

Tuesday, November 26, 2024
Time of Issue: 2125 hours IST
(NIGHT)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ❖ The **Deep Depression** over Southwest Bay of Bengal moved north-northwestwards with a speed of 8 kmph during past 6 hours and lay centred at 1730 hours IST of today, the 26th November 2024 over the same region near latitude 7.0°N and longitude 82.7°E, about 240 km southeast of Trincomalee, 520 km southeast of Nagapattinam, 640 km south-southeast of Puducherry and 720 km south-southeast of Chennai. It is very likely to continue to move north-northwestwards and intensify further into a **cyclonic storm** on 27th November. Thereafter, it will continue to move north-northwestwards towards Tamil Nadu coast skirting Sri Lanka coast during subsequent 2 days.
- ❖ **Jet Stream** Winds of the order upto 140 knots at 12.6 km above mean sea level are prevailing over Northwest India.
- ❖ A fresh Western disturbance is likely to affect Western Himalayan Region from 29th November.

Forecast & Warnings (upto 7 days):

- ✓ Light to moderate rainfall at a few places accompanied with isolated thunderstorm & lightning very likely over coastal Tamil Nadu & Puducherry and Kerala & Mahe on 26th & 27th November.
- ✓ Isolated **heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over coastal Tamil Nadu & Puducherry on 26th & 27th, **heavy to very heavy rainfall** at isolated places on 28th and **heavy rainfall** at isolated places on 29th & 30th November.
- ✓ **Heavy to very heavy rainfall** at isolated places very likely over Coastal Andhra Pradesh & Yanam, Rayalaseema during 28th-30th November.
- ✓ **Heavy rainfall** at isolated places very likely over Andaman & Nicobar Islands on 26th; Kerala & Mahe on 26th & 27th; Coastal Andhra Pradesh & Yanam, Rayalaseema during 26th November- 01st December; and over Nagaland, Manipur, Mizoram & Tripura on 28th November.
- ✓ **Dense fog conditions** very likely to prevail during early morning hours in isolated pockets of Himachal Pradesh during 27th-29th, Punjab & Haryana-Chandigarh during 28th -30th and Uttar Pradesh during 27th November-01st December.

ii. Temperature conditions and Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today

No significant change in minimum temperature observed over most parts of the country during past 24 hours. Minimum temperatures are **appreciably above normal (3°C to 5°C)** at isolated places over West Rajasthan and Bihar; **above normal (2°C to 3°C)** at a few places over Kerala & Mahe; at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Uttar Pradesh, Saurashtra & Kutch. These are **appreciably below normal (-5°C to -3°C)** at isolated places over Madhya Pradesh; **below normal (-3°C to -1°C)** at isolated places over East Rajasthan, Gangetic West Bengal, Odisha, Coastal Karnataka, Konkan & Goa, Marathwada, Vidarbha, Telangana, Haryana-Chandigarh-Delhi and near normal over rest parts of the country. Today, **the lowest minimum temperature** of 7.4°C is reported at **Adampur_IAF (Punjab)** over the plains of the country.

Forecast of temperature:

- ❖ No large Change in minimum temperatures very likely over Western Himalayan region during next 24 hours and gradual fall by 2-3°C thereafter.
- ❖ No large Change in minimum temperatures very likely over Central India during next 3 days and fall by 2-3°C thereafter.
- ❖ No large Change in minimum temperatures very likely over Gangetic West Bengal, Odisha during next 3 days and fall by 3-4°C thereafter.
- ❖ No significant change in minimum temperatures over rest parts of the country during next 5 days.

iii. Weather forecast over Delhi/NCR during 26th Nov. to 29th Nov. 2024

Past Weather:

There has been a fall upto 03°C in maximum temperature and fall upto 2°C in minimum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 24 to 26°C and 10 to 13°C respectively. The maximum temperature was below normal by 01 to 02°C and the minimum temperature was near normal most places over the region. Mainly smog/ shallow fog condition with predominant surface wind from west direction with wind speed reaching 06 to 14 kmph prevailed on 25.11.2024. Shallow fog reported at Safdarjung airport during early morning today. Safdarjung airport recorded lowest visibility 700 m at 0230 hours IST which improved thereafter becoming 800m at 0530 hours IST. Mainly clear sky condition with wind speed less than 10 kmph west direction prevailed over the region in the forenoon today.

Weather Forecast:

26.11.2024: Mainly clear sky. The predominant surface wind is likely to be northwest direction with wind speed upto 08-10 kmph till evening. It would decrease thereafter becoming less than 06 kmph from northwest direction during night. Smog/shallow fog is likely in the evening/night.

27.11.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 04 kmph during morning hours. Smog/ moderate fog is likely in the morning. The wind speed will increase thereafter becoming less than 08 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 04 kmph from north direction during evening and night. Smog/ shallow fog is likely in the evening/night.

28.11.2024: Mainly clear sky. The predominant surface wind is likely to be from variable direction with speed less than 04 kmph during morning hours. Smog/ moderate to dense fog is likely in the morning. The wind speed will gradually increase becoming 04-06 kmph from north direction during afternoon. It will decrease thereafter becoming less than 04 kmph from variable direction during evening and night. Smog/ shallow to moderate fog is likely in the evening/night.

29.11.2024: Mainly clear sky. The predominant surface wind is likely to be from variable direction with wind speed less than 04 kmph during morning hours. Smog/moderate to dense fog in the morning. The wind speed will increase thereafter becoming 04-06 kmph from northeast direction during afternoon. It will gradually decrease becoming less than 04 kmph from variable direction during evening and night. Smog/ shallow fog is likely in the evening/night.

