

Friday, October 25, 2024
Time of Issue: 1315 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ❖ The **Severe cyclonic storm "Dana"** (pronounced as Dana) moved north-northwestwards with a speed of 10 kmph and weakened into a **cyclonic storm** over north coastal Odisha and lay centred near latitude 21.20°N and longitude 86.70°E at 0830 hrs IST of today, the 25th October, about 30 km northeast of Bhadrak and 50 km north-northwest of Dhamara. The maximum sustained wind speed around the centre of the cyclone is about 80-90kmph gusting to 100kmph. The landfall process has completed. It is likely to move northwestwards across north Odisha and weaken gradually into a deep depression during next 06 hours.
- ❖ A **cyclonic circulation** lies over Southeast Arabian Sea off south Kerala coast in lower tropospheric levels.
- ❖ A fresh **Western Disturbance** as a trough in mid-tropospheric westerlies with its axis in middle tropospheric levels roughly along Long. 50°E to the north of Lat. 28°N

Forecast & Warnings (upto 7 days):

East India

- ✓ Light to moderate rainfall at most places with **heavy rainfall over to very heavy rainfall** at a few places over **Keonjhar, Mayurbhanj, Balasore, Bhadrak, Dhenkanal, Cuttack, Jajpur, Kendrapara, Angul, Nayagarh, Khorda, Puri and Jagatsinghpur** districts of Odisha on 25th October. **Extremely heavy rainfall (≥ 21 cm)** at isolated places is very likely over **Keonjhar, Mayurbhanj, Balasore and Bhadrak** districts of Odisha on 25th October.
- ✓ **Light to moderate rainfall at most places with heavy to very heavy rainfall** at a few places with **extremely heavy rainfall** at isolated places over **East & West Medinipur**, districts of Gangetic West Bengal on 25th October.
- ✓ Light to moderate rainfall at many places with **heavy to very heavy rainfall** at isolated places is likely over south Jharkhand on 25th October.

South Peninsular India

- ✓ Light to moderate rainfall at a few places accompanied with isolated thunderstorm and lightning very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep during next 2-3 days and reduction thereafter.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Kerala & Mahe on 25th October.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal on 25th & 26th; Lakshadweep on 25th and over Kerala & Mahe during 25th-27th October.

