

Thursday, October 10, 2024  
Time of Issue: 1430 hours IST  
(MID-DAY)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### On further Withdrawal of Southwest Monsoon

- ✓ The line of withdrawal of Southwest Monsoon continues to pass through 29°N/84°E, Nautanwa, Sultanpur, Panna, Narmada Puram, Khargone, Nandurbar, Navsari and 20°N/70°E.
- ✓ Conditions are favourable for further withdrawal of Southwest Monsoon from remaining parts of Gujarat, Madhya Pradesh, Uttar Pradesh, some more parts of Maharashtra and some parts of Bihar & Jharkhand during next 2-3 days.

#### Weather Systems:

- ✓ Yesterday's low pressure area intensified into a Well Marked Low pressure area and seen over eastcentral Arabian Sea off Karnataka- Goa coasts at 0830 hours IST of today the 10<sup>th</sup> October 2024. It is likely to move northwestwards and intensify into a Depression over central Arabian Sea during next 2-3 days.
- ✓ The cyclonic circulation over Sri Lanka & neighbourhood is now seen over Southwest Bay of Bengal off Tamil Nadu coast and extends upto middle tropospheric levels tilting southwestwards with height.
- ✓ Another fresh cyclonic circulation very likely to develop over central parts of south Bay of Bengal around 12<sup>th</sup> October at lower & middle tropospheric levels.
- ✓ The cyclonic circulation over east Assam & neighbourhood at lower tropospheric levels persists.

#### Forecast & Warnings (upto 7 days):

##### South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Lakshadweep, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Coastal & South Interior Karnataka; Isolated to Scattered light to moderate rainfall very likely over North Interior Karnataka, Rayalaseema, Telangana, Coastal Andhra Pradesh & Yanam during the week.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 10<sup>th</sup>-15<sup>th</sup> October; over Kerala & Mahe during the week; over Lakshadweep on 10<sup>th</sup>; over Coastal Andhra Pradesh & Yanam & Rayalaseema during 14<sup>th</sup> - 16<sup>th</sup> October; over North Interior Karnataka on 10<sup>th</sup> & 11<sup>th</sup>; over South Interior Karnataka during 10<sup>th</sup>-12<sup>th</sup> and on 14<sup>th</sup> October.
- ✓ **Isolated very heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal on 10<sup>th</sup> and on 13<sup>th</sup> & 14<sup>th</sup> October; Kerala & Mahe on 13<sup>th</sup> & 14<sup>th</sup> October.

##### Northeast India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Arunachal Pradesh during next 4 days and Scattered to Fairly widespread light to moderate rainfall over remaining days during the week; Scattered to Fairly widespread light to moderate rainfall very likely over the remaining region during the week.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh during 10<sup>th</sup>-12<sup>th</sup> October and Assam & Meghalaya during 10<sup>th</sup>-11<sup>th</sup> October.
- ✓ **Isolated very heavy rainfall** very likely over Arunachal Pradesh on 10<sup>th</sup> October.

##### West India

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Konkan & Goa and Gujarat Region during the week; Isolated to scattered light to moderate rainfall over remaining region during the week.
- ✓ **Isolated very heavy rainfall** very likely over Konkan & Goa on 10<sup>th</sup> & 11<sup>th</sup> October.
- ✓ **Isolated heavy rainfall** very likely over Konkan & Goa & Gujarat Region during 10<sup>th</sup>-13<sup>th</sup> October, Over Madhya Maharashtra on 10<sup>th</sup>-12<sup>th</sup> October; over Saurashtra & Kutch on 11<sup>th</sup>-13<sup>th</sup> October.

##### Northwest, East & Central India:

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Andaman & Nicobar Islands; Scattered to Fairly widespread light to moderate rainfall very likely over Sub-Himalayan West Bengal & Sikkim; Isolated to Scattered light rainfall over the northwest India during the week;
- ✓ No significant rainfall likely over these regions during next one week.

