



Thursday, September 28, 2023  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features

#### **Withdrawal of Southwest Monsoon:**

- Conditions are becoming favourable for further withdrawal of Southwest Monsoon from some more parts of Northwest and adjoining Westcentral India during next 2-3 days.
- The line of withdrawal of Southwest Monsoon continues to pass through 28.3°N/72.0°E, Nokhra, Jodhpur, Barmer and 25.7°N/70.3°E.

#### **Significant Weather features:**

- ❖ A cyclonic circulation lies over south Chhattisgarh & neighbourhood and a trough runs from north Coastal Karnataka to this cyclonic circulation in lower tropospheric levels.
- ❖ A cyclonic circulation is likely to emerge over Eastcentral Bay of Bengal & adjoining north Andaman Sea off Myanmar coast during next 24 hours. Under its influence, a low pressure area is likely to form over Eastcentral Bay of Bengal off Myanmar coast during subsequent 24 hours. Thereafter, it is likely to move northwestwards with possibility of gradual intensification.

#### **Weather Forecast and Warnings:**

**East India:** Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Andaman & Nicobar Islands during 28<sup>th</sup> - 30<sup>th</sup>; Odisha during 29<sup>th</sup> September to 02<sup>nd</sup> October; Gangetic West Bengal on 30<sup>th</sup> and Jharkhand on 30<sup>th</sup> September & 01<sup>st</sup> October.

**Isolated very heavy rainfall very likely over Andaman & Nicobar Islands on 28<sup>th</sup> & 29<sup>th</sup> September. Squally weather with wind speed reach 45-55 gusting to 65 likely over Andaman Islands during 28<sup>th</sup>-30<sup>th</sup> September, 2023.**

**South India:** Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over Tamil Nadu during 28<sup>th</sup>-29<sup>th</sup>; Coastal Karnataka during 28<sup>th</sup> September-02<sup>nd</sup> October; Kerala & Mahe during 28<sup>th</sup>-30<sup>th</sup> and Interior Karnataka during 29<sup>th</sup> September-02<sup>nd</sup> October.

**West India:** Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Konkan-Goa during 28<sup>th</sup>-30<sup>th</sup> and Madhya Maharashtra during 28<sup>th</sup>-29<sup>th</sup> September. **Isolated very heavy rainfall very likely over Konkan -Goa on 28<sup>th</sup> & 29<sup>th</sup> September.**

**Central India:** Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Chhattisgarh on 30<sup>th</sup> September & 01<sup>st</sup>-02<sup>nd</sup> October.

**No significant weather over rest parts of the country.**



### Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours to 1730 hours IST of yesterday): **at most places** over Kerala & Mahe; **at many places** over Konkan & Goa; **at a few places** over Madhya Maharashtra, Jharkhand, Sub-Himalaya West Bengal & Sikkim, Telangana, South Interior Karnataka, Coastal Andhra Pradesh & Yanam and **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Bihar, Gangetic West Bengal, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Odisha, Madhya Pradesh, Gujarat state, Vidarbha.
- ❖ **Significant rainfall recorded** (from 0830 hours to 1730 hours IST of yesterday): **(in cm): Coastal Andhra Pradesh:** Nellore-8; **Konkan & Goa:** Goa-7; **Madhya Maharashtra:** Pune-7; **Gangetic West Bengal:** South Twenty-Four Parganas-5; **Odisha:** Kendujhar-5; **Jharkhand:** Deoghar-4;
- ❖ **Heavy rainfall** at isolated places over Konkan & Goa, Madhya Maharashtra and Coastal Andhra Pradesh & Yanam.
- ❖ **Minimum Temperature Departures (as on 27-09-2023):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Sub-Himalaya West Bengal & Sikkim; at isolated places over Madhya Maharashtra and Saurashtra & Kutch; **above normal (1.6°C to 3.0°C)** at many places over West Rajasthan; at a few places over East Uttar Pradesh, Bihar, Gangetic West Bengal and Gujarat Region; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, East Rajasthan, Madhya Pradesh, Jharkhand, Chhattisgarh, Odisha, Marathwada and Nagaland, Manipur, Mizoram & Tripura. They were **below normal (-1.6°C to -3.0°C)** at isolated places over Coastal Andhra Pradesh & Yanam and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 16.5°C** was reported at **Raisen (West Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 27-09-2023):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at many places over Arunachal Pradesh, Assam & Meghalaya; at a few places over Nagaland, Manipur, Mizoram & Tripura, Sub-Himalaya West Bengal & Sikkim; **above normal (1.6°C to 3.0°C)** at many places over Bihar, Gangetic West Bengal, Himachal Pradesh; at a few places over East Uttar Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Jharkhand, Odisha, Coastal Andhra Pradesh & Yanam; at isolated places over West Uttar Pradesh, Haryana-Chandigarh-Delhi, West Rajasthan, Madhya Pradesh, Chhattisgarh, North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Uttarakhand. They were **below normal (-1.6°C to -3.0°C)** at isolated places over Coastal & South Interior Karnataka and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 39.3°C** is reported at **Barmer (West Rajasthan)**.