Northeast, Central, West & Northwest India

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

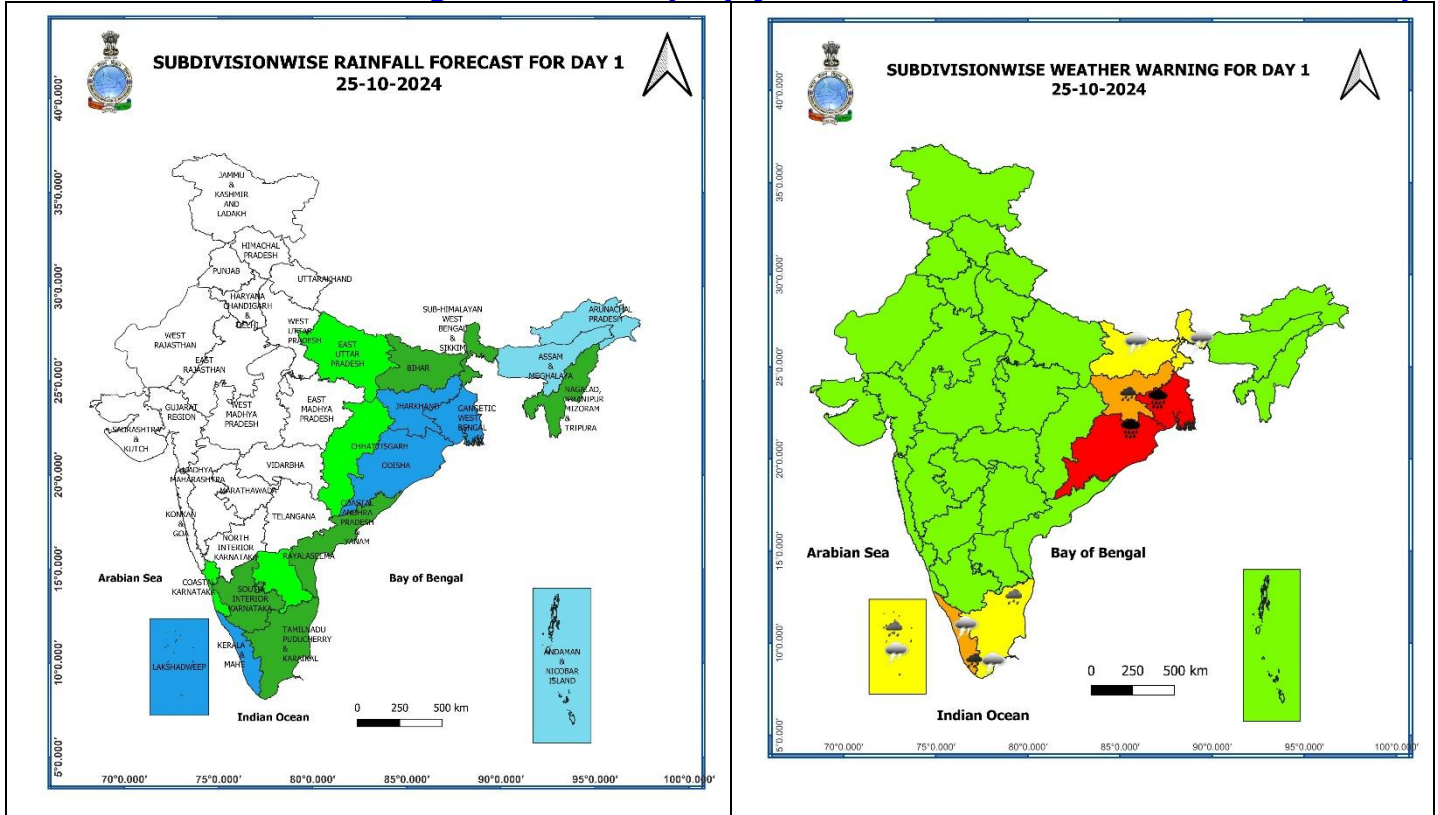
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **at many places** over Andaman & Nicobar Islands, Jharkhand, Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **at few places** over Sub-Himalayan West Bengal & Sikkim, Lakshadweep; **at isolated places** over East Uttar Pradesh, Bihar, Konkan & Goa, Madhya Maharashtra, Coastal Karnataka, South Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very heavy rainfall** at isolated places over Tamil Nadu, Puducherry & Karaikal, Odisha; **Heavy rainfall** at isolated places over Kerala & Mahe, Coastal Karnataka, Gangetic West Bengal.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Odisha:** Chandbali (Bhadrak) 16, Rajkanika (Kendrapara) 16, Nawana (Mayurbhanj) 14, Marsaghai (Kendrapara) 11, Basudevpur (Bhadrak) 11, Oupada (Balasore) 11, Rajnagar (Kendrapara) 10, Mohakalapada (Kendrapara) 9, Aul (Kendrapara) 8, Paradeep Cwr (Jagatsinghpur) 8, Derabis (Kendrapara) 7, Bhadrak (Bhadrak) 7, Balasore (Balasore) 7, Jajpur Pto (Jajpur) 7, Kendrapada Pto (Kendrapara) 7, Nilgiri (Balasore) 7, Kendrapara (Kendrapara) 7, Pattamundai (Kendrapara) 7, **Tamil Nadu, Puducherry & Karaikal:** Anaimaduvu Dam (dist Salem) 15; Orthanad (dist Thanjavur) 13; Kozhiporvilai (dist Kanyakumari), Mannargudi (dist Thiruvarur), Thuckalay (dist Kanyakumari), Neyyoor AWS (dist Kanyakumari), Aduthurai AWS (dist Thanjavur) 11 each; Suthamalli Dam (dist Ariyalur), Eraniel (dist Kanyakumari), Kodavasal (dist Thiruvarur) 10 each; Manjalaru (dist Thanjavur), Needamangalam (dist Thiruvarur) 9 each; Madurai AWS (dist Madurai), Tiruvarur (dist Thiruvarur), Parangipettai (dist Cuddalore), Nannilam (dist Thiruvarur), Mayiladuthurai (dist Mayiladuthurai), Kuruvadi (dist Ariyalur), Idayapatti (dist Madurai), Tirupuvanam (dist Sivagangai), Colachel (dist Kanyakumari) 8 each; Kumbakonam (dist Thanjavur), Tiruvaiyaru (dist Thanjavur), Kurunthancode (dist Kanyakumari), Mayiladuthurai AWS (dist Mayiladuthurai), Ariyalur PTO (dist Ariyalur), Ariyalur Taluk Office (dist Ariyalur), Budalur (dist Thanjavur), Vettikadu (dist Thanjavur), Tiruvarur AWS (dist Thiruvarur), Natham AWS (dist Dindigul), Lower Anaicut (dist Thanjavur), Natham (dist Dindigul), Thiruvaidaimaruthur (dist Thanjavur), Mylaudy (dist Kanyakumari) 7 each; **Gangetic West Bengal:** Diamond Harbour (dist South 24 Parganas) 9, Kalaikunda (Iaf) (dist West Midnapore) 9, Amfu Kharagpur (dist West Midnapore) 9, Durgachack (dist East Midnapore) 8, Mohanpur (dist West Midnapore) 7, Jhargram (pto) (dist Jhargram) 7, Uluberia (dist Howrah) 7; **Kerala & Mahe:** Mannarkkad (dist Palakkad) 7; **Coastal Karnataka:** Dharmasthala (dist Dakshina Kannada) 7, Belthangadi (dist Dakshina Kannada) 7; **Jharkhand:** Gurabandha (dist East Singbhum) 7.
- ❖ **Minimum Temperature Departures (as on 25-10-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at isolated places over East Uttar Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Uttarakhand, Bihar, Jharkhand, West Madhya Pradesh, Madhya Maharashtra, Sub-Himalayan West Bengal & Sikkim; **above normal (1.6°C to 3.0°C)** at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh, Rajasthan, Gujarat state, Odisha, Marathwada; at many places over Konkan & Goa, East Madhya Pradesh, Chhattisgarh; at isolated places over Arunachal Pradesh, Assam & Meghalaya, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, North Interior Karnataka. Today, **the lowest minimum temperature of 16.0°C** is reported at **Amritsar (Punjab), Hissar (Haryana) & Ridge (Delhi)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 24-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttar Pradesh, Coastal Andhra Pradesh & Yanam; **above normal (1.6°C to 3.0°C)** at a few places over Himachal Pradesh; at isolated places over Punjab, Haryana-Chandigarh-Delhi, Uttarakhand, West Rajasthan, Gujarat state, Konkan & Goa, Telangana, Tamil Nadu, Puducherry & Karaikal. These were **markedly below normal (-5.1°C or less)** at a few places over Gangetic West Bengal; at appreciably **below normal (-3.1°C to -5.0°C)** at isolated places over Odisha, Assam & Meghalaya, Jharkhand, Sub-Himalayan West Bengal & Sikkim; **below normal (-3.0°C to -1.6°C)** at isolated places over Bihar, Madhya Pradesh, Nagaland, Manipur, Mizoram & Tripura. Yesterday, **the highest maximum temperature of 38.4°C** was reported at **Phalodi IAF (West Rajasthan)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0830 hours IST)

- ❖ The **Severe cyclonic storm “Dana” (pronounced as Dana)** moved north-northwestwards with a speed of 10 kmph and weakened into a **cyclonic storm** over north coastal Odisha and lay centred near latitude 21.20°N and longitude 86.70°E at 0830 hrs IST of today, the 25th October, about 30 km northeast of Bhadrak and 50 km north-northwest of Dhamara. The maximum sustained wind speed around the centre of the cyclone is about 80-90kmph gusting to 100kmph. The landfall process has completed. It is likely to move northwestwards across north Odisha and weaken gradually into a deep depression during next 06 hours.
- ❖ The **upper air cyclonic circulation** over Southeast Arabian Sea & adjoining Lakshadweep area now lies over Southeast & adjoining Southwest Arabian Sea and extends upto 3.1 km above mean sea level persists.
- ❖ A cyclonic circulation lies over Southeast Arabian Sea off south Kerala coast and extends upto 1.5 km above mean sea level.
- ❖ A cyclonic circulation lies over northeast Assam at 3.1 km above mean sea level.
- ❖ A fresh Western Disturbance as a trough in mid-tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 50°E to the north of Lat. 28°N.

