

Monday, October 7, 2024  
Time of Issue: 1400 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 and some more parts of Maharashtra during next 2-3 days.

#### Weather Systems:

- ✓ A **cyclonic circulation** lies over South Kerala & neighbourhood and extends upto lower tropospheric level. A trough runs from southwest Bay of Bengal to Lakshadweep across south Tamil Nadu and the above cyclonic circulation over South Kerala and extends upto lower tropospheric level.
- ✓ Under their influence, a **low pressure area** is likely to form over Lakshadweep and adjoining Southeast & eastcentral Arabian Sea around 09<sup>th</sup> October. It is likely to move northwestwards thereafter.

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

##### South Peninsular India:

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Lakshadweep, Coastal Karnataka, South Interior Karnataka, Kerala & Mahe North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal; Isolated to Scattered light to moderate rainfall very likely over Rayalaseema, Telangana, Coastal Andhra Pradesh & Yanam during the week.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Kerala & Mahe during the week; Tamil Nadu, Puducherry & Karaikal during 07<sup>th</sup> & 10<sup>th</sup> -12<sup>th</sup>; Lakshadweep on 07<sup>th</sup>; South Interior Karnataka on 07<sup>th</sup> & 08<sup>th</sup> October.
- ✓ **Isolated heavy rainfall** very likely over Kerala & Mahe, Tamil Nadu, Lakshadweep, Puducherry & Karaikal during the week; Coastal Karnataka on 07<sup>th</sup> & 08<sup>th</sup>; South Interior Karnataka during 07<sup>th</sup> -11<sup>th</sup> October.

##### Northeast India:

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over North East India during the week.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya during 07<sup>th</sup> -11<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura during 07<sup>th</sup> -09<sup>th</sup> October.

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

- ✓ No significant rainfall likely over these regions during next one week.

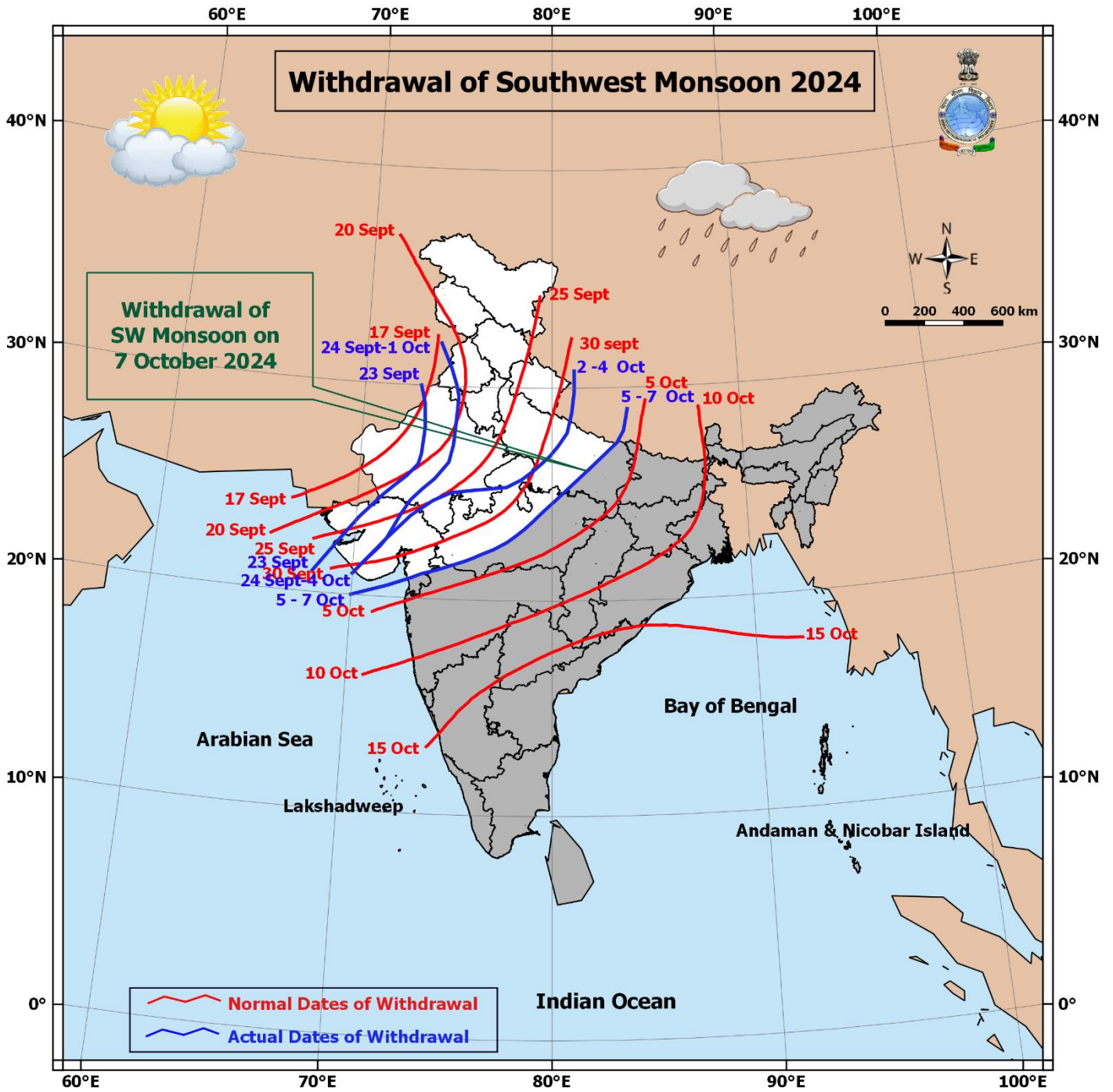
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Kerala & Mahe; **at many places** over Arunachal Pradesh, Konkan & Goa, Lakshadweep; **at few places** over West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka, South Interior Karnataka; **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Bihar, Jharkhand, Odisha, Madhya Maharashtra, Marathwada, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, North Interior Karnataka.
- ❖ **Heavy rainfall** recorded (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very Heavy rainfall** realized at isolated places over Kerala & Mahe; **Heavy rainfall** at isolated places over Odisha, Assam & Meghalaya, Coastal Karnataka, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Kerala & Mahe:** Perinthalamanna (dist Malappuram) 15, Irikkur (dist Cannur) 13, Angadipuram (dist Malappuram) 10, Kannur Airport (dist Cannur) 10, Ams Kannur (dist Cannur) 10, Mancompu (dist Alapuzha) 8, Varkala (dist Thiruvananthapuram) 8, Airport Chakka (dist Thiruvananthapuram) 8, Panathur (dist Kasargod) 7; **Coastal Karnataka:** Puttur Hms (dist Dakshina Kannada) 11; **Tamil Nadu, Puducherry & Karaikal:** Neyyoor AWS (dist Kanniyakumari) 10, Barwood (dist The Nilgiris) 7; **South Interior Karnataka:** Napoklu (dist Kodagu) 9; **Odisha:** Chandanpur (Mayurbhanj) 8, Bangiriposi (Mayurbhanj) 7; **Assam & Meghalaya:** Silchar (dist Cachar) 7,
- ❖ **Minimum Temperature Departures (as on 07-10-2024):** Minimum temperatures are **above normal (1.6°C to 3.0°C)** at a few places over Sub-Himalayan West Bengal & Sikkim, Bihar, East Uttar Pradesh, Rajasthan, Marathwada; at isolated places over Punjab, Uttarakhand, Haryana-Chandigarh-Delhi, West Uttar Pradesh, Madhya Pradesh, Gujarat state, Odisha, Chhattisgarh, Madhya Maharashtra Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Telangana and Interior Karnataka. These are **below normal (-1.6°C to -3.0°C)** at isolated places over Assam & Meghalaya. Today, **the lowest minimum temperature of 18.3°C** is reported at **Delhi Ridge (New Delhi)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 06-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Coastal Andhra Pradesh & Yanam; **above normal (1.6°C to 3.0°C)** at a few places over Himachal Pradesh, Vidarbha, Konkan & Goa; at isolated places over Uttarakhand, Punjab, West Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Odisha, Marathwada, Madhya Maharashtra, Telangana, Rayalaseema, Coastal Karnataka, Kerala & Mahe. These were **markedly below normal (-5.1°C or less)** at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh; **below normal (-1.6°C to -3.0°C)** at a few places over Assam & Meghalaya; at isolated places over Gujarat Region, Bihar, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal. Yesterday, **the highest Maximum Temperature of 38.3°C** was reported at **Ganganagar (West Rajasthan)** 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 and some more parts of Maharashtra during next 2-3 days.
- ❖ A **cyclonic circulation** lies over South Kerala & neighbourhood and extends upto 1.5 km above mean sea level. A **trough** runs from southwest Bay of Bengal to Lakshadweep across south Tamil Nadu and the above cyclonic circulation over South Kerala and extends upto 1.5 km above mean sea level.
- ❖ Under their influence, a low pressure area is likely to form over Lakshadweep and adjoining Southeast & eastcentral Arabian Sea around 09<sup>th</sup> October. It is likely to move northwestwards thereafter.
- ❖ A **cyclonic circulation** lies over East Bangladesh and adjoining southeast Assam and extends upto 1.5 km above mean sea level.
- ❖ The **Western Disturbance** as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 64°E to the north of Lat. 28°N.
- ❖ The **cyclonic circulation** over northern parts of Gangetic West Bengal & neighbourhood extending upto 3.1 km above mean sea level has become less marked.
- ❖ The **trough** from Jharkhand to Manipur across above cyclonic circulation over northern parts of Gangetic West Bengal & neighbourhood at 0.9 km above mean sea level has become less marked.
- ❖ The **upper air cyclonic circulation** over southwest & adjoining westcentral Bay of Bengal off north Tamil Nadu-south Andhra Pradesh coasts between 1.5 km to 5.8 km above mean sea level tilting southwestwards with height has become less marked.
- ❖ The **trough** from southeast Arabian Sea to Rayalaseema across north Kerala & South Interior Karnataka at 0.9 km above mean sea level has become less marked.
- ❖ The **cyclonic circulation** over north Pakistan & adjoining Punjab between 1.5 km & 3.1 km above mean sea level has become less marked.

