

Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 03<sup>rd</sup> December, 2024

Time of Issue: 1400 hours IST

**Subject: (i) Well marked low pressure area [remnant of Cyclonic Storm “FENGAL”] over Coastal Karnataka and adjoining east central Arabian sea. Heavy to very heavy rainfall very likely at isolated places over north Kerala and coastal Karnataka today and decrease thereafter.**

**(ii) A fresh Western Disturbance is likely to affect Western Himalayan Region from 7<sup>th</sup> night and adjoining plains of Northwest India from 08<sup>th</sup> December.**

**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 with extremely heavy rainfall** has been recorded at isolated places over Coastal Karnataka and north Kerala; **Heavy to very heavy rainfall** at isolated places over north interior Tamil Nadu and **Heavy rainfall** at isolated places over South Interior Karnataka, Coastal Andhra Pradesh & Yanam & Rayalaseema.

**Fog conditions realized over the country:**

- ❖ **Dense fog (visibility 50-200 m)** reported in isolated pockets of Uttar Pradesh and Meghalaya.
- ❖ **Visibility reported (in metre): West Uttar Pradesh:** Bareilly 50; **East Uttar Pradesh:** Varanasi 100; **Meghalaya:** Barapani 100

**Weather Systems:**

- ❖ The **well marked low pressure area** over Coastal Karnataka and adjoining east central Arabian sea persisted over the same region at 0830 hours IST of today, the 03<sup>rd</sup> December, 2024. It is likely to move west-northwestwards over eastcentral Arabian sea during next 2 days. It is likely to maintain the intensity for next 24 hours and weaken gradually thereafter.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from 7<sup>th</sup> night and adjoining plains of Northwest India from 08<sup>th</sup> December. It is likely to cause isolated to scattered light/moderate rainfall/snowfall over the Western Himalayan Region during 07<sup>th</sup>-09<sup>th</sup> and over the adjoining plains of Northwest India on 08<sup>th</sup> December, 2024.

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

- ✓ **North Kerala: Heavy to very heavy rainfall** very likely at isolated places over north Kerala on 03<sup>rd</sup> December and then reduce thereafter.
- ✓ **Tamil Nadu: Heavy rainfall** very likely at isolated places over ghat districts of Tamil Nadu on 03<sup>rd</sup> December.
- ✓ **Coastal Karnataka: Heavy rainfall** very likely at isolated places over Coastal Karnataka on 03<sup>rd</sup> December.
- ✓ **South Interior Karnataka: Heavy rainfall** very likely at isolated places over ghat areas of South Interior Karnataka on 03<sup>rd</sup> December.

- ✓ **Rayalaseema: Heavy rainfall** very likely at isolated places over Rayalaseema on 03<sup>rd</sup> December.
- ✓ **Lakshadweep: Heavy rainfall** very likely at isolated places over Lakshadweep on 03<sup>rd</sup> December.

## ii. Fishermen & Wind Warnings (Annexure IV):

### Fishermen Warnings:

Fishermen are advised not venture over southeast adjoining east central Arabian sea, along and off Kerala-Karnataka, off Goa coasts on 03<sup>rd</sup> December; Lakshadweep area during 03<sup>rd</sup> -05<sup>th</sup> December; over southeast adjoining east central Arabian sea during 04<sup>th</sup> -07<sup>th</sup> December, 2024.

## iii. Temperature conditions and Forecast:

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

Minimum temperatures are in the range of 10-15°C in the plain of Northwest India and 15-20°C over Central India, Gujarat State, Maharashtra and eastern parts of India. Minimum temperatures are **markedly above normal (5°C or more)** at most places over Telangana, Odisha and parts of Punjab & Maharashtra; **appreciably above normal (3°C to 5°C)** at a few places over Tamil Nadu, Puducherry & Karaikal; at isolated places over Gangetic West Bengal, Karnataka and Nagaland, Manipur, Mizoram & Tripura; **above normal (1°C to 3°C)** at a few places over Rajasthan, Uttar Pradesh, Bihar, Gujarat State; at isolated places over Haryana-Chandigarh-Delhi, Madhya Pradesh and Kerala & Mahe. These are **below normal (-3°C to -1°C)** at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim and near normal over rest parts of the country. Today, **the lowest minimum temperature of 8.0°C** is reported at **Bathinda (Punjab)** over the plains of the country.

### Forecast of temperature:

- ❖ No significant change in minimum temperatures likely over Northwest, Central & East India, Maharashtra during next 2 days and gradual fall by 2-4°C thereafter during subsequent 3 days.
- ❖ Rise in minimum temperatures by 2-3°C over Gujarat Region during next 3 days and gradual fall by 3-4°C thereafter during subsequent 3 days.
- ❖ No significant change in minimum temperatures likely over rest parts of the country during next 4-5 days.