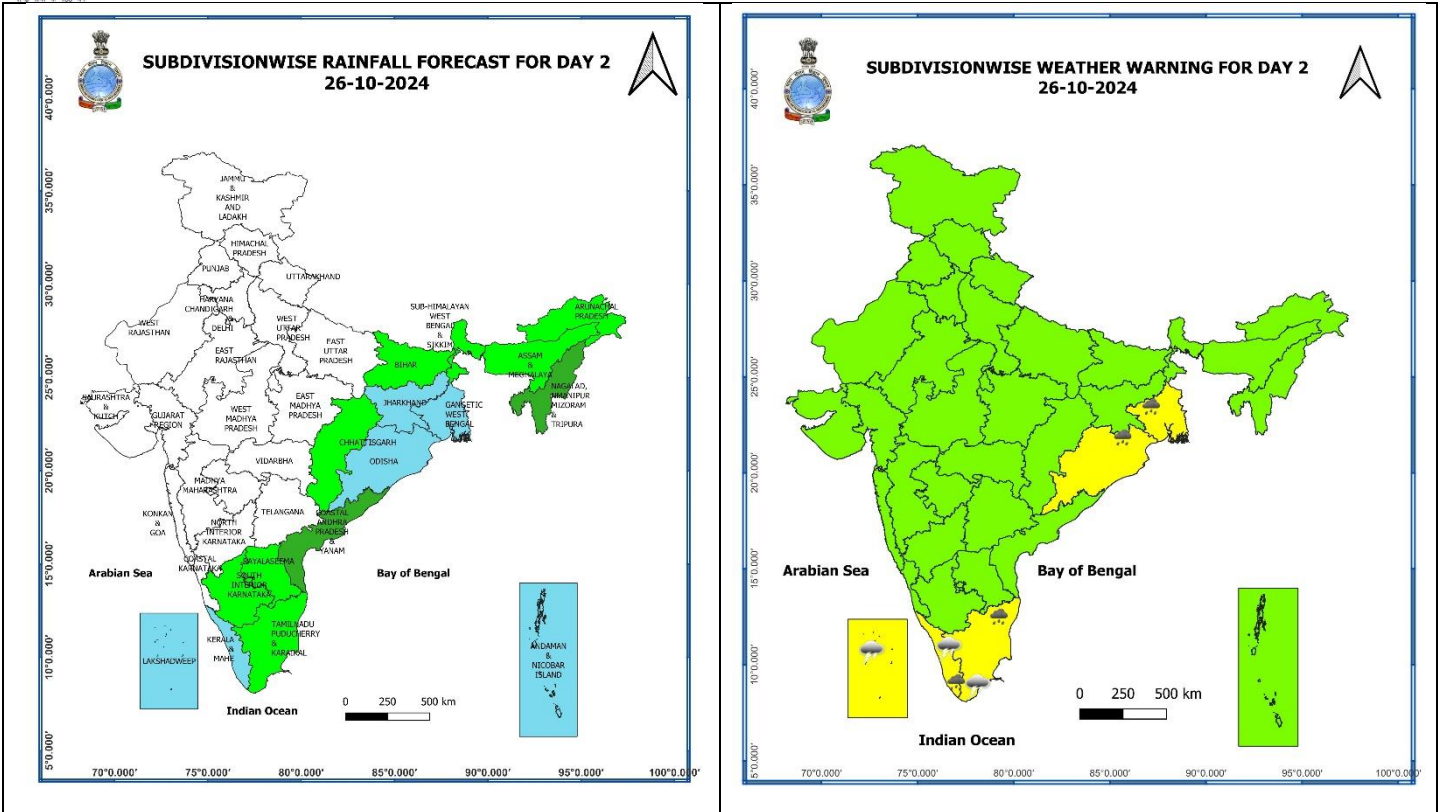
Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 01st November, 2024)



25 October (Day 1):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls (≥ 20 cm)** very likely at isolated places over Odisha and Gangetic West Bengal (Purba Medinipur & Paschim Medinipur districts); **Heavy to very heavy rainfall (≥ 12 cm)** at isolated places over Jharkhand, remaining parts of Gangetic West Bengal, Kerala & Mahe; **Heavy rainfall (≥ 7 cm)** at isolated places over Tamil Nadu, Puducherry & Karaikal, Lakshadweep.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Bihar and **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep.
- ❖ **Gale wind speed reaching 80-90 gusting to 100 kmph** is prevailing over Northwest Bay of Bengal and would gradually decrease becoming squally wind speed reaching 40-50 kmph gusting top 60 kmph from evening of 25th October 2024. **Gale wind speed reaching 60-80 kmph gusting to 90 kmph** would prevail over Balasore, Mayurbhanj, Keonjhar, Bhadrak, Kendrapara districts of Odisha and East Mednipur district of West Bengal till evening of 25th October 2024 and decrease thereafter. **Squally wind speed reaching 40-60 kmph gusting to 70 kmph** would prevail over Jagatsinghpur, Cuttack, Dhenkanal, Angul & adjoining areas of Sundargarh & Khorda districts of Odisha and south 24 Paraganas, West Mednipur & Jhargram districts of West Bengal till evening of 25th October and decrease thereafter. **Squally wind speed reaching 40-50 gusting to 60 kmph** is very likely to prevail over South Jharkhand till evening of 26th October. Fishermen are advised not to venture into Northwest Bay of Bengal and along & off Odisha and West Bengal coasts on 25th October.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail along and off Kerala coast and over Lakshadweep area. Fishermen are advised not to venture into these areas.