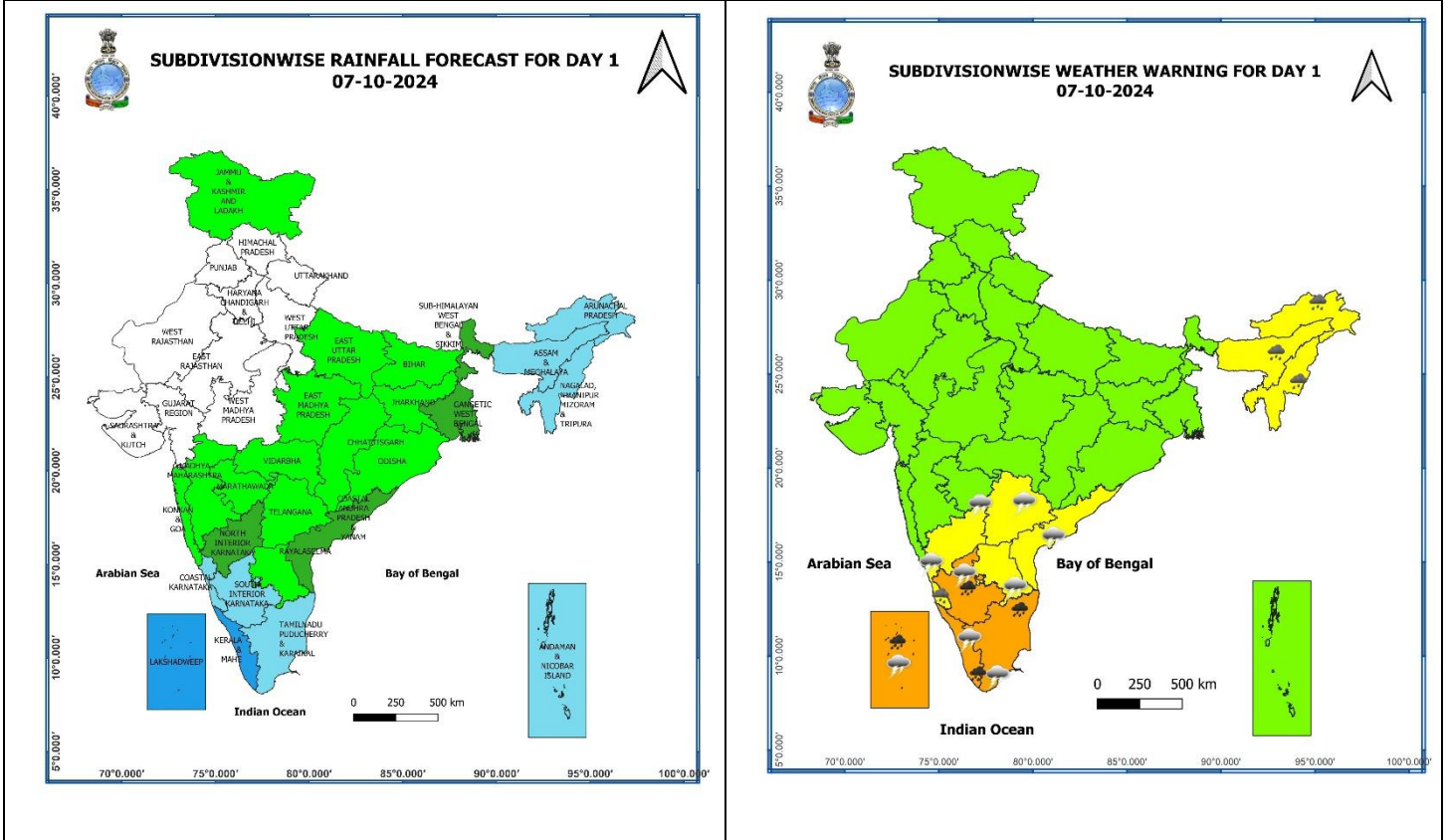
### Withdrawal of Southwest Monsoon 2024