## iv. Weather conditions and forecast over Delhi/NCR during 03<sup>rd</sup> to 06<sup>th</sup> Dec. 2024 (Annexure V)

For more details, kindly refer National Weather Bulletin:

[https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

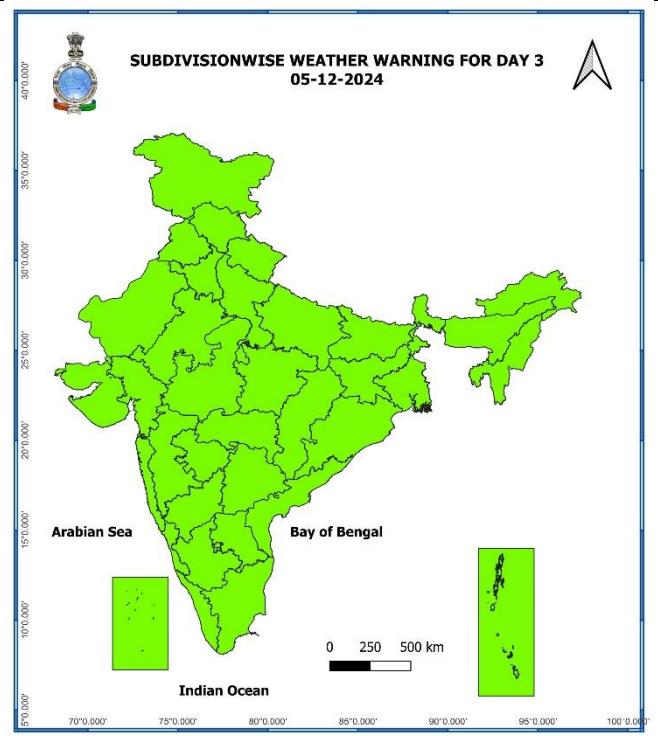
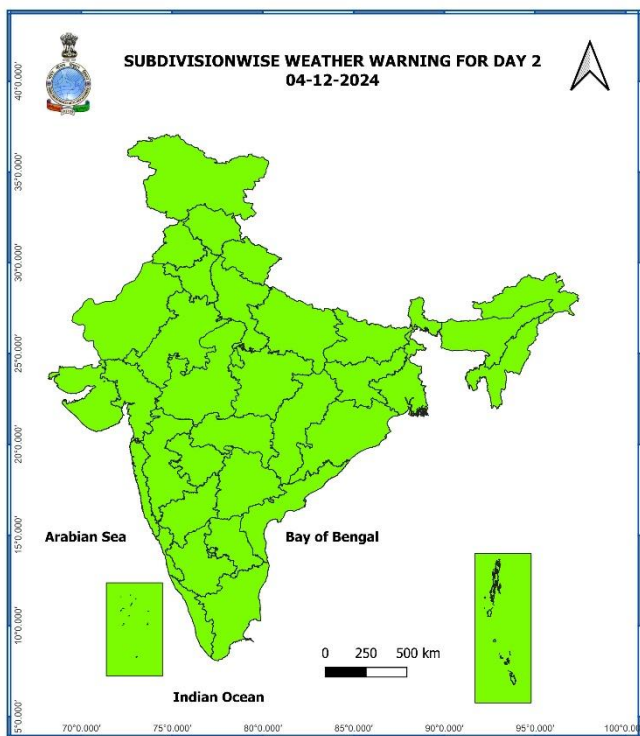
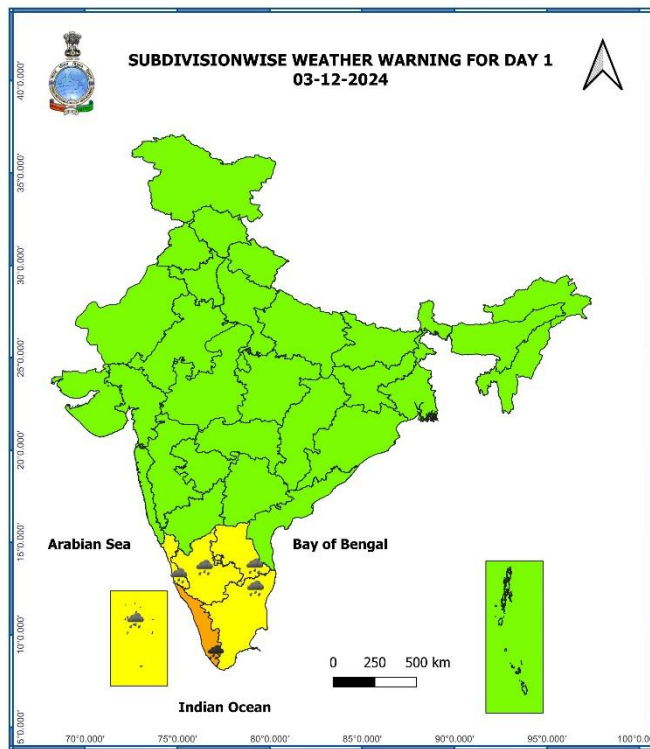
For District wise warnings refer: <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 03.12.2024 (in cm):**