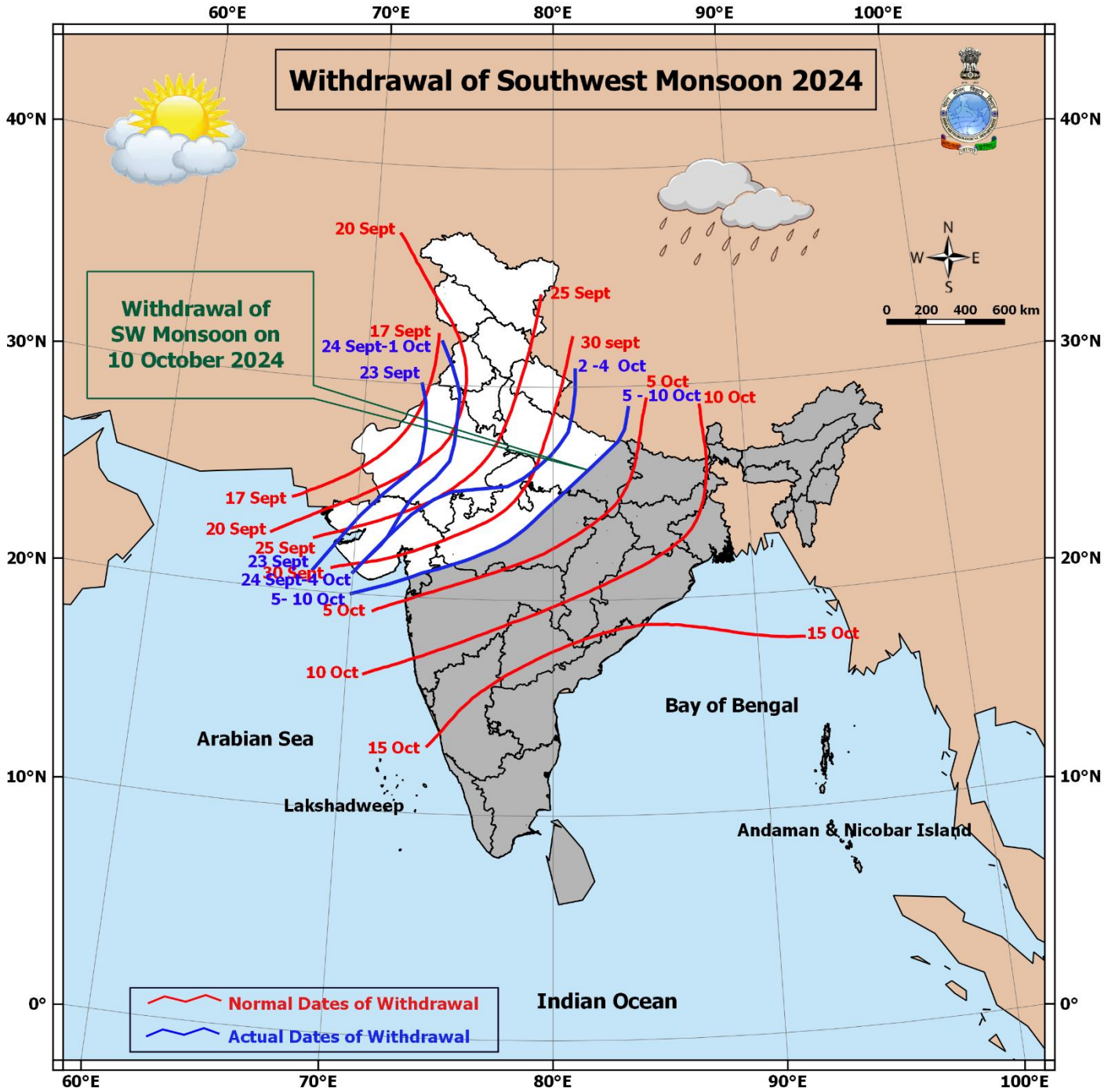
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places over** Kerala & Mahe, Lakshadweep; **at many places over** Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Interior Karnataka, Sub-Himalayan West Bengal & Sikkim; **at a few places over** Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Coastal Karnataka, Andaman & Nicobar Islands, Gangetic West Bengal; **at isolated places over** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, West Rajasthan, Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Odisha, Marathwada, Saurashtra & Kutch.
- ❖ **Heavy rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very Heavy rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim and Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall** at isolated places over North Interior Karnataka, Gujarat Region, Kerala & Mahe and Gangetic West Bengal.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today)(in cm): **Sub-Himalayan West Bengal & Sikkim:** Mathabhanga (dist Cooch Behar) 12, Jhallong (dist Kalimpong) 11, Rongo (dist Kalimpong) 10, Alipurduar (pto) (dist Alipurduar) 9, Chepan (dist Alipurduar) 9, Pakyong (dist Pakyong) 7, Tadong (dist Gangtok) 7, Gangtok (dist Gangtok) 7, Barobhisha (dist Alipurduar) 7; **North Interior Karnataka:** Shiggaon (dist Haveri) 8, Hubballi (dist Dharwad) 7, Dharwad (hos) (dist Dharwad) 7; **Tamil Nadu:** PWD Makkinampatti (dist Coimbatore) 12, Zone 03 Madhavaram (dist Chennai) 9, Nilakottai (dist Dindigul) , Pollachi (dist Coimbatore) , Uthiramerur (dist Kancheepuram) , Zone 13 U39 Adyar (dist Chennai) , RSCL-3 Anandhapuram (dist Villupuram), Kannadaian Anicut (dist Tirunelveli) 7 each; **Gujarat Region:** Dangs (ahwa) (dist Dangs) 10, Umerpada (dist Surat) 7; **Kerala & Mahe:** Ranni(dist Pathanamthitta) 8, Thennala(Malappuram district) 7; **Gangetic West Bengal:** Basirhat(pt) (dist North 24 Parganas) 11;
- ❖ **Minimum Temperature Departures (as on 10-10-2024):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over West Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at a many places over East Uttar Pradesh, East Madhya Pradesh, Bihar, Marathwada, Gujarat State; at a few places over Madhya Maharashtra, Vidarbha, Andaman & Nicobar Islands; at isolated places over Odisha, Chhattisgarh, Rayalaseema, Telangana, Uttarakhand, West Uttar Pradesh, North Interior Karnataka, Rajasthan, Jharkhand. Today, **the lowest minimum temperature of 17.9°C** is reported at **Delhi Ridge (New Delhi)** over the plains of the country. **(Fig.4)**
- ❖ **Maximum Temperature Departures (as on 09-10-2024):** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at a few places over Coastal Andhra Pradesh & Yanam; at isolated places over Telangana, Rayalaseema, Odisha, Chhattisgarh, Himachal Pradesh, Punjab, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad. These were **below normal (-1.6°C to -3.0°C)** at a few places over Arunachal Pradesh; at isolated places over Haryana-Chandigarh-Delhi, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura. Yesterday, **the highest Maximum Temperature of 40.1°C** was reported at **Bhuj (Saurashtra & Kutch)** over the country. **(Fig. 2)**

## Meteorological Analysis (Based on 0830 hours IST)

- ❖ The **line of withdrawal of Southwest Monsoon** continues to pass through 29°N/84°E, Nautanwa, Sultanpur, Panna, Narmadapuram, Khargaon, Nandurbar, Navsari and 20°N/70°E.
- ❖ Conditions are favourable for further **withdrawal of Southwest Monsoon** from remaining parts of Gujarat, Madhya Pradesh, Uttar Pradesh, some more parts of Maharashtra and some parts of Bihar and Jharkhand during next 2-3 days.
- ❖ The **low pressure area** over eastcentral and adjoining Lakshadweep & southeast Arabian Sea lay as a **Well Marked Low pressure area** over eastcentral Arabian Sea off Karnataka- Goa coasts at 0830 hours IST of today the 10th October 2024. The associated cyclonic circulation extending upto 5.8 km above mean sea level. It is likely to move northwestwards and intensify into a **Depression** over central Arabian Sea during next 2-3 days.
- ❖ The **cyclonic circulation** over Sri Lanka & neighbourhood now seen as a cyclonic circulation over southwest Bay of Bengal off Tamilnadu coast and extends upto 4.5 km above mean sea level tilting southwestwards with height.
- ❖ The **Western Disturbance** over east Afghanistan & neighbourhood now seen as a **cyclonic circulation** over Jammu and adjoining Pakistan at 3.1 Km above mean sea level with a trough aloft at 5.8 km above mean sea level roughly along Long. 72°E to the north of Lat. 30°N.
- ❖ The **cyclonic circulation** over east Assam & neighbourhood extending upto 1.5 km above mean sea level persists. The trough aloft has become less marked.
- ❖ The **trough** from Comorin area to north Konkan coast across the cyclonic circulation associated with Low Pressure area over eastcentral and adjoining Lakshadweep and southeast Arabian Sea extending upto 1.5 km above mean sea level has become less marked.
- ❖ Another fresh cyclonic circulation very likely to develop over central parts of south Bay of Bengal around 12<sup>th</sup> October at lower & middle tropospheric levels.

