राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

Sunday, October 13, 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:

✓ **Southwest Monsoon** has further withdrawn from remaining parts of Bihar, Jharkhand, entire West Bengal & Sikkim; some more parts of Chhattisgarh, Madhya Pradesh; many parts of Odisha and some parts of Assam & Meghalaya, northwest Bay of Bengal. The **line of withdrawal of Southwest Monsoon** now passes through 28.5°N/89.5°E, 27.0°N/90.0°E Dhubri, Tura, 22°N/89°E, 20°N/87°E, Gopalpur, Raipur, 22.5°N/79.5°E, Khargone, Nandurbar, Navsari and 20°N/70°E.

✓ Conditions are favourable for further **withdrawal of Southwest Monsoon** from remaining parts of Gujarat, Madhya Pradesh, Chhattisgarh, Odisha & some more parts of Maharashtra and north Bay of Bengal during next 2 days.

✓ Thereafter **Southwest Monsoon** likely to withdraw remaining parts of the country during subsequent 2 days. Simultaneously with the setting in of easterly & northeasterly winds over southern peninsular India, south & adjoining central Bay of Bengal, the **Northeast Monsoon** rainfall activity is like to commence over south eastern peninsular region during the same period.

Weather Systems:

- ✓ The **Well Marked Low pressure area** over eastcentral & adjoining westcentral Arabian sea persisted over the same region at 0830 hours IST of today, the 13th October 2024. It is likely to move west-northwestwards and intensify into **a Depression** over central Arabian Sea during next 12 hours.
- ✓ The upper air **cyclonic circulation** over southwest Bay of Bengal now lies over north interior Tamil Nadu in lower tropospheric levels tilting southwestward with height.
- ✓ A **trough runs** from centre of the Well Marked Low pressure area over eastcentral & adjoining westcentral Arabian sea to Comorin area across south Kerala and the cyclonic circulation over Tamil Nadu in low to mid tropospheric levels.
- ✓ The **cyclonic circulation** over southeast Bay of Bengal & adjoining equatorial Indian Ocean moved west- northwestwards & lay over southeast Bay of Bengal and extending upto 5.8 km above mean sea level at 0830 hours IST of today, the 13th October 2024. Under its influence, a **low pressure area** is likely to form over central parts of south Bay of Bengal around 14th October. It is likely to become **Well marked low pressure area** and move west-northwestwards towards north Tamilnadu, Puducherry and adjoining south Andhra Pradesh coasts during subsequent 48 hours.
- ✓ The upper air cyclonic circulation over east Assam & neighbourhood persists in lower tropospheric levels.

Forecast & Warnings (upto 7 days) :

South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Karnataka; Scattered to Fairly widespread light to moderate rainfall over Coastal Andhra Pradesh & Yanam, Rayalaseema; Isolated to Scattered light to moderate rainfall very likely over Telangana during the week.
- ✓ **Isolated extremely heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal, Rayalaseema on 16th October.
- ✓ **Isolated very heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 13th-17th; km on 17th & 18th; Coastal Andhra Pradesh & Yanam on 15th & 16th; Rayalaseema during 15th -17th; Coastal & South Interior Karnataka on 17th October.
- ✓ **Isolated heavy rainfall** very likely over Kerala & Mahe during the week; Coastal Andhra Pradesh & Yanam, Rayalaseema during 13th-17th; Rayalaseema during 14th-17th Coastal & South Interior Karnataka during 15th-18th; North Interior Karnataka on 17th & 18th October.

West & Central India

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Gujarat State during 2 days; Isolated to Scattered light to moderate rainfall over same region during subsequent 5 days; Isolated to Scattered light to moderate rainfall over Konkan & Goa, Madhya Maharashtra, Marathwada, Madhya Pradesh, Vidarbha, Chhattisgarh during the week.
- ✓ **Isolated heavy rainfall** very likely over Madhya Maharashtra, Gujarat State, West Madhya Pradesh on 13th; Konkan & Goa on 17th October.

Northwest, Northeast & East 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 Andaman & Nicobar Islands, Coastal Karnataka, Lakshadweep; **at many places** over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **at a few places** over Vidarbha, Assam & Meghalaya, Konkan & Goa, Madhya Maharashtra, Gujarat state, Coastal Andhra Pradesh & Yanam, South Interior Karnataka; **at isolated places** over Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Marathwada, 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** at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall** at isolated places over East Rajasthan, West Madhya Pradesh, Gujarat State, Odisha.

- **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Tamil Nadu, Puducherry & Karaikal:** Madurai AWS (dist Madurai) 16, Tirupuvanam (dist Sivagangai) 14, Sivakasi (dist Virudhunagar), Tallakulam (dist Madurai), Rameswaram (dist Ramanathapuram), Periyapatti (dist Madurai), Vettikadu (dist Thanjavur) 12 each, Madurai North (dist Madurai) 11, Kovilankulam (dist Virudhunagar), Aruppukottai KVK AWS (dist Virudhunagar), Thaniamangalam (dist Madurai), Ponnaniyar Dam (dist Thiruchirappalli), Mettupatti (dist Madurai) 10 each, Devakottai (dist Sivagangai), Pulipatti (dist Madurai), Melur (dist Madurai), Avudayarkoil (dist Pudukkottai) 9 each; **East Rajasthan**: Udaipur/d-aero (dist Udaipur) 9, Girva Sr (dist Udaipur) 8, Jhadol Sr (dist Udaipur) 7; **West Madhya Pradesh:** Neemuch (dist Jawad) 8; **Saurashtra & Kutch:** Malia (dist Junagadh) 8; **Gujarat Region:** Surat_kvk Aws (dist Surat) 7; **Odisha:** Chandua Kuliana (dist Mayurbhanj) 7..

- **Minimum Temperature Departures (as on 13-10-2024):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at a few places over Madhya Pradesh, Vidarbha; at isolated places over West Rajasthan, Saurashtra & Kutch, Madhya Maharashtra, Marathwada, Odisha; **above normal (1.6°C to 3.0°C)** at many places over Andaman & Nicobar Islands**;** at a few places over East Rajasthan, Konkan & Goa, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Gangetic West Bengal; at isolated places over Telangana, Rayalaseema, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, East Uttar Pradesh, Bihar, Jharkhand, North Interior Karnataka, Sub-Himalayan West Bengal & Sikkim. These are **below normal (-1.6°C to -3.0°C)** at isolated places over Haryana-Chandigarh-Delhi, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura. Today, **the lowest minimum temperature** of **16.0°C** is reported at **Delhi Ridge (New Delhi)** over the plains of the country. **(Fig.4)**

- **Maximum Temperature Departures (as on 12-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Odisha; **above normal (1.6°C to 3.0°C)** at a few places over Odisha, Chhattisgarh; at isolated places over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Gangetic West Bengal. These were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Gujarat state, Madhya Pradesh, Assam & Meghalaya; **below normal (-1.6°C to -3.0°C)** at isolated places over Bihar, East Rajasthan, Haryana-Chandigarh-Delhi, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe. Yesterday, **the highest Maximum Temperature** of **38.0°C** was reported at **Sri Ganganagar (West Rajasthan)** over the country. **(Fig. 2)**

Meteorological Analysis (Based on 1130 hours IST)

- **Southwest Monsoon** has further withdrawn from remaining parts of Bihar, Jharkhand, entire West Bengal & Sikkim; some more parts of Chhattisgarh, Madhya Pradesh; many parts of Odisha and some parts of Assam & Meghalaya, northwest Bay of Bengal. The **line of withdrawal of Southwest Monsoon** now passes through 28.5°N/89.5°E, 27.0°N/90.0°E Dhubri, Tura, 22°N/89°E, 20°N/87°E, Gopalpur, Raipur, 22.5°N/79.5°E, Khargone, Nandurbar, Navsari and 20°N/70°E.