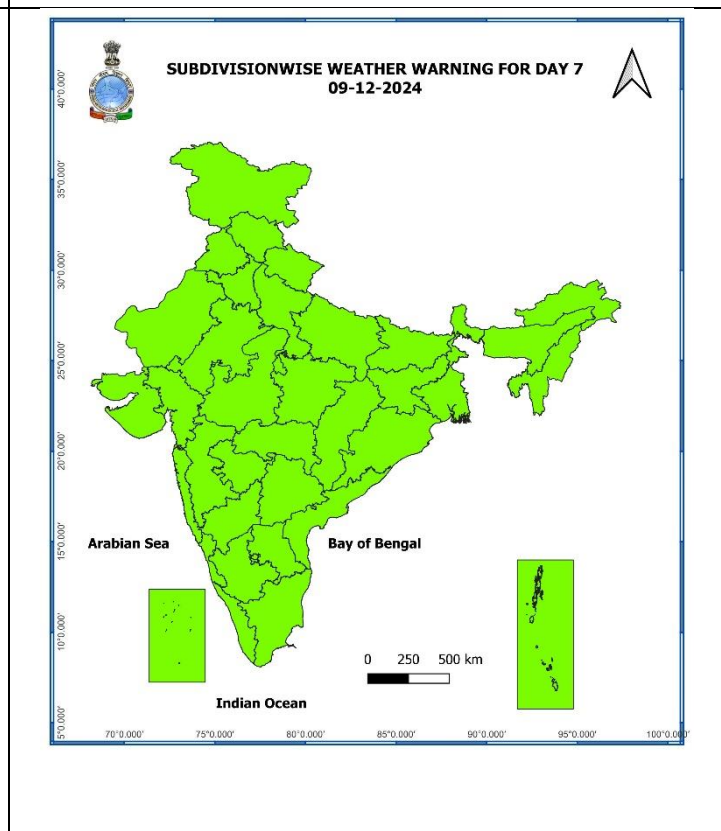
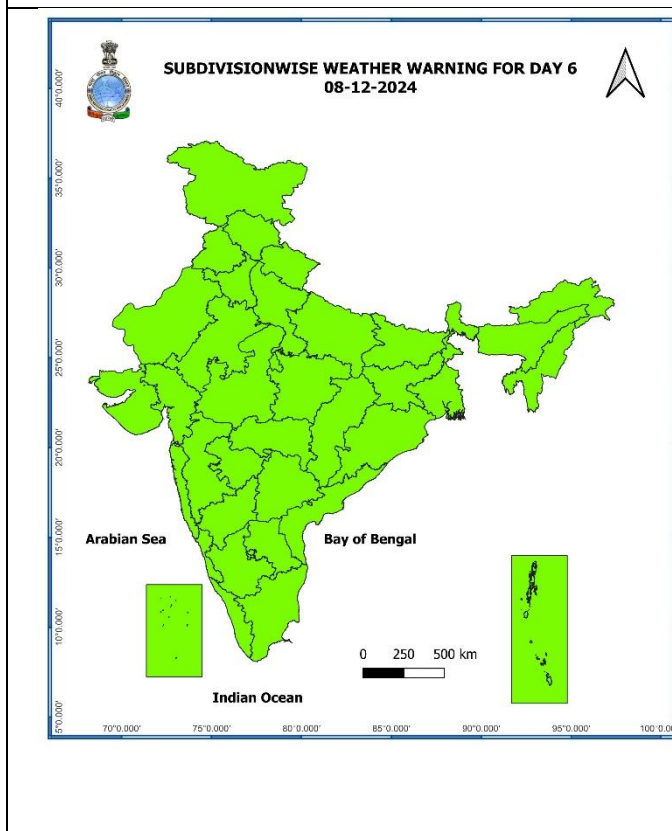
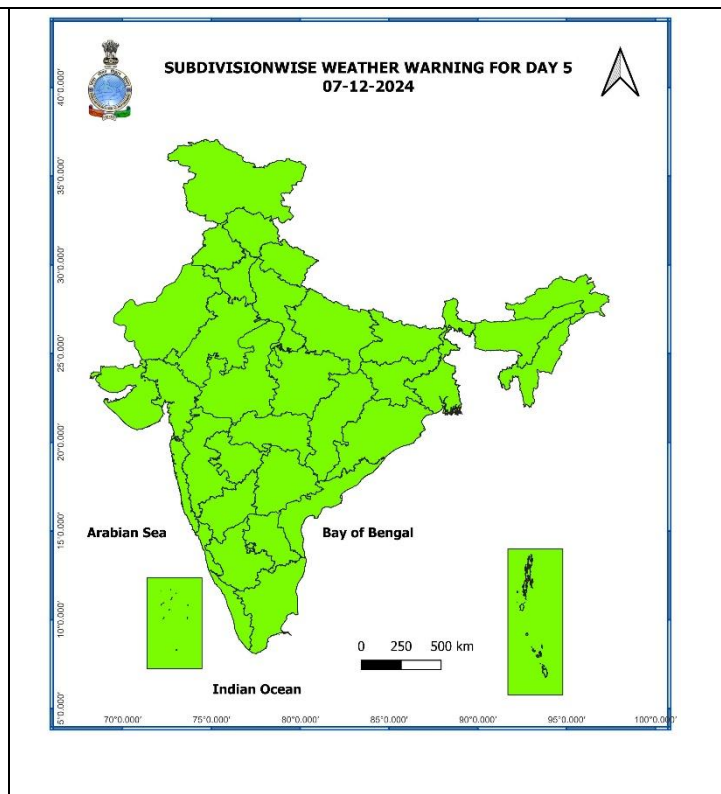
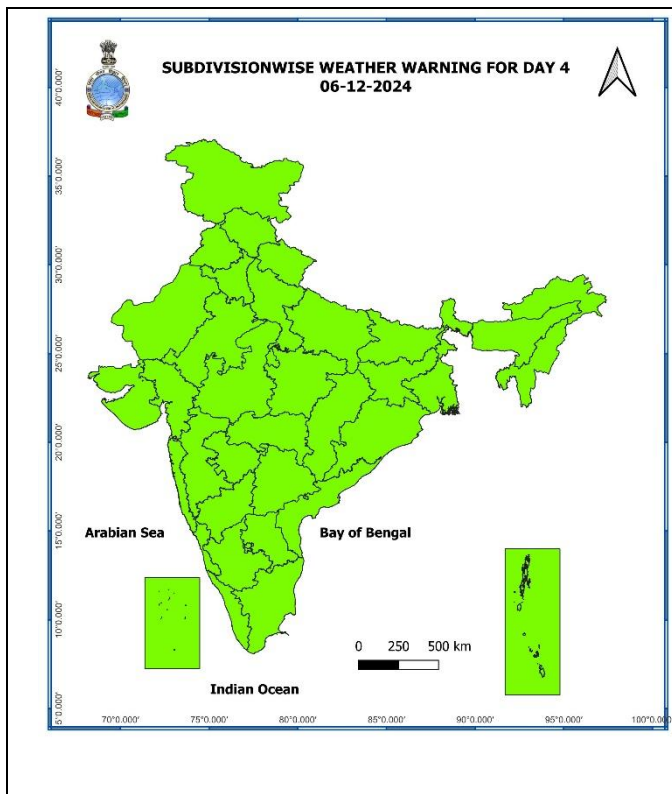
- ❖ **Coastal Karnataka:** Mulki (dist Dakshina Kannada) 26, Mangaluru (dist Dakshina Kannada) 19, PanamburObsy (dist Dakshina Kannada) 18, Mangaluru Ap Obsy (dist Dakshina Kannada) 16, Karkala (distUdupi) 15, Udupi (dist Udupi) 14, Kota (dist Udupi) 13;
- ❖ **Kerala & Mahe:** Enamakkal (dist Thrissur) 20, Hosdurg (dist Kasaragod) 20, Vadakara (dist Kozhikode) 18, Ponnani (dist Malappuram) 17, Irinjalakuda (dist Thrissur) 17, Thennala (dist Malappuram) 17, Kudulu (dist Kasaragod) 16, Kozhikode (dist Kozhikode) 16, Angadipuram (dist Malappuram) 15, Chalakudi (dist Thrissur) 15, Kunnamkulam (dist Thrissur) 14, Perinthalamanna (dist Malappuram) 13, Quilandi (dist Kozhikode) 13, Vellanikkara (dist Thrissur) 13, Vadakara (dist Kozhikode) 13, Cheruvanchery (dist Cannur) 12, Karipur Ap. (dist Malappuram) 12, Kunnamangalam (dist Kozhikode) 11, Peringome (dist Cannur) 11, Kannur Airport (dist Cannur) 10, Ams Kannur (dist Cannur) 10, Haripad (dist Alapuzha) 10, Kannur (dist Cannur) 10, Chimoni (dist Thrissur) 9, Kannur (dist Cannur) 9, Mavelikara (dist Alapuzha) 9, Thycattussery (dist Alapuzha) 9, Alwaye (dist Ernakulam) 8, Vadakkancherry (dist Thrissur) 8, Perumpavur (dist Ernakulam) 8, Madikkai (dist Kasaragod) 8, Taliparamba (dist Cannur) 8, Anakayam (dist Malappuram) 8, Mangalam (dist Palakkad) 7, Aluva (dist Ernakulam) 7, Thritla (dist Palakkad) 7, Nilambur (dist Malappuram) 7, Munderi (dist Malappuram) 7, Muliya (dist Kasaragod) 7, Pattembi (dist Palakkad) 7, Tellichery (dist Cannur) 7, Vyttiri (dist Wynad) 7;
- ❖ **Tamil Nadu, Puducherry:** Thogamalai (dist Karur) 13, Krishnarayapuram (dist Karur), Sholingur (dist Ranipet), Tirupattur PTO (dist Tirupathur), Yercaud (dist Salem) 10 each, Panjapatti (dist Karur), Vazhapadi ARG (dist Salem), Sirugamani KVK AWS (dist Thiruchirappalli), Salem (dist Salem), Pulivalam (dist Thiruchirappalli), Viralimalai (dist Pudukkottai) 9 each, Mayanoor (dist Karur), Musiri (dist Thiruchirappalli), R.K.Pet ARG (dist Tiruvallur), Went Worth Estate (dist The Nilgiris), Kadavur Taluk Offie AWS (dist Karur), Taluk Office Pandalur (dist The Nilgiris) 8 each, Devala (dist The Nilgiris), Ponnaniyar Dam (dist Thiruchirappalli), R.K.Pet (dist Tiruvallur), Hosur (dist Krishnagiri), Panapakam (dist Ranipet), Vathalai Anaicut (dist Thiruchirappalli) 7 each;
- ❖ **South Interior Karnataka:** Bellur (dist Mandya) 9, Bhagamandala (dist Kodagu) 9, Maddur (dist Mandya) 9;
- ❖ **Coastal Andhra Pradesh:** Seetharamapuram (dist Spsr Nellore) 7;
- ❖ **Rayalaseema:** Palasamudram (dist Chittoor) 8, Pakala (dist Tirupati) 7;