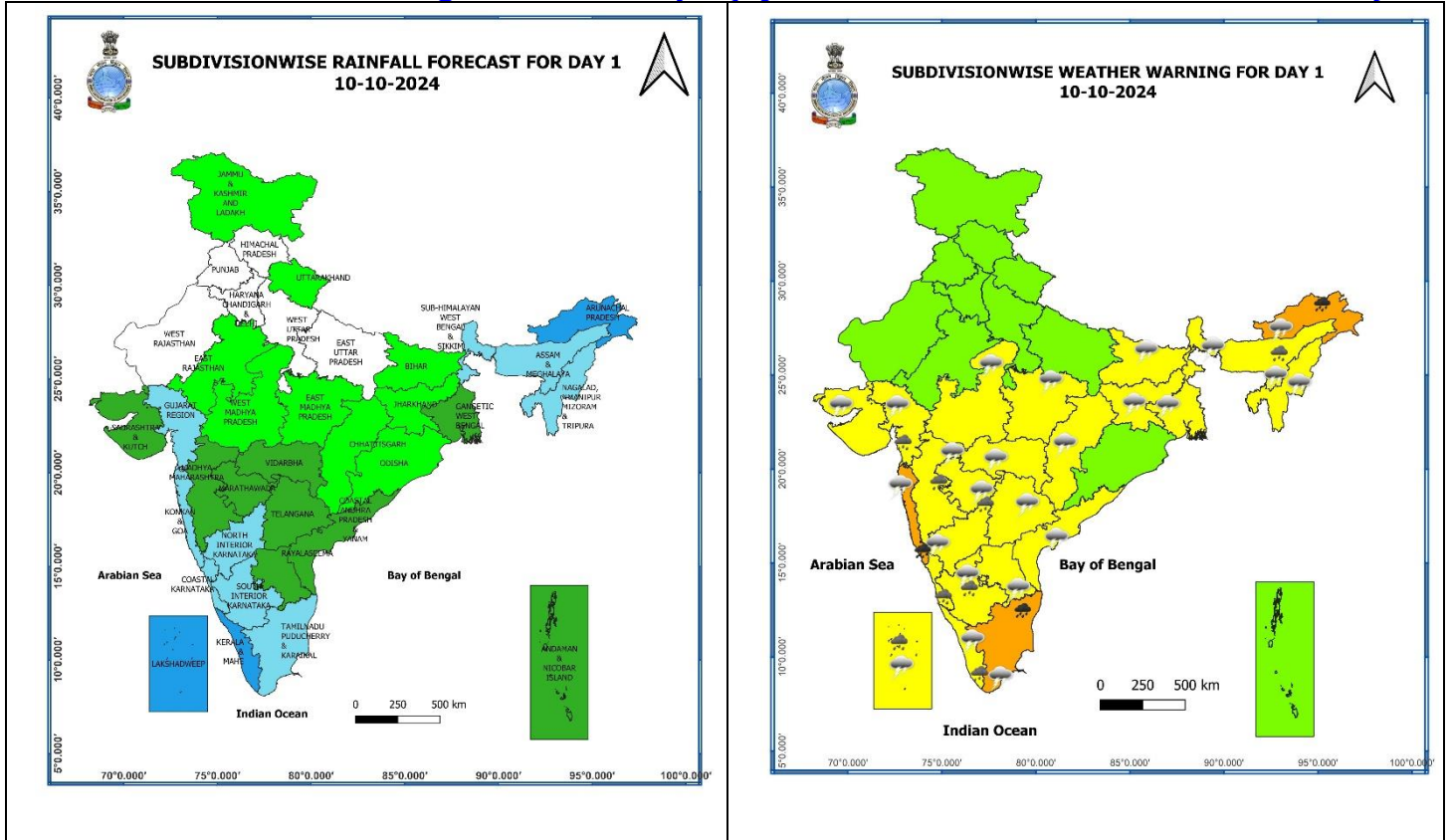
### Withdrawal of Southwest Monsoon 2024



\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
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For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
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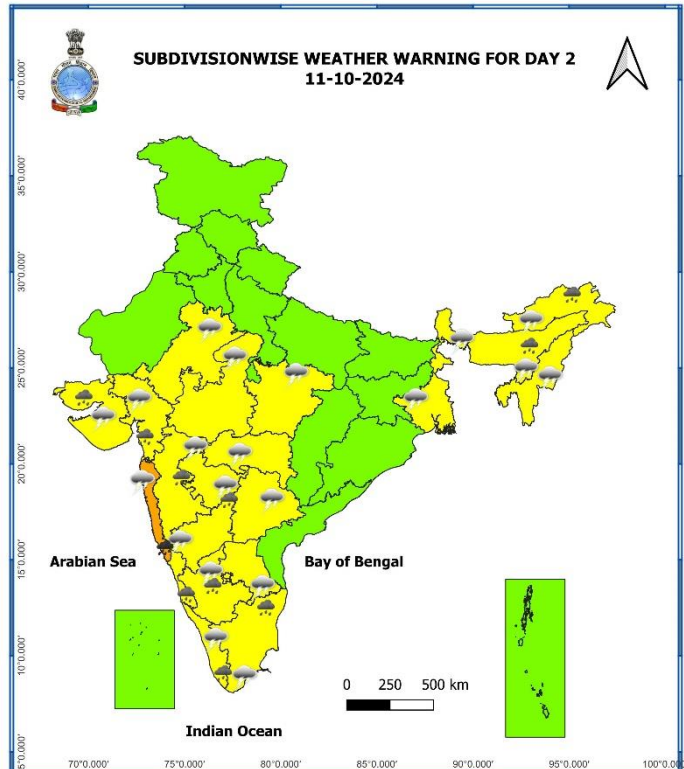
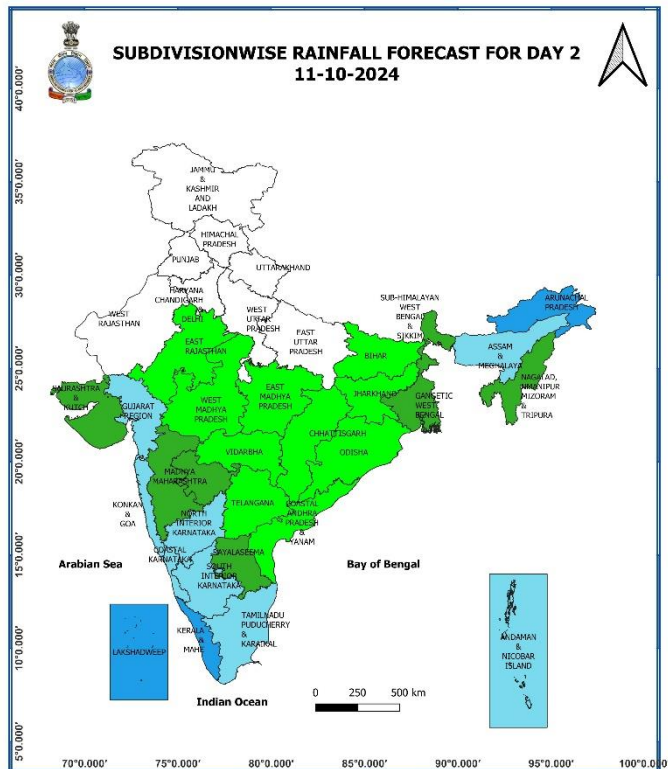


**Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 17<sup>th</sup> October, 2024)**



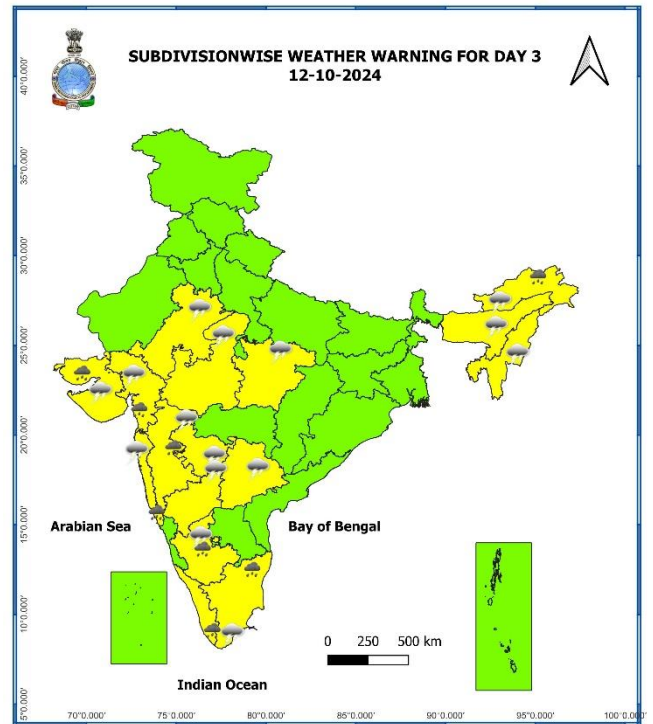
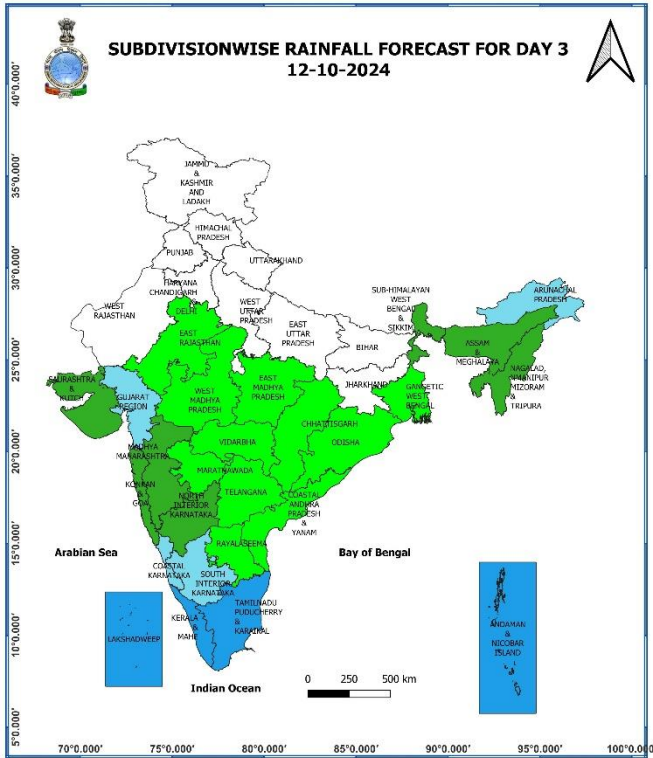
**10 October (Day 1):**

- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** very likely at isolated places over Arunachal Pradesh, Konkan & Goa, Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall ( $\geq 7$  cm)** very likely at isolated places over Assam & Meghalaya, Madhya Maharashtra, Gujarat Region, Kerala & Mahe and Lakshadweep and Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana, Madhya Pradesh; **with lightning** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and eastern parts of southwest Arabian Sea, along and off Kerala, Karnataka, Goa, off Maharashtra coasts, many parts of east central Arabian sea, gulf of Mannar, along and off south Sri Lanka coast adjoining southwest Arabian sea. Fishermen are advised not to venture into these areas.



### 11 October (Day 2):

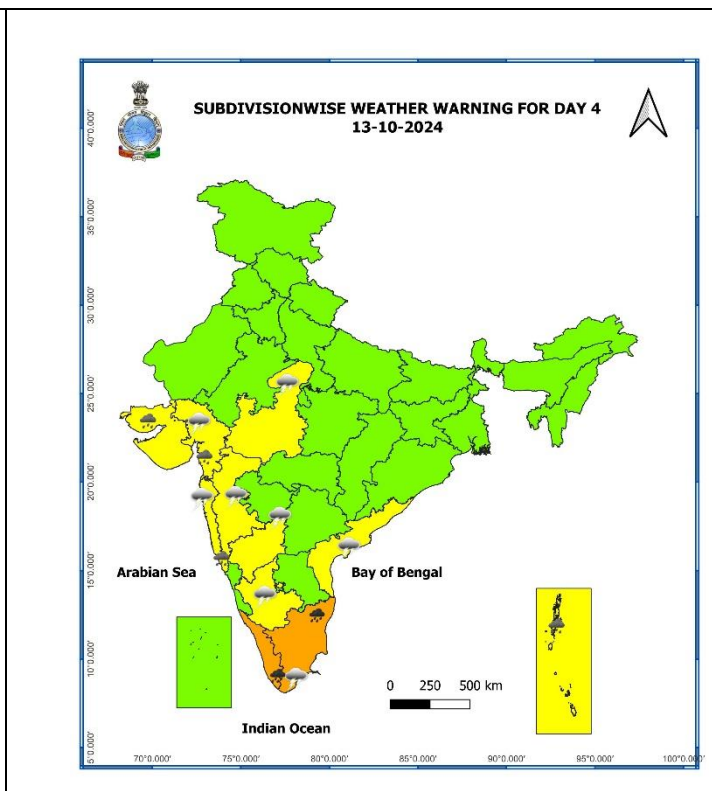
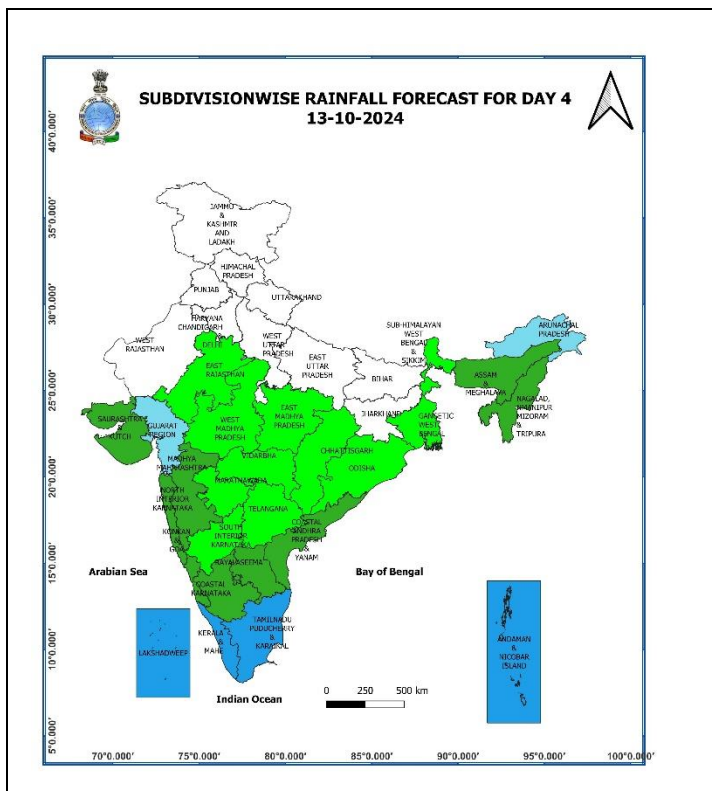
- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** very likely at isolated places over Konkan & Goa; **Heavy rainfall ( $\geq 7$ cm)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Gujarat state, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal and Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana and West Madhya Pradesh; **with lightning** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Rayalaseema, Interior Karnataka, East Rajasthan, East Madhya Pradesh, Vidarbha, West Bengal & Sikkim.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and adjoining southwest Arabian sea, along and off Kerala, Karnataka, goa, off Maharashtra coasts and many parts of east central Arabian sea, gulf of Mannar, along and off south Sri Lanka coast adjoining southwest Arabian sea. Fishermen are advised not to venture into these areas.