\* 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  
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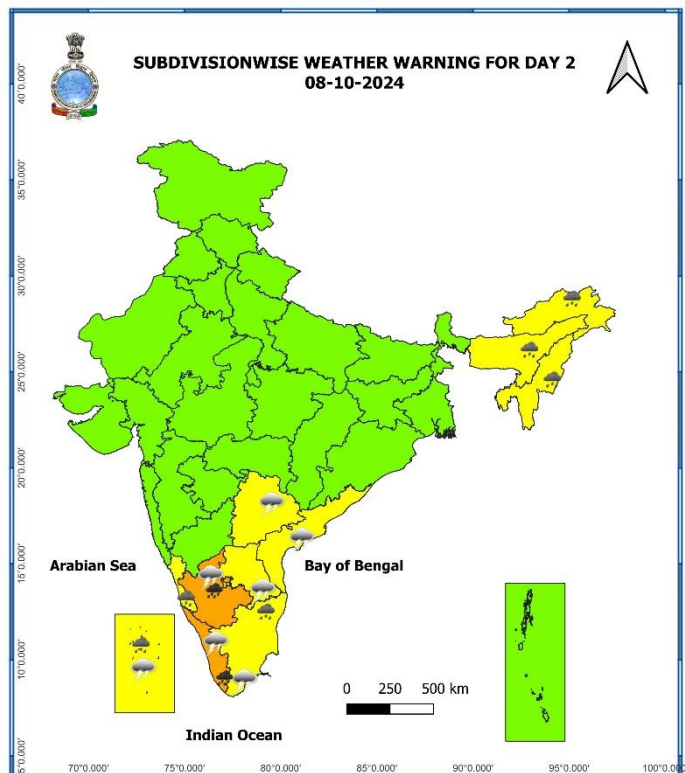
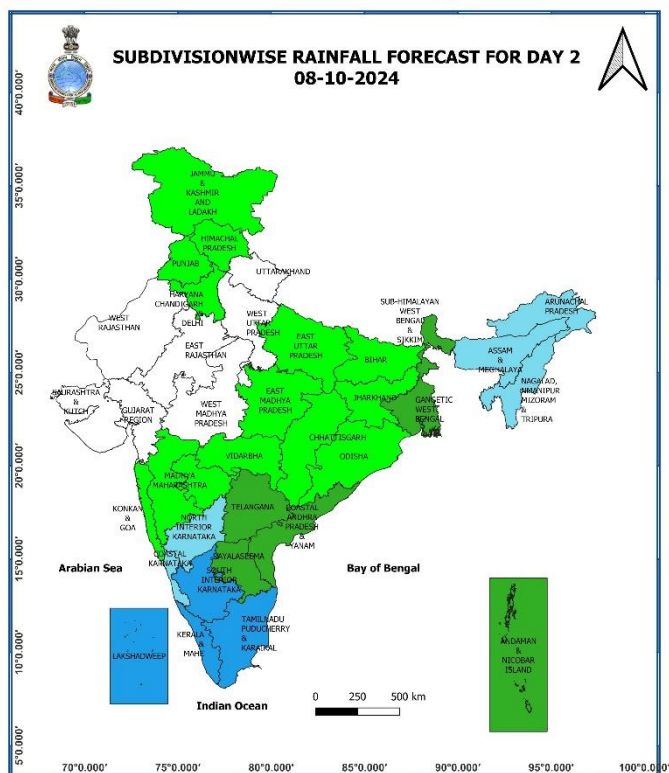


Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 13<sup>th</sup> October, 2024)