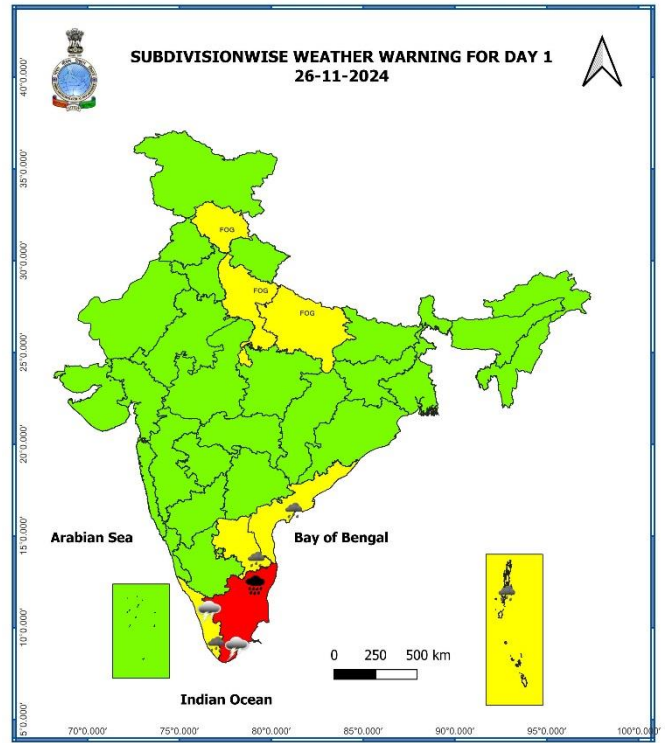
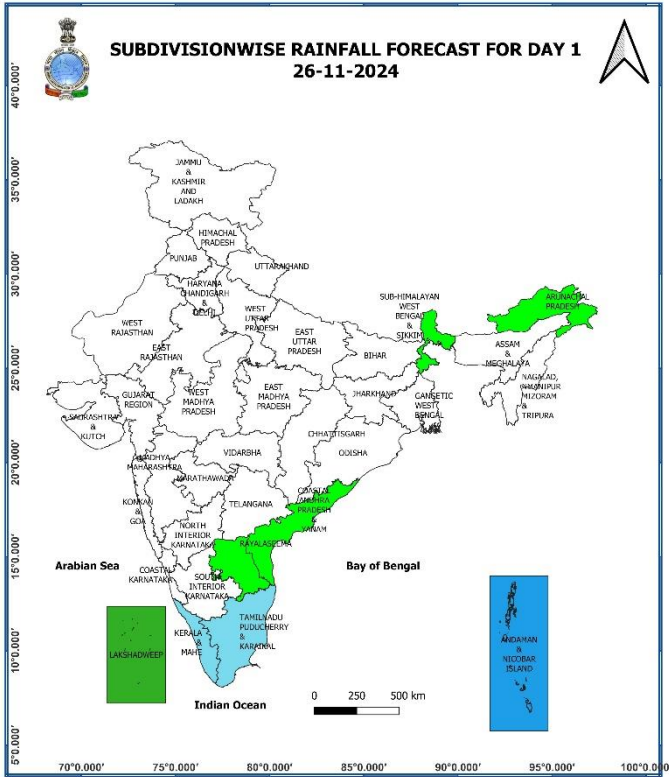
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of today): **at most places** over Andaman & Nicobar Islands; at a few places over Tamil Nadu, Puducherry & Karaikal; **at isolated places** over Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Lakshadweep.
- ❖ **Heavy rainfall observed** (from 0830 hours IST to 1730 hours IST of today): at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of today) (in cm): **Andaman & Nicobar Islands:** Nan Cowry -4; Port Blair -2; Maya Bandar, Hut Bay, Long Islands -1 each; **Coastal Andhra Pradesh & Yanam:** Nellore -2; **Tamil Nadu, Puducherry & Karaikal:** Nagapattinam -12, Karaikal-5; Nungambakkam & Chennai -4 each; Thanjavur -3; Kodaikanal & Tondi -1 each.
- ❖ **Fog conditions observed** (at 1730 hours IST of today): **Shallow to moderate** in isolated pockets of Bihar.
- ❖ **Visibility reported** (at 1730 hours IST of today) (≤ 500 metres) (in m): **Bihar:** Supaul -500.
- ❖ **Minimum Temperature Departures (as on 26-11-2024):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over West Rajasthan and Bihar; **above normal (2°C to 3°C)** at a few places over Kerala & Mahe; at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Uttar Pradesh, Saurashtra & Kutch. These are **appreciably below normal (-5.0°C to -3.1°C)** at isolated places over Madhya Pradesh; **below normal (-3.0°C to -1.6°C)** at isolated places over East Rajasthan, Gangetic West Bengal, Odisha, Coastal Karnataka, Konkan & Goa, Marathwada, Vidarbha, Telangana, Haryana-Chandigarh-Delhi and near normal over rest parts of the country. Today, **the lowest minimum temperature** of 7.4°C is reported at **Adampur_IAF (Punjab)** over the plains of the country. **(Fig.4)**
- ❖ **Maximum Temperature Departures (as on 26-11-2024):** Maximum temperatures are **above normal (1.6°C to 3.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Arunachal Pradesh, Assam & Meghalaya and West Rajasthan. These are **below normal (-1.6°C to -3.0°C)** at many places over Madhya Maharashtra, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Andaman & Nicobar Islands; at a few places over South Interior Karnataka and Kerala & Mahe; at isolated places over West Bengal & Sikkim, Marathwada, West Madhya Pradesh, Telangana and Coastal Andhra Pradesh & Yanam and near normal over rest parts of the country. Today, **the highest maximum temperature** of 35.4°C is reported at **Karwar (Coastal Karnataka)** over the country. **(Fig. 2)**

Meteorological Analysis (Based on 1730 hours IST)