### 12 October (Day 3):

- ❖ **Heavy rainfall ( $\geq 7\text{cm}$ ) very likely** at isolated places over Arunachal Pradesh, Konkan & Goa, Madhya Maharashtra, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, South Interior Karnataka,
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph) very likely** at isolated places over Telangana, West Madhya Pradesh; **with lightning** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Interior Karnataka, East Rajasthan, East Madhya Pradesh.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and adjoining southwest Arabian sea, along and off Kerala, Karnataka coasts, off Maharashtra coast, most parts of east central Arabian sea and adjoining parts of west central and north Arabian sea, gulf of Mannar, along and off south Sri Lanka coast, some parts of southwest Bay of Bengal and adjoining parts of southeast Bay of Bengal. Fishermen are advised not to venture into these areas.

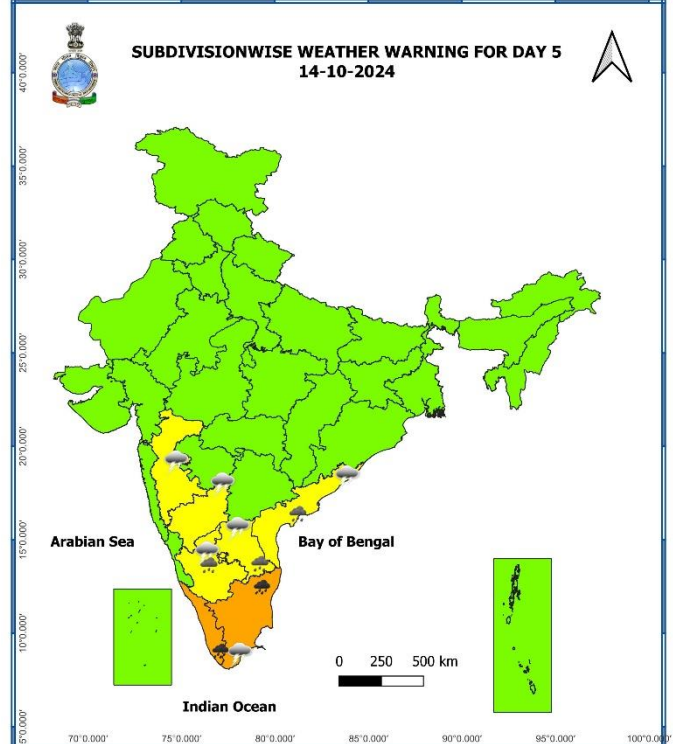
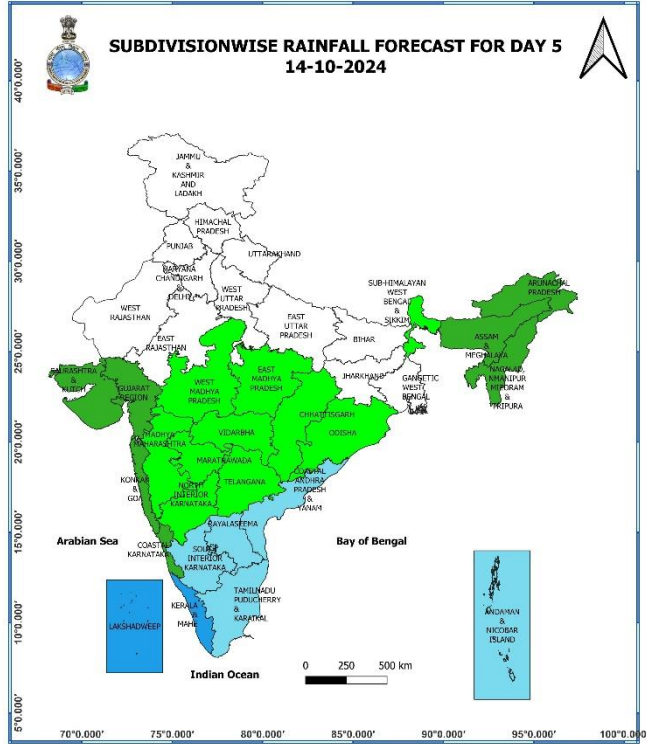