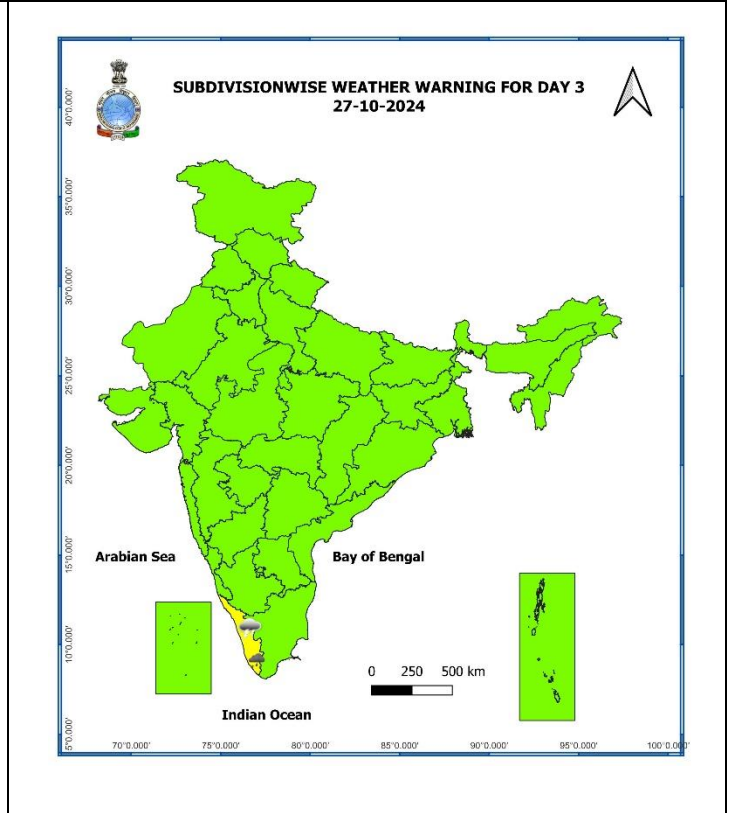
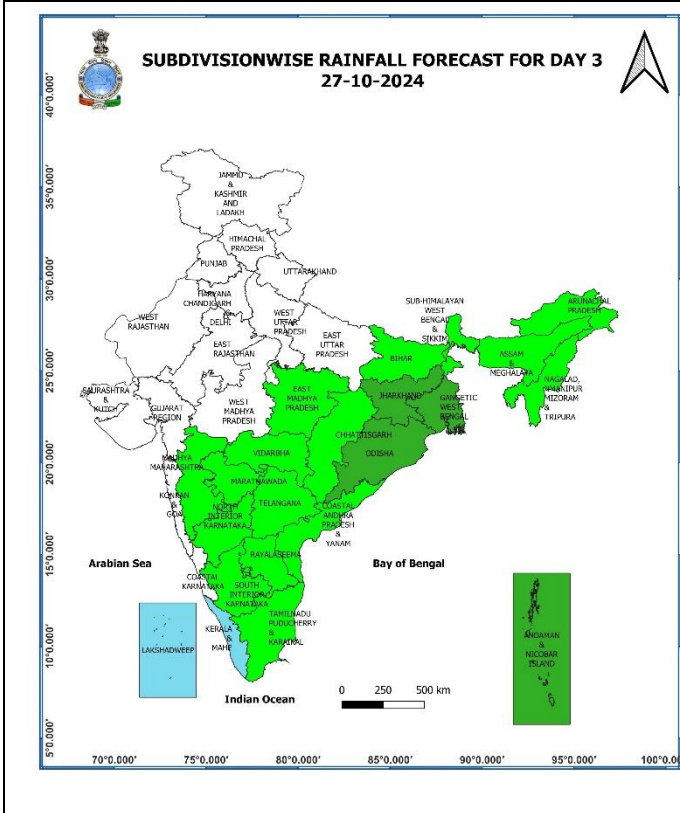
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26 October (Day 2):

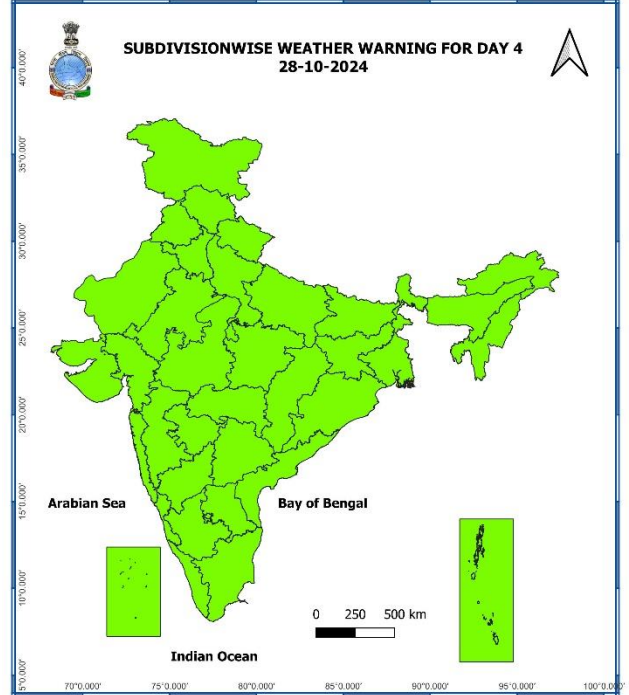
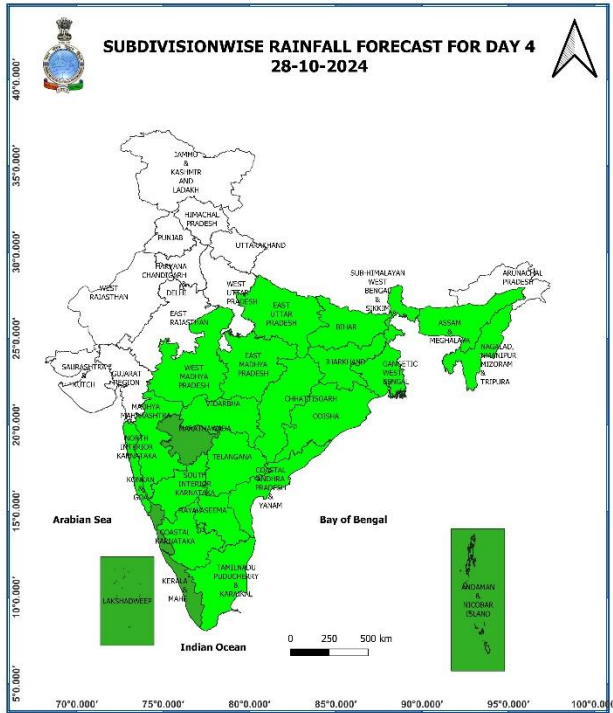
- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Gangetic West Bengal, Odisha, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep.
- ❖ **Squally wind speed reaching 40-50 gusting to 60 kmph** is very likely to prevail over South Jharkhand.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail along and off Odisha coast, along and off Kerala coast and over Lakshadweep area. Fishermen are advised not to venture into these areas.