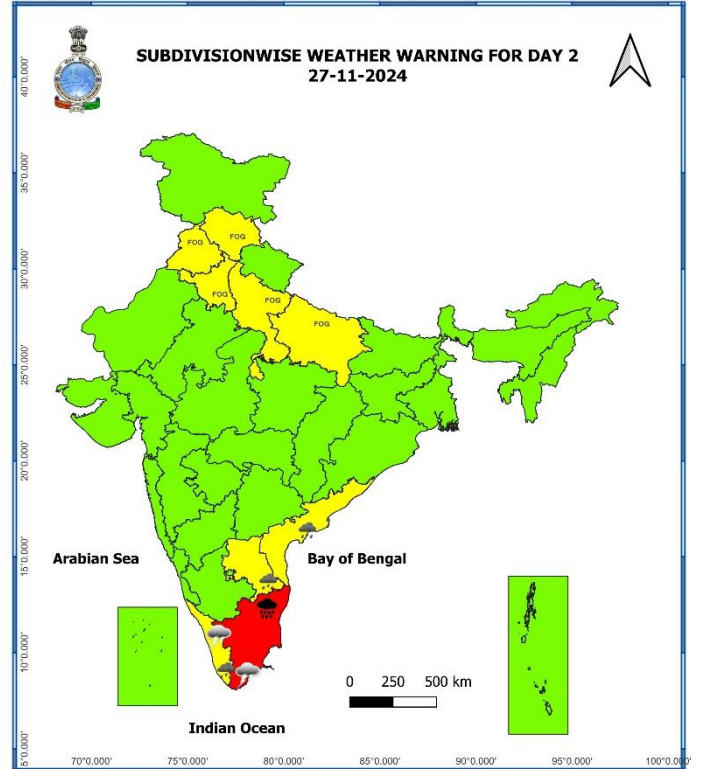
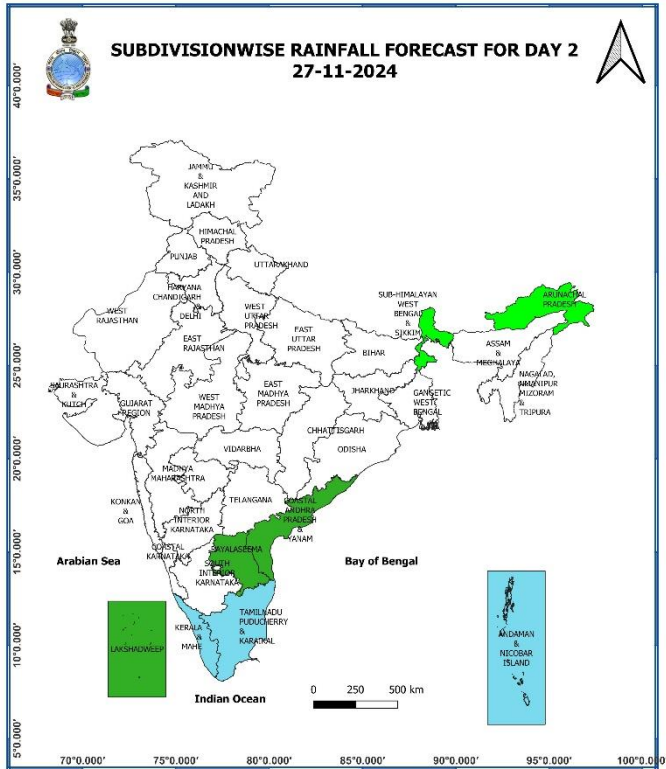
- ❖ The **Deep Depression** over Southwest Bay of Bengal moved north-northwestwards with a speed of 8 kmph during past 6 hours and lay centred at 1730 hours IST of today, the 26th November 2024 over the same region near latitude 7.0°N and longitude 82.7°E, about 240 km southeast of Trincomalee, 520 km southeast of Nagapattinam, 640 km south-southeast of Puducherry and 720 km south-southeast of Chennai. It is very likely to continue to move north-northwestwards and intensify further into a **cyclonic storm** on 27th November. Thereafter, it will continue to move north-northwestwards towards Tamil Nadu coast skirting Sri Lanka coast during subsequent 2 days.
- ❖ **Jet Stream** Winds of the order upto 140 knots at 12.6 km above mean sea level are prevailing over Northwest India.
- ❖ A fresh **Western disturbance** is likely to affect Western Himalayan Region from 29th November.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 03rd December, 2024)



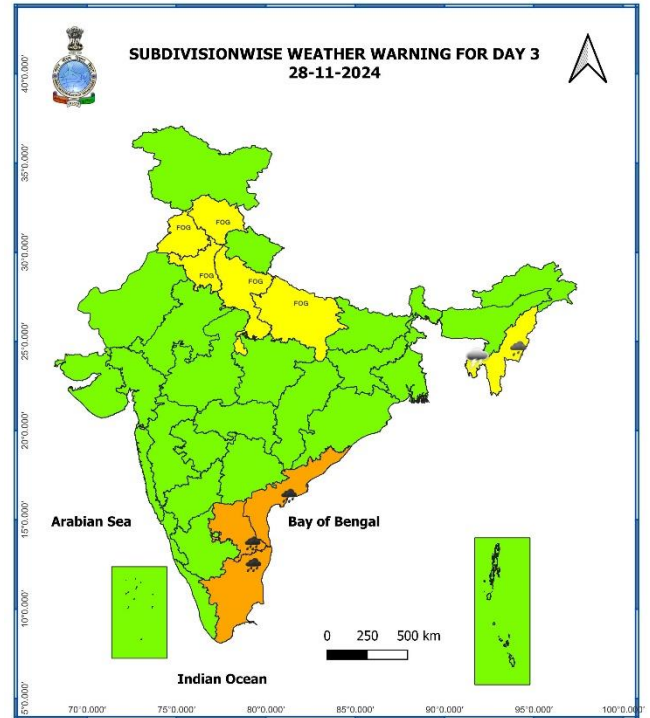
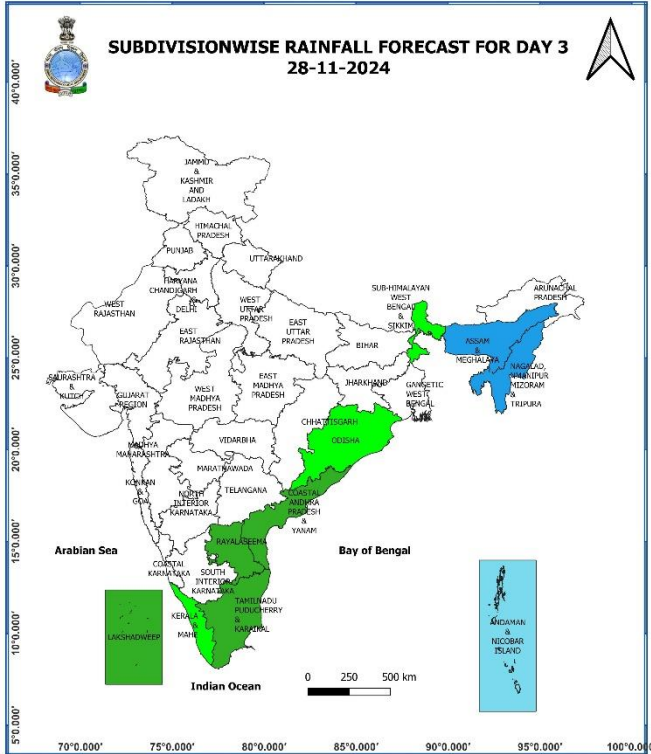
26 November (Day 1):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls (≥ 20 cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall (≥ 7 cm)** at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema and Andaman & Nicobar Islands.
- ❖ **Dense fog** very likely in isolated pockets of Himachal Pradesh and Uttar Pradesh in night/morning hours.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevailing along and off south Kerala coast, over gulf of Mannar and Comorin area, over southwest Bay of Bengal and adjoining parts of southeast and west central Bay of Bengal, along and off Sri Lanka coast, Tamil Nadu, Puducherry & south Andhra Pradesh coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevailing over prevail over adjoining areas of westcentral Bay of Bengal, along & off Tamil Nadu-Puducherry and south Andhra Pradesh coasts. **Squally wind speed reaching 55-65 kmph gusting to 75 kmph** is likely to prevail over southwest Bay of Bengal and along & off Sri Lanka. Fishermen are advised not to venture into these areas.