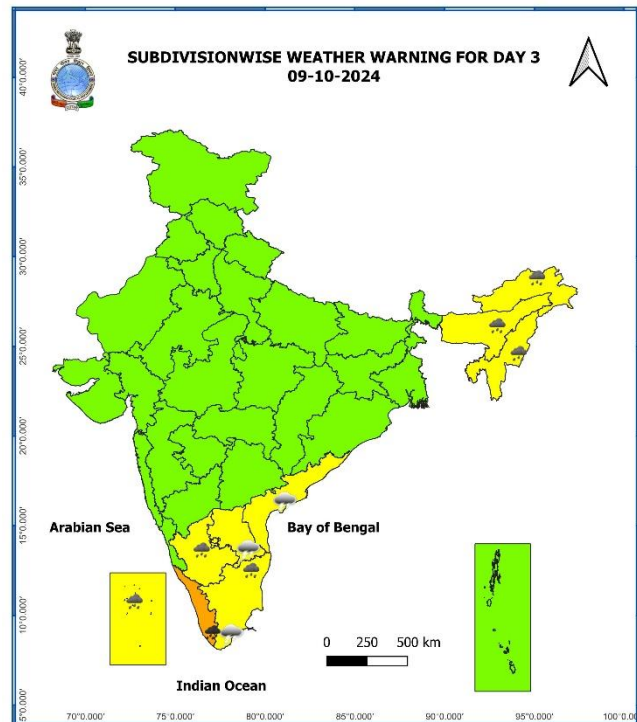
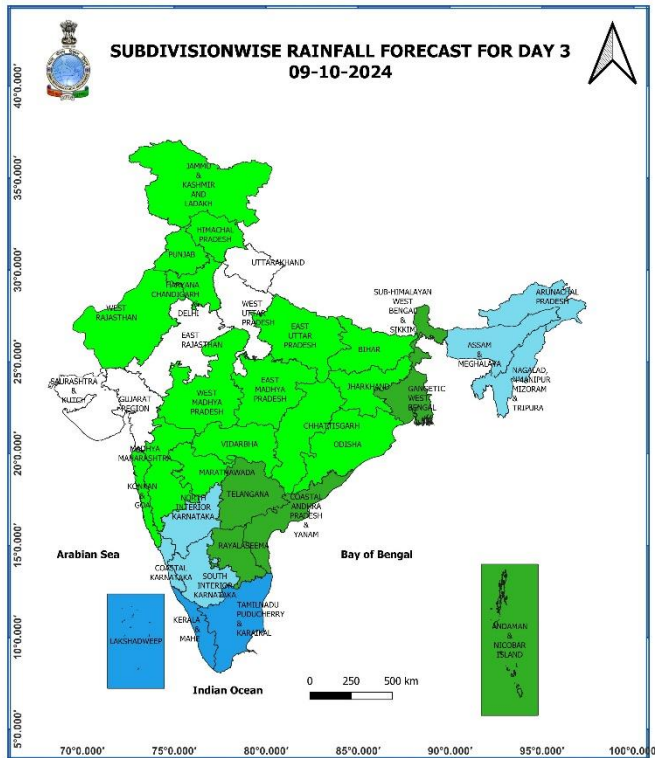
07 October (Day 1):

- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, South Interior Karnataka, Lakshadweep; **Heavy rainfall ( $\geq 7$ cm)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka.
- ❖ **Thunderstorm accompanied with lighting and gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **Thunderstorm with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Uttar Pradesh, West Bengal & Sikkim, Jharkhand, Bihar, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep areas & adjoining Comorin area, many parts of southeast Arabian sea, along & off Kerala coast, gulf of Mannar, along and off north Tamil Nadu coast and adjoining southwest bay of Bengal. Fishermen are advised not to venture into these areas.



## 08 October (Day 2):

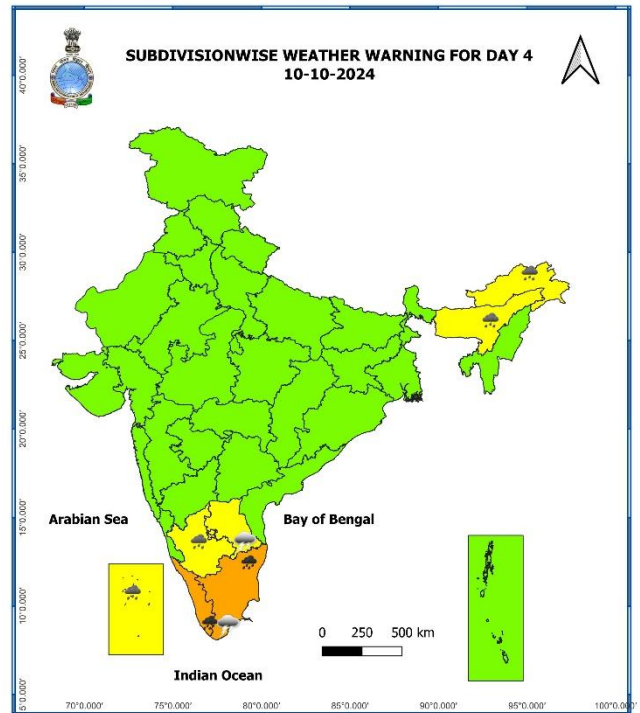
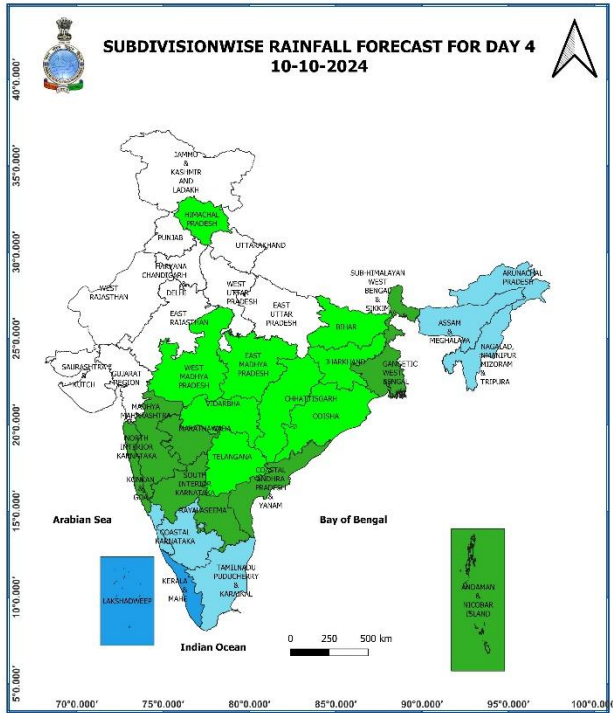
- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** very likely at isolated places over Kerala & Mahe, South Interior Karnataka; **Heavy rainfall ( $\geq 7$ cm)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka and Lakshadweep.
- ❖ **Thunderstorm accompanied with lighting and gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **Thunderstorm with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, East Madhya Pradesh, Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema, South Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep areas & adjoining Comorin area, many parts of southeast Arabian sea, along & off Kerala coast, gulf of Mannar. Fishermen are advised not to venture into these areas.