### Meteorological Analysis (Based on 0530 hours IST)

- ❖ Conditions are becoming favourable for further withdrawal of Southwest Monsoon from some more parts of Northwest and adjoining Westcentral India during next 2-3 days.
- ❖ The line of withdrawal of Southwest Monsoon continues to pass through 28.3°N/72.0°E, Nokhra, Jodhpur, Barmer and 25.7°N/70.3°E.
- ❖ **Western Disturbance** as a trough in westerlies in mid-tropospheric levels with its axis at 5.8 km above mean sea level now runs roughly along Long. 65°E to the north of Lat. 30°N.
- ❖ The **cyclonic circulation** over Gangetic West Bengal & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over south Chhattisgarh & neighbourhood extending upto 3.1 km above mean sea level persists.
- ❖ The **trough** from north Coastal Karnataka to the cyclonic circulation over south Chhattisgarh across North Interior Karnataka, Telangana & Vidarbha at 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over North Interior Karnataka & neighbourhood between 3.1 & 5.8 km above mean sea level persists.
- ❖ The **cyclonic circulation** over Southwest Bay of Bengal off Tamil Nadu coast between 4.5 & 5.8 km above mean sea level persists.
- ❖ A cyclonic circulation is likely to emerge over Eastcentral Bay of Bengal & adjoining north Andaman Sea off Myanmar coast during next 24 hours. Under its influence, a low pressure area is likely to form over Eastcentral Bay of Bengal off Myanmar coast during subsequent 24 hours. Thereafter, it is likely to move northwestwards with possibility of gradual intensification.

### Weather Forecast for next 5 days (Upto 0830 hours IST of 03<sup>rd</sup> October, 2023)

- ❖ Meteorological sub-division wise detailed 5 days rainfall forecast is given in Table-1.
- ❖ No significant change in maximum temperatures likely over most parts of country during next 5 days.

### Weather Outlook for subsequent 2 days

- ❖ Fairly widespread to widespread light/moderate rainfall likely over parts of east & adjoining central and northeast India.
- ❖ Dry weather likely to prevail over rest parts of the country except isolated rainfall likely over south peninsular India.

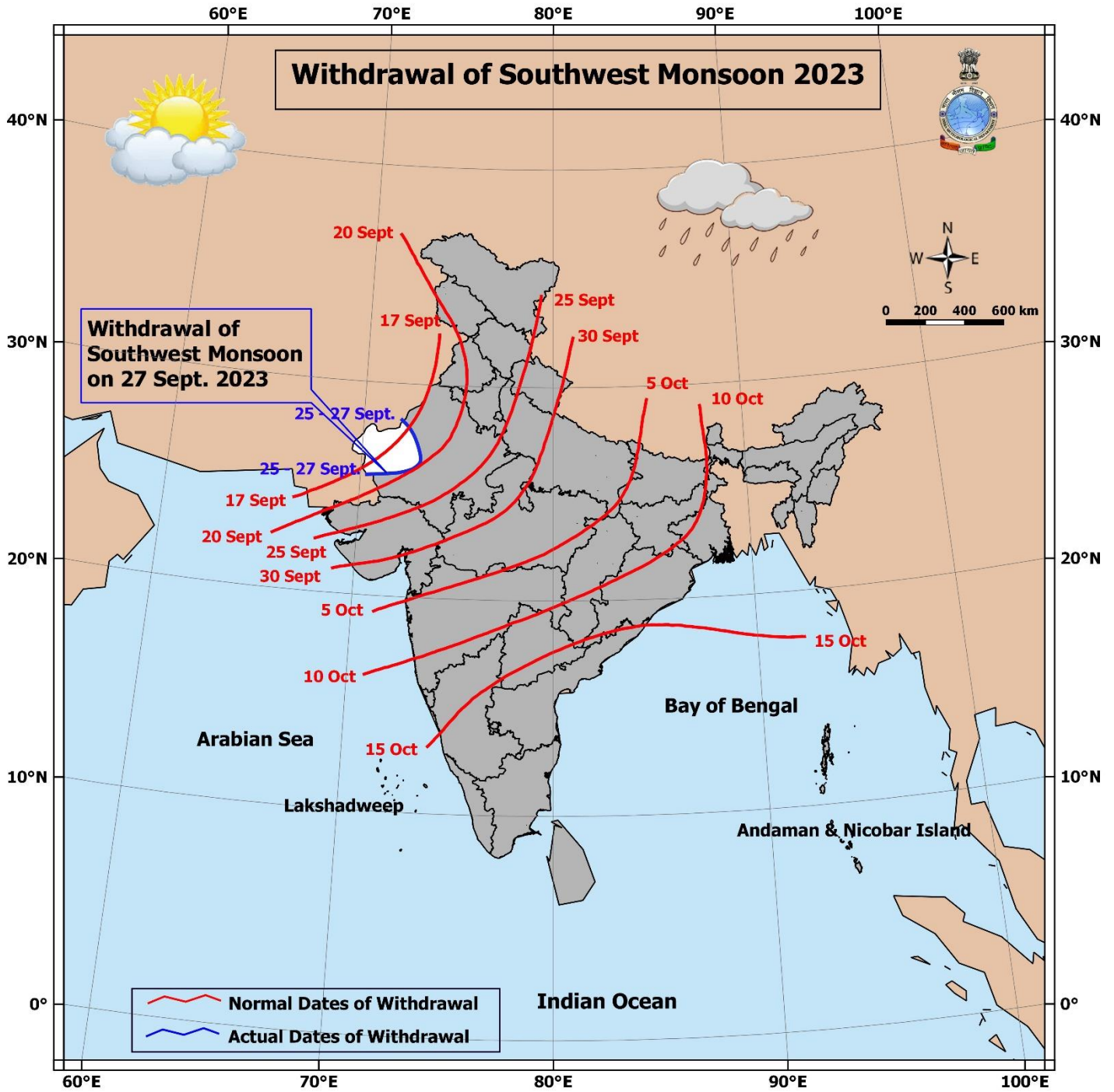




Table-1

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

| Legend | Category                      | % Stations |
|--------|-------------------------------|------------|
| WS     | Widespread/Most Places        | 76-100     |
| FWS    | Fairly Widespread/Many Places | 51-75      |
| SCT    | Scattered/ A Few Places       | 26-50      |
| ISOL   | Isolated Places               | 1-25       |
| DRY    | No Rain                       | 0          |

\* Red color warning does not mean "Red Alert" Red color 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)