7 Days Rainfall Forecast								
S. No.	Subdivision	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec	08-Dec	09-Dec
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	SCT	FWS	FWS	FWS	FWS
2	ARUNACHAL PRADESH	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
8	JHARKHAND	DRY	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	ISOL	DRY
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	ISOL	DRY
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	ISOL	DRY
15	HIMACHAL PRADESH	ISOL	DRY	DRY	DRY	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	DRY	DRY	DRY	DRY	ISOL	ISOL	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	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	ISOL	ISOL	DRY	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	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	ISOL	ISOL	DRY	DRY
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	ISOL	DRY	DRY
26	VIDARBHA	DRY	DRY	ISOL	ISOL	ISOL	DRY	DRY
27	CHHATTISGARH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
28	COASTAL ANDHRA PRADESH & YANAM	FWS	FWS	SCT	SCT	SCT	ISOL	ISOL
29	TELANGANA	SCT	SCT	SCT	SCT	ISOL	ISOL	ISOL
30	RAYALASEEMA	FWS	FWS	SCT	SCT	SCT	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS	FWS	SCT	SCT	FWS	SCT	DRY
33	NORTH INTERIOR KARNATAKA	FWS	ISOL	SCT	SCT	SCT	ISOL	DRY
34	SOUTH INTERIOR KARNATAKA	FWS	ISOL	SCT	SCT	SCT	ISOL	DRY
35	KERALA & MAHE	FWS	SCT	SCT	SCT	SCT	SCT	SCT
36	LAKSHADWEEP	FWS	SCT	SCT	SCT	SCT	SCT	SCT