### 09 October (Day 3):

- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** very likely at isolated places over Kerala & Mahe; **Heavy rainfall ( $\geq 7$ cm)** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Lakshadweep, South Interior Karnataka.
- ❖ **Thunderstorm with lightning** very likely at isolated places over Vidarbha, Chhattisgarh, Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Coastal Andhra Pradesh & Yanam.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep areas & adjoining Comorin area, many parts of southeast Arabian sea, along & off Kerala coast, gulf of Mannar. Fishermen are advised not to venture into these areas.

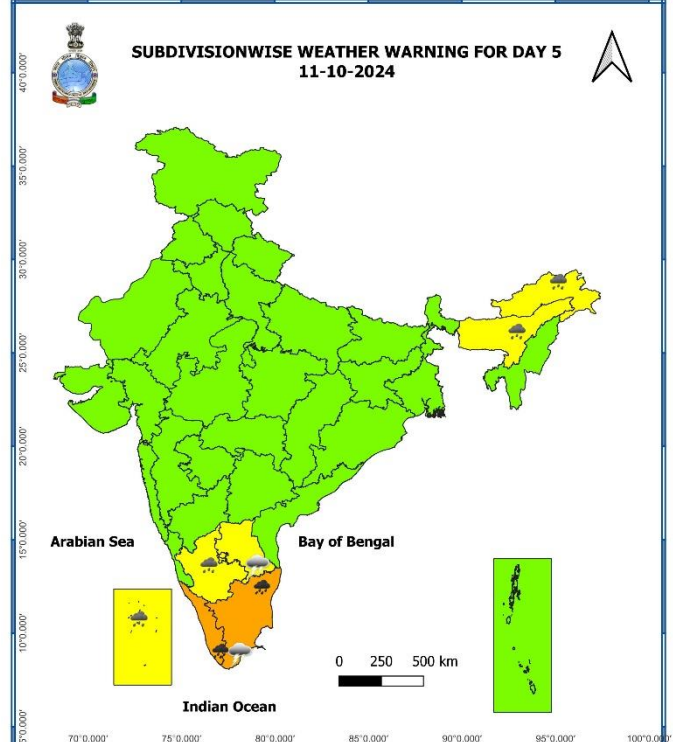
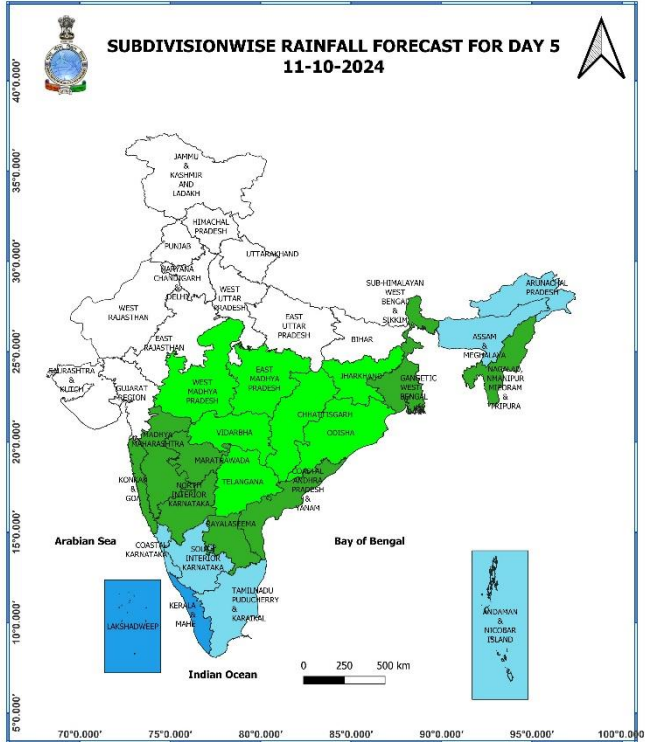




### 10 October (Day 4):

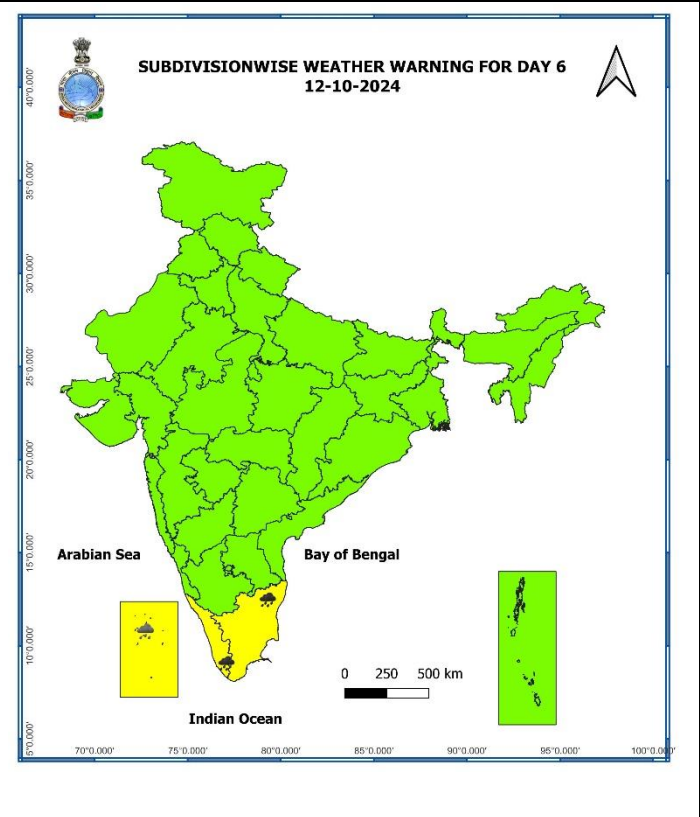
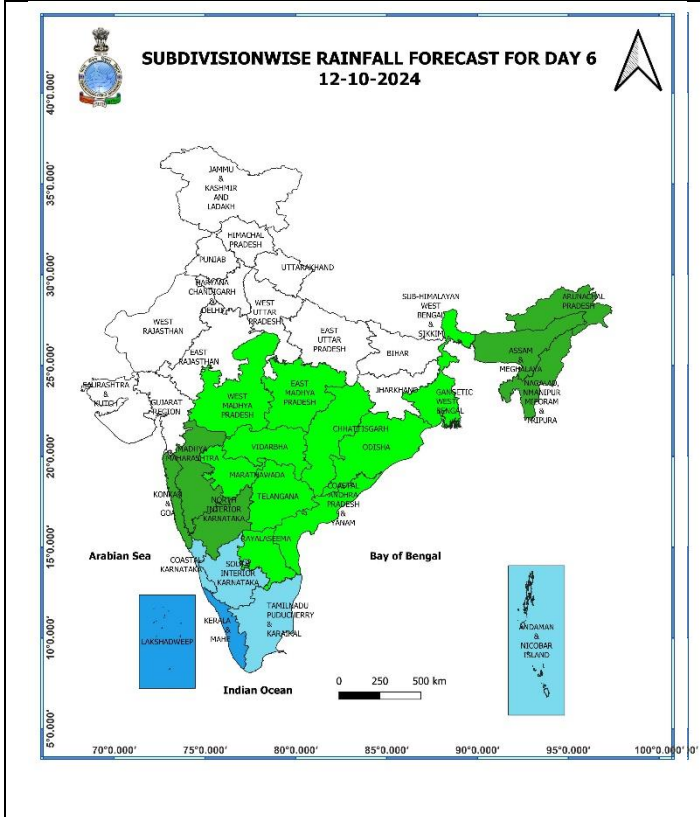
- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **Heavy rainfall ( $\geq 7$ cm)** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, South Interior Karnataka and Lakshadweep.
- ❖ **Thunderstorm with lightning** likely at isolated places over Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Rayalaseema.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Maldives, Lakshadweep areas & adjoining Comorin area, southeast Arabian sea & adjoining southwest Arabian sea, parts of eastcentral Arabian sea, along & off Kerala, Karnataka coasts, gulf of Mannar. Fishermen are advised not to venture into these areas.