Fig. 1: Maximum Temperatures Dated 27.09.2023

Fig. 2: Departure of Maximum Temp. Dated 27.09.2023

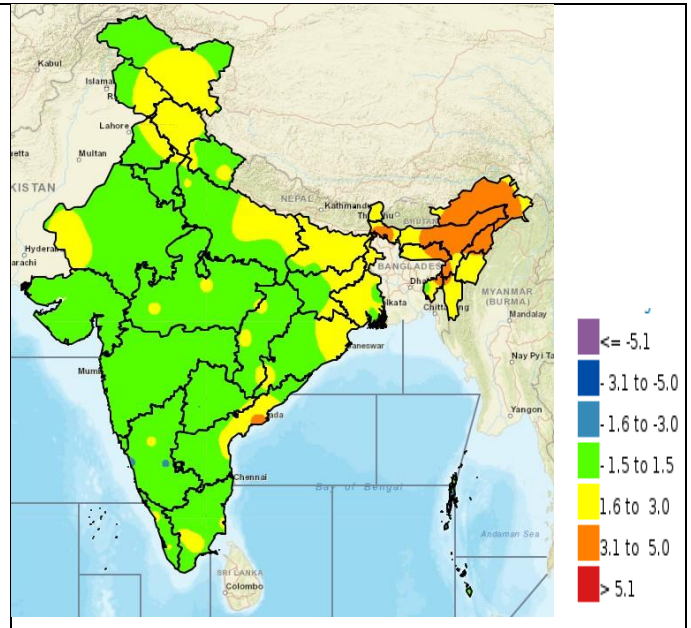
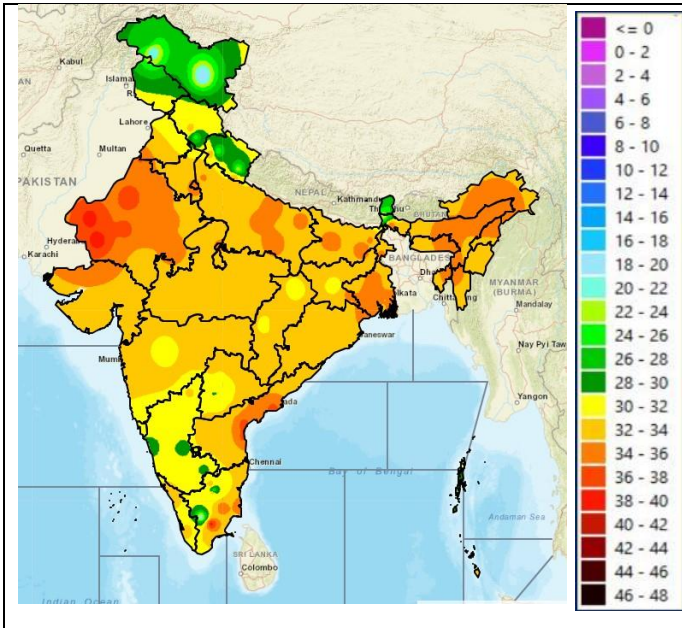