- Conditions are favourable for further **withdrawal of Southwest Monsoon** from remaining parts of Gujarat, Madhya Pradesh, Chhattisgarh, Odisha, Assam, Meghalaya; entire Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura & some more parts of Maharashtra and north Bay of Bengal during next 2 days.

- Thereafter **Southwest Monsoon** is likely to withdraw from remaining parts of the country during subsequent 2 days. Simultaneously with the setting in of easterly & northeasterly winds over southern peninsular India, south & adjoining central Bay of Bengal, the **Northeast Monsoon** rainfall activity is like to commence over south east peninsular region during the same period.

- The **Well Marked Low pressure area** over eastcentral & adjoining westcentral Arabian sea with the associated cyclonic circulation extending upto 5.8 km above mean sea level persisted over the same region at 0830 hours IST of today, the 13th October 2024. It is likely to move west-northwestwards and intensify into **a Depression** over central Arabian Sea during next 12 hours.

- The upper air **cyclonic circulation** over southwest Bay of Bengal now lies over north interior Tamil Nadu and extends upto 3.1 km above mean sea level tilting southwestward with height.

- A **trough runs** from centre of the Well Marked Low pressure area over eastcentral & adjoining westcentral Arabian sea to Comorin area across south Kerala and cyclonic circulation over Tamil Nadu between 3.1 km & 5.8 km above mean sea level.

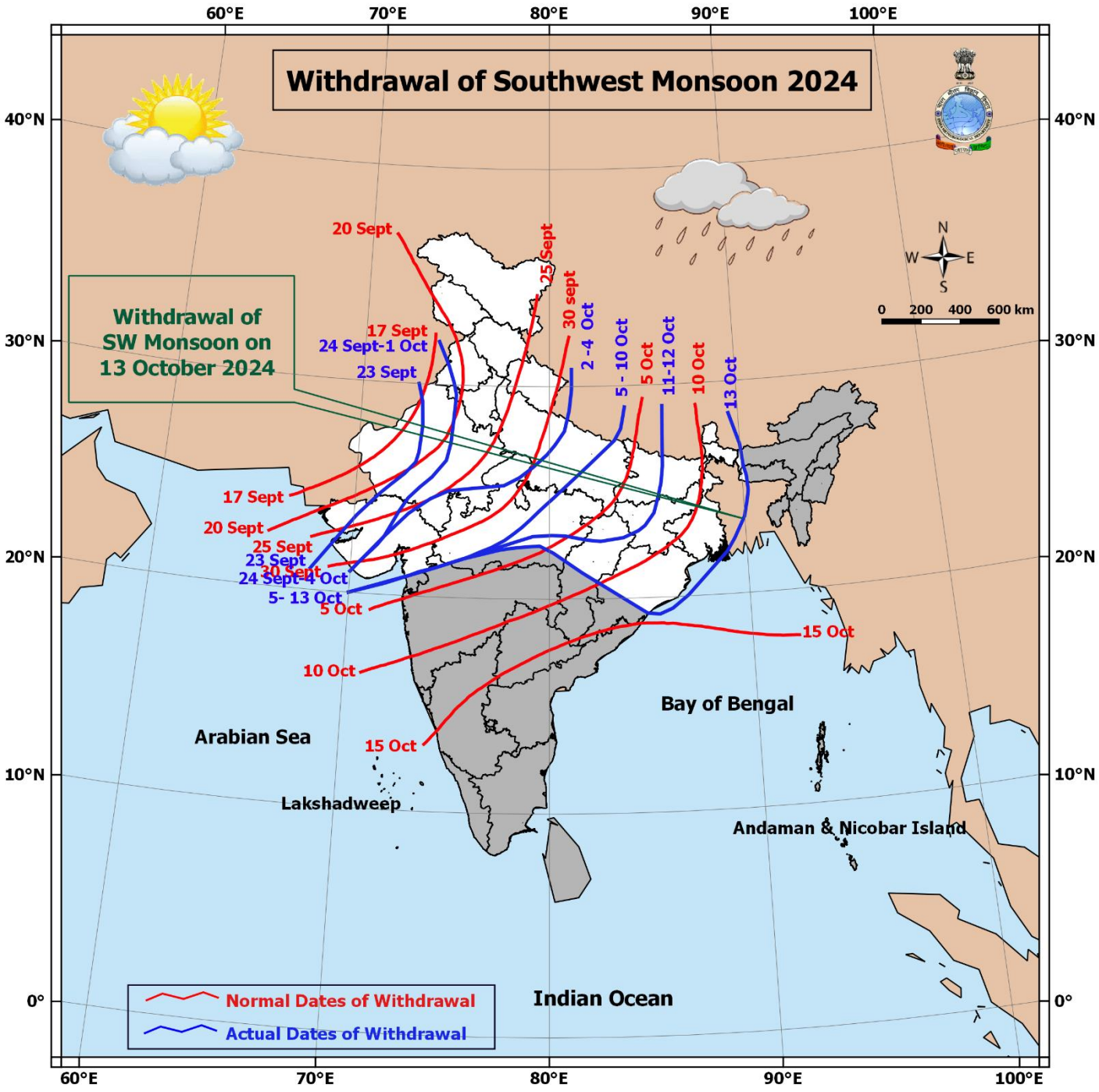
- The **cyclonic circulation** over southeast Bay of Bengal & adjoining equatorial Indian Ocean moved west-northwestwards & lay over southeast Bay of Bengal and extending upto 5.8 km above mean sea level at 0830 hours IST of today, the 13th October 2024. Under its influence, a **low pressure area** is likely to form over central parts of south Bay of Bengal around 14th October. It is likely to become **Well marked low pressure area** and move west-northwestwards towards north Tamilnadu, Puducherry and adjoining south Andhra Pradesh coasts during subsequent 48 hours.

- The upper air **cyclonic circulation** over east Assam & neighbourhood persists & now extends upto 3.1 km above mean sea level.