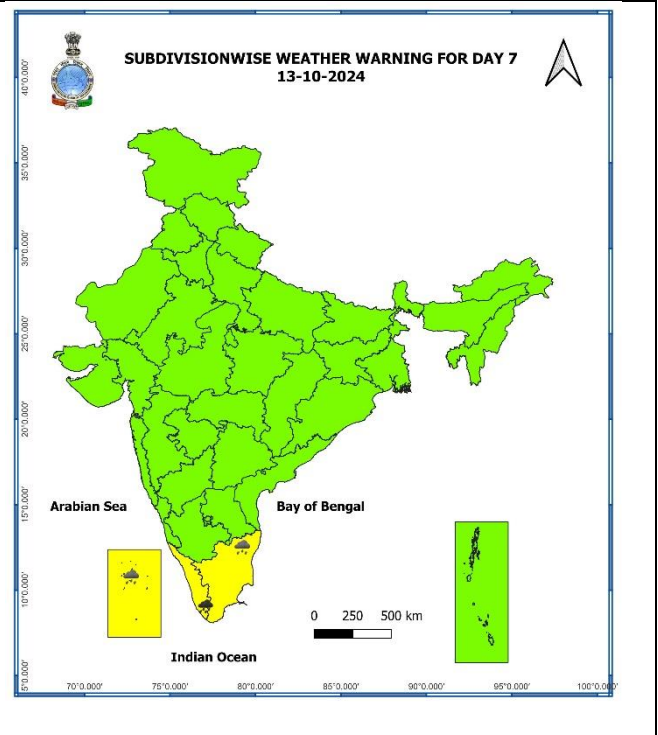
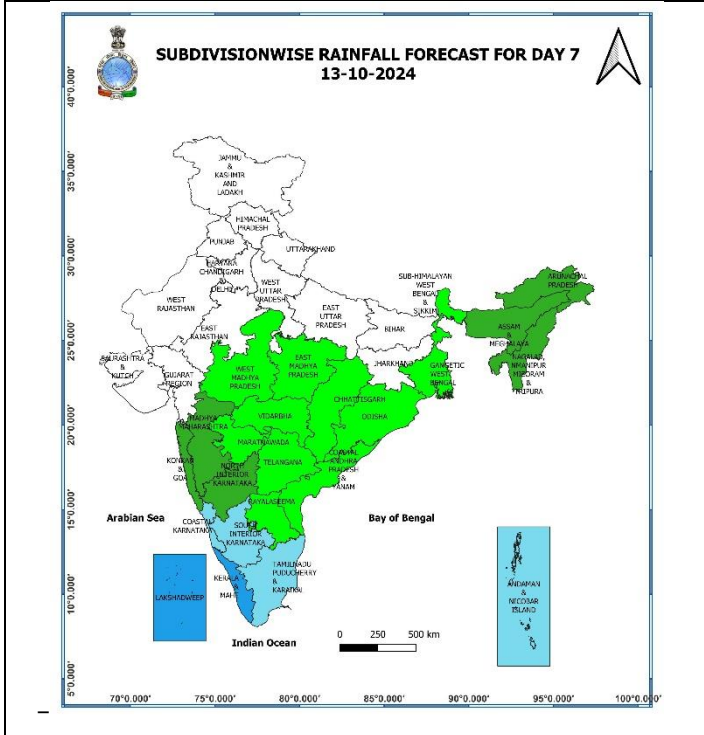
### 11 October (Day 5):

- ❖ **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 over Arunachal Pradesh, Assam & Meghalaya, Lakshadweep, South Interior Karnataka.
- ❖ **Thunderstorm with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep areas & adjoining Comorin area, southeast Arabian sea & adjoining southwest Arabian sea, parts of eastcentral Arabian sea, along & off Kerala, Karnataka coasts, gulf of Mannar. Fishermen are advised not to venture into these areas.



**12 October (Day 6):**

- ❖ **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 over Lakshadweep.



### 13 October (Day 7):

- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Kerala & Mahe; **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Lakshadweep.