Fig. 3: Minimum Temperatures Dated 27.09.2023

Fig. 4: Departure of Minimum Temp. Dated 27.09.2023

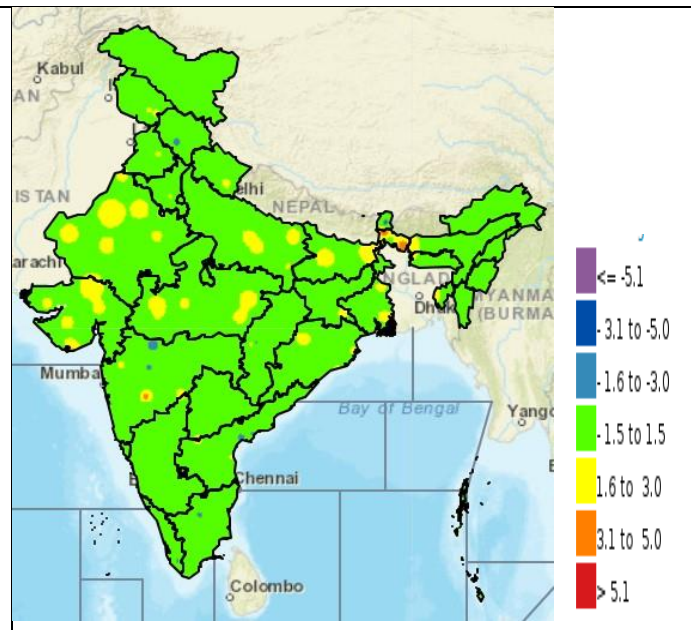
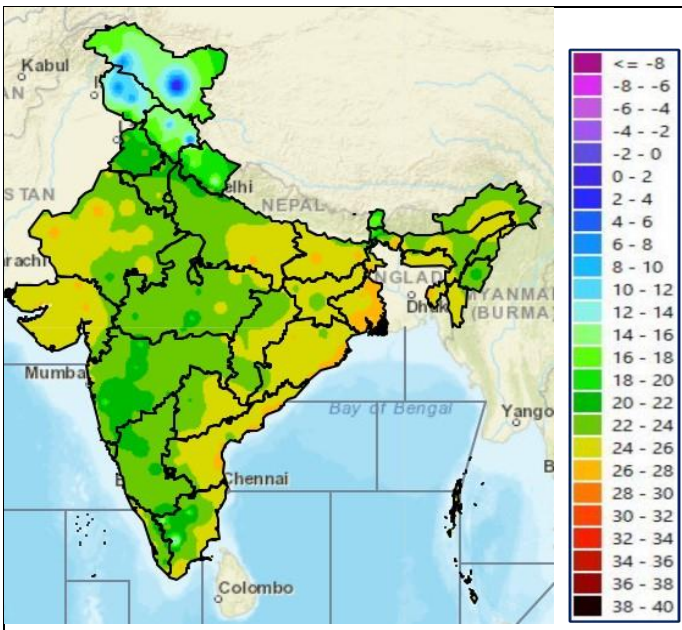
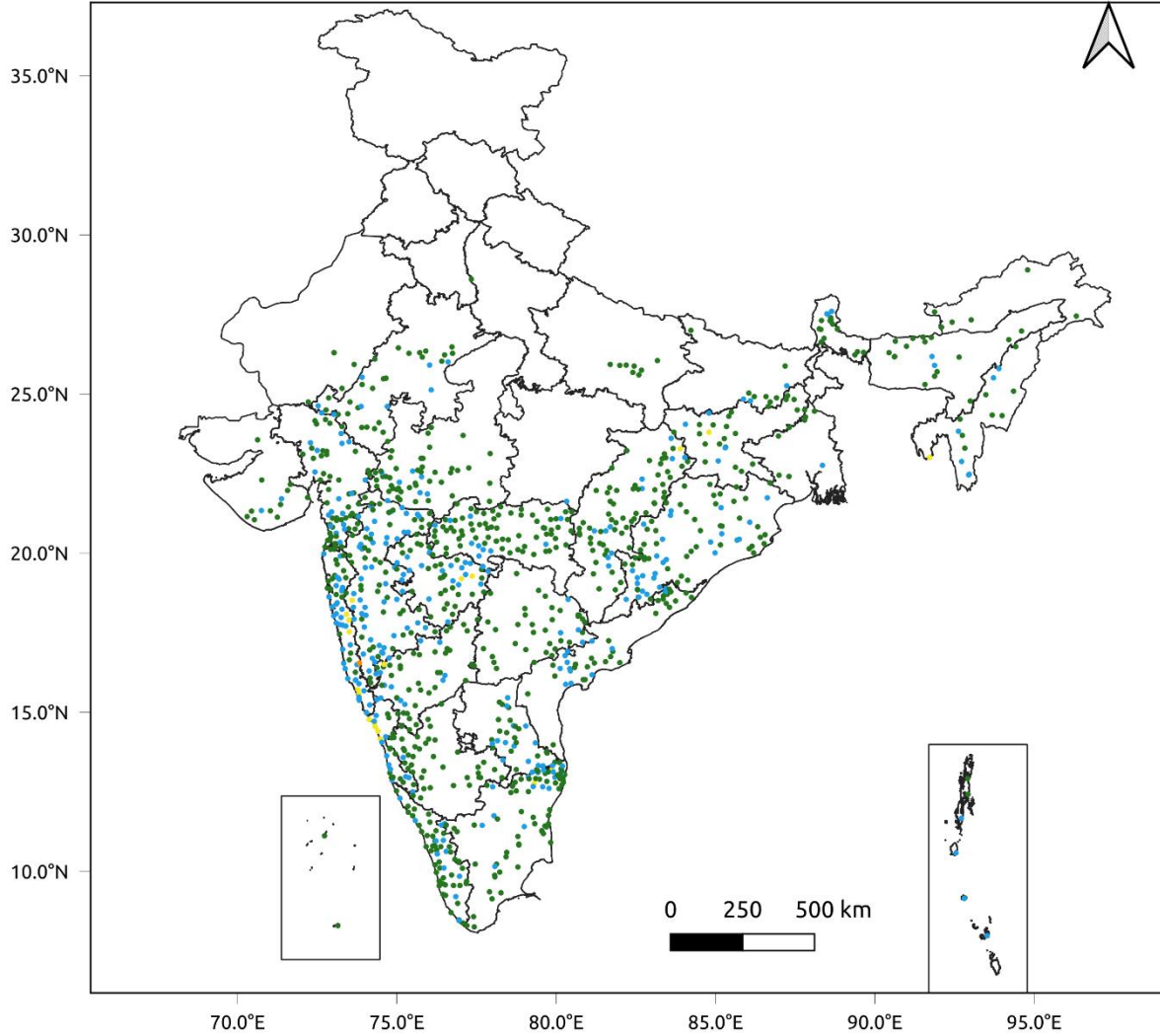