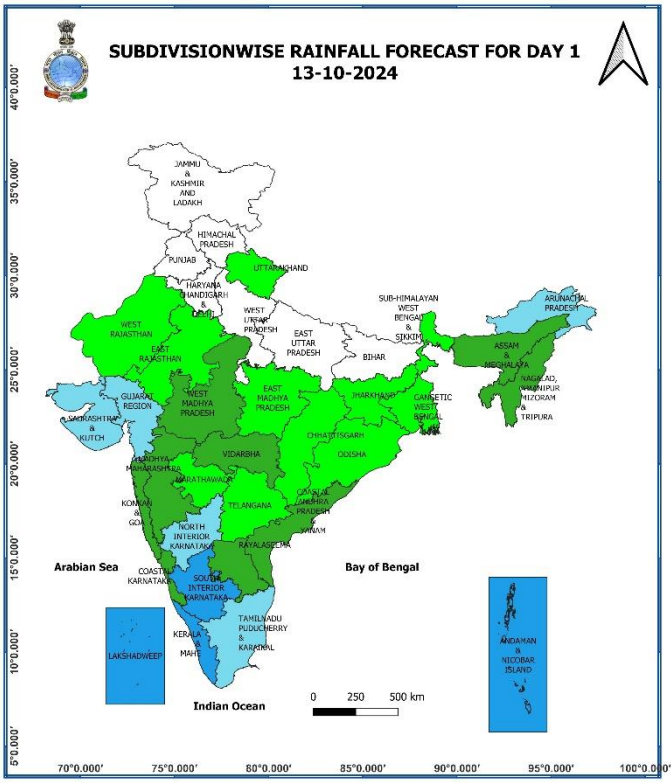
- A **cyclonic circulation** lies over northwest Uttar Pradesh and extends upto 3.1 km above mean sea level.

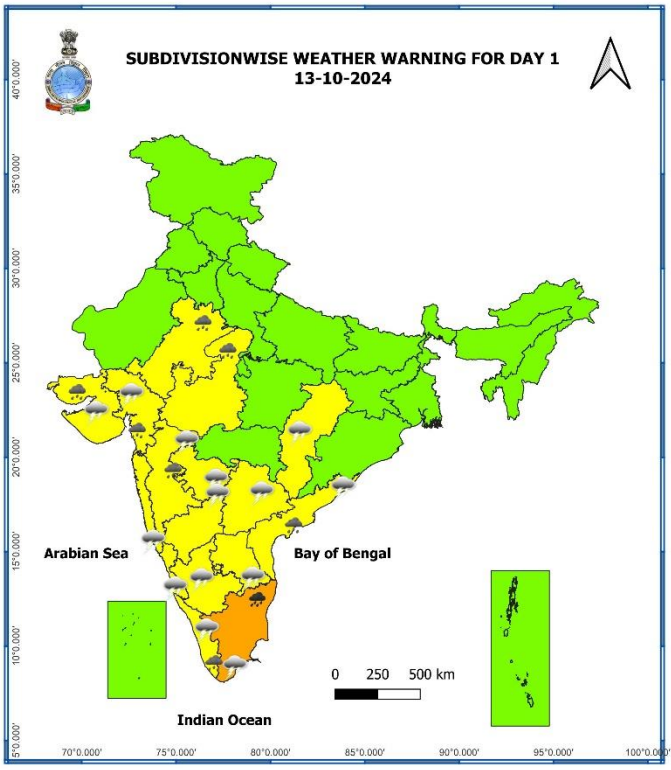
- The **trough** from centre of the Well Marked Low pressure area over eastcentral & adjoining westcentral Arabian sea to north Sri Lanka across Coastal Karnataka, Tamil Nadu extending upto 1.5 km above mean sea level has become less marked.

Withdrawal of Southwest Monsoon 2024



Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 20th October, 2024)



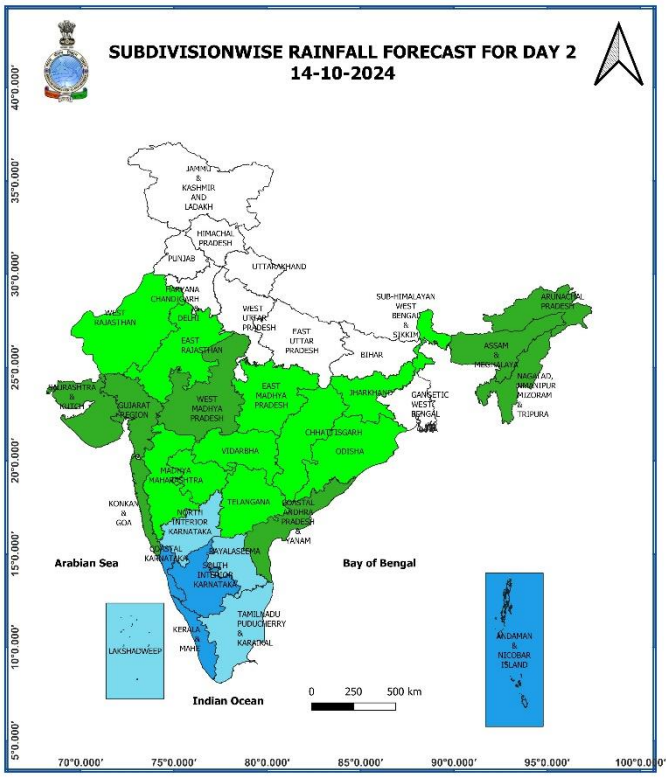


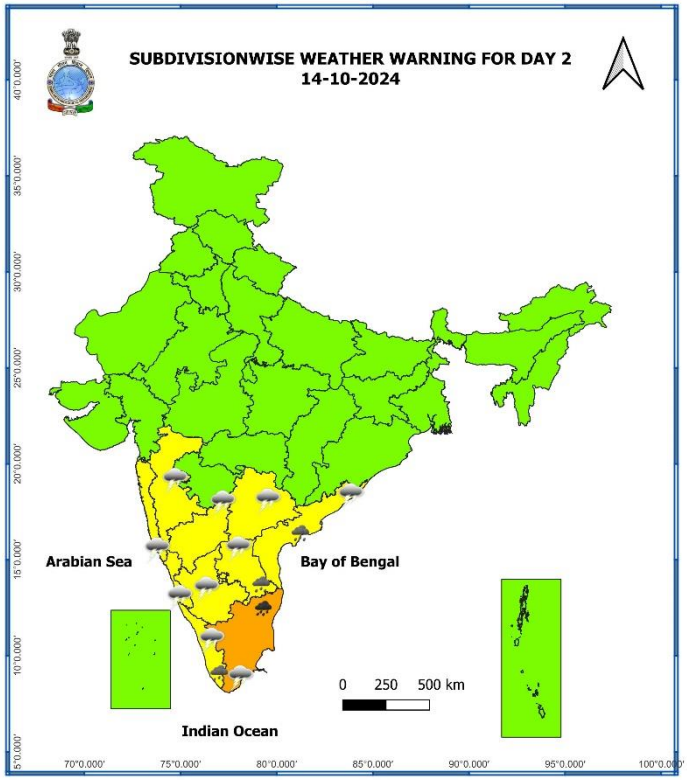
13 October (Day 1):

- **Heavy to very Heavy rainfall (≥12 cm)** very likely at isolated places over Tamil Nadu, Puducherry; **Heavy rainfall (≥7cm)** very likely at isolated places over East Rajasthan, West Madhya Pradesh, Madhya Maharashtra, Gujarat state, Kerala & Mahe, Coastal Andhra Pradesh & Yanam.