### Weather Outlook for subsequent 3 days (During 14<sup>th</sup> October- 16<sup>th</sup> October, 2024)

- ❖ Fairly widespread to widespread rainfall likely over Peninsular and adjoining Central India and Islands.
- ❖ Scattered to fairly widespread rainfall 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 Kerala & Mahe during the week; Tamil Nadu, Puducherry & Karaikal during 07<sup>th</sup> & 10<sup>th</sup> -12<sup>th</sup>; Lakshadweep on 07<sup>th</sup>; South Interior Karnataka on 07<sup>th</sup> & 08<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.
- ✓ In Kerala, postpone harvesting of virippu paddy; provide mechanical support to banana.
- ✓ Drain out excess water from standing crop fields and fruit orchards to avoid water stagnation in Kerala, Coastal Karnataka, 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

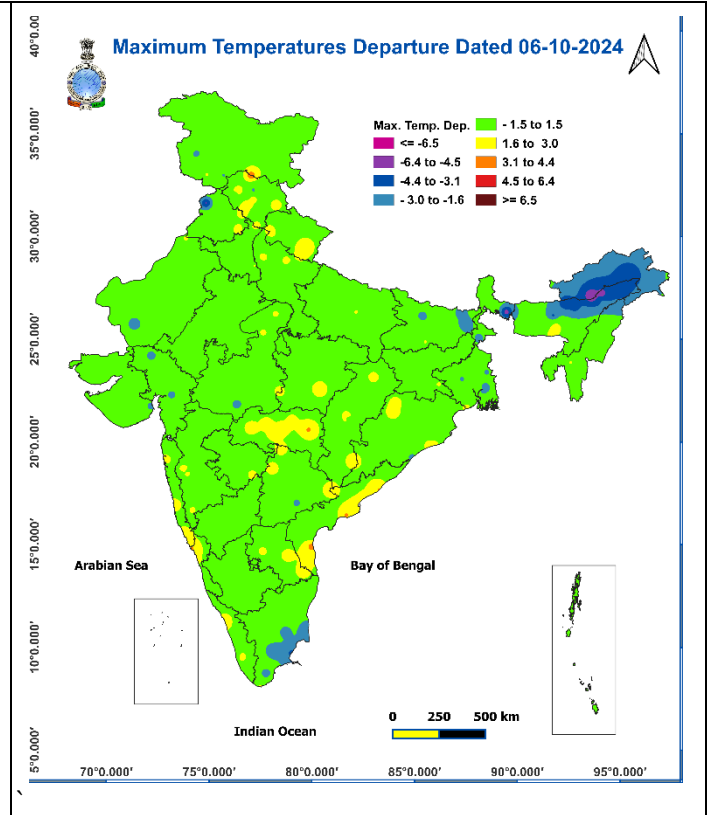
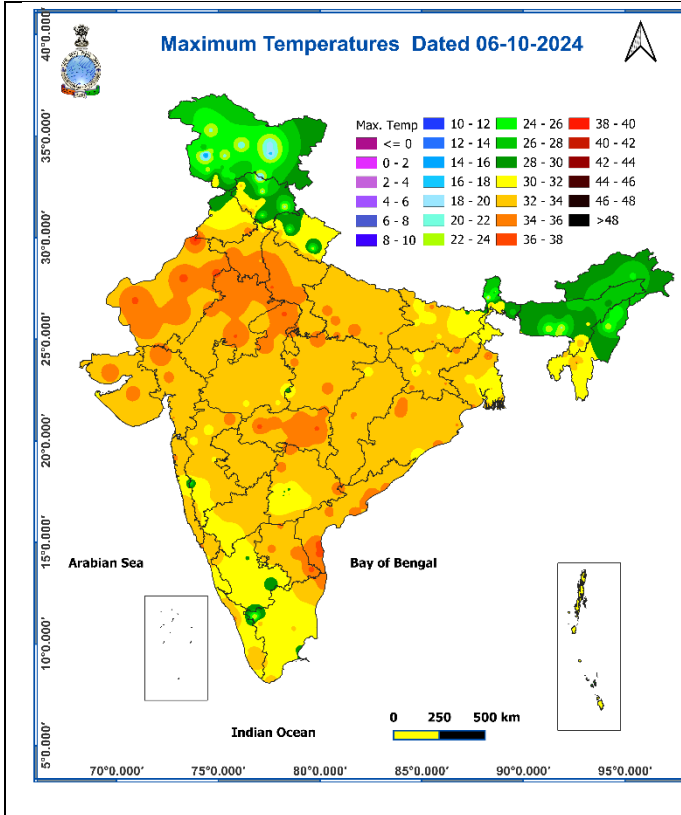


