

Monday, May 20, 2024  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems and Forecast & Warnings:

- ❖ Yesterday the Southwest Monsoon had advanced into some parts of Maldives & Comorin area, South Bay of Bengal, Nicobar Islands and South Andaman Sea. The Northern Limit of Monsoon passes through 5°N/75°E, 6°N/80°E, 7°N/85°E, Nancowry and 10°N/100°E.
- ❖ A cyclonic circulation lies over south interior Tamil Nadu & neighbourhood in low and mid tropospheric levels. A trough runs from west Vidarbha to south Tamil Nadu in lower tropospheric levels. Under their influence:
  - Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Karnataka and Isolated to scattered light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** over Coastal Andhra Pradesh & Yanam, Telangana and Rayalaseema during next 7 days.
  - *Isolated heavy rainfall very likely over Coastal Karnataka on 23<sup>rd</sup> & 24<sup>th</sup>; South Interior Karnataka on 22<sup>nd</sup> & 23<sup>rd</sup> and Lakshadweep during 20<sup>th</sup>-22<sup>nd</sup> May, 2024.*
  - *Isolated heavy to very heavy rainfall very likely over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe on 23<sup>rd</sup>; Coastal Karnataka during 20<sup>th</sup> - 22<sup>nd</sup> and South Interior Karnataka on 20<sup>th</sup>, 21<sup>st</sup> & 24<sup>th</sup> May, 2024.*
  - *Isolated extremely heavy rainfall also very likely over Tamil Nadu and Kerala during 20<sup>th</sup>-22<sup>nd</sup> May, 2024.*
  - Fairly widespread to widespread light to moderate rainfall very likely over Andaman & Nicobar Islands during next 7 days. **Isolated heavy rainfall very likely over Nicobar Islands during 20<sup>th</sup>-24<sup>th</sup> May**. Isolated light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Konkan & Goa, Madhya Maharashtra, Marathawada during 20<sup>th</sup>-22<sup>nd</sup>; Vidarbha and Chhattisgarh during 20<sup>th</sup>-23<sup>rd</sup> and East Madhya Pradesh on 20<sup>th</sup> May.
  - Isolated to scattered light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Odisha, Bihar, Gangetic West Bengal and Jharkhand during 20<sup>th</sup>-24<sup>th</sup> May.
- ❖ A cyclonic circulation lies over northeast Assam & neighbourhood in lower tropospheric levels. Under its influence:
  - Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (40-50 kmph)** very likely over Sub-Himalayan West Bengal & Sikkim during next 5 days.
  - Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Arunachal Pradesh, Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura during next 5 days.
  - *Isolated heavy rainfall likely over Sikkim on 20<sup>th</sup> & 21<sup>st</sup> May, 2024. Isolated very heavy rainfall also likely over Assam & Meghalaya on 20<sup>th</sup> May.*
- ❖ A Western Disturbance as a cyclonic circulation lies over north Pakistan & neighborhood in lower tropospheric level with a trough aloft in middle tropospheric westerlies roughly along long. 65°E to the north of lat. 28°N. Under its influence; Isolated to scattered light rainfall with **thunderstorm, lightning** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh during 20<sup>th</sup> & 21<sup>st</sup> May and Uttarakhand during next 7 days.
- ❖ **Strong surface winds (25-35 kmph)** very likely to prevail Uttar Pradesh, Haryana, Delhi and Rajasthan during next 4-5 days.

#### Maximum temperature observation:

- ❖ **Areas having maximum temperatures greater than 40°C:** Yesterday, maximum temperatures were in the range of 43-46°C in most places over Haryana-Chandigarh-Delhi & Rajasthan; in many parts of Punjab, Uttar Pradesh & West Madhya Pradesh; in some places over East Madhya Pradesh & Gujarat state; in the range of 40- 42°C in many parts of Vidarbha; in isolated pockets of Bihar, Chhattisgarh, Madhya Maharashtra and plains of Himachal Pradesh & Uttarakhand. These were above normal by 2-4°C over many parts of Punjab, Haryana-Chandigarh-Delhi & Uttar Pradesh; in some parts of Saurashtra & Kutch and in isolated pockets of Rajasthan.