- **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Chhattisgarh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka.

- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail central parts of Arabian sea southern parts of north Arabian sea, along and off Somalia coast, many parts of southwest Arabian sea and adjoining parts of southeast Arabian sea, along and off Kerala, Karnataka coasts and adjoining Lakshadweep area, over Comorin area, gulf of Mannar, along and off Sri Lanka coast, Tamil Nadu coast, most parts of southwest Bay of Bengal many parts of southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



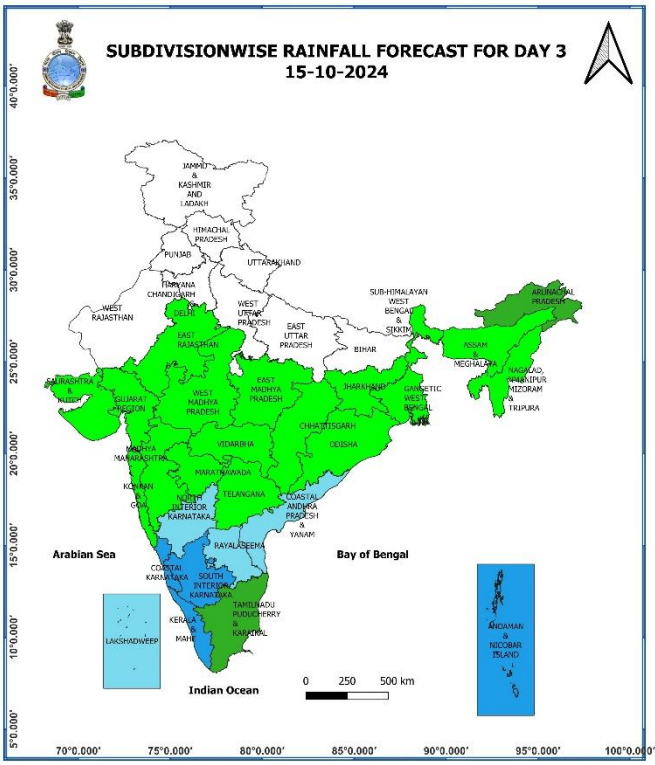


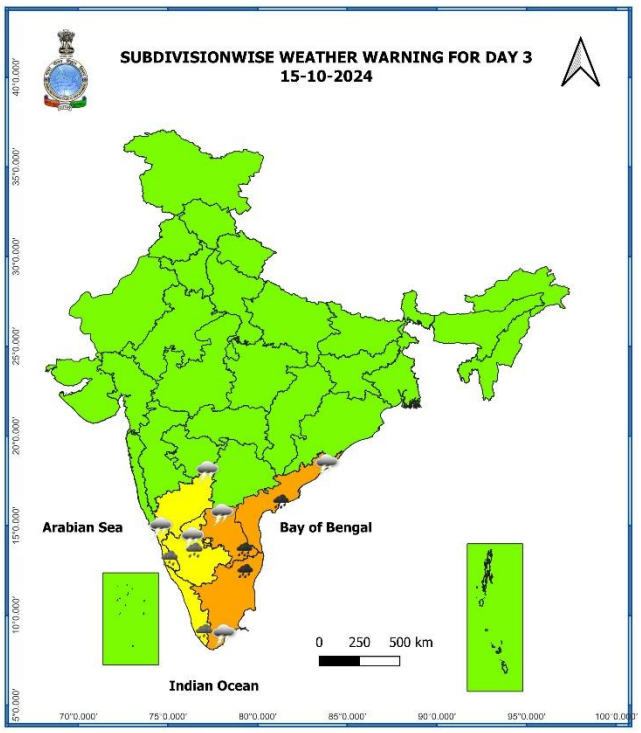
14 October (Day 2):

- **Heavy to very Heavy rainfall (≥12 cm)** very likely at isolated places over Tamil Nadu, Puducherry; **Heavy rainfall (≥7cm)** likely at isolated places over Kerala & Mahe, Rayalaseema, Coastal Andhra Pradesh & Yanam.

- **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka.

- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over many parts of west central Arabian sea, southern parts of north Arabian sea, along and off Somalia coast, many parts of southwest Arabian sea, gulf of Mannar, along and off Sri Lanka coast, along and off Tamil Nadu, south Andhra Pradesh coasts, southwest Bay of Bengal and many parts of southeast Bay of Bengal, many parts of westcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