### 13 October (Day 4):

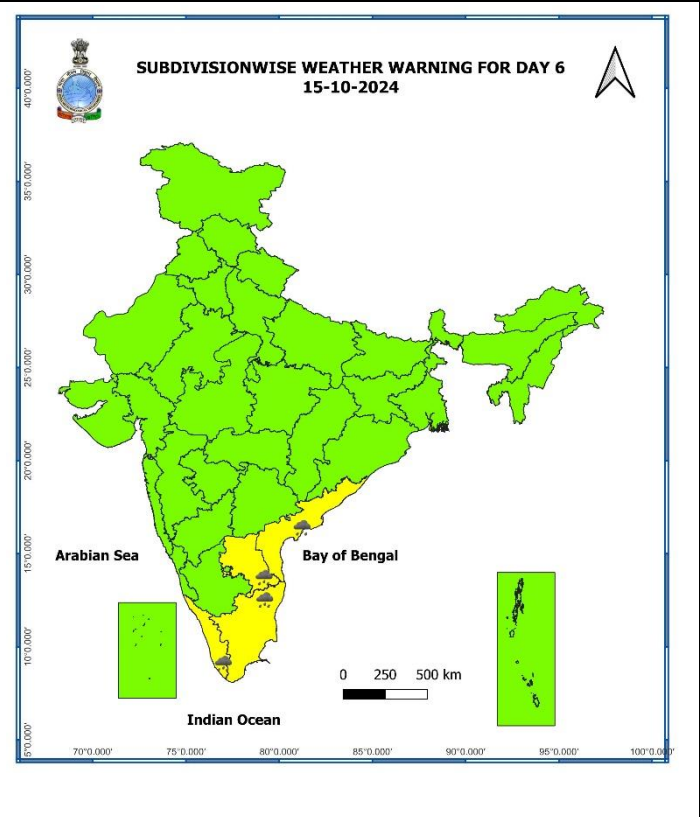
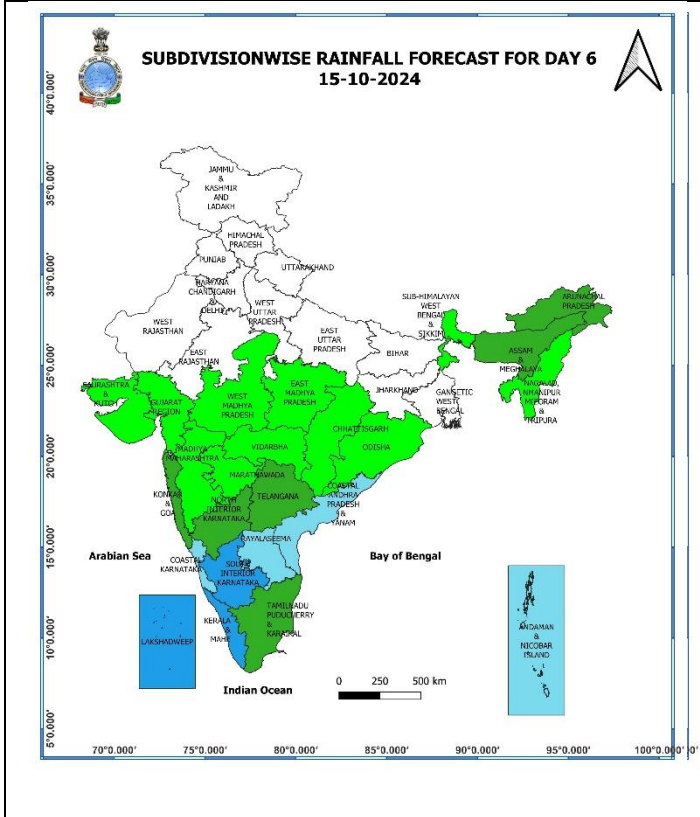
- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **Heavy rainfall ( $\geq 7$ cm)** likely at isolated places Konkan & Goa, Gujarat state, Andaman & Nicobar Islands.
- ❖ **Thunderstorm with lightning** likely at isolated places over Konkan & Goa, Madhya Maharashtra, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Interior Karnataka, West Madhya Pradesh.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over many parts of west central Arabian sea and adjoining parts of east central and north Arabian sea, many parts of southwest Arabian sea and adjoining parts of southeast Arabian sea, along and off south Kerala coast and adjoining Lakshadweep area, over Comorin area, gulf of Mannar, along and off Sri Lanka coast, Tamilnadu coast, many parts of southwest Bay of Bengal adjoining parts of southeast Bay of Bengal. Fishermen are advised not to venture into these areas.





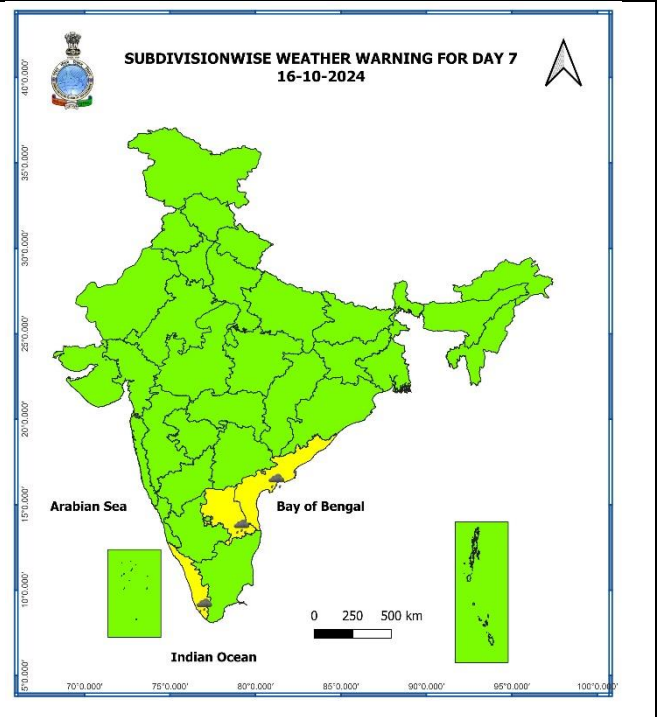
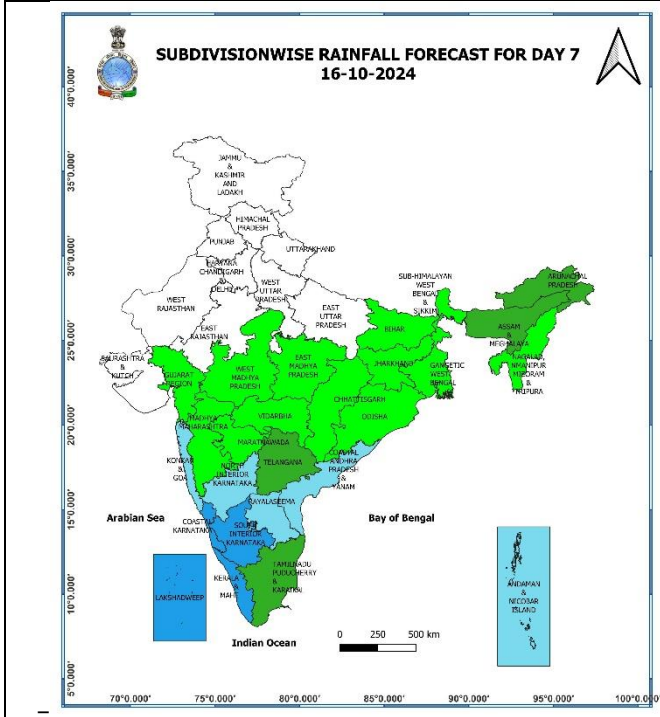
### 14 October (Day 5):

- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Tamil Nadu, Puducherry, Kerala & Mahe; **Heavy rainfall ( $\geq 7$ cm)** likely at isolated places over Coastal Andhra Pradesh & Yanam, Rayalaseema, South Interior Karnataka.
- ❖ **Thunderstorm with lightning** likely at isolated places over Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over most parts of west central Arabian sea and adjoining parts of east central, many parts of north Arabian sea, many parts of southwest Arabian sea and adjoining parts of southeast Arabian sea, along and off south Kerala coast and adjoining Lakshadweep area, over Comorin area, gulf of Mannar, along and off Sri Lanka coast, Tamilnadu coast, many parts of southwest Bay of Bengal adjoining parts of southeast Bay of Bengal. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over most parts of northwest Arabian sea and adjoining parts of westcentral Arabian sea. Fishermen are advised not to venture into these areas.



**15 October (Day 6):**

- ❖ Heavy rainfall ( $\geq 7\text{cm}$ ) likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema.



### 16 October (Day 7):

- ❖ Heavy rainfall ( $\geq 7\text{cm}$ ) likely at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema.

### Weather Outlook for subsequent 3 days (During 17<sup>th</sup> October- 19<sup>th</sup> October, 2024)

- ❖ Fairly widespread to widespread rainfall likely over Peninsular and adjoining Central India and Islands.
- ❖ Isolated to Scattered rainfall likely over East and Northeast India.
- ❖ Mainly dry weather will prevail over rest parts of country.