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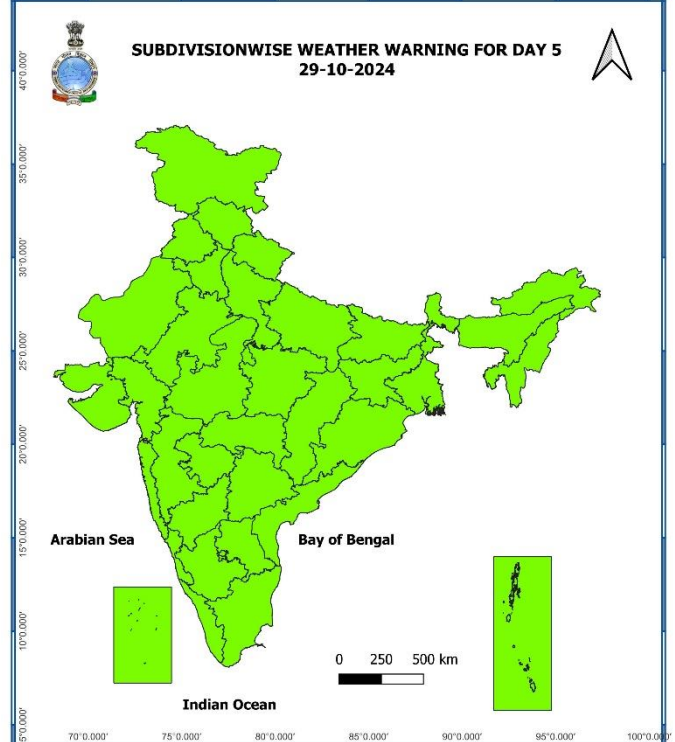
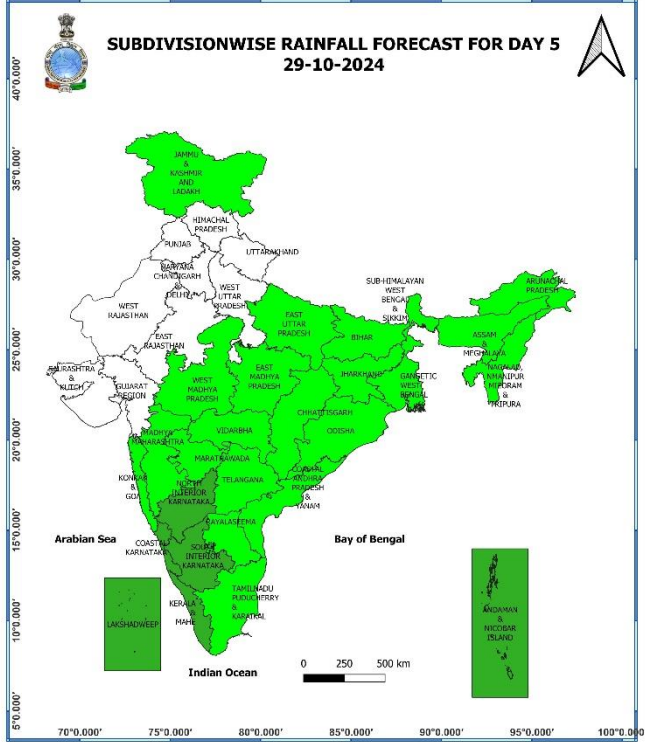
27 October (Day 3):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Kerala & Mahe.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Kerala & Mahe.



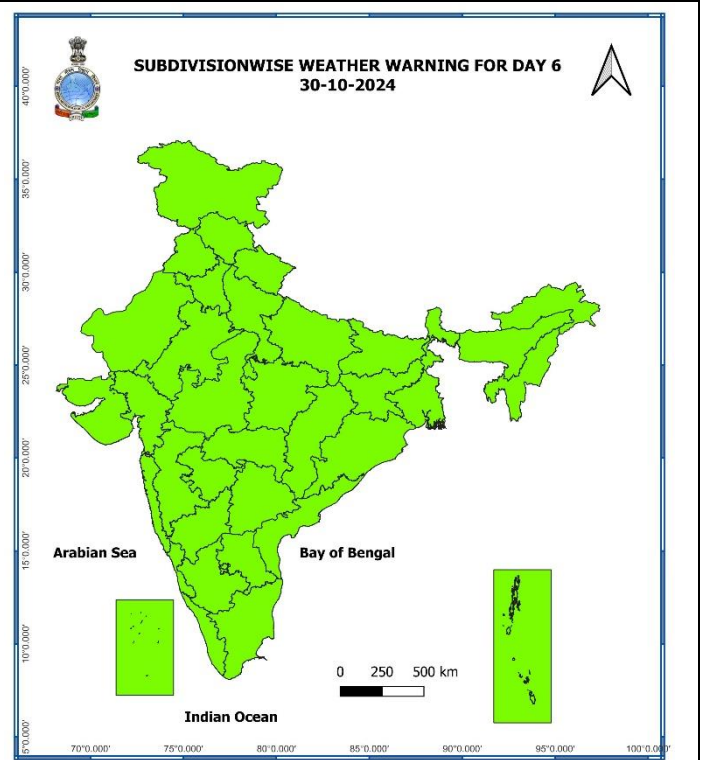
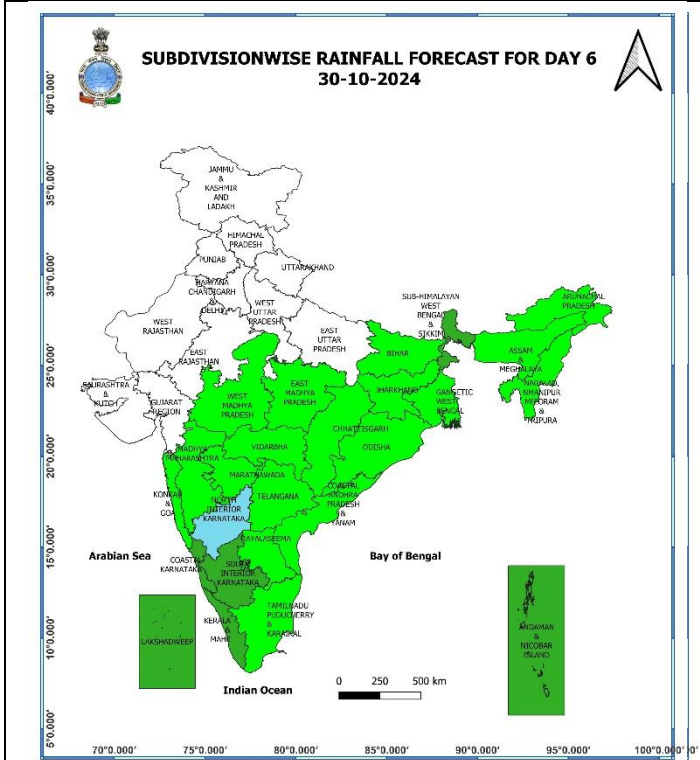
28 October (Day 4):