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

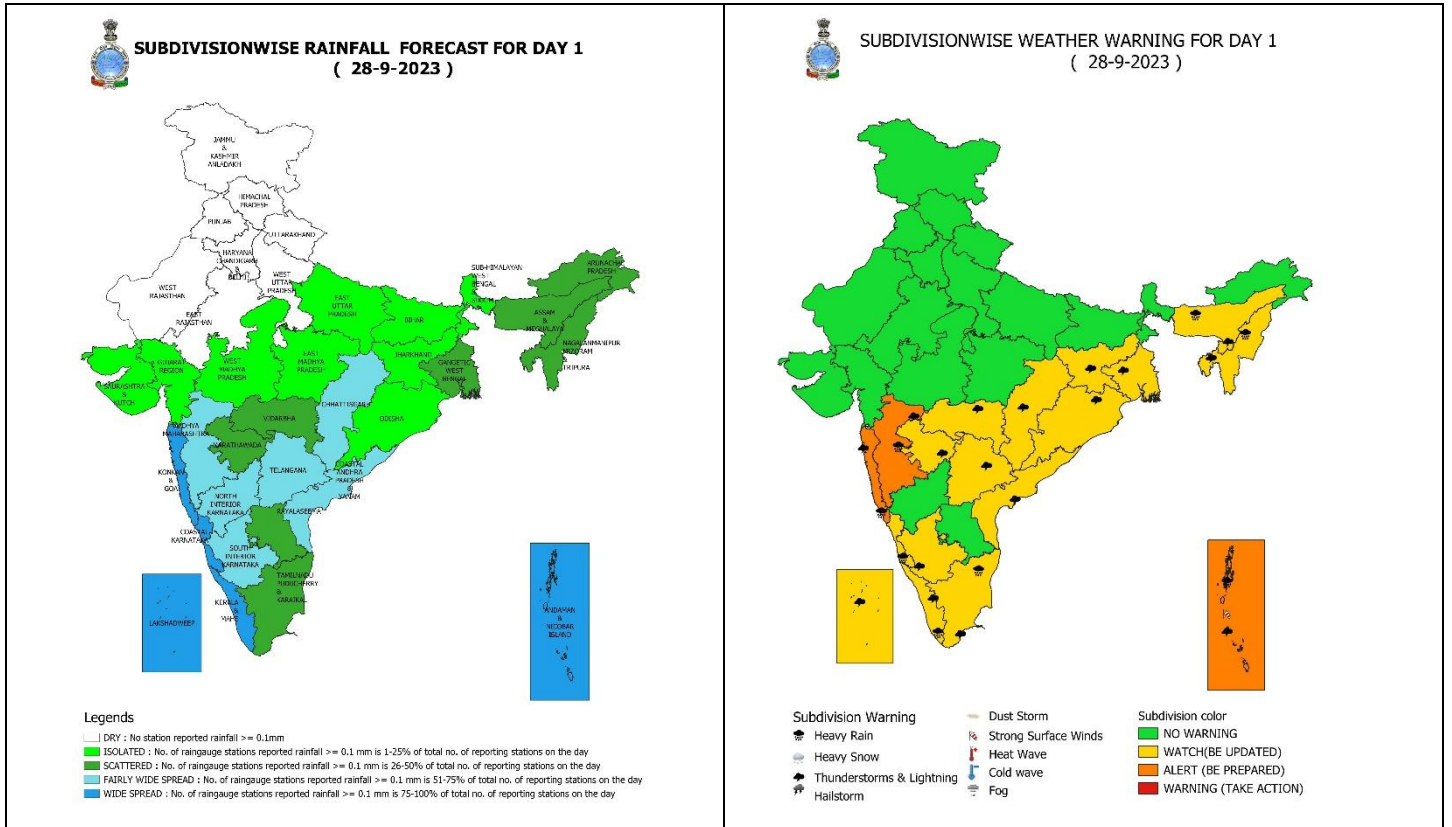


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 26-9-2023 to 0830 IST of 27-9-2023



## Legends

- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)