- 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.

## Impact due to

- ✓ **Isolated heavy to very heavy rainfall** very likely over Arunachal Pradesh on 10<sup>th</sup> October; Konkan & Goa on 10<sup>th</sup> & 11<sup>th</sup> October; Tamil Nadu, Puducherry & Karaikal on 10<sup>th</sup>, 13<sup>th</sup> & 14<sup>th</sup> October; Kerala & Mahe on 13<sup>th</sup> & 14<sup>th</sup> October.

## 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 and roadways due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutcha roads.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ Damage to horticulture and standing crops in some areas due to inundation and wind.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

## Action Suggested

- ✓ Judicious regulation of surface transports including railways and roadways.
- ✓ 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.

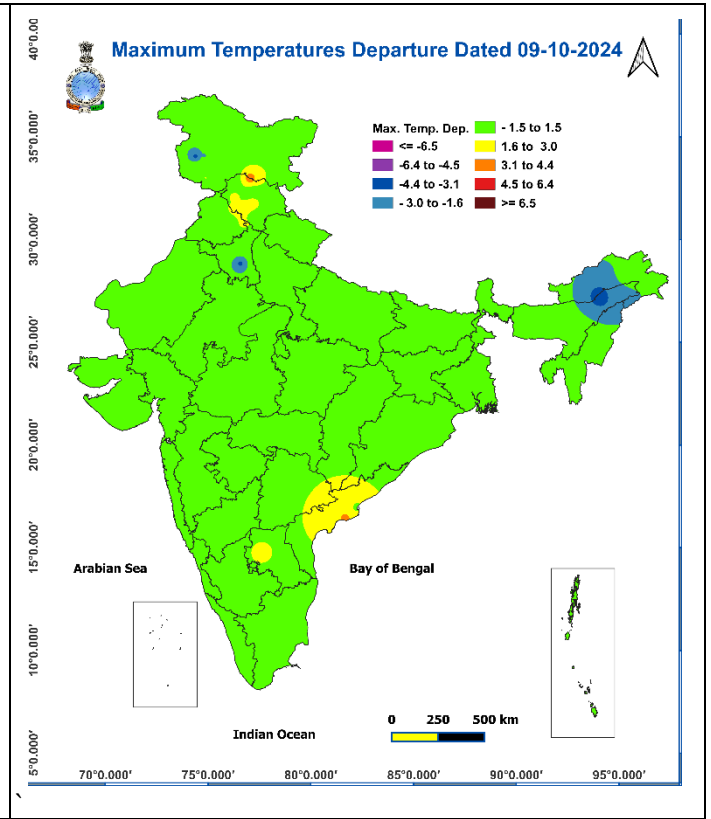
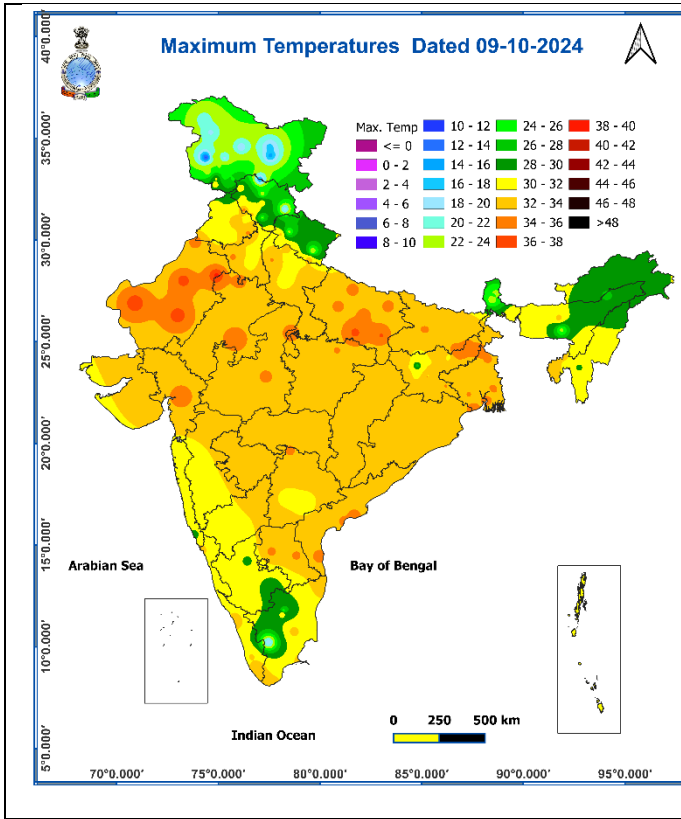
## Agromet advisories for Heavy Rainfall likely over various parts of the country

- ✓ In **Tamil Nadu**, drain out excess water from rice nurseries and recently transplanted rice fields; postpone harvesting of matured millet crops.
- ✓ Make necessary arrangements for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Konkan & Goa, Madhya Maharashtra, Kerala, Lakshadweep, Coastal and South Interior Karnataka and North Eastern States.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.