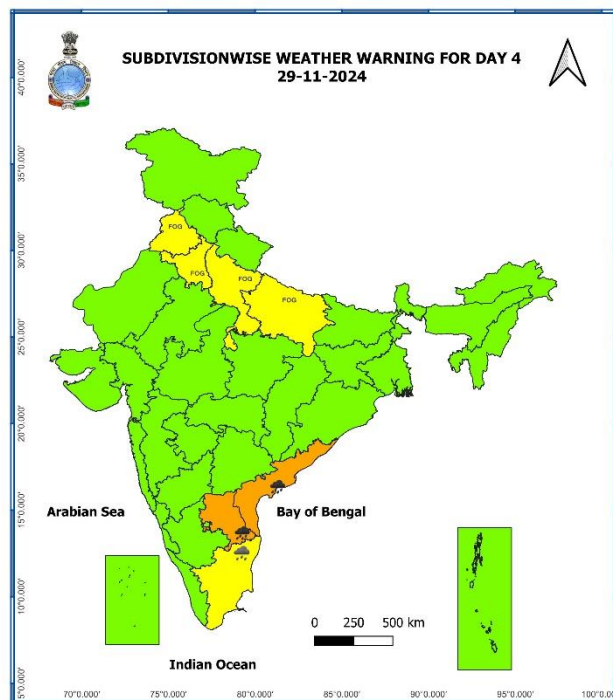
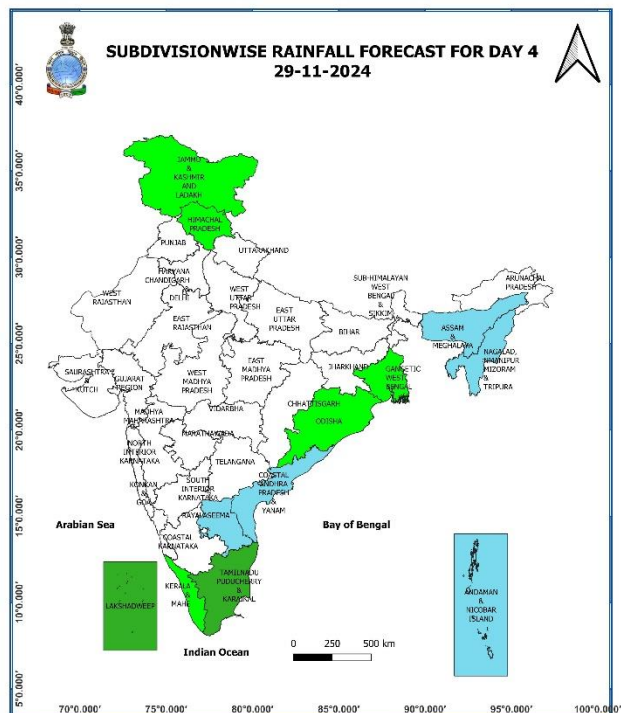
27 November (Day 2):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls (≥ 20 cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall (≥ 7 cm)** at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Dense fog** very likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh in night/morning hours.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevailing along and off south Kerala coast, over gulf of Mannar and Comorin area, over many parts of southwest & adjoining parts of southeast Bay of Bengal, over most parts westcentral Bay of Bengal, along and off Sri Lanka, Tamil Nadu, Puducherry & Andhra Pradesh coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevailing over prevail over adjoining areas of westcentral Bay of Bengal, along & off Tamil Nadu-Puducherry and south Andhra Pradesh coasts. **Squally wind speed reaching 55-65 kmph gusting to 75 kmph** is likely to prevail over southwest Bay of Bengal and along & off Sri Lanka. Fishermen are advised not to venture into these areas.



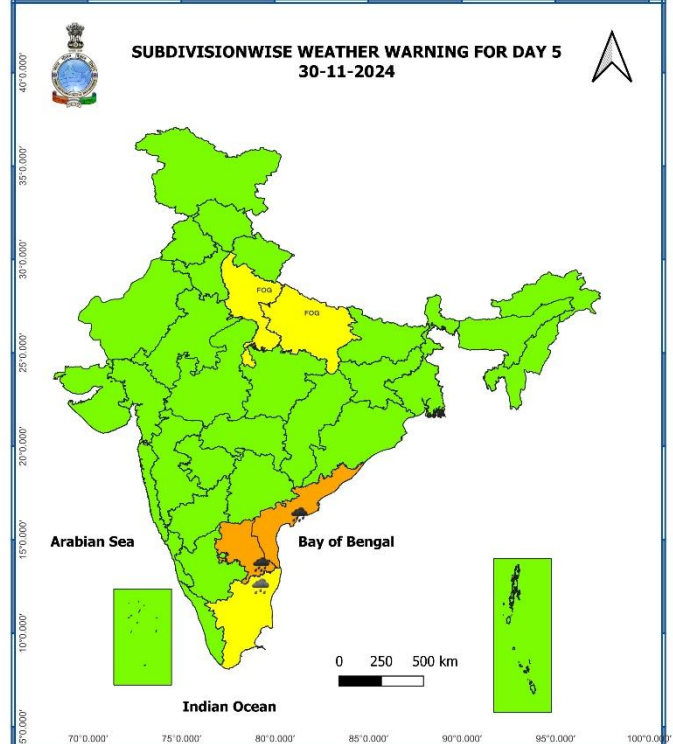
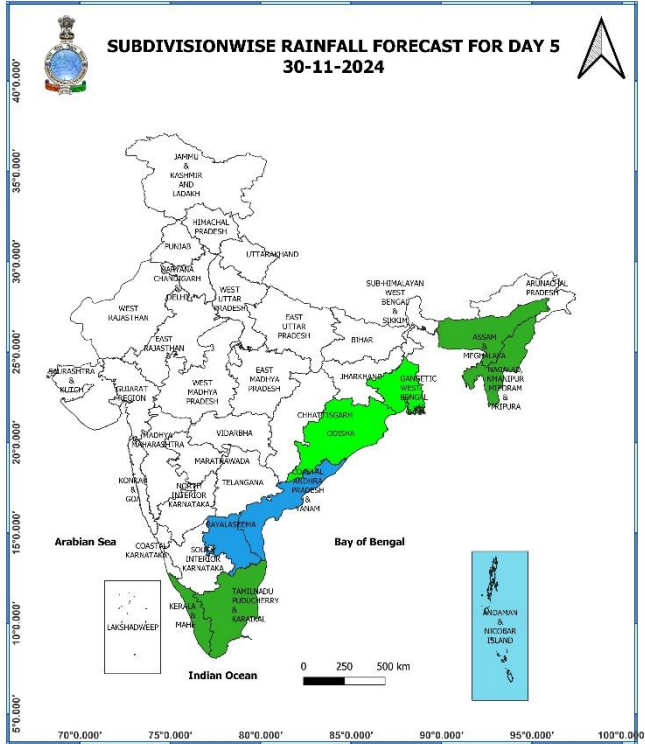
28 November (Day 3):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Rayalaseema; **Heavy rainfall (≥ 7 cm)** at isolated places over Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Dense fog** very likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh in night/morning hours.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevailing along and off south Kerala coast, over gulf of Mannar and Comorin area, over southwest and adjoining parts of southeast Bay of Bengal, many parts of westcentral Bay of Bengal, along and off Sri Lanka, Tamil Nadu, Puducherry & Andhra Pradesh coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevailing over many parts of southwest and westcentral Bay of Bengal, along and off Sri Lanka, Tamil Nadu & south Andhra Pradesh coasts. **Squally weather with wind speed 55 kmph to 65 kmph gusting to 75 kmph** is likely to prevailing over west central Bay of Bengal, Tamil Nadu & adjoining south Andhra Pradesh coasts. Fishermen are advised not to venture into these areas. **Gale wind speed reaching 60-70 kmph gusting to 80 kmph** over southwest Bay of Bengal and along & off Sri Lanka coasts. Fishermen are advised not to venture into these areas.