- As the lead period increases forecast accuracy decreases.



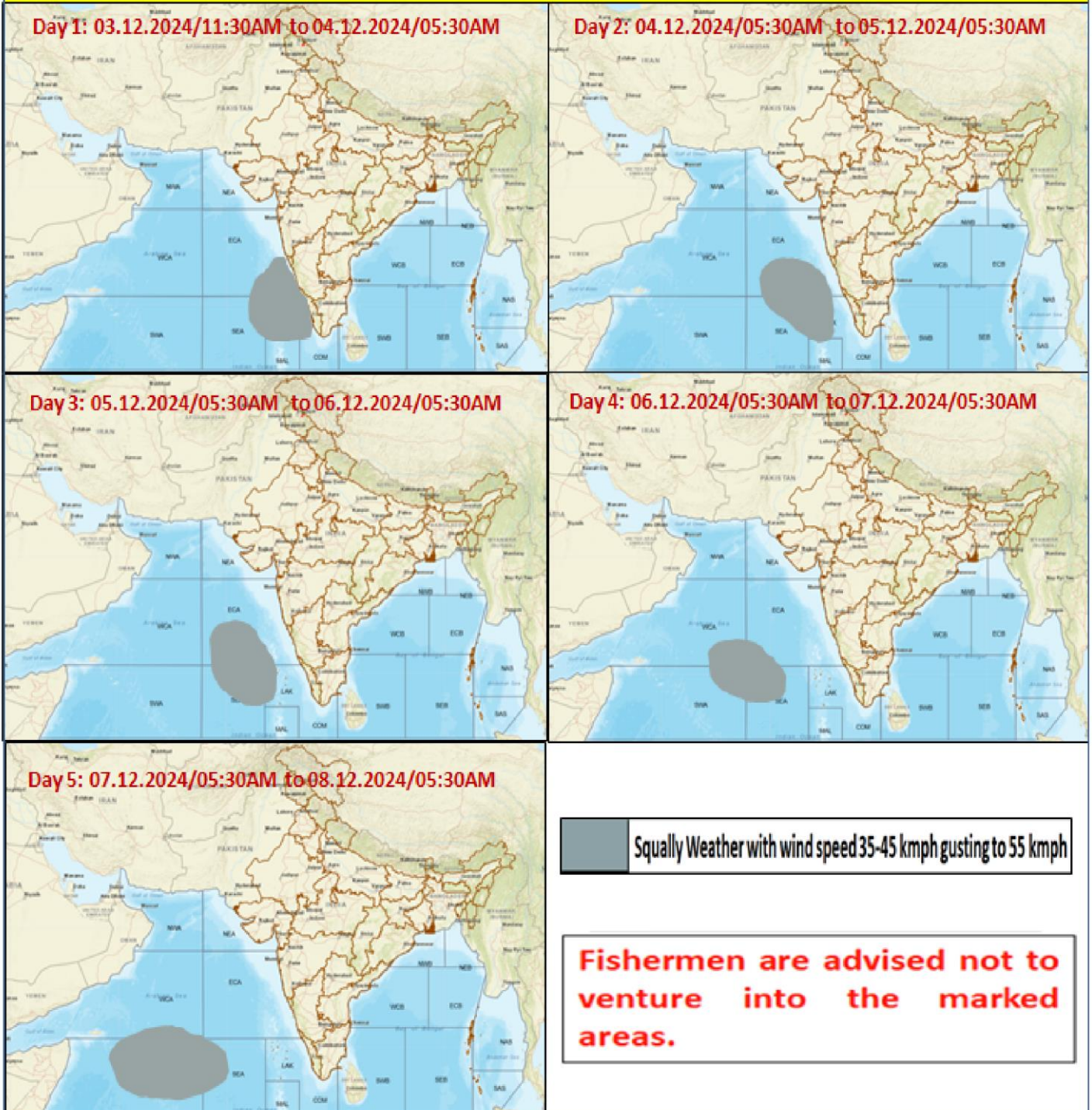




- Action may be taken based on **ORANGE AND RED COLOUR** warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.



### Fishermen Warning Graphics



**Weather Realised (past 24 hours) & forecast (during 03<sup>rd</sup> Dec. to 06<sup>th</sup> Dec. 2024) over Delhi/NCR****Past Weather:**

There has been a slight rise in minimum and maximum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 24 to 28°C and 10 to 13°C respectively. The maximum temperature was above normal by 01 to 04 °C and minimum temperature was above normal by 01 to 02 °C over most places. Mainly smog/ mist condition with predominant surface wind from northwest direction with wind speed reaching 04 to 10 kmph prevailed during day time and calm wind during night time on 02.12.2024. Safdarjung airport recorded lowest visibility 1200 m during 0730 hours to 0930 hours IST which improved thereafter becoming 1400m at 1000 hours IST. Mainly clear sky condition with wind speed less than 10 kmph west direction prevailed over the region in the forenoon today.