**Fig. 1: Maximum Temperatures**

**Fig. 2: Departure of Maximum Temperatures**



**Fig. 3: Minimum Temperatures**

**Fig. 4: Departure of Minimum Temperatures**

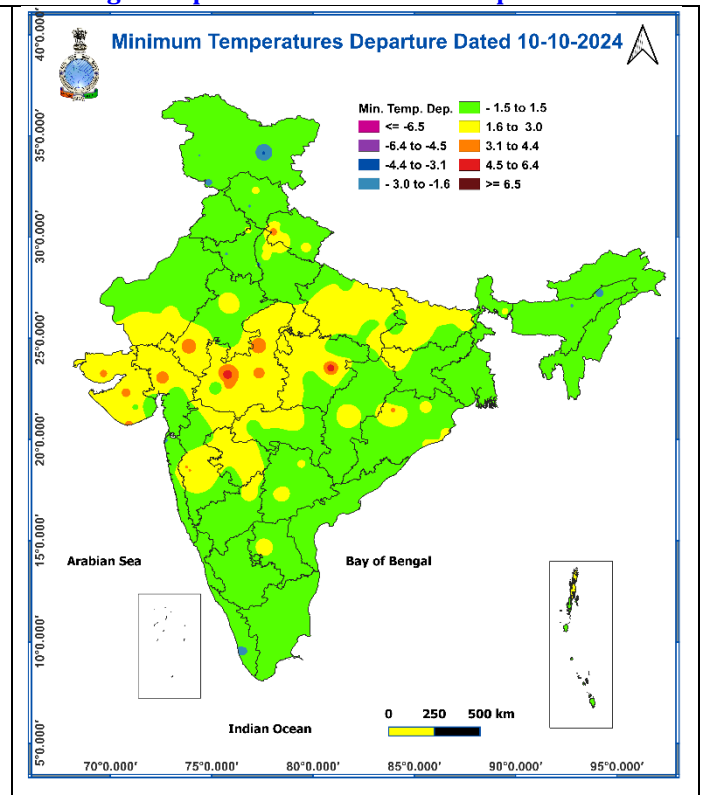
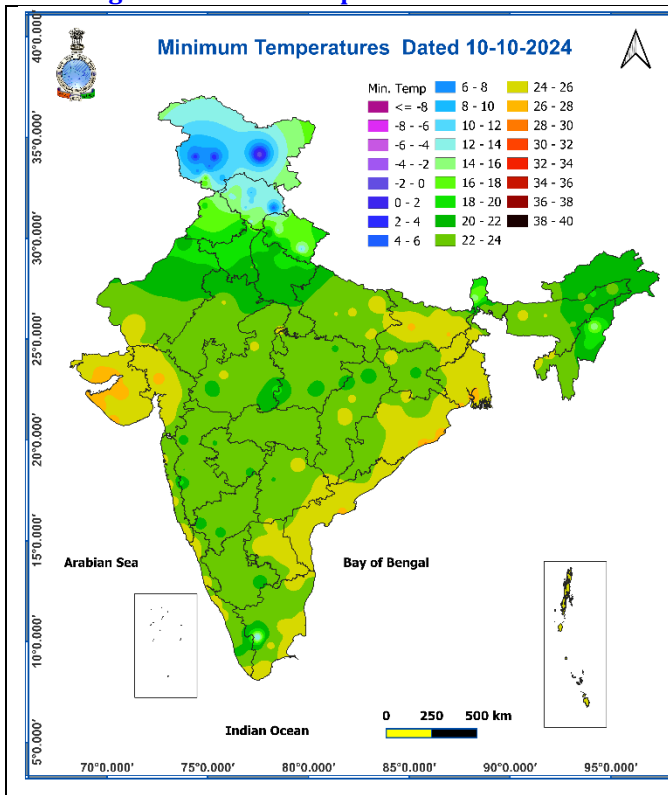
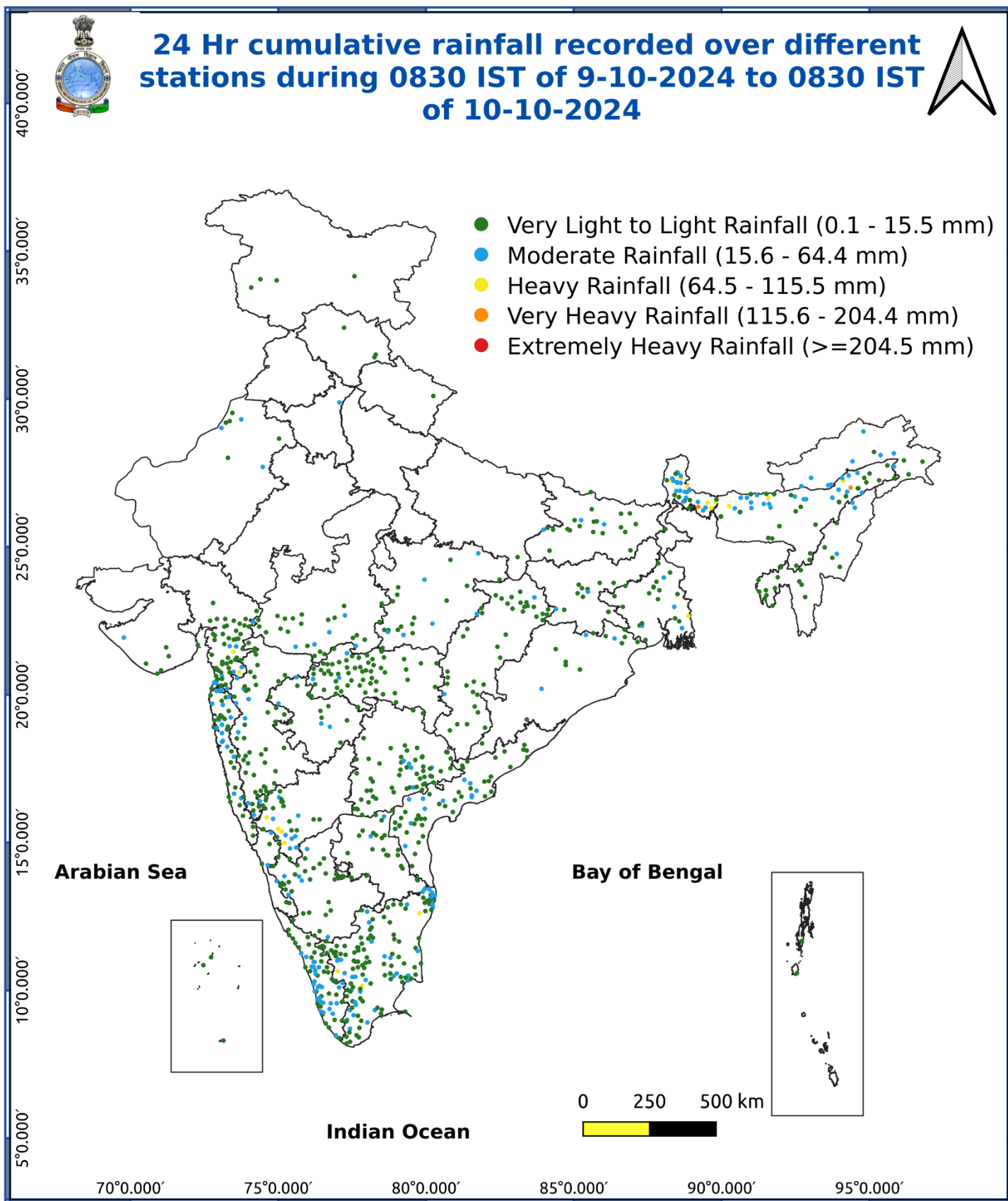


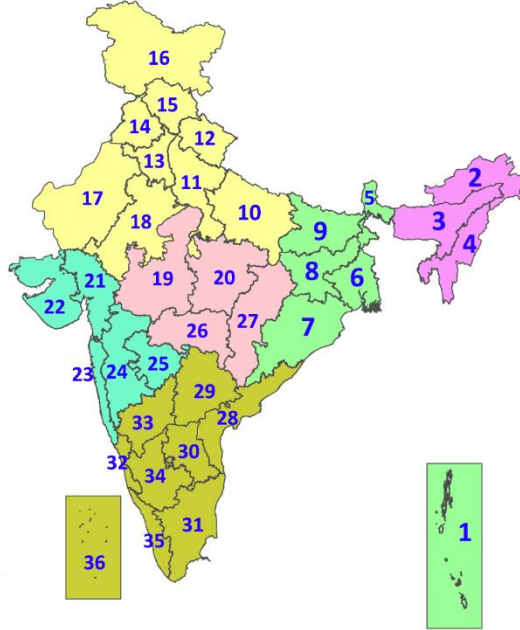
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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## 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



## 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>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</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>When maximum temperature remains <math>40^{\circ}\text{C}</math></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>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.</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>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</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>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>
<b>Dust/Sand Storm</b>	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</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>