

Saturday, September 7, 2024
Time of Issue: 0745 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ The western end of **monsoon trough** is near its normal position and eastern end is south of its normal position at mean sea level. It is likely to continue so for next 2-3 days.
- ✓ The **low pressure area** persists over central and adjoining north Bay of Bengal at 0530 hrs IST of today, the 07th September, 2024. It is likely to move slowly nearly northwards and intensify into **Depression** over northwest Bay of Bengal and adjoining areas of Gangetic West Bengal, north Odisha and Bangladesh coasts around 09th September. Thereafter, it is likely to move west-northwestwards across Gangetic West Bengal and adjoining north Odisha, Jharkhand and adjoining north Chhattisgarh during subsequent 3 days.
- ✓ A **Western Disturbance** lay as a cyclonic circulation over Jammu and Kashmir in middle tropospheric levels.
- ✓ A cyclonic **circulation** over northeast Rajasthan extends upto middle tropospheric levels.

Forecast & Warnings (upto 7 days):

❖ West & Central India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over West India; Scattered to Fairly widespread light/moderate rainfall very likely over Central India during the week.
- ✓ Isolated **very heavy rainfall** very likely over Gujarat Region on 07th; ghat areas of Madhya Maharashtra during 07th-09th; Konkan & Goa during 07th-09th September.
- ✓ Isolated **heavy rainfall** very likely over Chhattisgarh during next 7 days; Saurashtra & Kutch on 07th; West Madhya Pradesh, Gujarat Region on 07th & 08th; East Madhya Pradesh on 07th & 08th and during 11th-13th; Konkan & Goa, ghat areas of Madhya Maharashtra during 07th-11th; Vidarbha during 08th-13th September.

❖ South Peninsular India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Coastal Karnataka, Kerala & Mahe; Scattered to Fairly widespread light/moderate rainfall over Coastal Andhra Pradesh & Yanam, Telangana, Lakshadweep; isolated to scattered rainfall over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Interior Karnataka during the week.
- ✓ Isolated **very heavy rainfall** very likely over Coastal Andhra Pradesh & Yanam on 08th & 09th; Telangana on 09th & 10th September.
- ✓ Isolated **heavy rainfall** very likely over Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Coastal Karnataka during 07th-10th; Telangana during 08th-10th September.

❖ East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Andaman & Nicobar Islands during next 7 days; Scattered to Fairly widespread light/moderate rainfall very likely over Arunachal Pradesh during the week and East India during 07th-09th & fairly widespread to widespread light/moderate rainfall during 10th-13th September.
- ✓ Isolated **very heavy rainfall** very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 09th-12th; Odisha on 08th & 09th September.
- ✓ Isolated **heavy rainfall** very likely over Assam & Meghalaya & Nagaland, Manipur, Mizoram & Tripura during next 7 days; Odisha, Jharkhand during 07th-10th; Bihar on 07th; Sub-Himalayan West Bengal & Sikkim on 09th, 10th & 13th; Gangetic West Bengal during 09th-13th; Arunachal Pradesh during 10th-13th September.

❖ Northwest India

- ✓ Scattered to Fairly widespread light/moderate rainfall very likely over Northwest India on 06th & 07th; isolated to scattered rainfall over the region during subsequent 5 days.
- ✓ Isolated **very heavy rainfall** very likely over East Rajasthan on 07th September.
Isolated **heavy rainfall** very likely over Uttarakhand, southwest Rajasthan on 07th; East Uttar Pradesh during 09th-13th; West Uttar Pradesh on 12th & 13th; East Rajasthan on 07th & 08th September.