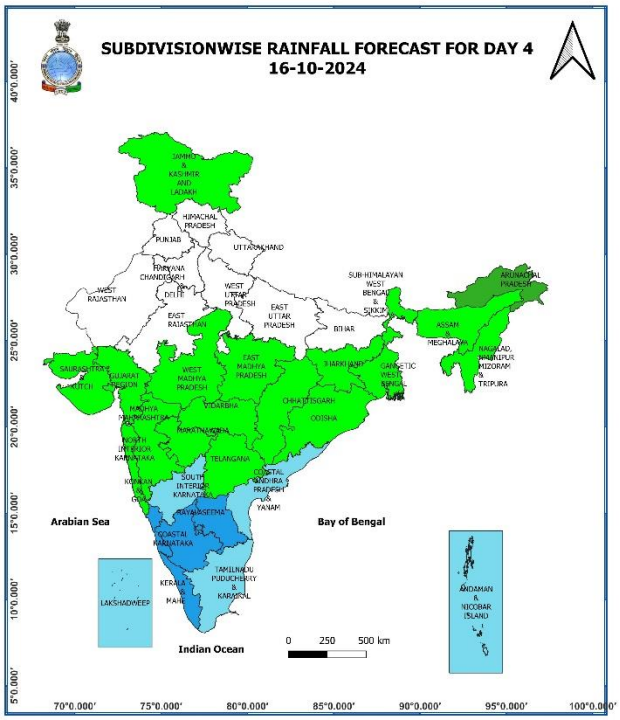


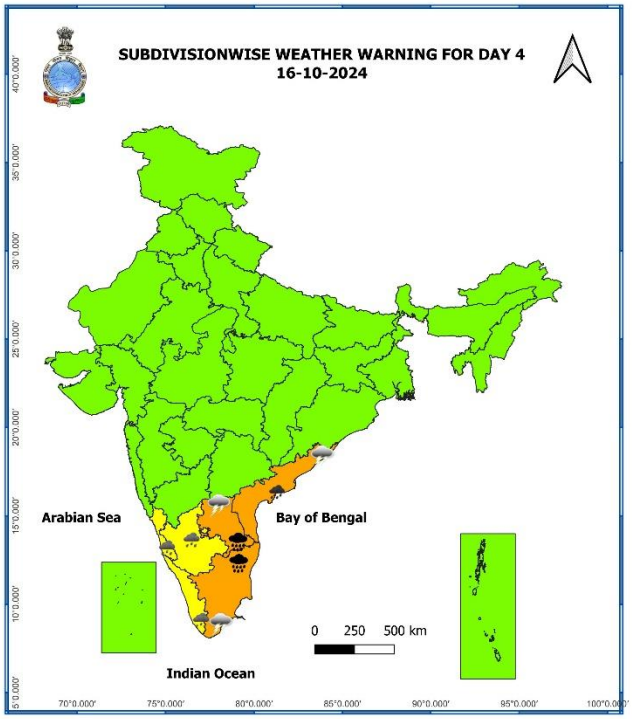
15 October (Day 3):

- **Heavy to very Heavy rainfall (≥12 cm)** very likely at isolated places over Tamil Nadu, Puducherry, Coastal Andhra Pradesh & Yanam, Rayalaseema; **Heavy rainfall (≥7cm)** likely at isolated places over Kerala & Mahe, Coastal Karnataka, South Interior Karnataka.

- **Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka.

- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over gulf of Mannar, along and off Sri Lanka coast, along and off Tamil Nadu, Andhra Pradesh coasts, southwest Bay of Bengal and many parts of southeast Bay of Bengal, many parts of westcentral Bay of Bengal and some parts of eastcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



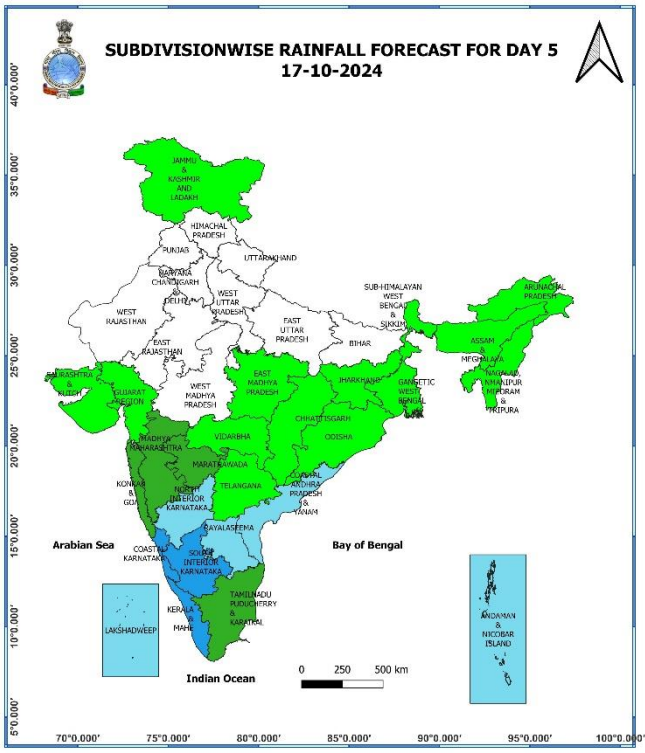


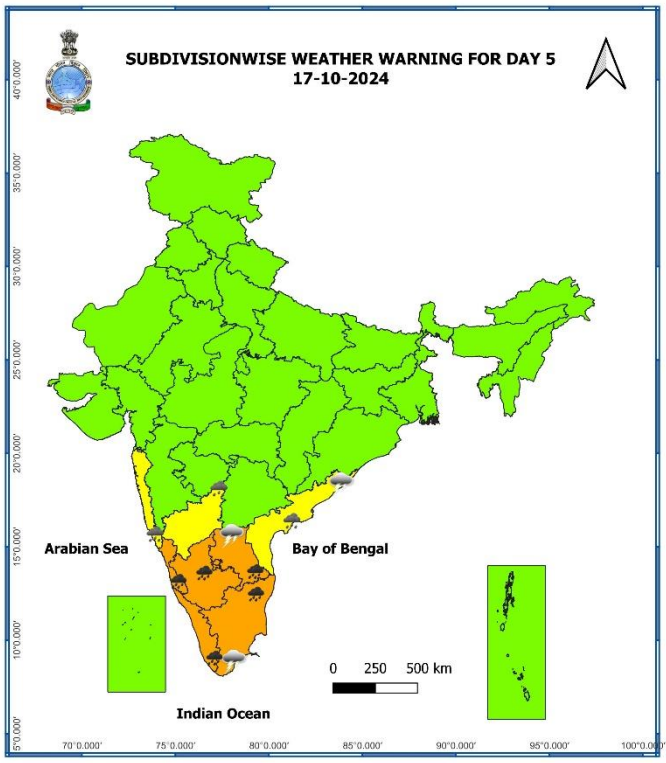
16 October (Day 4):

- **Heavy to very heavy rainfall with extremely heavy falls (> 20 cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema; **Heavy to very Heavy rainfall (≥12 cm)** likely at isolated places over Coastal Andhra Pradesh & Yanam; **Heavy rainfall (≥7cm)** likely at isolated places over Kerala & Mahe, Coastal Karnataka, South Interior Karnataka.

- **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema.

- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55** kmph is likely to prevail over along and off Kerala, Karnataka coasts and adjoining Lakshadweep area, over Comorin area, gulf of Mannar, along and off Sri Lanka coast, along and off Tamil Nadu, Andhra Pradesh coasts, southwest Bay of Bengal adjoining southeast Bay of Bengal, many parts of westcentral Bay of Bengal. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over along and off north Tamil Nadu and adjoining south Andhra Pradesh coasts and parts of southwest and westcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