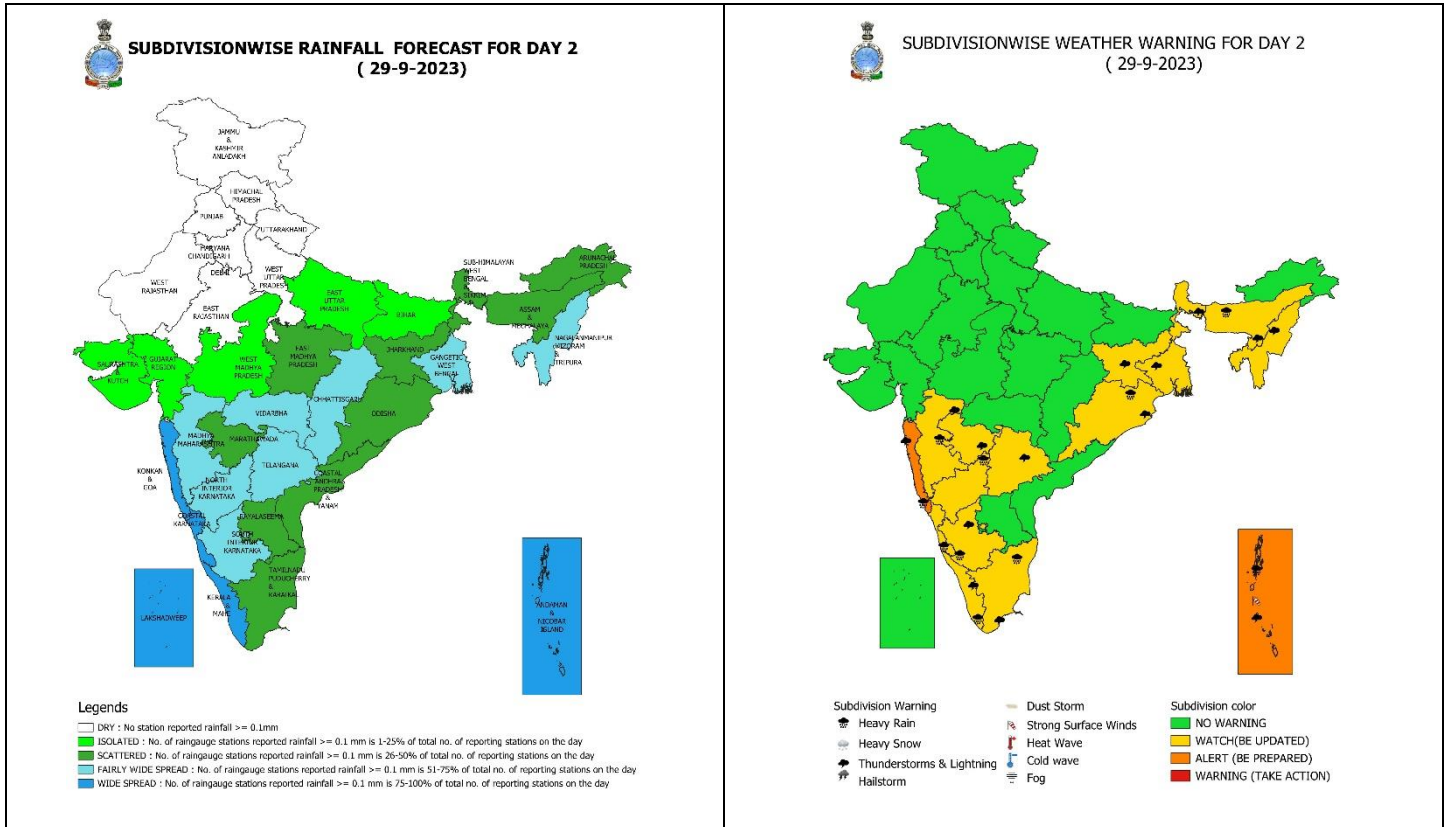
### 28 September (Day 1): -

- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands, Madhya Maharashtra and Konkan & Goa; **Heavy rainfall** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka, Tamil Nadu, Kerala & Mahe.
- ❖ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands; **with lightning** likely at isolated places over Gangetic West Bengal, Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Telangana, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** likely