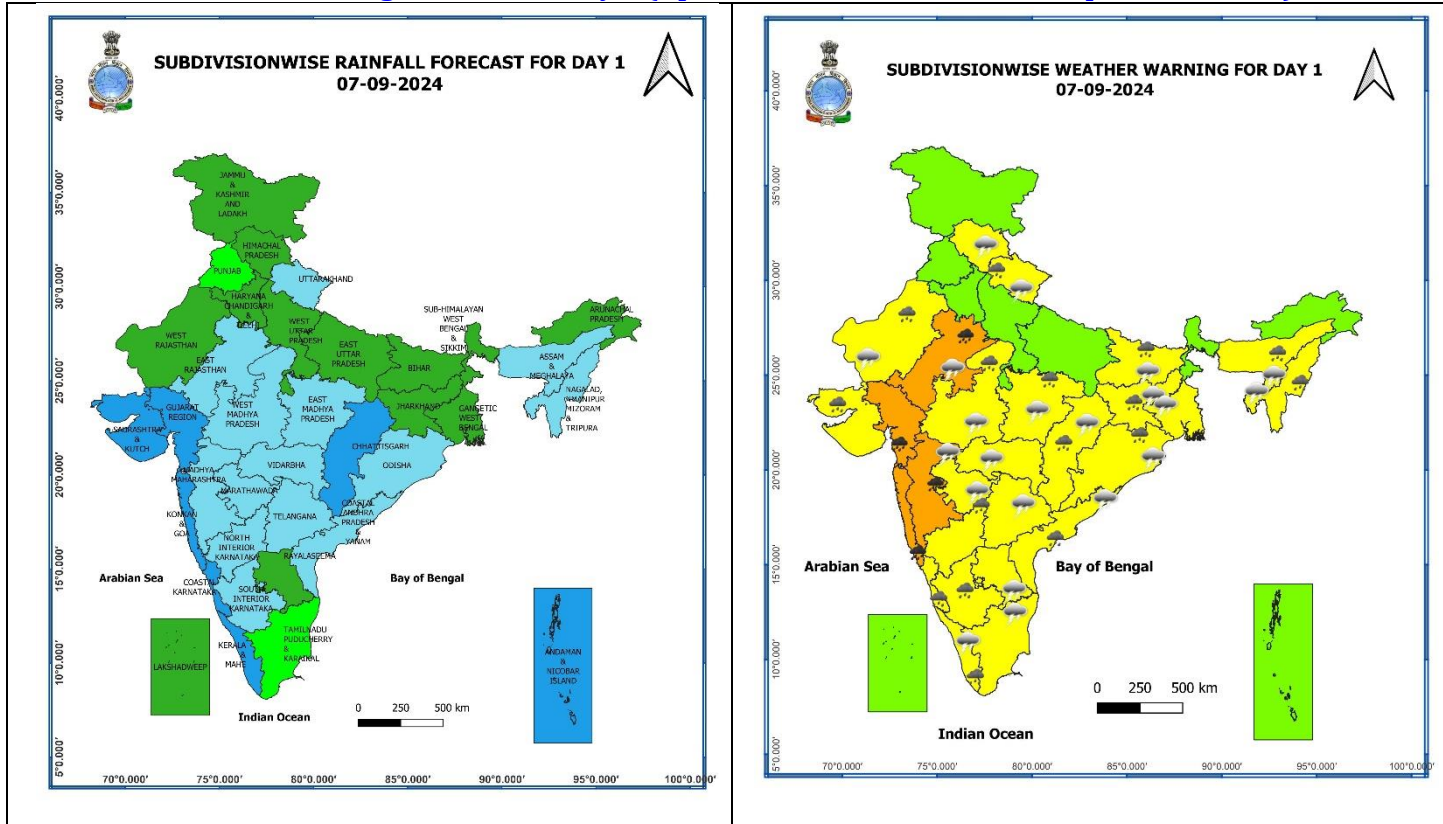
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Uttarakhand, Kerala & Mahe; **at a few places** over West Uttar Pradesh, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Konkan & Goa; **at isolated places** over Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi, East Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Assam & Meghalaya, Arunachal Pradesh, Odisha, Telangana, Tamil Nadu, Puducherry & Karaikal, Madhya Maharashtra, Gujarat state, East Madhya Pradesh, Rajasthan.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **Very heavy rainfall** at isolated places over East Rajasthan; **Heavy rainfall** at isolated places over West Rajasthan and Gujarat Region.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **East Rajasthan:** Rajsamand 14, Ajmer(Pushkar) 13, Beawar 10, Banswara 9; **West Rajasthan:** Jodhpur 9, Nagaur 7; **Gujarat Region:** Deesa 7, Bulsar 2; **Chhattisgarh:** Ambikapur 5; **West Uttar Pradesh:** Shahjahanpur 5, Moradabad 3, Bareilly 3; **Odisha:** Puri 4; **Himachal Pradesh:** Shimla 3, Bhuntar 3; **Madhya Maharashtra:** Mahabaleshwar 3, Dahanu 3; ; **Saurashtra & Kutch:** Rajkot 3, Amreli 2; **Konkan & Goa:** Dahanu 3; **East Madhya Pradesh:** Mandla 3, Seoni 3, Sagar 3, Satna 2;
- ❖ **Minimum Temperature Departures (as on 06-09-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over East Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at isolated places over Jammu-Kashmir, Punjab, Himachal Pradesh, Haryana-Chandigarh-Delhi, West Uttar Pradesh, West Madhya Pradesh, Saurashtra & Kutch, Madhya Maharashtra, Vidarbha. Odisha, Assam & Meghalaya, Gangetic West Bengal, Konkan & Goa, Rayalaseema, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Telangana and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 19.2°C** was reported at **Bulsar (Gujarat Region)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 06-09-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Odisha; at isolated places over Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal; **above normal (1.6°C to 3.0°C)** at isolated places over West Bengal, Sikkim, Nagaland, Manipur, Mizoram & Tripura, Bihar, Vidarbha, Madhya Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad. These were **below normal (-1.6°C to -3.0°C)** at a few places over East Rajasthan, at isolated places over Coastal Andhra Pradesh & Yanam, Haryana-Chandigarh-Delhi, Himachal Pradesh, Madhya Maharashtra, West Uttar Pradesh and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature of 40.1°C** was reported at **Madurai (Tamil Nadu)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **low pressure area** persists over central and adjoining north Bay of Bengal at 0530 hrs IST of today, the 07th September, 2024. The associated **cyclonic circulation** extends upto 7.6 km above mean sea level tilting southwestwards with height. It is likely to move slowly nearly northwards and intensify into **Depression** over northwest Bay of Bengal and adjoining areas of Gangetic West Bengal, north Odisha and Bangladesh coasts around 09th September. Thereafter, it is likely to move west-northwestwards across Gangetic West Bengal and adjoining north Odisha, Jharkhand and adjoining north Chhattisgarh during subsequent 3 days.
- ❖ The **Monsoon trough** at mean sea level now passes through Jaisalmer, Kota, Guna, Sagar, Bilaspur, Puri and the centre of above **low Pressure area** over central and adjoining north Bay of Bengal.
- ❖ The **Western Disturbance** as a cyclonic circulation over Jammu and Kashmir between 3.1 & 5.8 km above mean sea level with a trough aloft in middle tropospheric westerlies with its axis at 7.6 km above mean sea level now runs roughly along Long. 74°E to the north of Lat. 28°N.
- ❖ The **cyclonic circulation** over northeast Rajasthan & neighbourhood extending upto 5.8 km above mean sea level tilting southwestwards with height persists.
- ❖ The **trough** from Southeast Uttar Pradesh to a **cyclonic circulation** associated with **low pressure area** over Central adjoining North Bay of Bengal across north Chhattisgarh & North Odisha between 1.5 and 3.1 km above mean sea level persists.
- ❖ The **cyclonic circulation** over north Bangladesh & neighbourhood at 0.9 km above mean sea level persists.
- ❖ The **cyclonic circulation** over Westcentral Arabian Sea off Oman coast extending upto 3.1 km above mean sea level persists.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 14th September, 2024)