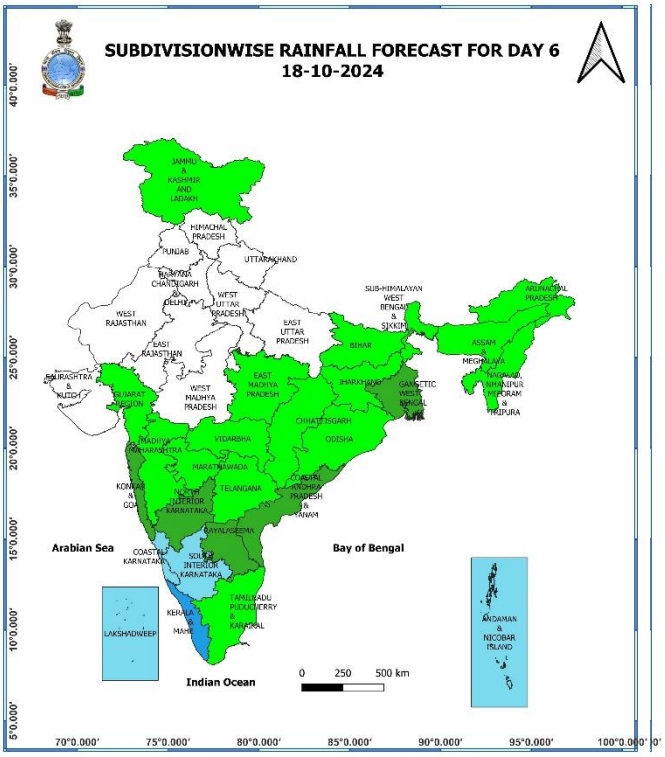


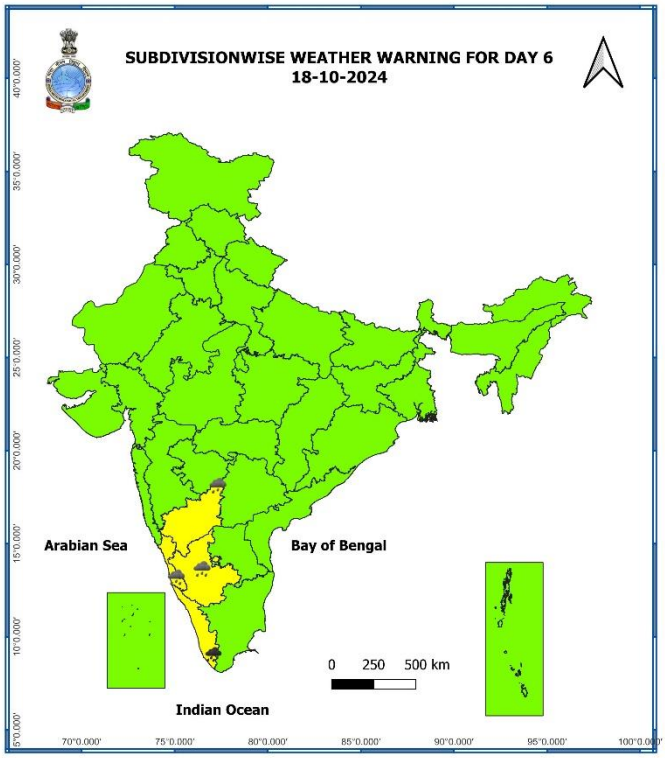
17 October (Day 5):

- **Heavy to very Heavy rainfall (≥12 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Rayalaseema, Coastal Karnataka, South Interior Karnataka; **Heavy rainfall (≥7cm)** likely at isolated places over Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, North Interior Karnataka.

- **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema.

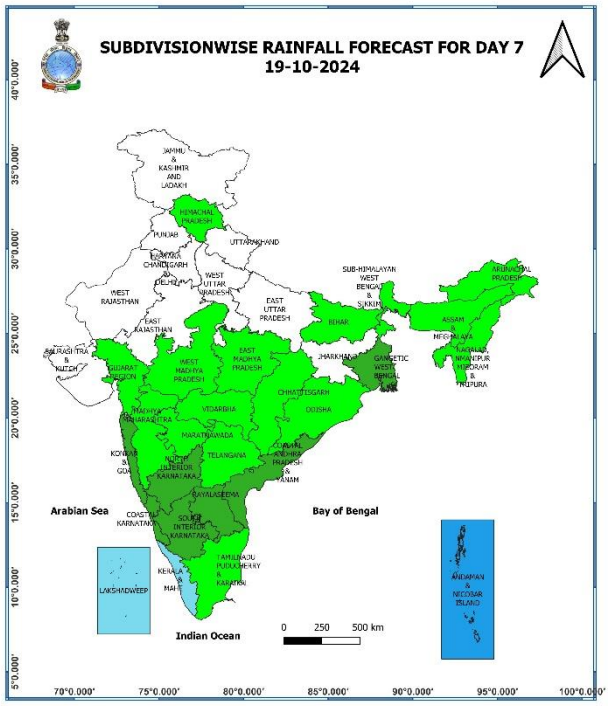
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over along and off Kerala, Karnataka coasts and adjoining Lakshadweep area, over Comorin area, gulf of Mannar, along and off Sri Lanka coast, along and off Tamil Nadu, Andhra Pradesh coasts, southwest Bay of Bengal, many parts of westcentral Bay of Bengal. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over along and off north Tamil Nadu and adjoining south Andhra Pradesh coasts and adjoining southwest and westcentral Bay of Bengal.

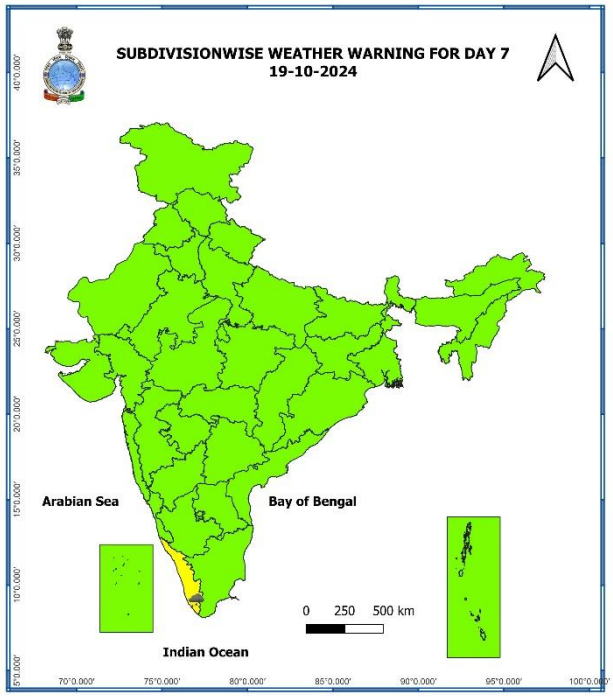




18 October (Day 6):

- **Heavy to very Heavy rainfall (≥12 cm)** likely at isolated places over Kerala & Mahe; **Heavy rainfall (≥7cm)** likely at isolated places over Karnataka.





19 October (Day 7):

- **Heavy rainfall (≥7cm)** likely at isolated places over Kerala & Mahe.