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

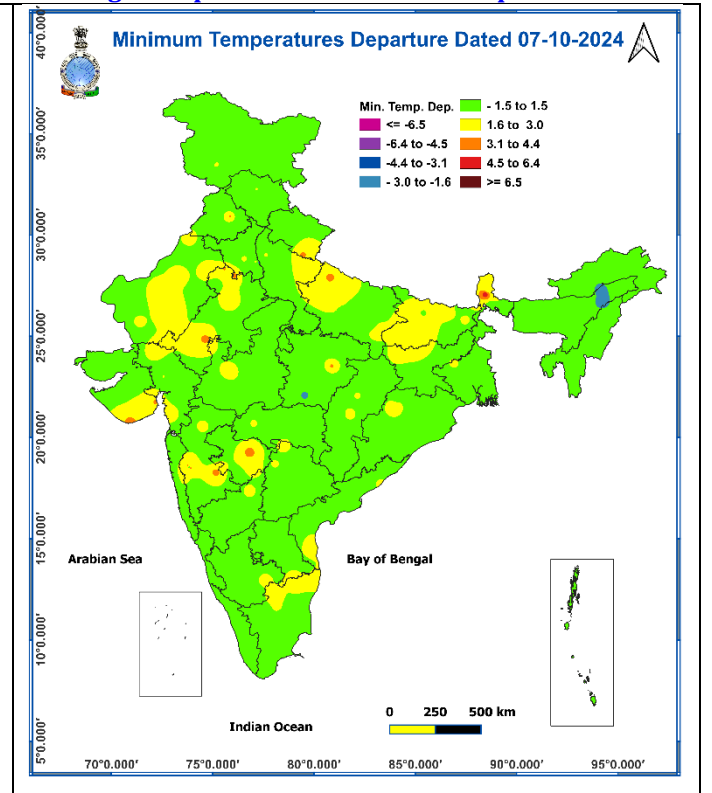
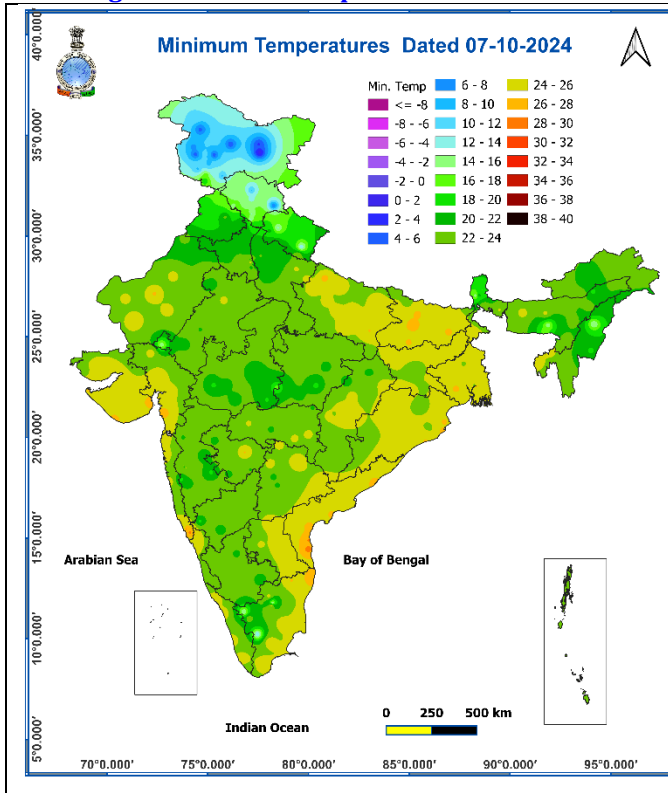
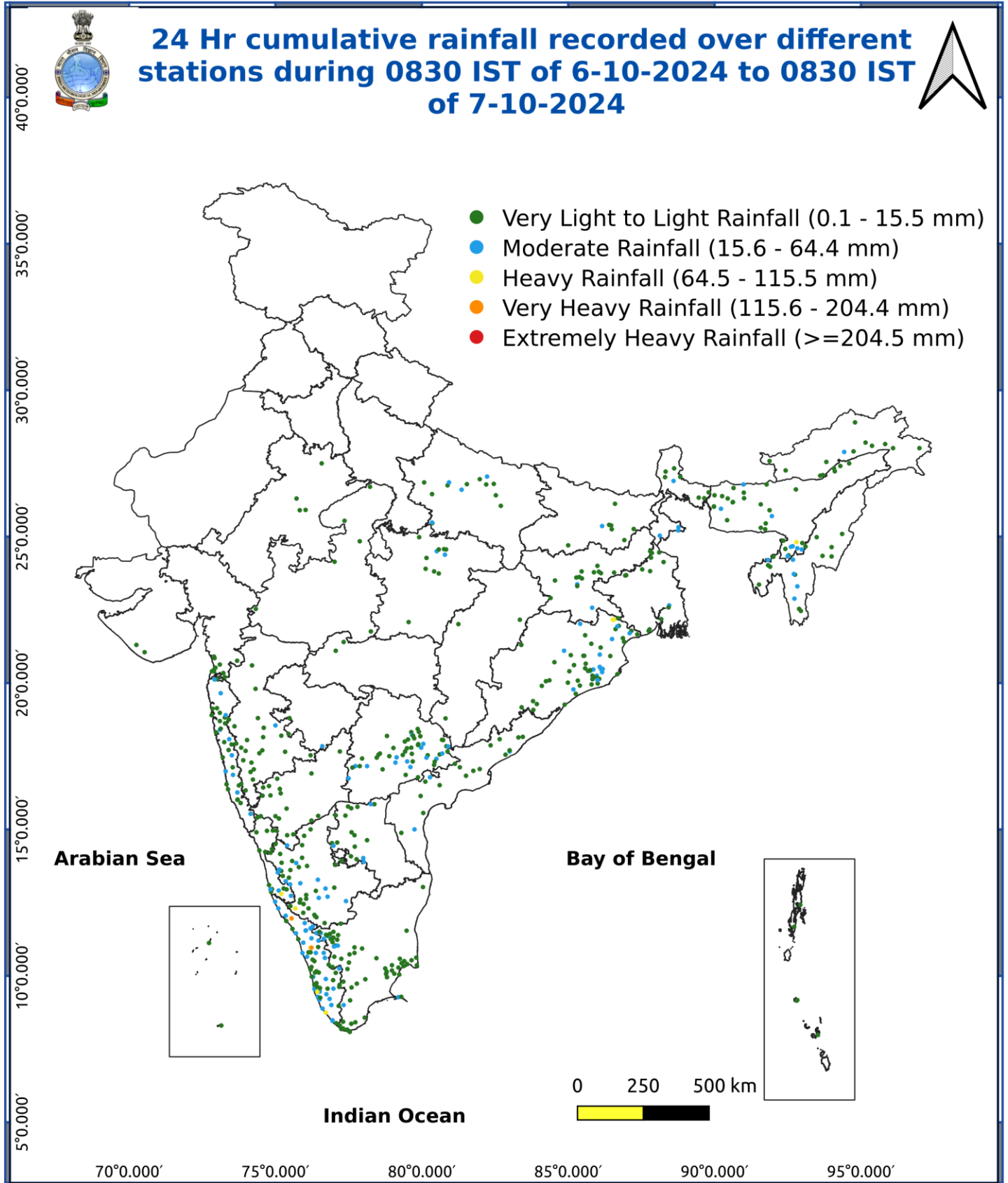


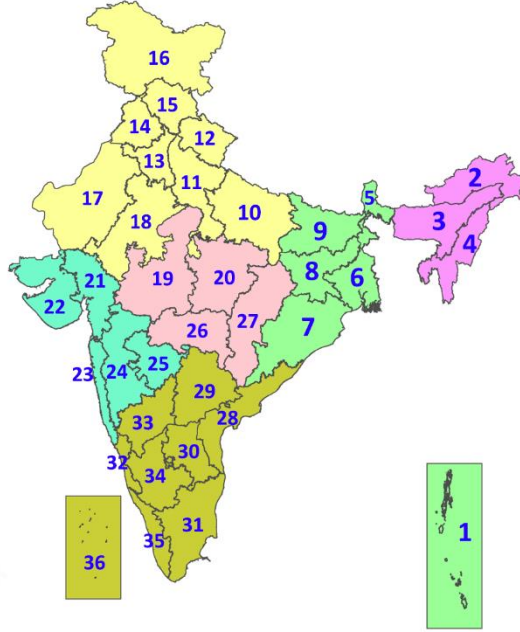
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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>Ice deposits on ground</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>