❖ **No weather warning.**



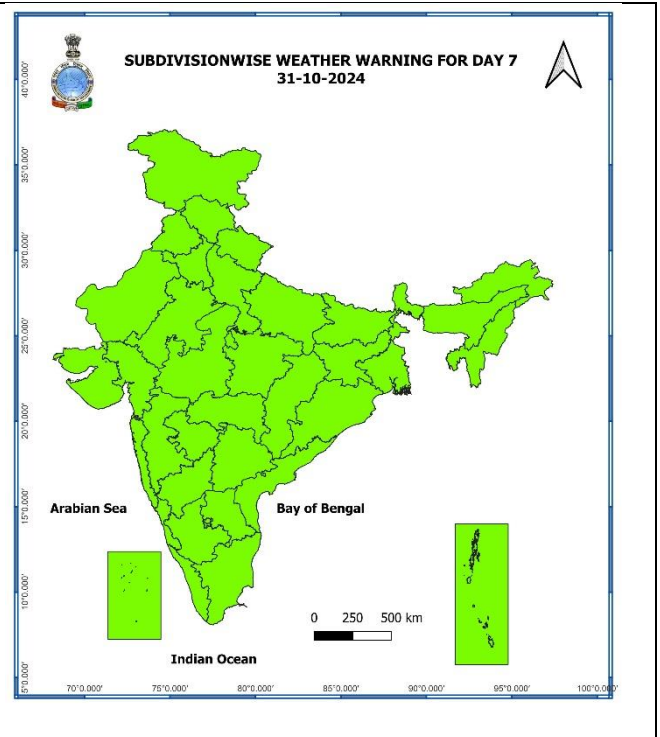
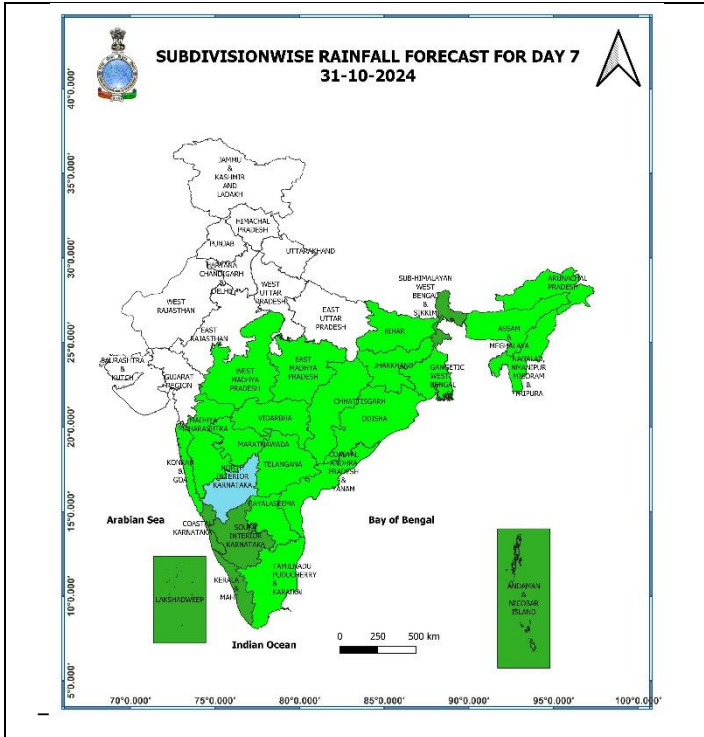
29 October (Day 5):

❖ **No weather warning.**



30 October (Day 6):

❖ **No weather warning.**



31 October (Day 7):

❖ No weather warning.

Weather Outlook for subsequent 3 days (During 01st November – 03rd November, 2024)

- ❖ Isolated to Scattered light rainfall likely over some parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe 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.

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Impact due to

- ✓ **Isolated extremely heavy rainfall** very likely over Odisha, Gangetic West Bengal on 25th October.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Kerala & Mahe & Jharkhand on 25th October.
- ✓ **Moderate flash flood** risk likely over few watersheds & neighbourhoods of Odisha, Gangetic West Bengal on 25th & 26th October. (**Annexure I**)

Impact Expected

- ❖ **Impact Expected over districts of Odisha (Baleswar, Bhadrak, Kendrapara, Jagatsinghpur, Mayurbhanj, Keonjhar, Dhenkanal) and West Bengal (East & West Medinipur, South 24 Parganas and Jhargram)**
 - Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
 - Breaking of tree branches and uprooting of trees. Large dead limbs blown from trees.
 - Damage to power and communication lines.
 - Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
 - Damage to vulnerable structure.
 - Major damage to standing crops including banana, papaya, horticultural and vegetable crops due to inundation and wind.
 - Damage to embankments/ salt pans.
 - 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 and poor visibility due to heavy rain leading to increased travel time and incidents
 - Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
 - Likely disruption of marine and inland water transportation like small boats and trawlers.
 - It may lead to riverine flooding in some river catchments (for riverine flooding please visit Webpage of Central Water Commission)

Action Suggested

- ❖ **Action Suggested for districts of Odisha (Baleswar, Bhadrak, Kendrapara, Jagatsinghpur, Mayurbhanj, Keonjhar and Dhenkanal) and West Bengal (East & West Medinipur, South 24 Parganas and Jhargram)**
 - Total suspension of fishing operations over Northwest Bay of Bengal till 25th noon.
 - ✓ Fishermen are advised not to venture into Northwest Bay of Bengal and along & off Odisha and West Bengal coasts on 25th October.
 - Movement in motor boats unsafe
 - Coastal hutment dwellers to be moved to safer places.
 - People in affected areas to remain indoors.
 - Judicious regulation of onshore/offshore, Port and maritime activities including shipping.
 - Judicious regulation of tourism activities in coastal areas.
 - 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 in view of Cyclonic storm "DANA" over North Coastal Odisha

- ✓ Immediately shift the harvested produce to safer places.
- ✓ In **Odisha**, postpone harvesting of rice, maize, black gram, green gram, groundnut, vegetables and fruits till the cessation of rains. Withhold sowing of pre-rabi pulses and winter vegetables. Provide propping in sugarcane by tying leaves from four to five plants together to prevent their lodging.
- ✓ In **Gangetic West Bengal**, drain out excess water from *Aman* rice, groundnut, pulses and vegetables. Postpone harvesting of *kharif* rice, vegetables, and fruits till the cessation of rains.
- ✓ In **Jharkhand**, postpone harvesting of groundnut, fruits & vegetables. Protect vegetable seedlings in open fields by making shed nets by placing bamboo and polythenes. Withhold sowing of *rabi* crops.
- ✓ Make arrangements for adequate drainage to avoid water logging in crop fields.
- ✓ Provide mechanical support to young fruit plants and staking in vegetables to prevent their lodging.

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

- ✓ Drain out excess water from rice nurseries and fields of rice, maize, pepper and newly planted turmeric. Undertake detrashing and propping of more than five-months-old sugarcane to avoid lodging. Provide support to banana plantations.
- ✓ In **Kerala**, drain out excess water from rice, banana, coconut and vegetable fields. Undertake propping in banana plantations and strengthen the vegetable pandals.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

Flash Flood Risk:

Annexure I

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 26-10-2024 :

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

Odisha - Baleshwar, Bhadrak, Kendraparha and Mayurbhanj districts.
Gangetic West Bengal - Bankura, Eastmednipur, Haora, Hugli, Nadia, North 24 Praganas, Pashchim Medinipur, Puruliya and South 24 Parganas 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.