Weather Outlook for subsequent 3 days (During 20th October– 22nd October, 2024)

- Fairly widespread to widespread rainfall likely over Peninsular and adjoining Central India and Islands.
- Isolated to Scattered rainfall likely over some parts of 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 extremely heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal, Rayalaseema on 16th October.
- ✓ **Isolated very heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 13th-17th; Kerala & Mahe on 17th & 18th; Coastal Andhra Pradesh & Yanam on 15th & 16th; Rayalaseema during 15th -17th; Coastal & South Interior Karnataka on 17th 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 fields of rice, maize, pepper and newly planted turmeric. Provide support to banana plantations.
- ✓ Make necessary arrangements for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in West Madhya Pradesh, Vidarbha, Madhya Maharashtra, Gujarat region, Kerala, South Interior Karnataka, Arunachal Pradesh and Assam.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

Fig. 1: Maximum Temperatures

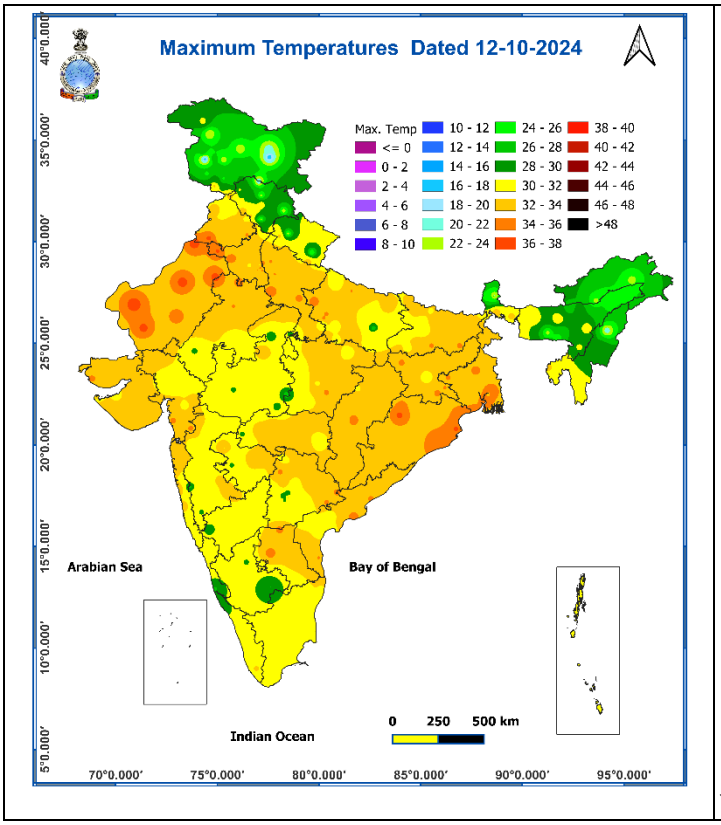


Fig. 2: Departure of Maximum Temperatures

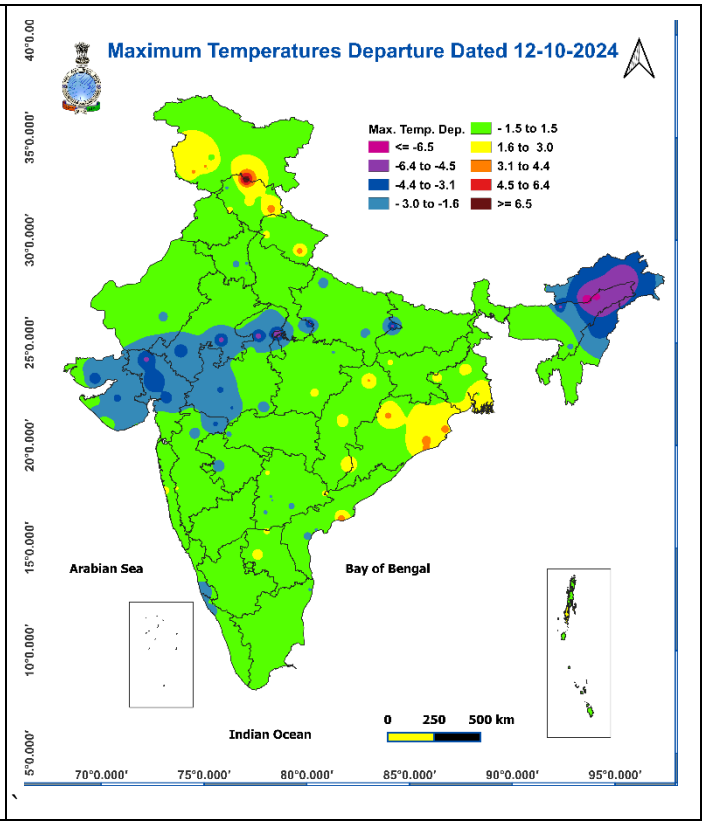


Fig. 3: Minimum Temperatures

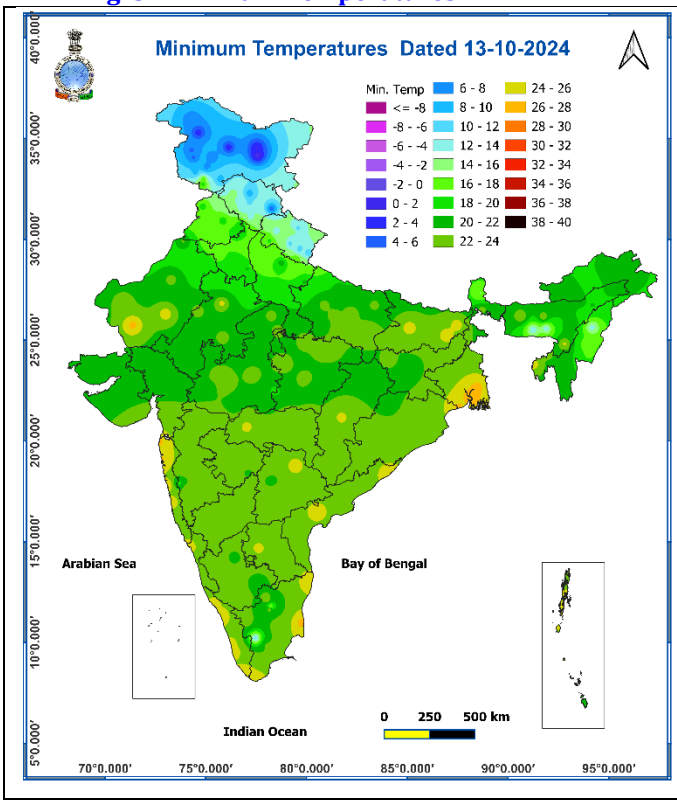
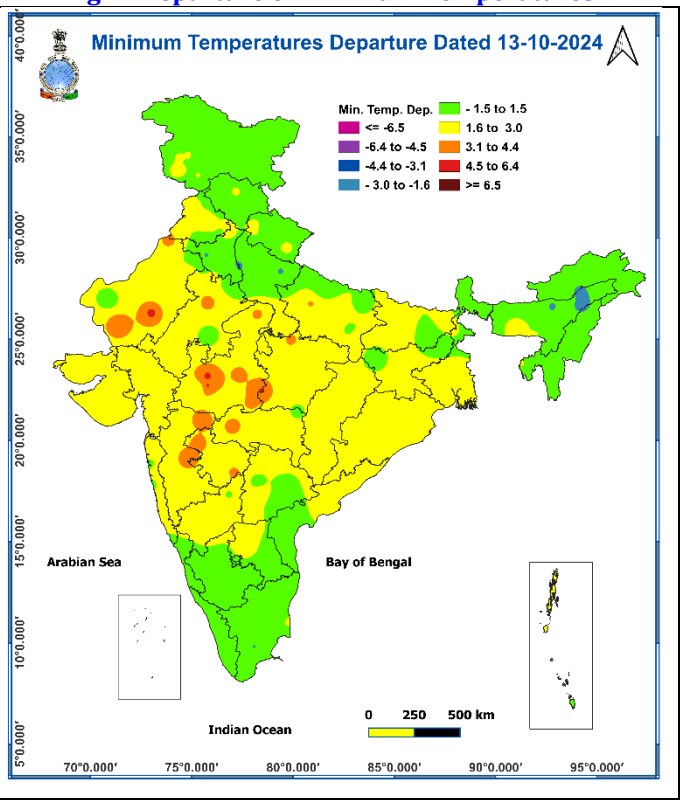
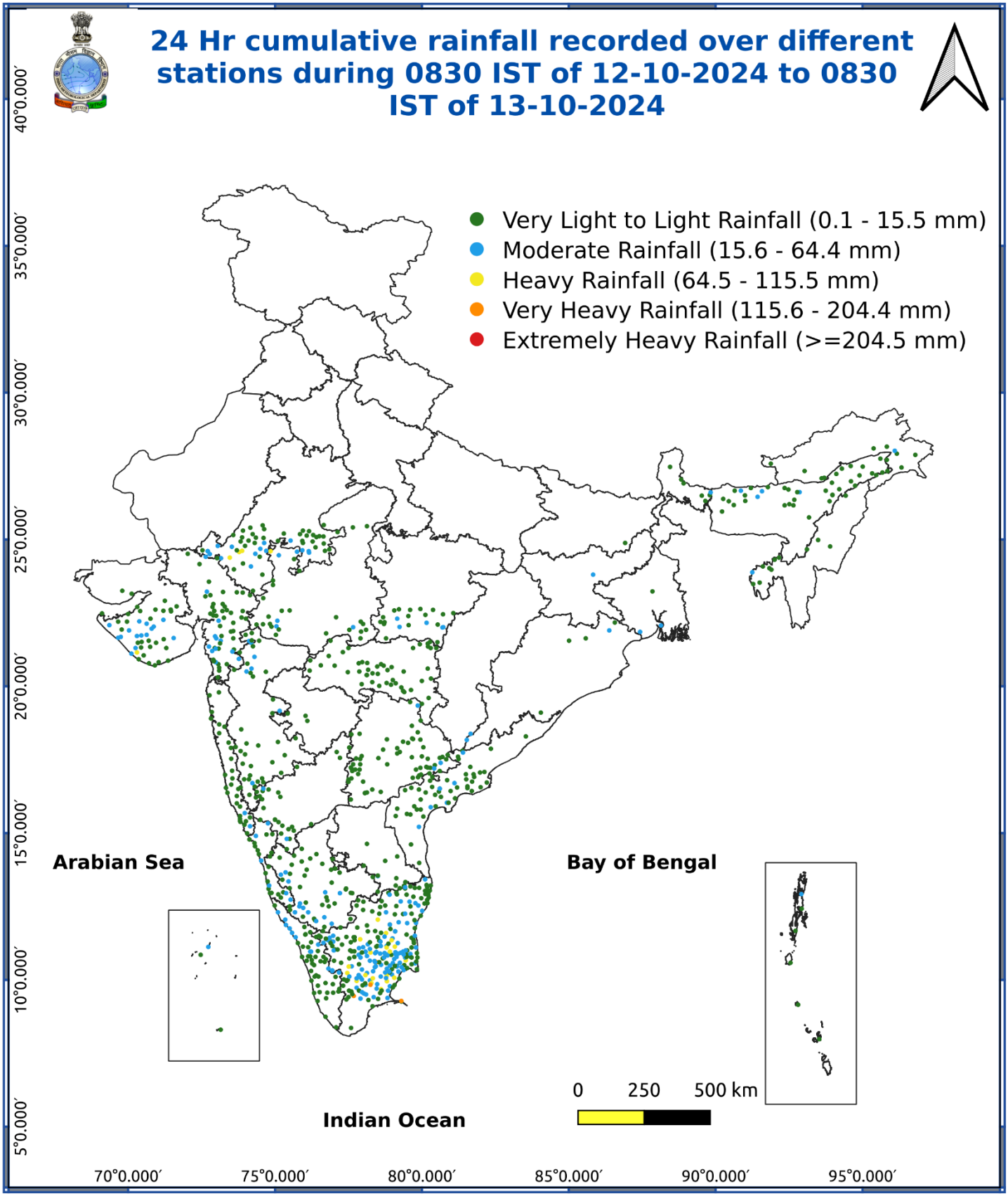


Fig. 4: Departure of Minimum Temperatures



* 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