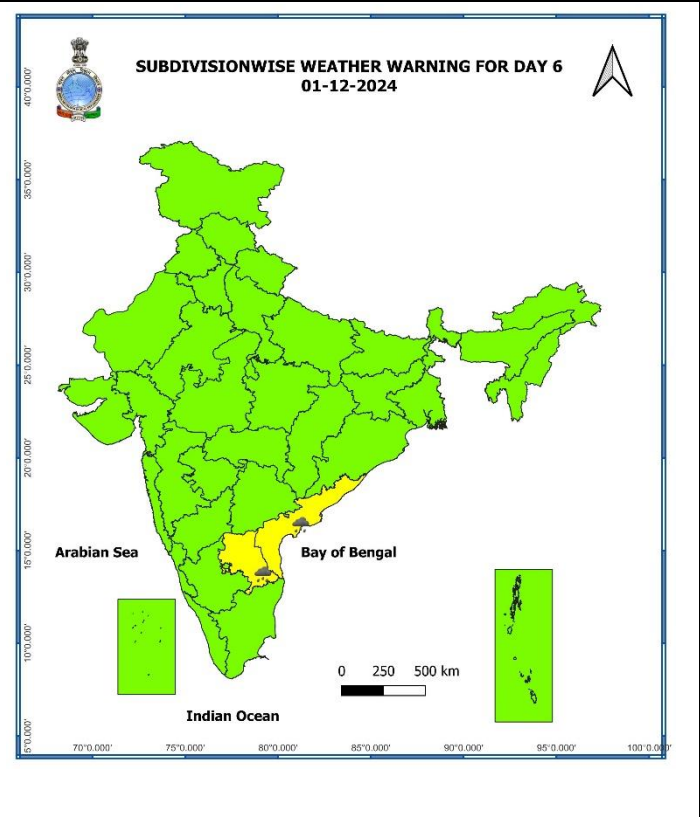
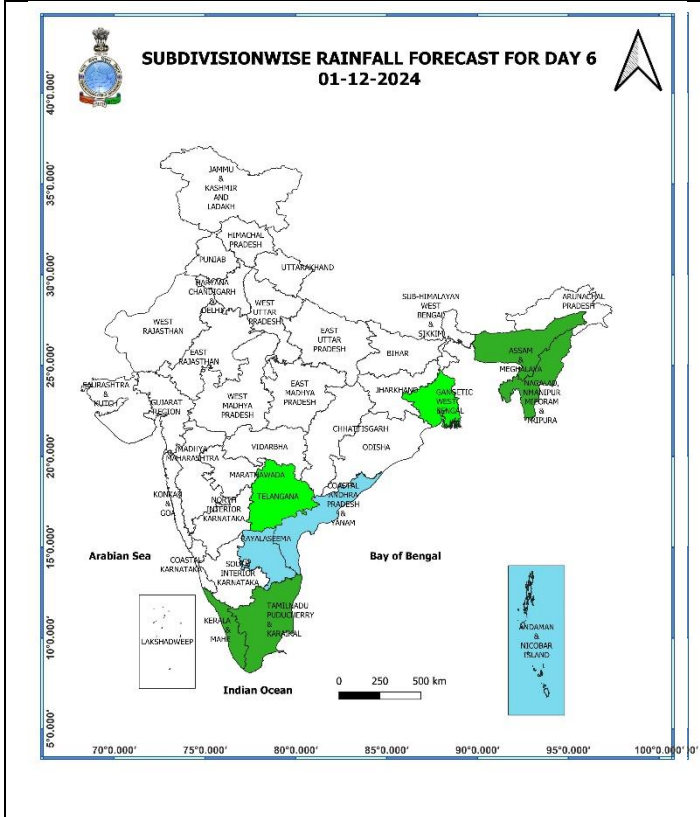
29 November (Day 4):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** likely at isolated places over Coastal Andhra Pradesh & Yanam and Rayalaseema. **Heavy rainfall (≥ 7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense fog** very likely in isolated pockets of Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh in night/morning hours.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevailing along and off south Kerala coast, over gulf of Mannar and Comorin area, over many parts of southwest & adjoining parts of westcentral Bay of Bengal, along and off Sri Lanka, Tamil Nadu, Puducherry & south Andhra Pradesh coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevailing over along and off north Tamil Nadu & adjoining south Andhra Pradesh coasts and adjoining sea area. Fishermen are advised not to venture into these areas. **Gale wind speed reaching 60-70 kmph gusting to 80 kmph** over southwest Bay of Bengal and along & off Sri Lanka coasts. Fishermen are advised not to venture into these areas.