07 September (Day 1):

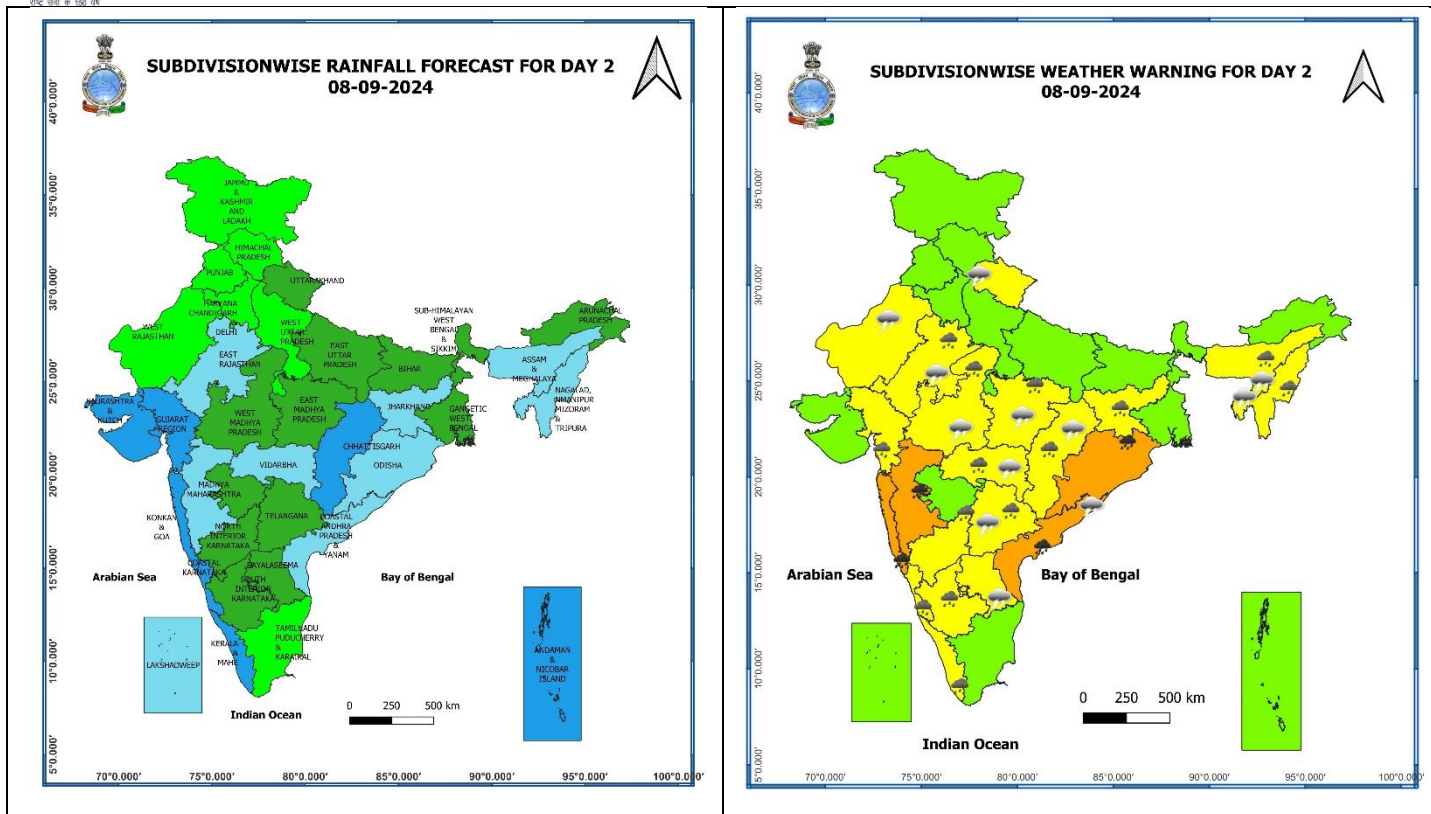
- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over East Rajasthan, Konkan & Goa, Madhya Maharashtra and Gujarat Region; **Heavy rainfall (≥ 7 cm)** at isolated places over Saurashtra & Kutch, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Karnataka, Uttarakhand, southwest Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand and Odisha.
- ❖ **Thunderstorm accompanied with lighting and gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Himachal Pradesh, Uttarakhand, Rajasthan, Gangetic West Bengal, Bihar, Jharkhand and Odisha.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over many parts of westcentral Arabian sea & adjoining areas of eastcentral Arabian sea, northern parts of southwest Arabian sea, off Sri Lanka coast, most parts of south and central Bay of Bengal, along and off Andhra Pradesh coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over gulf of Mannar, many parts of central Bay of Bengal and adjoining parts of south Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of westcentral, southwest Arabian sea, along and off Somalia, off north Yemen, south Oman coasts. Fishermen are advised not to venture into these areas.

* 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.

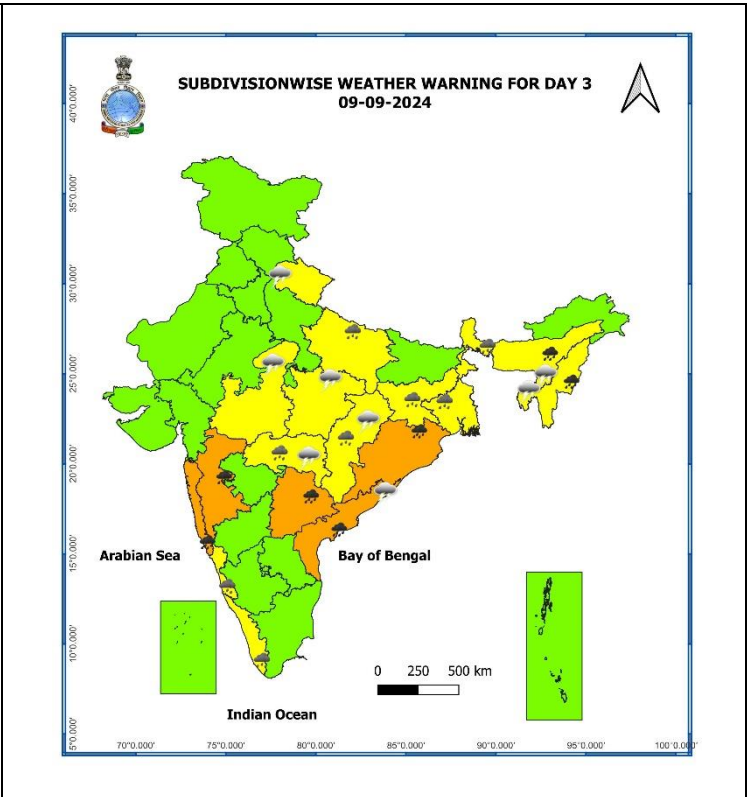
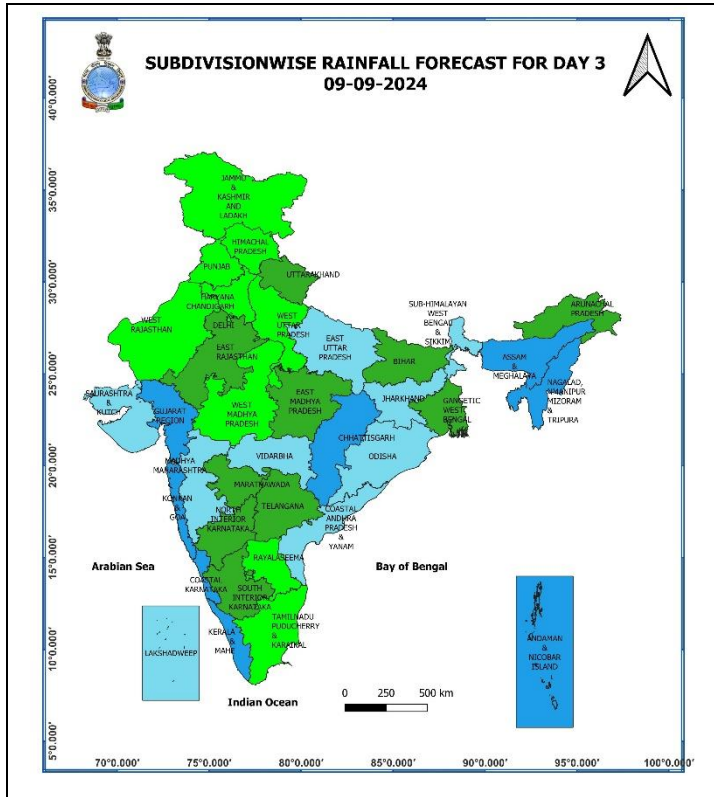
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599

