024/05:30AM



Day 2: 02.12.2024/05:30AM to 03.12.2024/05:30AM



Day 3: 03.12.2024/05:30AM to 04.12.2024/05:30AM



Day 4: 04.12.2024/05:30AM to 05.12.2024/05:30AM



Day 5: 05.12.2024/05:30AM to 06.12.2024/05:30AM



Squally Weather with wind speed 35-45 kmph gusting to 55 kmph

Squally wind with speed 45-55 kmph gusting to 65 kmph

Deep depression with wind speed 55-65 kmph gusting to 75 kmph

CS with Gale winds with speed 60-80 kmph gusting to 90 kmph

Fishermen are advised not to venture into the marked areas.

Weather Realised (past 24 hours) & forecast (during 01st Dec. to 04th Dec. 2024) over Delhi/NCR**Past Weather:**

There has been a rise in minimum temperature upto 2°C and slight rise in maximum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 24 to 27°C and 10 to 13°C respectively. The maximum and minimum temperature were near normal over most places. Mainly smog/ shallow fog condition with predominant surface wind from northwest direction with wind speed reaching 04 to 12 kmph prevailed during day time and calm wind during night time on 30.11.2024. Shallow fog reported at Safdarjung airport during early morning today. Safdarjung airport recorded lowest visibility 500 m at 0700 hours IST which improved thereafter becoming 600m at 0730 hours IST. Mainly smog condition with wind speed less than 06 kmph northwest direction prevailed over the region in the forenoon today.

Weather Forecast:

01.12.2024: Mainly clear sky. The predominant surface wind is likely to be northwest direction with wind speed less than 08 kmph till evening. It would decrease thereafter becoming less than 04 kmph from northwest direction during night. Smog/Shallow fog is likely in the evening/night.

02.12.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 04 kmph during morning hours. Smog/ moderate fog is likely in the morning. The wind speed will increase thereafter becoming less than 08 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 04 kmph from north direction during evening and night. Smog/Shallow fog is likely in the evening/night.

03.12.2024: Mainly clear sky. The predominant surface wind is likely to be from north direction with speed less than 08 kmph during morning hours. Smog/shallow to moderate fog is likely in the morning. The wind speed will gradually increase becoming 10-12 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 08 kmph from northwest direction during evening and night. Smog/shallow fog is likely in the evening/night.

04.12.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with wind speed less than 08 kmph during morning hours. Smog/shallow fog in the morning. The wind speed will increase thereafter becoming 12-16 kmph from northwest direction during afternoon. It will gradually decrease becoming less than 08 kmph from northwest direction during evening and night. Smog/ shallow fog is likely in the evening/night.

Impact & Action Suggested

Impact Expected [over coastal districts of North Tamil Nadu (Tiruvallur, Chennai, Chengalpattu, Puducherry, Cuddalore, Mayiladuthurai, Nagappattinam, Dharampuri, Krishnagiri and Villupuram) and Andhra Pradesh (Tirupati, Nellore, Kadapa)]

- Damage to thatched huts.
- Minor damage to power and communication lines due to breaking of branches.
- Major damage to Kutcha and minor damage to Pucca roads.
- Some damage to paddy crops, banana, papaya, drum sticks (moringa) trees and orchards.
- Sea water inundation in low lying areas after erosion of Kutcha embankments.
- 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.
- Damage to horticulture and standing crops including vegetable crops in some areas due to inundation.
- Breaking of tree branches, uprooting of small trees including banana, papaya and drumstick.

Action Suggested:

- ❖ Total suspension of fishing operations till evening of 1st December.
- ❖ Fishermen are advised not to venture into southwest Bay of Bengal adjoining areas of westcentral Bay of Bengal, Gulf of Mannar and along & off Tamil Nadu-Puducherry, South Andhra Pradesh and North Sri Lanka coasts till 1st December.
- ❖ The ships plying over the area need to be regulated.
- ❖ People should stay in safe places till evening of 1st December evening in the districts near the centre of cyclone.
- ❖ 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.
- ❖ Special care may be taken for fishing ponds and poultrys over coastal areas.
- ❖ Avoid staying in vulnerable structure.

Agromet advisories for Heavy Rainfall likely over various parts of the country

- Drain out excess water from rice, sugarcane, cotton, turmeric, vegetables, and other standing crop fields, as well as coconut and banana orchards in **Tamil Nadu**; rice nurseries, standing field crops and vegetables in **South Coastal Andhra Pradesh & Rayalaseema** and rice, coffee, banana, coconut, arecanut, ginger, pepper, cardamom and other standing crops in **Kerala**.
- Undertake picking of matured cotton bolls and harvesting of matured rice, maize, groundnut, finger millet, pigeon pea, arecanut, fruits and vegetables immediately in **South Interior Karnataka**. Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Provide adequate drainage facilities for removal of excess water from standing crop fields and fruit orchards in Coastal and South Interior Karnataka.
- Provide mechanical support to horticultural crops and staking to vegetables.

Livestock and Fishery

- Keep the animals inside the shed during heavy rainfall and provide balanced feed.
- Store the feed and fodder at safer place to avoid spoilage from rainfall.
- Hang gunny bags all around poultry sheds.
- Construct an outlet with proper netting around the pond to drain out excess rain water, thereby preventing fishes/fingerlings from escaping in case of overflowing.
- Check and repair dykes around the ponds to avoid entry of runoff water from the catchment areas.