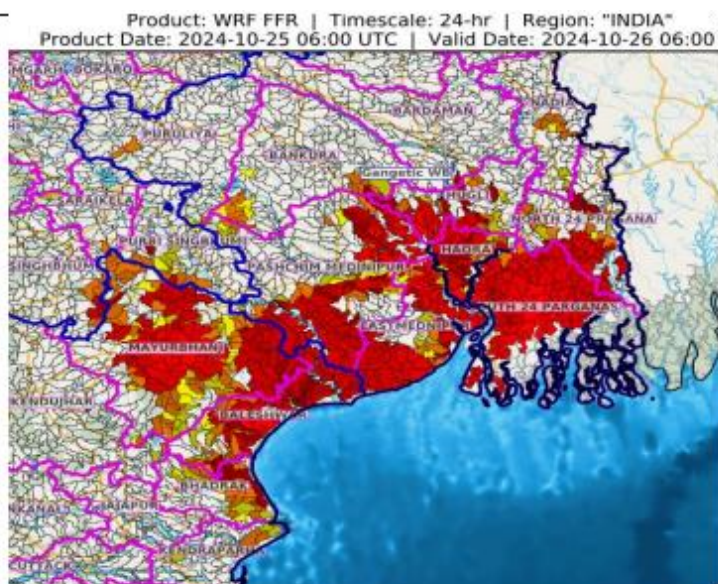


Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

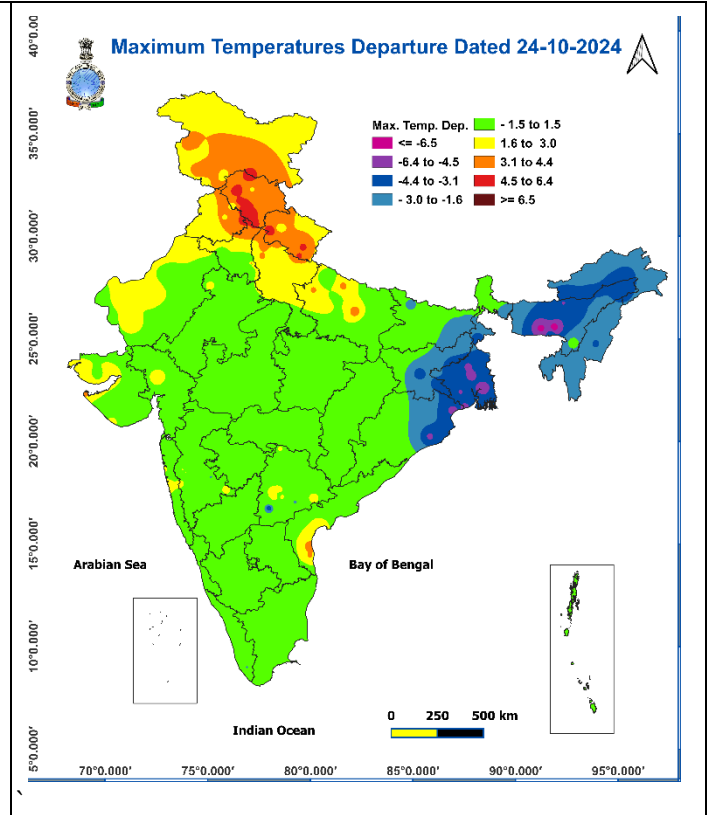
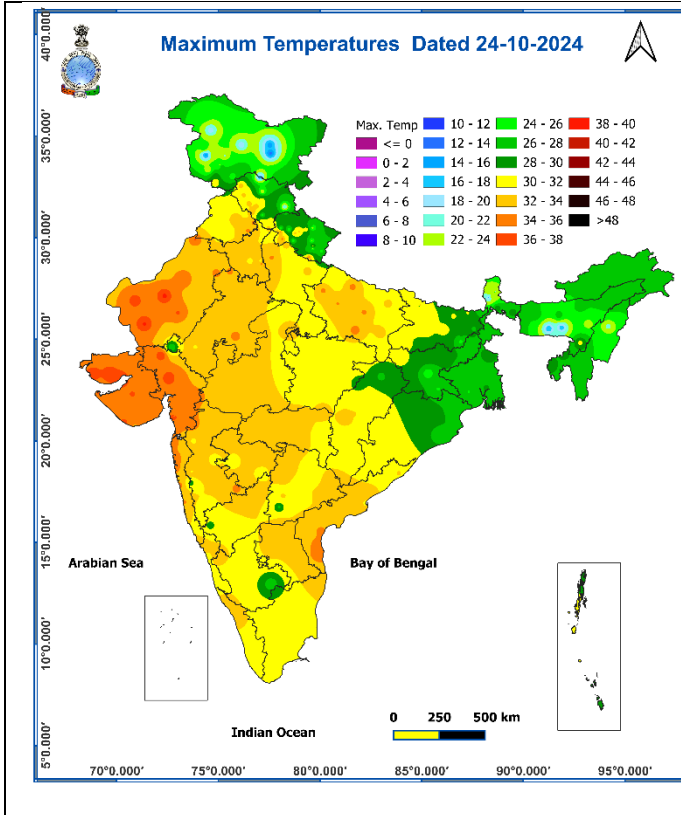