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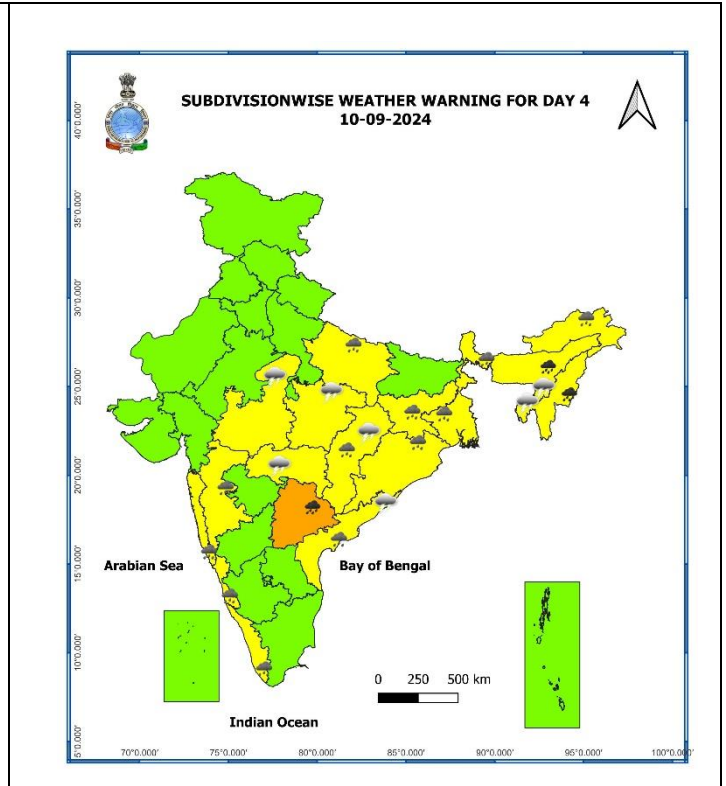
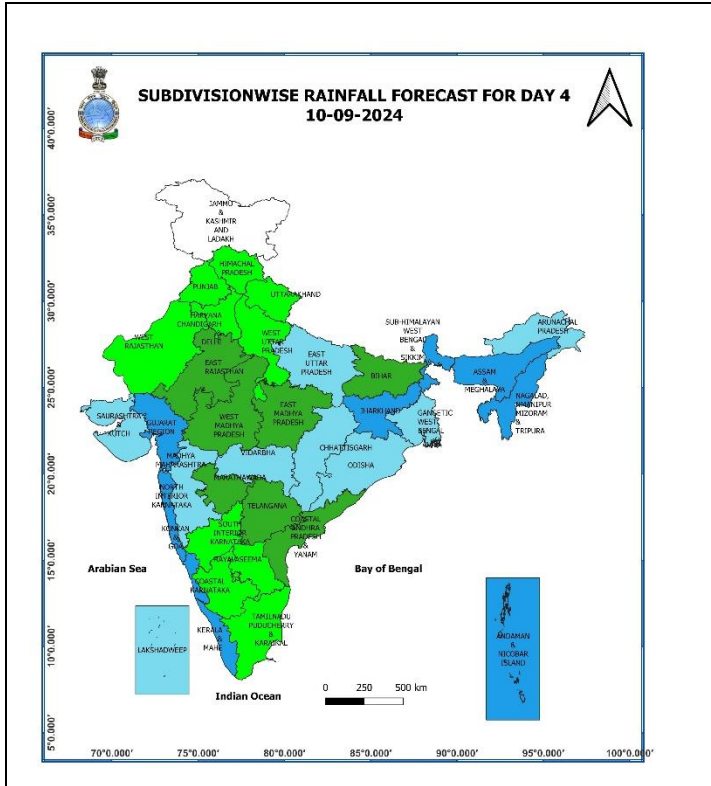
08 September (Day 2):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Odisha, Konkan & Goa, Madhya Maharashtra and Coastal Andhra Pradesh & Yanam; **Heavy rainfall (≥ 7 cm)** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region, Telangana, Coastal & Interior Karnataka, East Rajasthan, Madhya Pradesh, Chhattisgarh, Vidarbha, Jharkhand and Odisha.
- ❖ **Thunderstorm accompanied with lighting and gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Uttarakhand and Rajasthan.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over many parts of westcentral Arabian sea & few western parts of eastcentral Arabian sea, northern parts of southwest Arabian sea, off Sri Lanka coast, most parts of south and central Bay of Bengal, northwest and adjoining northeast Bay of Bengal, along and off Andhra Pradesh, Odisha, west Bengal coasts & adjoining Bangladesh coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over gulf of Mannar, many parts of central Bay of Bengal & adjoining parts of south Bay of Bengal, along and off north Andhra Pradesh coast. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.



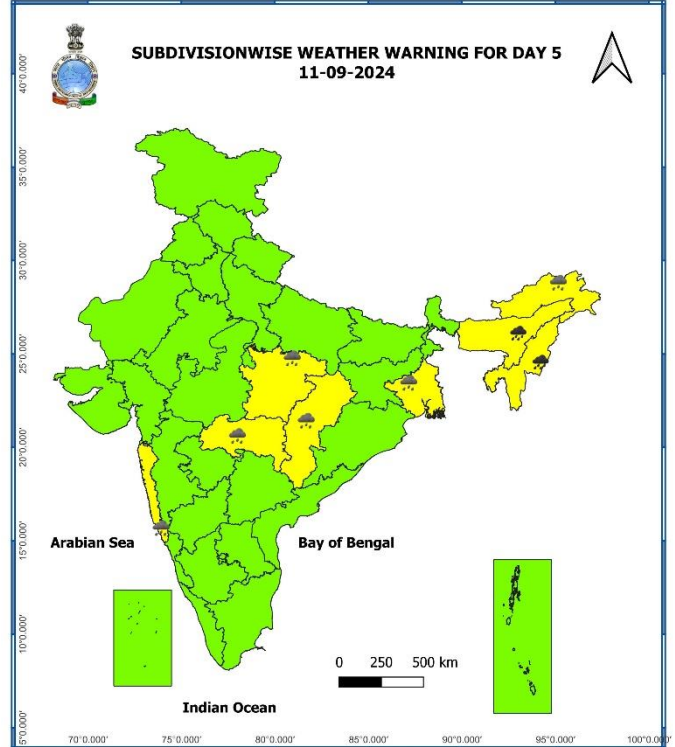
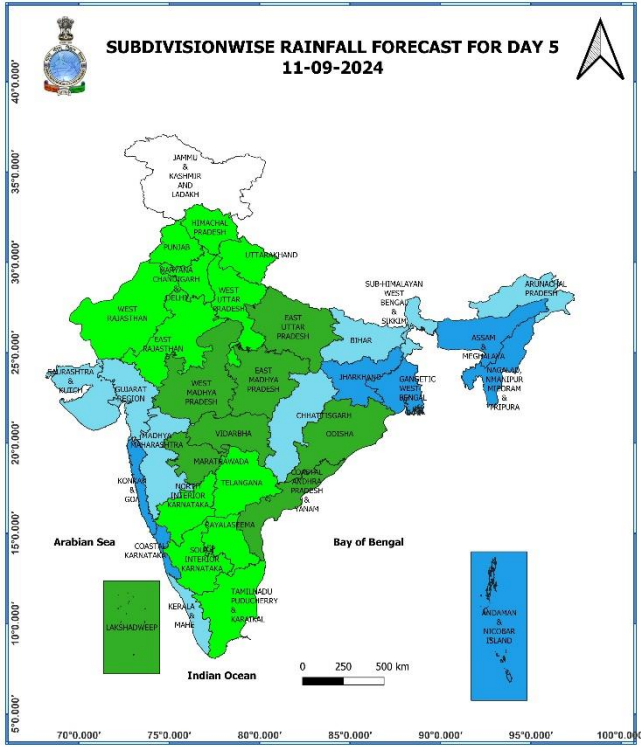
09 September (Day 3):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam and Telangana; **Heavy rainfall (≥ 7 cm)** at isolated places over West Uttar Pradesh, Vidarbha, West Bengal & Sikkim and Jharkhand.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Uttarakhand.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is very likely to prevail over many parts of westcentral Arabian sea & few western parts of eastcentral Arabian sea, northern parts of southwest Arabian sea, off Sri Lanka coast, most parts of south and central Bay of Bengal, northwest Bay of Bengal, many parts of northeast Bay of Bengal, along and off Andhra Pradesh coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over gulf of Mannar, many parts of central & southeast Bay of Bengal, most parts of northwest Bay of Bengal and adjoining parts of northeast Bay of Bengal, north Andhra Pradesh, Odisha, west Bengal coasts and adjoining Bangladesh coasts. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.