FLASH FLOOD GUIDANCE:

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 02-12-2024 :

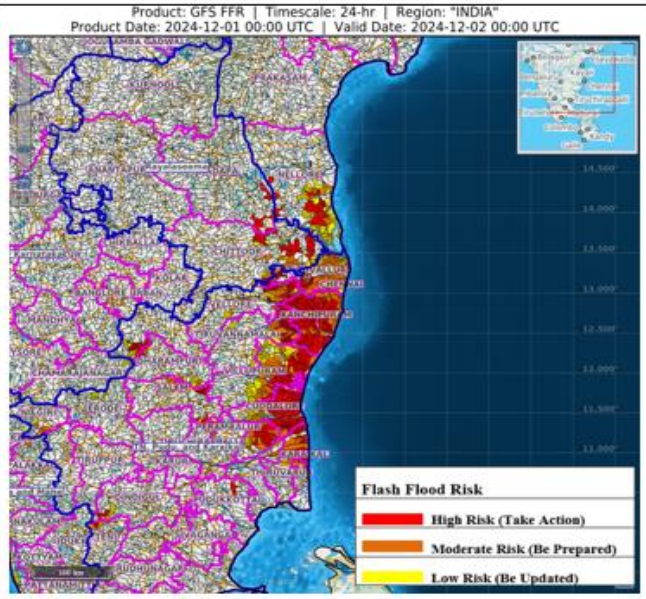
Moderate to High flash flood risk likely over few watersheds & neighbourhoods of following Meteorological Sub-divisions during next 24 hours.

Coastal Andhra Pradesh & Yanam – Thirupati and Nellore districts.

Rayalaseema - Chittoor and Kadapa districts.

Tamil Nadu - Puducherry & Karaikal – Chennai, Tiruvallir, Vellore, Kanchipuram, Tiruvannamalai, Villupuram, Puducherry, Cuddalore, Ariyalur, Perambalur and Karaikal districts.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over Area of Concern (AoC) as shown in map due to expected rainfall occurrence in next 24 hours.

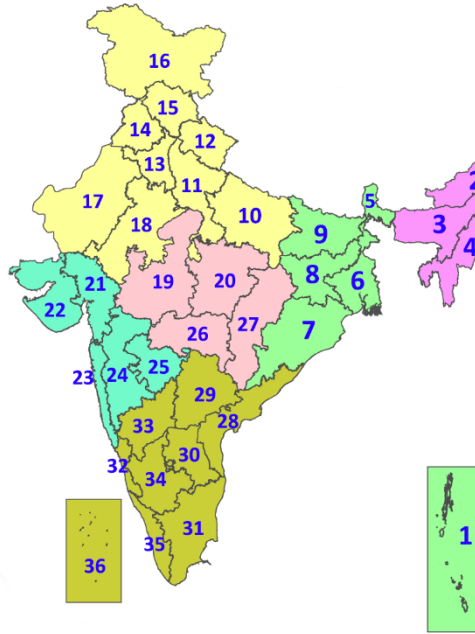


Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **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 Marathawada.
 - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखंड
13. हरियाणा, चंडीगढ़ और दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कोंकण और गोवा
24. मध्य महाराष्ट्र
25. मराठवाड़ा
26. विदर्भ
27. छत्तीसगढ़
28. तटीय आंध्र प्रदेश और यनम
29. तेलंगाना
30. रायलसीमा
31. तमिलनाडु, पुडुचेरी और कराईकल
32. तटीय कर्नाटक
33. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और माहे
36. लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Odisha
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chandigarh & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidarbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. 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 Widespread (FWS/Many Places)	1-25	Isolated (ISOL)



Fog



Heavy Snow



Cold Wave



Heavy Rain



Dust Storm



Cold Day



Very Heavy Rain



Heat Wave



Ground Frost



Extremely Heavy Rain



Warm Night



Thunder & Lightning



Hot Day



Hailstorm



Hot & Humid



Dust Raising Winds



Strong Surface Winds

COLOUR CODED WARNING

No Warning (No Action)
Watch (Be Aware)
Alert (Be Prepared To Take Action)
Warning (Take Action)

Probabilistic Forecast

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

* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)

DEFINITION/CRITERIA

Rain/ Snow *

Heavy: 64.5 to 115.5 mm/cm *
Very Heavy: 115.6 to 204.4 mm/cm*
Extremely Heavy: > 204.4 mm/cm *

Heat Wave

When maximum temperature of a station reaches $\geq 40^{\circ}\text{C}$ for plains and $\geq 30^{\circ}\text{C}$ for hilly regions
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .

Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^{\circ}\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$.

Severe Heat Wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$

(c) Criteria for heat wave for coastal stations

When maximum temperature departure is $> 4.5^{\circ}\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^{\circ}\text{C}$

Warm Night

When maximum temperature remains 40°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°C .

Severe Warm Night: When minimum temperature departure $> 6.4^{\circ}\text{C}$.

Cold Wave

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 $\leq 15^{\circ}\text{C}$

Cold Day

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 $\leq -6.5^{\circ}\text{C}$

Fog

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

Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)

Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.

Frost

Ice deposits on ground

Air temperature $\leq 4^{\circ}\text{C}$ (over Plains)

Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph

Severe: Wind speed 62-87 kmph

Very Severe: Wind speed > 87 kmph

Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre

High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre

Phenomenal: Wind speed > 117 kmph (> 63 knots) & Wave height > 14 metre

Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)

Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Super Cyclone Strom: Wind speed > 220 kmph (> 119 knots)

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