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

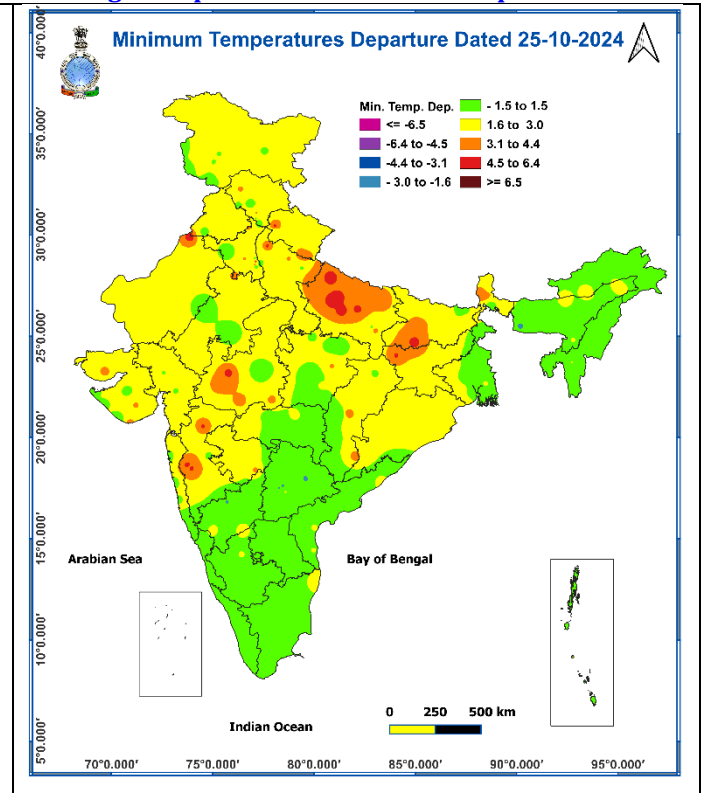
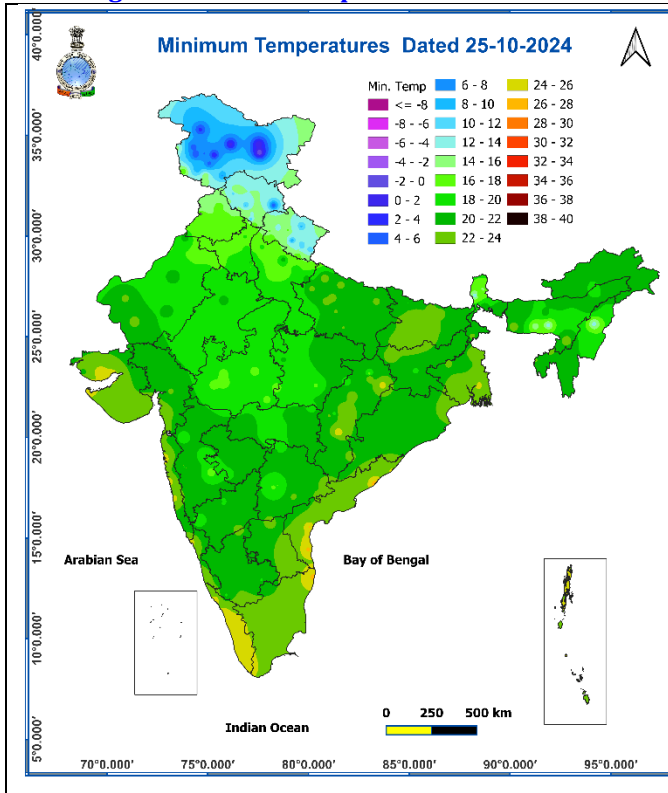
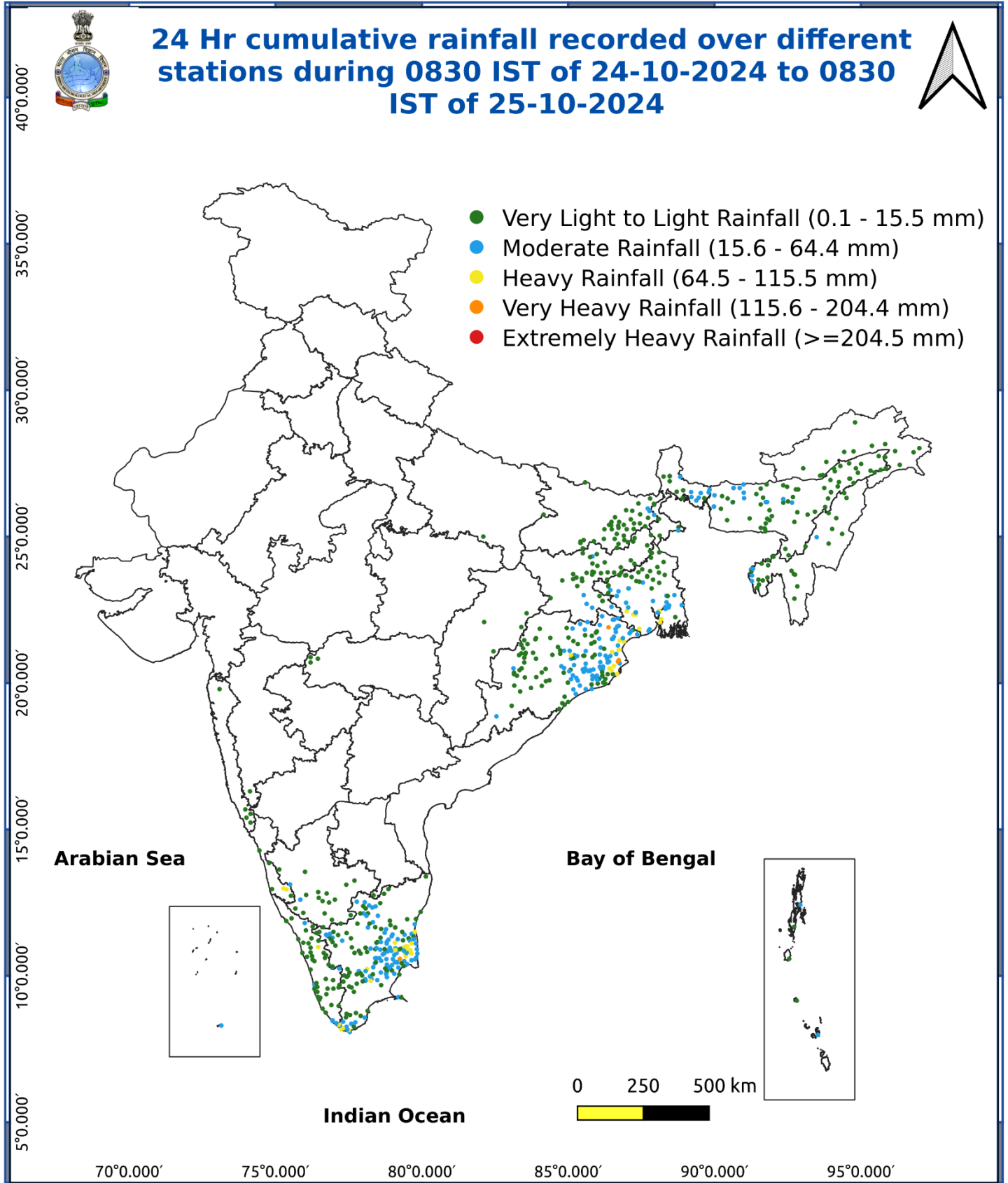


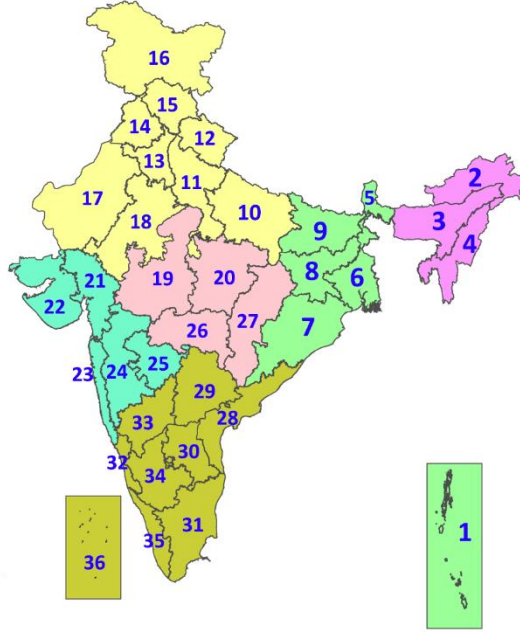
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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)



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