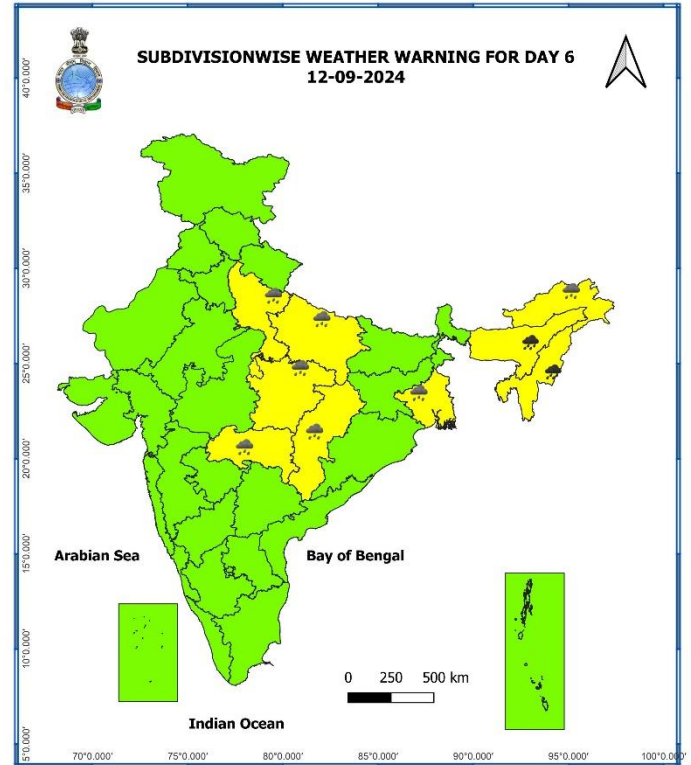
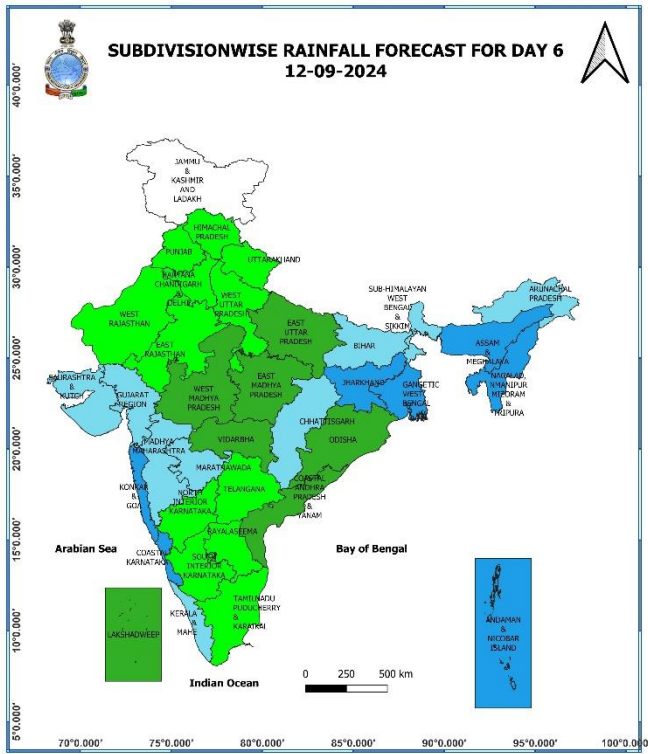
10 September (Day 4):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Telangana; **Heavy rainfall (≥ 7 cm)** at isolated places over Arunachal Pradesh, Konkan & Goa, Madhya Maharashtra, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Coastal Karnataka, East Uttar Pradesh, West Bengal & Sikkim, Odisha and Jharkhand.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Uttarakhand.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over many parts of westcentral Arabian sea & few western parts of eastcentral Arabian sea, northern parts of southwest Arabian sea, off Sri Lanka coast, most parts of south and central Bay of Bengal, northwest Bay of Bengal, many parts of northeast Bay of Bengal, along and off Andhra Pradesh coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over gulf of Mannar, many parts of central & southeast Bay of Bengal, most parts of northwest Bay of Bengal and adjoining parts of northeast Bay of Bengal, north Andhra Pradesh, Odisha, west Bengal coasts and adjoining Bangladesh coasts. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.