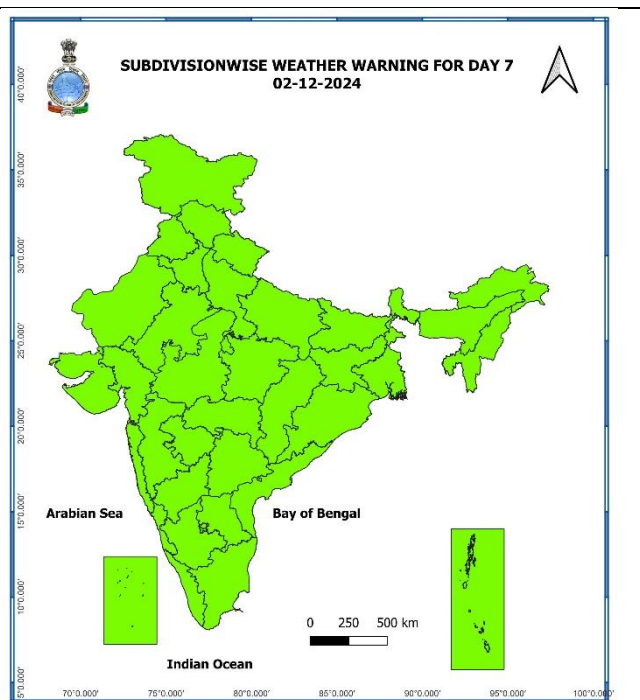
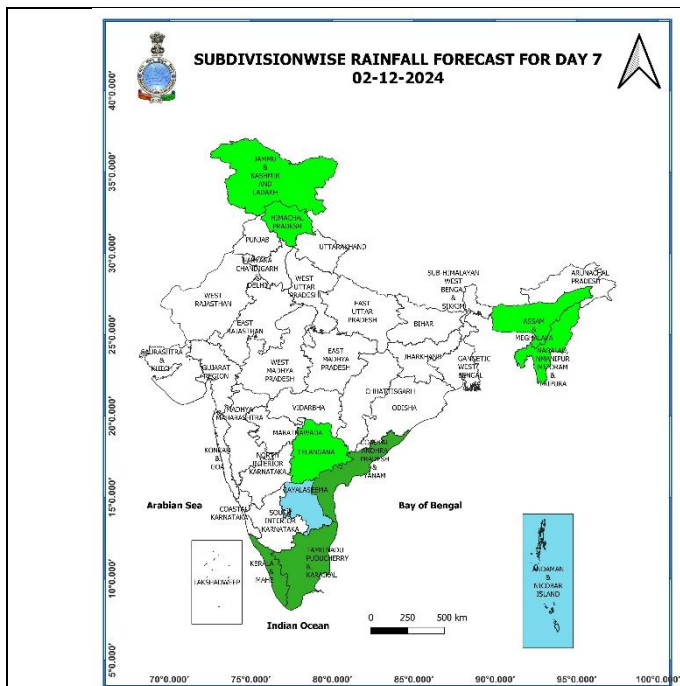
30 November (Day 5):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** likely at isolated places over Coastal Andhra Pradesh & Yanam and Rayalaseema. **Heavy rainfall (≥ 7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense fog** likely in isolated pockets of Uttar Pradesh in night/morning hours.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevailing along and off south Kerala coast, over gulf of Mannar and Comorin area, over many parts of southwest & adjoining parts of westcentral and adjoining southeast Bay of Bengal, along and off Sri Lanka, Tamil Nadu, Puducherry & south Andhra Pradesh coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevailing over along and off north Tamil Nadu & adjoining south Andhra Pradesh coasts and westcentral and adjoining southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



01 December (Day 6):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Coastal Andhra Pradesh & Yanam and Rayalaseema.



02 December (Day 7):

❖ **No Warning.**

Weather Outlook for subsequent 3 days (During 03rd December – 05th December, 2024)

- ❖ Isolated to Scattered to light to moderate rainfall likely over some parts of south peninsular India and light rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ 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.

* 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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Impact & Action Suggested due to

- ✓ **Isolated extremely heavy rainfall** over Tamil Nadu, Puducherry & Karaikal on 26th & 27th November.
- ✓ **Isolated heavy to very heavy rainfall** over Tamil Nadu, Puducherry & Karaikal on 28th, Rayalaseema & Coastal Andhra Pradesh & Yanam during 28th - 30th November.
- ✓ **High flash flood risk** likely over Tamil Nadu, Puducherry & Karaikal on 26th & 27th November. **(ANNEXURE I)**

A. 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 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
- ❖ 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).

B. Action Suggested

- ❖ 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.

Impact expected due to dense/ very dense fog in the late night /morning hours

- ❖ Transport and Aviation:
 - May affect some airports, highways and railway routes in the areas of met- sub-division.
 - Difficult driving conditions with slower journey times.
 - Unless taken precautionary measures, it may lead to some road traffic collisions.
- ❖ Power Sector:
 - Chances of Tripping of Power lines in the very dense fog routes.
- ❖ Human Health:
 - Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
 - Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
 - Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

- ❖ Transport and Aviation:
 - Be careful while driving or outing through any transport.
 - Use fog lights during driving.
 - Be in touch with airlines, railways and state transport for schedule of your journey.
- ❖ Power Sector:
 - To keep ready Maintenance Team
 - Human Health: To avoid outing until unless emergency and to cover the face.

Agromet advisories for Heavy Rainfall likely over Tamil Nadu, Kerala and Coastal Andhra Pradesh:

- ✓ In **Tamil Nadu**, provide adequate drainage facilities for the removal of excess water from rice, cotton, sugarcane, turmeric and vegetable fields, coconut and banana orchards. Undertake propping in sugarcane. Provide mechanical support to banana plants to prevent lodging.
- ✓ Make arrangements to drain out excess water from the standing crop fields and fruit orchards in Kerala and Coastal Andhra Pradesh.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops and staking to vegetables.

Flash Flood Guidance:

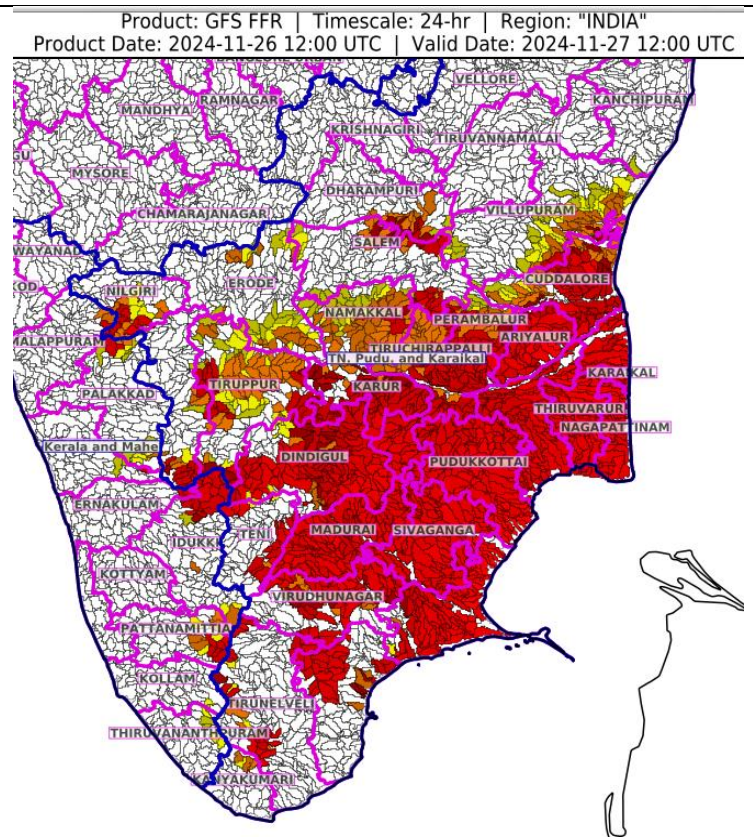
ANNEXURE I

24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 27-11-2024:

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

Tamil Nadu - Pudu & Karaikal - Karaikal, Mahe, Puduchery, Ariyalur, Chengalpattu, Coimbatore, Cuddalore, Dharampuri, Dindigul, Erode, Kallakurichi, Kanyakumari, Karur, Madurai, Mayiladuthurai, Nagapattinam, Namakkal, Nilgiri, Perambalur, Pudukkottai, Ramanathapuram, Ranipet, Salem, Sivaganga, Teni, Tenkasi, Thanjavur, Thiruvarur, Tiruchirappalli, Tirunelveli, Tirupattur, Tiruppur, Tuticorin, Villupuram and Virudhunagar districts.