over Southwest and adjoining Westcentral Arabian Sea and **Squally weather speed of 40-45 kmph gusting to 55 kmph** likely over Eastcentral Arabian Sea, along & off Maharashtra coast, South & adjoining Eastcentral Bay of Bengal and North Andaman Sea. **Fishermen are advised not to venture into these areas.**

\* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

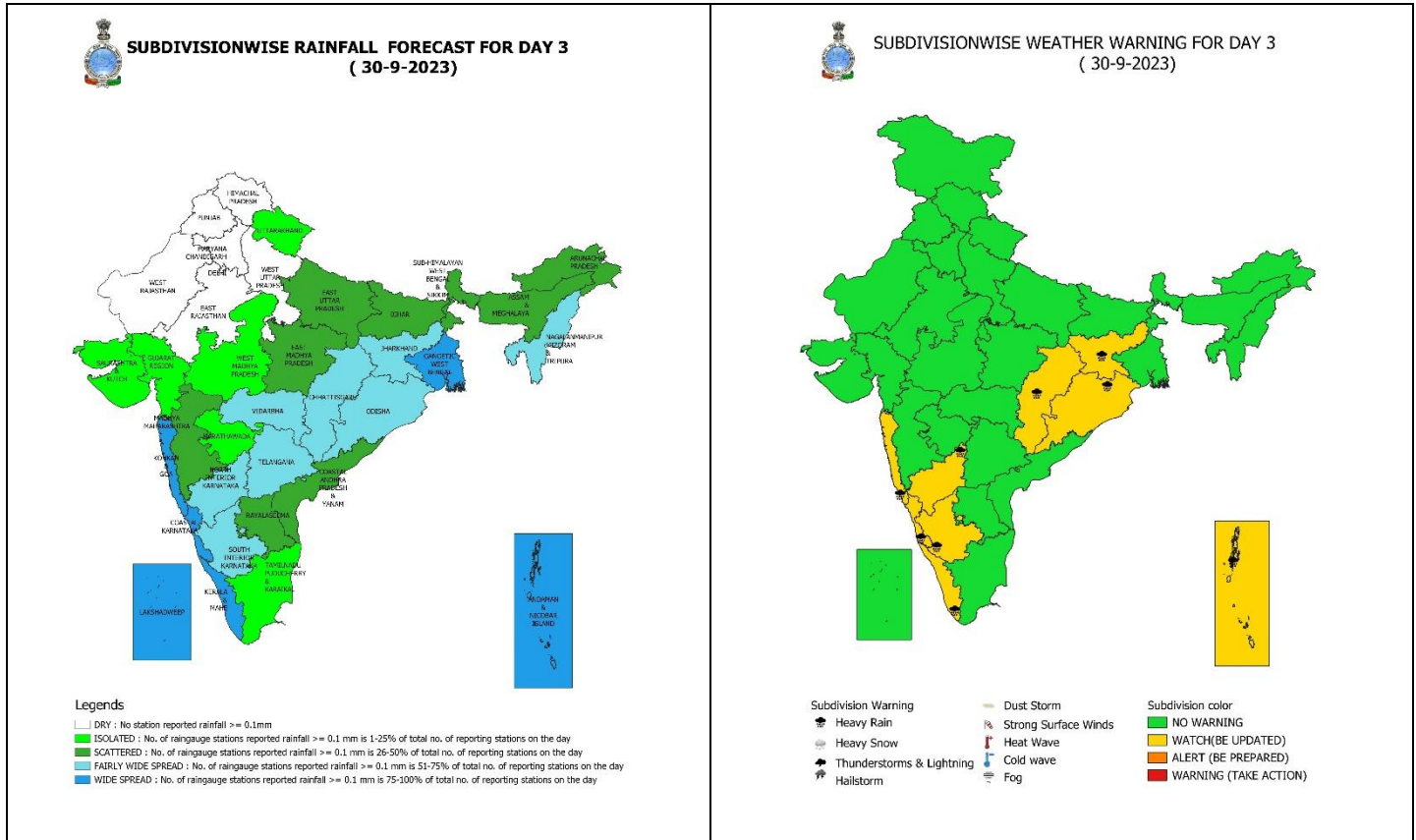
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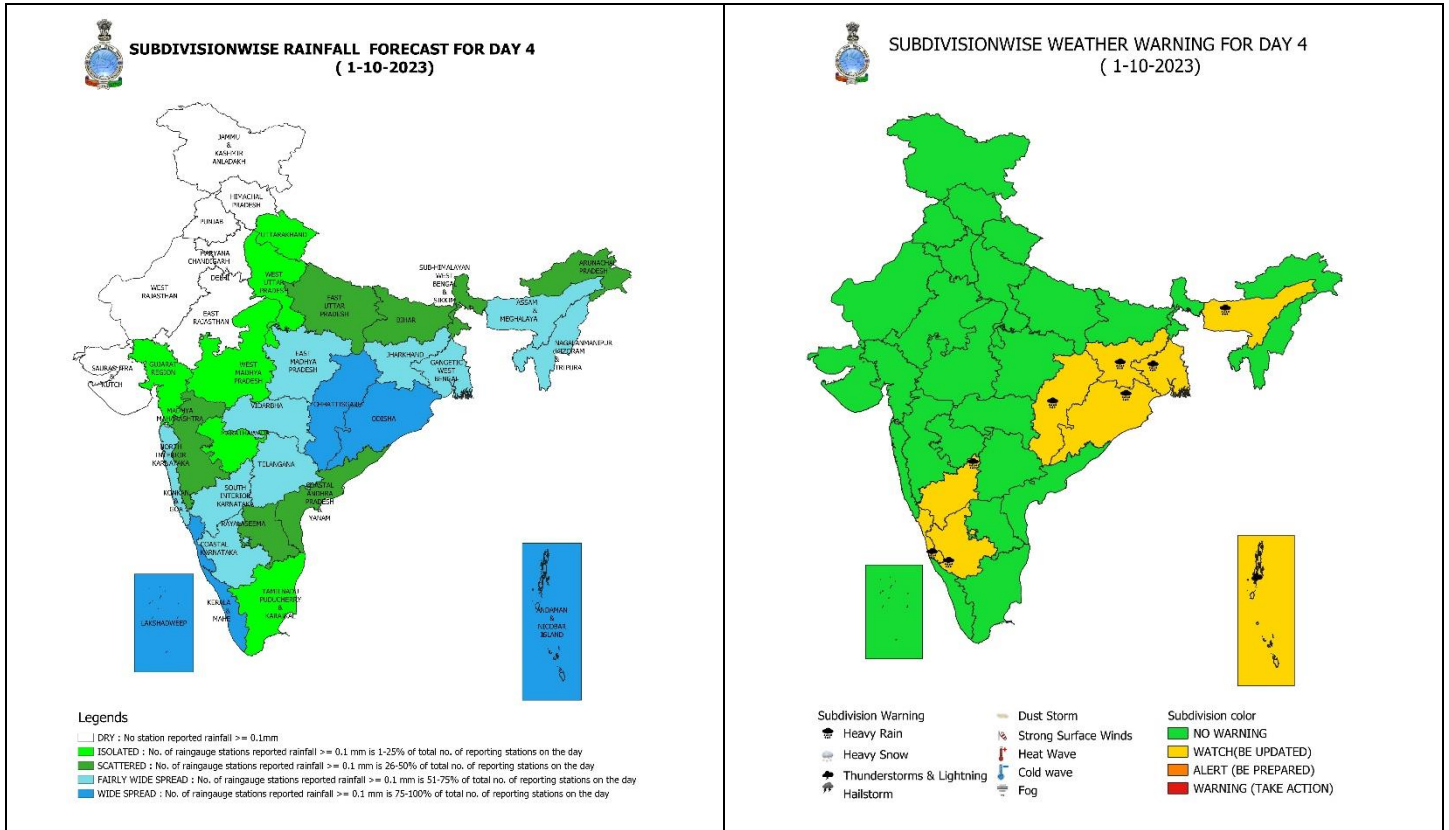
**29 September (Day 2): -**

- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands and Konkan & Goa; **Heavy rainfall** at isolated places over Odisha, Assam & Meghalaya, Madhya Maharashtra, Karnataka, Tamil Nadu and Kerala & Mahe.
- ❖ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands and Kerala & Mahe; **with lightning** likely at isolated places over West Bengal & Sikkim, Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Telangana, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** likely over Southwest and adjoining Westcentral Arabian Sea and **Squally weather speed of 45-55 kmph gusting to 55 kmph** likely over Eastcentral & Southeast Arabian Sea, along & off Maharashtra & Kerala coasts, South and Eastcentral Bay of Bengal and North Andaman Sea. **Fishermen are advised not to venture into these areas.**



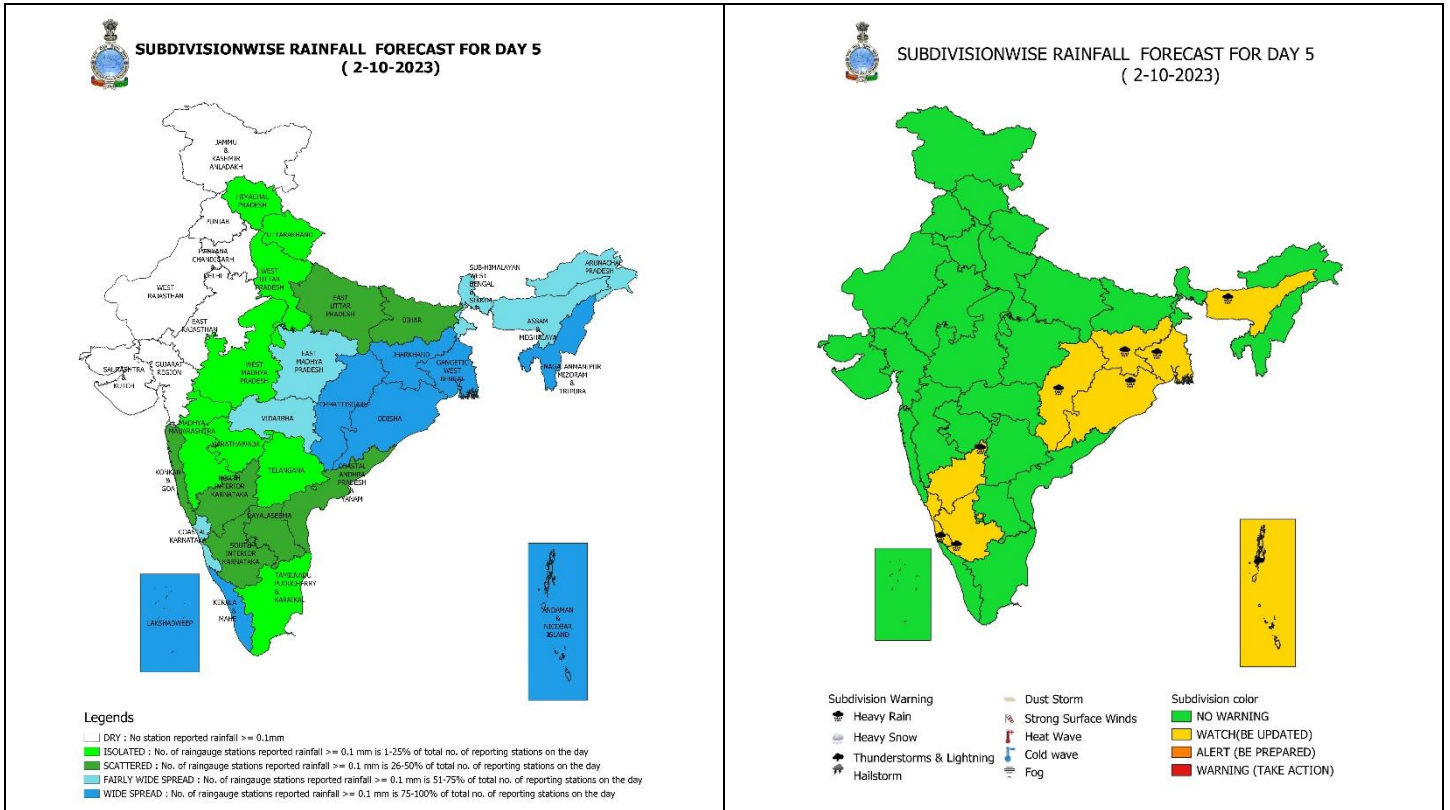
**30 September (Day 3) :-**

- ❖ **Heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands, Chhattisgarh, Gangetic West Bengal, Jharkhand, Odisha, Konkan & Goa, Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands and Kerala & Mahe; **with lightning** at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Konkan & Goa, Coastal Andhra Pradesh & Yanam.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** likely over Southwest and adjoining Westcentral Arabian Sea and **Squally weather speed of 45-55 kmph gusting to 55 kmph** likely over Eastcentral & Southeast Arabian Sea, along & off Maharashtra & Kerala coasts, South & adjoining Central and Northwest Bay of Bengal and North Andaman Sea. **Fishermen are advised not to venture into these areas.**



**01 October (Day 4) :-**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Odisha; **Heavy rainfall** at isolated places over Chhattisgarh, Jharkhand, Assam & Meghalaya and Karnataka.
- ❖ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands and Kerala & Mahe; **with lightning** likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Bihar, Coastal Andhra Pradesh & Yanam.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** likely over Southwest and adjoining Westcentral Arabian Sea and **Squally weather speed of 40-45 kmph gusting to 55 kmph** likely over South & adjoining Central and Northwest Bay of Bengal and North Andaman Sea. **Fishermen are advised not to venture into these areas.**



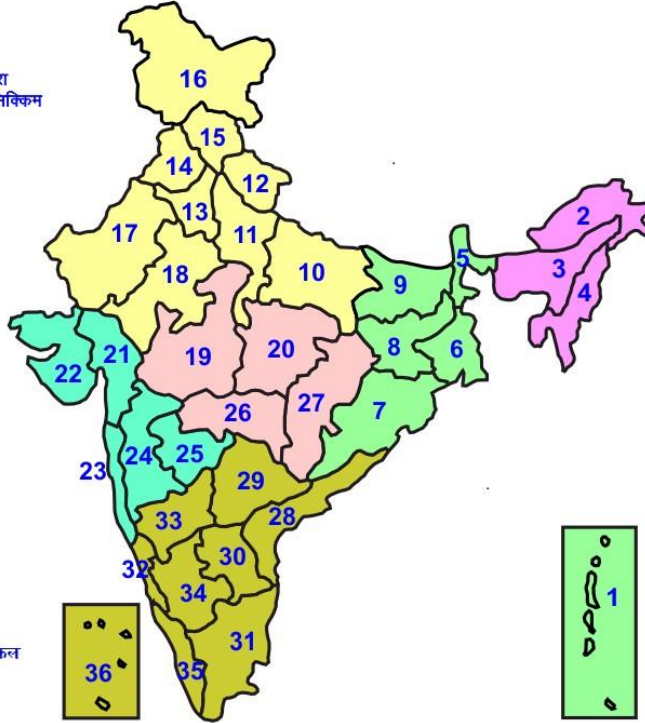
**02 October (Day 5): -**

- ❖ **Heavy rainfall** likely at isolated places over Odisha, Jharkhand, Assam & Meghalaya, Chhattisgarh, East Madhya Pradesh and Karnataka.
- ❖ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands and Kerala & Mahe; **with lightning** likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Bihar, Coastal Andhra Pradesh & Yanam.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** likely over Southwest and adjoining Westcentral Arabian Sea and **Squally weather speed of 40-45 kmph gusting to 55 kmph** likely over South & adjoining Central and Northwest Bay of Bengal and North Andaman Sea. **Fishermen are advised not to venture into these areas.**



## LEGENDS

- 1 अंडमान और निकोबार द्वीप समुह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम गंगेय बंगाल
- 7 ओडिसा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाडा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं 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. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & 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. Marathawada
26. Vidharbha
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)               |

## WARNING

|                                |
|--------------------------------|
| <b>WARNING (TAKE ACTION)</b>   |
| <b>ALERT ( BE PREPARED)</b>    |
| <b>WATCH (BE UPDATED)</b>      |
| <b>NO WARNING ( NO ACTION)</b> |

## Probabilistic Forecast

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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

\* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

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## LEGENDS

### WARNING

|                         |
|-------------------------|
| WARNING (TAKE ACTION)   |
| ALERT ( BE PREPARED)    |
| WATCH (BE UPDATED)      |
| NO WARNING ( NO ACTION) |

### Probabilistic Forecast

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



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  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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 Storm: Wind speed  $> 220$  kmph ( $> 119$  knots)

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