**Weather Forecast:**

**03.12.2024:** Mainly clear sky. The predominant surface wind is likely to be northwest direction with wind speed less than 16 kmph till evening. It would decrease thereafter becoming less than 10 kmph from northwest direction during night. Smog/mist is likely in the evening/night.

**04.12.2024:** Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 10 kmph during morning hours. Smog/ mist is likely in the morning. The wind speed will increase thereafter becoming less than 16 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 10 kmph from northwest direction during evening and night. Smog/mist is likely in the evening/night.

**05.12.2024:** Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 10 kmph during morning hours. Smog/mist is likely in the morning. The wind speed will gradually increase becoming 12-16 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 10 kmph from northwest direction during evening and night. Smog/mist is likely in the evening/night.

**06.12.2024:** 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/mist in the morning. The wind speed will increase thereafter becoming 10-12 kmph from northwest direction during afternoon. It will gradually decrease becoming less than 08 kmph from northwest direction during evening and night. Smog/ mist is likely in the evening/night.



**Impact & Action Suggested due to: Heavy to very heavy rainfall at isolated places over north Kerala on 03<sup>rd</sup> December.**

**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.
- ❖ Damage to horticulture and standing crops in some areas due to inundation.

**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.

**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**; from rice, coffee, banana, coconut, arecanut, ginger, pepper, cardamom and other standing crops in **Kerala**; from cotton, rice, maize, groundnut, finger millet, pigeon pea, arecanut, fruits and vegetables in **South Interior Karnataka** and from arecanut, cashew, coconut, banana, jasmine, black pepper, other standing crops and fruit orchards in **Coastal Karnataka**.
- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Provide mechanical support to horticultural crops and staking to vegetables.

**Livestock and Fishery**

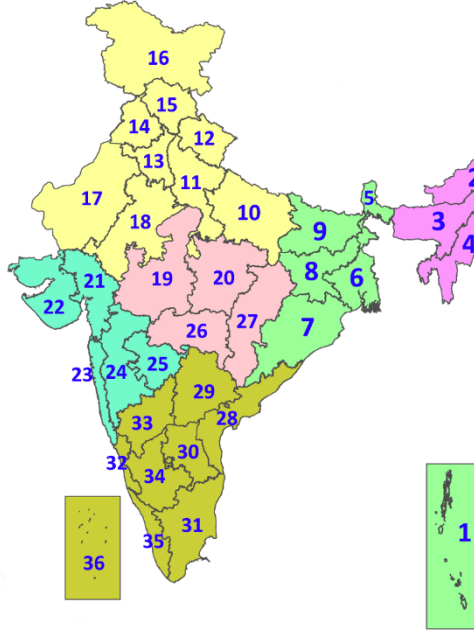
- Keep the animals inside the shed during heavy rainfall and provide balanced feed.
- Store the feed and fodder at safer place to avoid spoilage from rainfall.
- Hang gunny bags all around poultry sheds.
- Check and disinfect poultry houses to prevent disease outbreaks due to dampness.
- Check the huts and other weaker structures before relocation of the animals.
- Remove excess water from fish ponds to avoid losses of fish (if feasible).
- Check and repair dykes around the ponds to avoid entry of runoff water from the catchment areas.