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



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Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

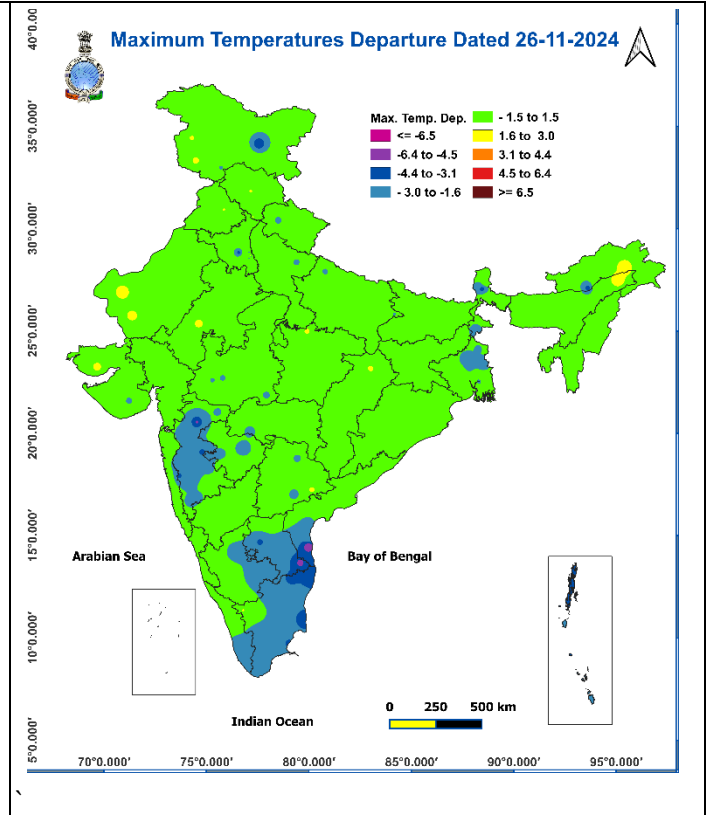
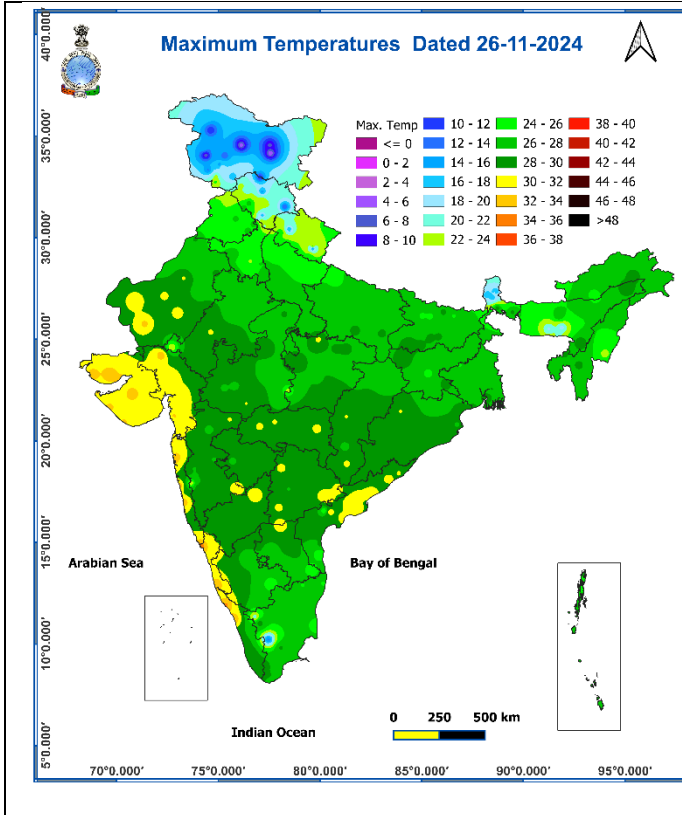