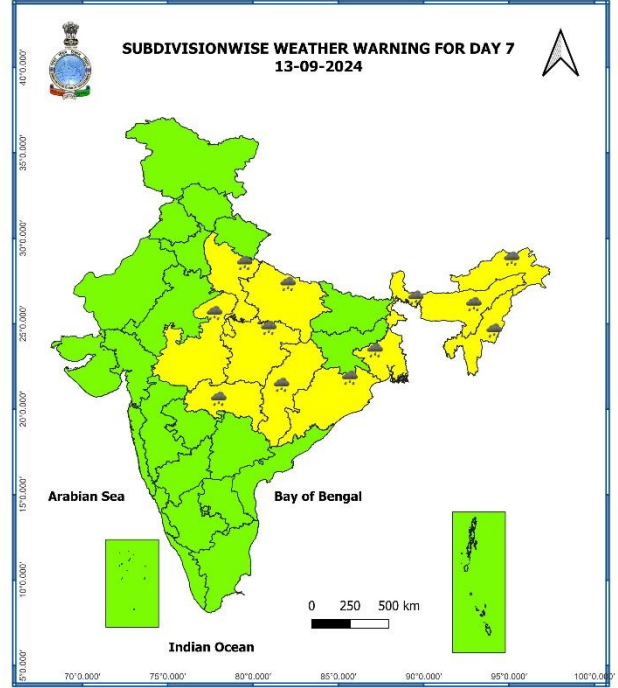
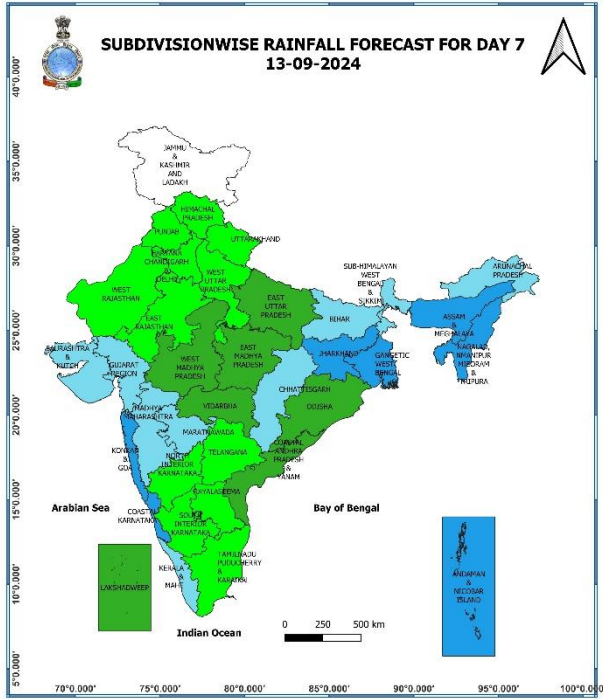
11 September (Day 5):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** likely at isolated places over Arunachal Pradesh, Konkan & Goa, East Madhya Pradesh, Vidarbha, Chhattisgarh and Gangetic West Bengal.



12 September (Day 6):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** likely at isolated places over Arunachal Pradesh, Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh and Gangetic West Bengal.



13 September (Day 7):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Odisha, Madhya Pradesh, Vidarbha, Chhattisgarh and Gangetic West Bengal.

Weather Outlook for subsequent 3 days (During 14th September- 16th September, 2024)

- ❖ Fairly widespread to widespread rainfall likely over most parts of the country except Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Rajasthan, Punjab, Tamil Nadu, Puducherry & Karaikal where isolated to scattered rainfall likely.

- 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

- **Very heavy rainfall** at isolated over Konkan & Goa, Madhya Maharashtra during 07th-09th; Gujarat Region, East Rajasthan on 07th; Odisha, Coastal Andhra Pradesh & Yanam on 08th & 09th; Telangana on 09th & 10th; Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 09th-12th September.
- **Low flash flood risk** likely over few watersheds & neighbourhoods of Uttarakhand, Himachal Pradesh, East Rajasthan, Gujarat Region on 07th & 08th September. **(ANNEXURE IV)**

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.
- ✓ Reduction of visibility over sea area due to sea spray induced by strong wind and heavy rainfall.
- ✓ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutch 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.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

Action Suggested

- ✓ Judicious regulation of offshore/onshore Operations
- ✓ 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

- ✓ Drain out excess water from field crops and horticultural crops in Odisha, Jharkhand, Bihar, Jammu & Kashmir, Himachal Pradesh, East Uttar Pradesh, East Rajasthan, Chhattisgarh, Madhya Maharashtra, Gujrat region, Coastal Andhra Pradesh and Telangana.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Konkan & Goa, Saurashtra & Kutch, Kerala, and Karnataka.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

Flash Flood Guidance:

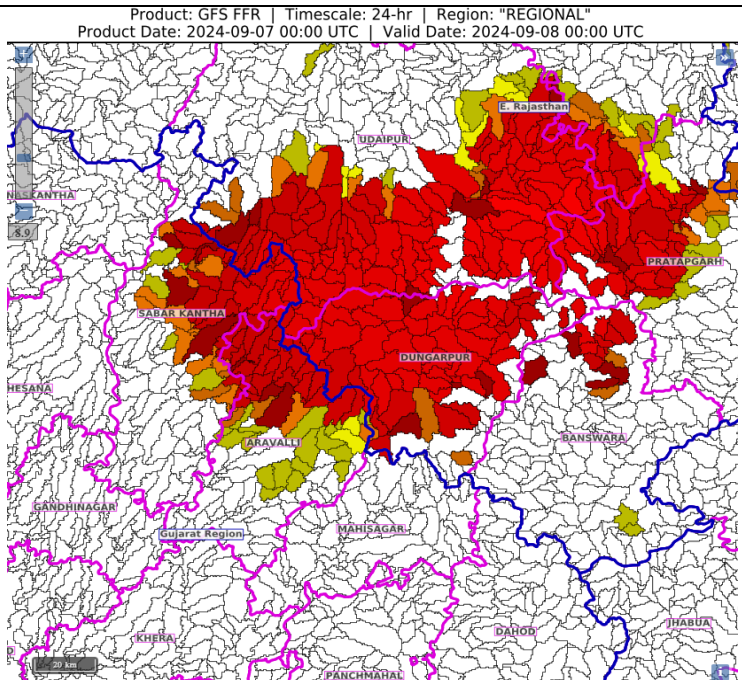
ANNEXURE I

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 08-09-2024:

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

East Rajasthan - Banswara, Dungarpur, Pratapgarh and Udaipur districts.
Gujarat Region - Aravalli and Sabar Kantha districts.

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



24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 08-09-2024:

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

Himachal Pradesh - Shimla, Sirmaur and Solan districts.
Uttarakhand - Almora, Bageshwar, Chamoli, Champawat, Dehradun, Nanital, Pauri Garhwal, Pithoragarh and Tehri Garwal districts.