(Service to the Nation since 1875)

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



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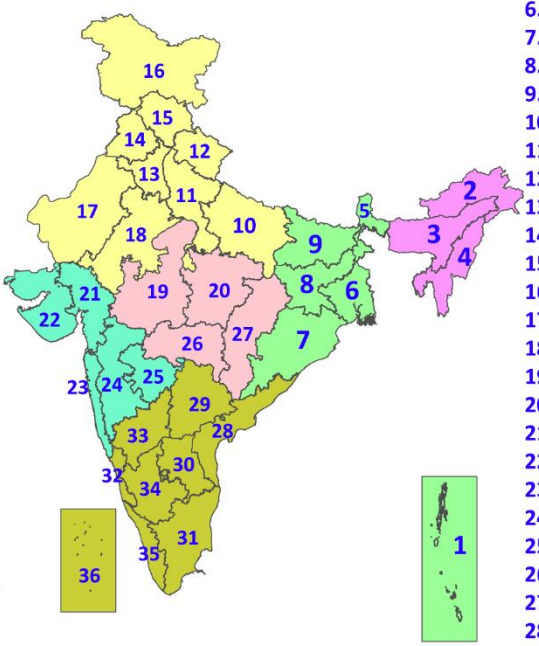
LEGENDS

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 Rain
Very Heavy Rain
Extremely Heavy Rain
Thunder & Lightning
Hailstorm
Dust Raising Winds
Heavy Snow
Dust Storm
Heat Wave
Warm Night
Hot Day
Hot & Humid
Strong Surface Winds
Cold Wave
Cold Day
Ground Frost

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

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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 ≥40° C for plains and ≥30° 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 ≥6.5° C

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature ≥45°C.
Severe Heat Wave: When actual maximum temperature ≥47°C

(c). Criteria for heat wave for coastal stations
When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C.

Cold Wave

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

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

Cold Wave : When Minimum Temperature is ≤ 4.0 °C
Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C

(c) For Coastal Stations
When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

Cold Day

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

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 ≤4°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)

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