## 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. रायलसेमा
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

<b>Rain/ Snow *</b>	<p><b>Heavy:</b> 64.5 to 115.5 mm/cm *</p> <p><b>Very Heavy:</b> 115.6 to 204.4 mm/cm*</p> <p><b>Extremely Heavy:</b> &gt; 204.4 mm/cm *</p>
<b>Heat Wave</b>	<p><b>When maximum temperature of a station reaches <math>\geq 40^\circ\text{C}</math> for plains and <math>\geq 30^\circ\text{C}</math> for hilly regions</b></p> <p><b>(a) Based on Departure from normal</b></p> <p><b>Heat Wave:</b> Maximum Temperature Departure from normal <math>4.5^\circ\text{C}</math> to <math>6.4^\circ\text{C}</math>.</p> <p><b>Severe Heat Wave:</b> Maximum Temperature Departure from normal <math>\geq 6.5^\circ\text{C}</math></p> <p><b>(b). Based on Actual maximum temperature</b></p> <p><b>Heat Wave:</b> When actual maximum temperature <math>\geq 45^\circ\text{C}</math>.</p> <p><b>Severe Heat Wave:</b> When actual maximum temperature <math>\geq 47^\circ\text{C}</math></p> <p><b>(c). Criteria for heat wave for coastal stations</b></p> <p>When maximum temperature departure is <math>&gt;4.5^\circ\text{C}</math> from normal. Heat Wave may be described provided maximum temperature <math>\geq 37^\circ\text{C}</math></p>
<b>Warm Night</b>	<p><b>When maximum temperature remains <math>40^\circ\text{C}</math></b></p> <p><b>Warm Night:</b> When minimum temperature departure <math>4.5^\circ\text{C}</math> to <math>6.4^\circ\text{C}</math>.</p> <p><b>Severe Warm Night:</b> When minimum temperature departure <math>&gt;6.4^\circ\text{C}</math>.</p>
<b>Cold Wave</b>	<p><b>When minimum temperature of a station <math>\leq 10^\circ\text{C}</math> for plains and <math>\leq 0^\circ\text{C}</math> for hilly regions.</b></p> <p><b>(a). Based on departure</b></p> <p><b>Cold Wave:</b> Minimum Temperature Departure from normal <math>-4.5^\circ\text{C}</math> to <math>-6.4^\circ\text{C}</math>.</p> <p><b>Severe Cold Wave:</b> Minimum Temperature Departure from normal <math>\leq -6.5^\circ\text{C}</math></p> <p><b>(b) Based on actual Minimum Temperature (for Plains only)</b></p> <p><b>Cold Wave :</b> When Minimum Temperature is <math>\leq 4.0^\circ\text{C}</math></p> <p><b>Severe Cold Wave:</b> When Minimum Temperature is <math>\leq 2.0^\circ\text{C}</math></p> <p><b>(c) For Coastal Stations</b></p> <p>When Minimum Temperature departure is <math>\leq -4.5^\circ\text{C}</math> &amp; actual Minimum Temperature is <math>\leq 15^\circ\text{C}</math></p>
<b>Cold Day</b>	<p><b>When minimum temperature of a station <math>\leq 10^\circ\text{C}</math> for plains and <math>\leq 0^\circ\text{C}</math> for hilly regions</b></p> <p><b>Based on departure</b></p> <p><b>Cold Day:</b> Maximum Temperature Departure from normal <math>-4.5^\circ\text{C}</math> to <math>-6.4^\circ\text{C}</math>.</p> <p><b>Severe Cold Day:</b> Maximum Temperature Departure from normal <math>\leq -6.5^\circ\text{C}</math></p>
<b>Fog</b>	<p><b>Phenomenon of small droplets suspended in air and the horizontal visibility <math>&lt; 1\text{km}</math></b></p> <p><b>Moderate Fog:</b> When the visibility between 500-200 metres</p> <p><b>Dense Fog:</b> when the visibility between 50- 200 metres</p> <p><b>Very Dense Fog:</b> when the visibility <math>&lt; 50</math> metres</p>
<b>Thunderstorm</b>	<p><b>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</b></p>
<b>Dust/Sand Storm</b>	<p><b>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</b></p>
<b>Frost</b>	<p><b>Ice deposits on ground</b></p> <p>Air temperature <math>\leq 4^\circ\text{C}</math> ( over Plains)</p>
<b>Squall</b>	<p><b>A strong wind that rises suddenly, lasts for atleast 1 minute.</b></p> <p><b>Moderate:</b> Wind speed 52-61 kmph</p> <p><b>Severe:</b> Wind speed 62-87 kmph</p> <p><b>Very Severe:</b> Wind speed <math>&gt;87</math> kmph</p>
<b>Sea State</b>	<p><b>Effect of various waves in the sea over specific area</b></p> <p><b>Rough to very rough:</b> Wind speed 41-62 kmph (22-33 knots) &amp; Wave height 2.5-6 metre</p> <p><b>High to very high:</b> Wind speed 63-117 kmph ( 34-63 knots) &amp; Wave height 6-14 metre</p> <p><b>Phenomenal:</b> Wind speed <math>&gt;117</math> kmph (<math>&gt;63</math> knots) &amp; Wave height <math>&gt;14</math> metre</p>
<b>Cyclone</b>	<p><b>Cyclonic Storm:</b> Wind speed 62-87 kmph (34-47 knots)</p> <p><b>Severe Cyclonic Storm:</b> Wind speed 88-117 kmph (48-63 knots)</p> <p><b>Very Severe Cyclonic Storm:</b> Wind speed 118-165 kmph (64 - 89 knots)</p> <p><b>Extremely Severe Cyclonic Storm:</b> Wind speed 166-220 kmph (90 -119 knots)</p> <p><b>Super Cyclone Strom:</b> Wind speed <math>&gt;220</math> kmph (<math>&gt;119</math> knots)</p>

\* 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.  
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