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

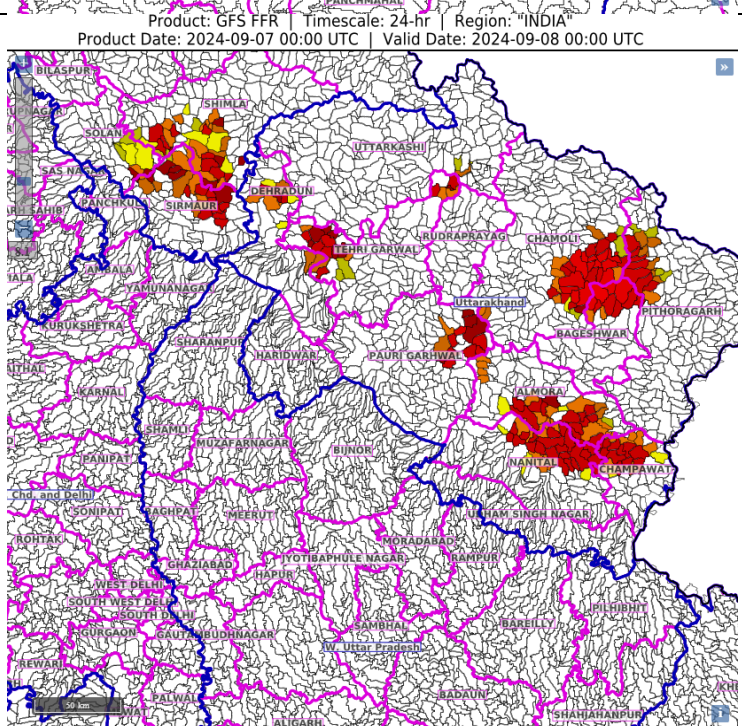


Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

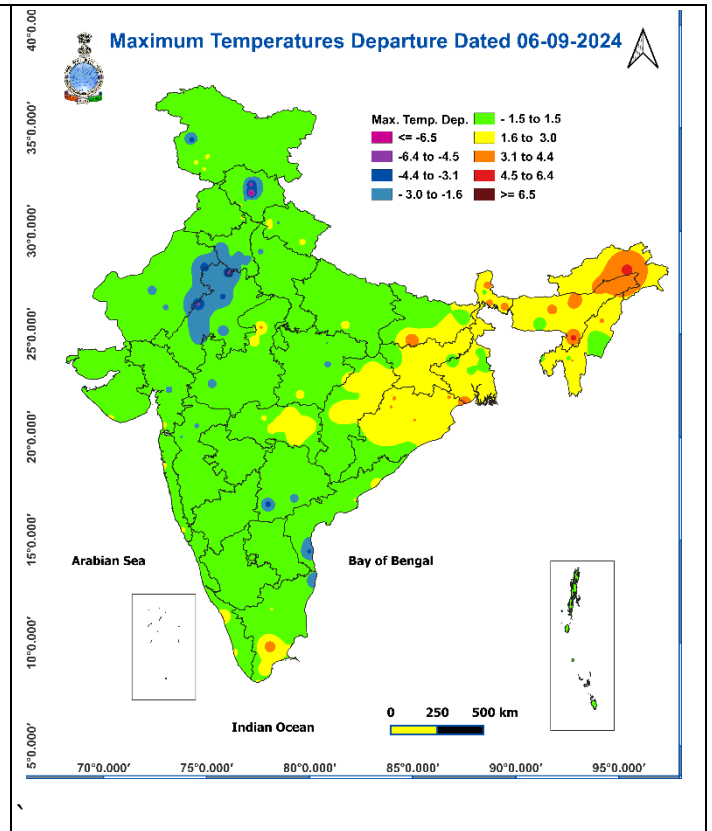
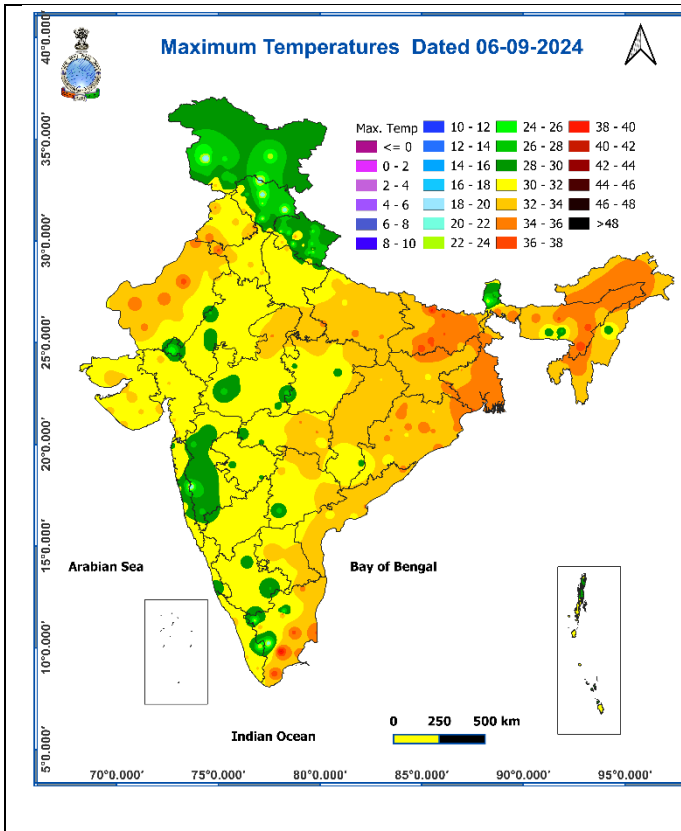