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

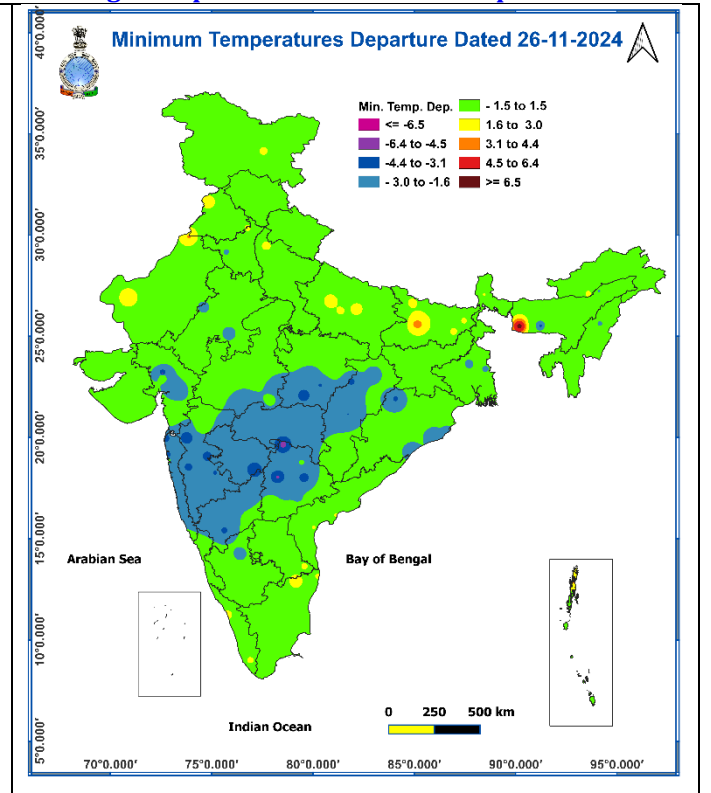
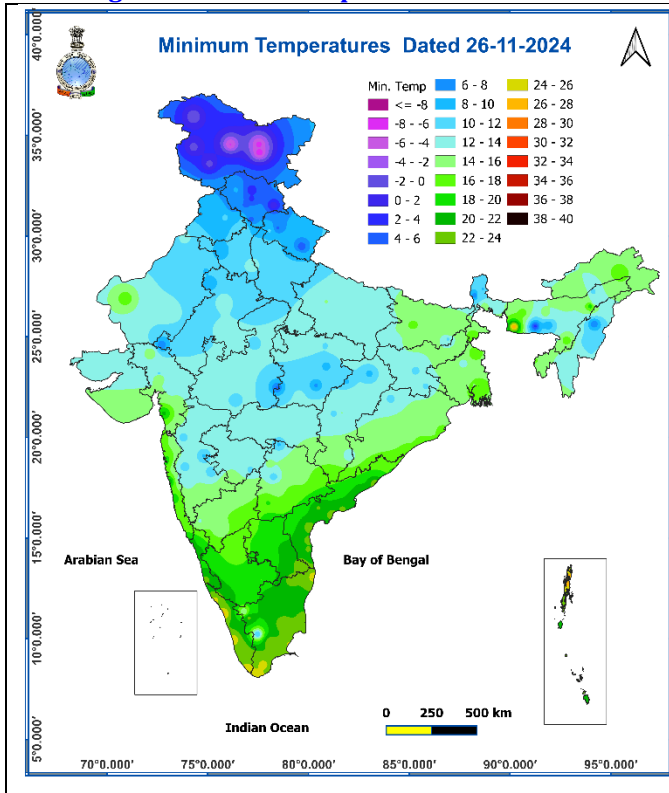
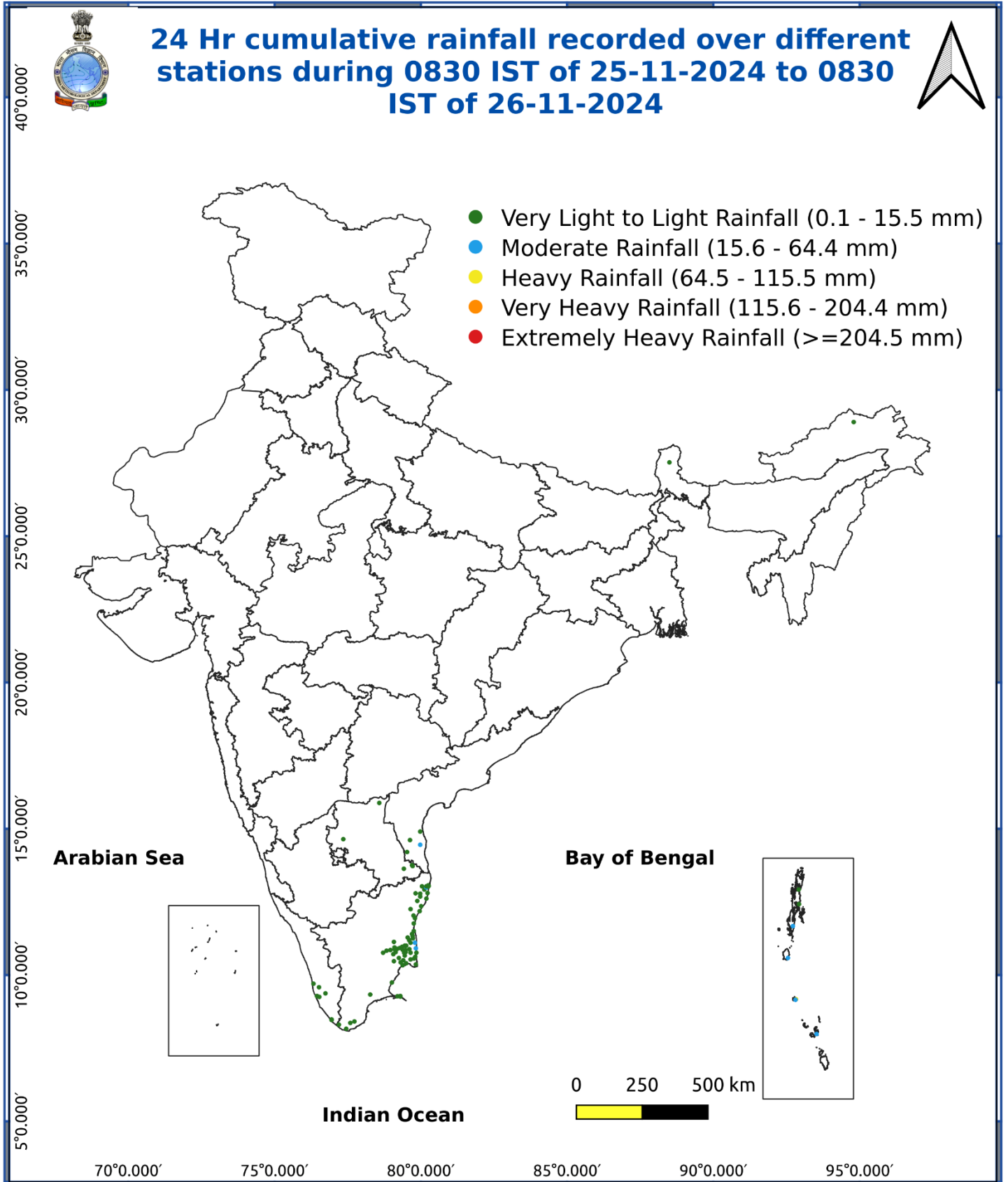


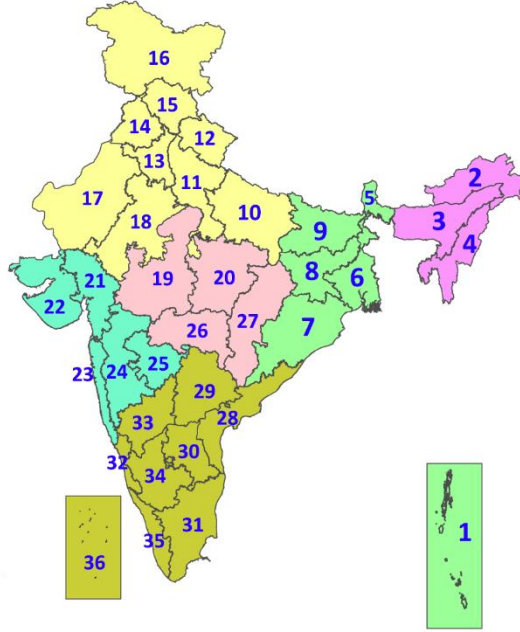
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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)