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

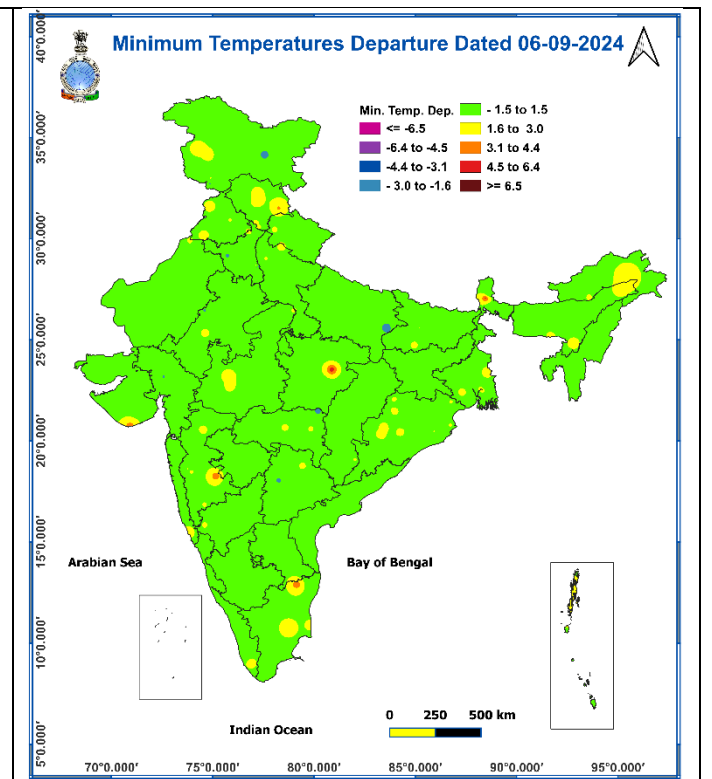
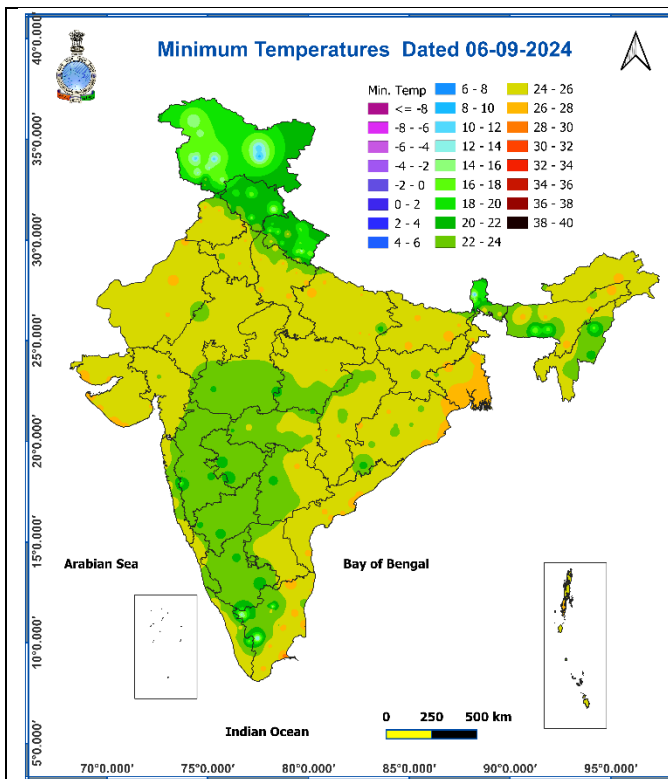
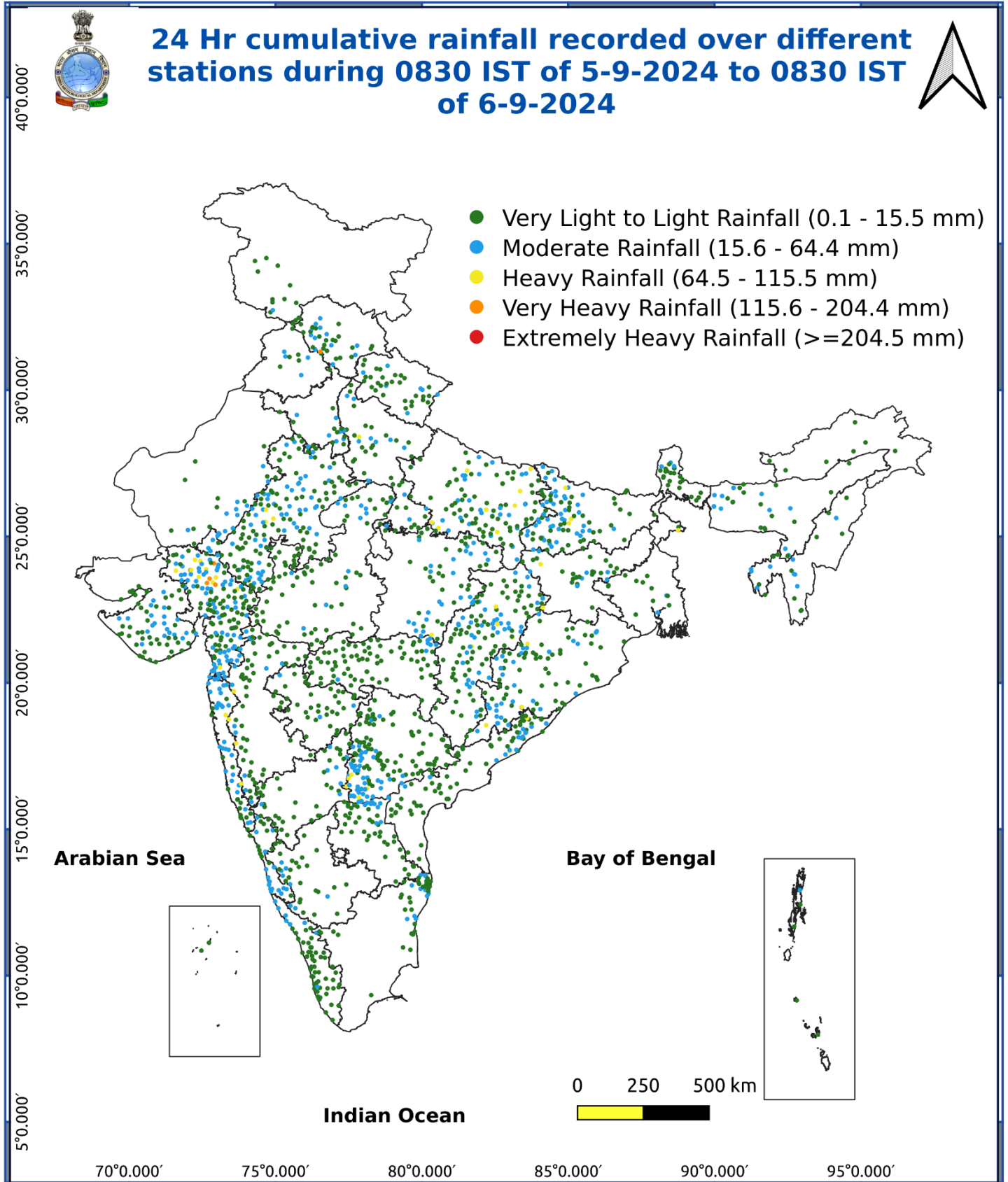


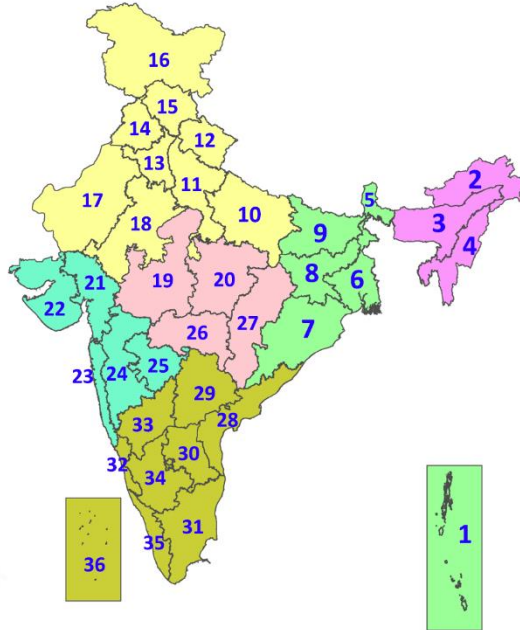
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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

Rain/ Snow *

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

Heat Wave

When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions

(a) Based on Departure from normal

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

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

(b). Based on Actual maximum temperature

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

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

(c). Criteria for heat wave for coastal stations

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

Warm Night

When maximum temperature remains 40°C

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

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

Cold Wave

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.

(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C .

Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$

Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$

Cold Day

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions
Based on departure

Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C .

Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres

Dense Fog: when the visibility between 50- 200 metres

Very Dense Fog: when the visibility < 50 metres

Thunderstorm

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

Dust/Sand Storm

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

Frost

Ice deposits on ground

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

Squall

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

Moderate: Wind speed 52-61 kmph

Severe: Wind speed 62-87 kmph

Very Severe: Wind speed > 87 kmph

Sea State

Effect of various waves in the sea over specific area

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

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

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

Cyclone

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

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

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

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

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