#### Heat Wave and Hot & Humid weather warning for next 5 days:

- ❖ **Heat wave to severe heat wave conditions very likely in many pockets over Punjab, Haryana-Chandigarh-Delhi during 20<sup>th</sup>-24<sup>th</sup>; West Rajasthan during 21<sup>st</sup>-24<sup>th</sup>; East Rajasthan on 22<sup>nd</sup>-24<sup>th</sup>; in some parts of West Uttar Pradesh on 20<sup>th</sup> & 21<sup>st</sup> and East Uttar Pradesh on 20<sup>th</sup> May, 2024.**
- ❖ **Heat wave conditions** very likely in many parts of West Rajasthan on 20<sup>th</sup>; in some parts of East Rajasthan on 20<sup>th</sup> & 21<sup>st</sup>; in isolated pockets of East Uttar Pradesh during 21<sup>st</sup>-24<sup>th</sup>; West Uttar Pradesh during 22<sup>nd</sup> - 24<sup>th</sup>; Himachal Pradesh, Gujarat and north Madhya Pradesh during 20<sup>th</sup>-24<sup>th</sup>; Uttarakhand during 20<sup>th</sup>-22<sup>nd</sup>; Bihar, Gangetic West Bengal on 20<sup>th</sup>; Jharkhand on 20<sup>th</sup> & 21<sup>st</sup>; Odisha during 21<sup>st</sup>-24<sup>th</sup> May, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Konkan & Goa on 20<sup>th</sup> & 21<sup>st</sup> and Sub-Himalayan West Bengal and Odisha on 20<sup>th</sup> May.
- ❖ **Warm night conditions** very likely to prevail over East Rajasthan during 20<sup>th</sup>-24<sup>th</sup> May, 2024.

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### Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Andaman & Nicobar Islands and Tamil Nadu, Puducherry & Karaikal; **at a few places** over Nagaland, Manipur, Mizoram & Tripura and Lakshadweep and **at isolated places** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Sikkim, Jharkhand, Chhattisgarh, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam and South Interior Karnataka.
- ❖ **Heavy rainfall** observed (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy rainfall** at isolated places over Lakshadweep.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Lakshadweep:** Aminidivi 8, **Tamil Nadu:** Nagapattinam, Yercaud, Kodaikanal, Tiruttani 2 each; **Kerala:** Thrissur 2, **Jharkhand:** Ranchi 2, **Andaman & Nicobar Islands:** Hut Bay 1; **Tripura:** Agartala 1.
- ❖ **Maximum wind speed reported** (from 0830 hours IST to 1730 hours IST of yesterday) (in kmph): **Rajasthan:** Jaipur 70, Bikaner & Hanumangarh 37 each, Churu 35.
- ❖ **Yesterday, heat wave to severe heat wave conditions** observed in many parts of Haryana-Chandigarh-Delhi and in isolated/some pockets of West Uttar Pradesh, Bihar, Gujarat and north Madhya Pradesh. **Heat wave conditions** observed in many parts of Himachal Pradesh & Rajasthan; in some parts of Punjab and in isolated pockets of East Uttar Pradesh. **Heat wave conditions** have been prevailing over Gujarat region since 15<sup>th</sup> & Saurashtra & Kutch since 16<sup>th</sup> May, 2024.
- ❖ **Minimum Temperature Departures (as on 19-05-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Himachal Pradesh; at isolated places over Uttarakhand, Punjab, East Uttar Pradesh, Rajasthan and Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, West Uttar Pradesh, Bihar and Gangetic West Bengal; at a few places over Arunachal Pradesh; at isolated places over Jharkhand, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Odisha, Madhya Maharashtra, Konkan & Goa and Andaman & Nicobar Islands. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Chhattisgarh, Vidarbha, Telangana, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature** of 22.5°C was reported at **Malanjkhanda (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 19-05-2024):** Maximum temperatures were **markedly above normal (5.1°C or more)** at many places over Assam & Meghalaya; at isolated places over Saurashtra & Kutch, Haryana-Chandigarh-Delhi, Himachal Pradesh, Gujarat state, Bihar and Arunachal Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at many places over Konkan & Goa; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Punjab; at isolated places over Sub-Himalayan West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura; **above normal (1.6°C to 3.0°C)** at many places over Uttar Pradesh and Lakshadweep; at a few places over Kerala & Mahe; at isolated places over Uttarakhand, Rajasthan, Gangetic West Bengal, Odisha and Andaman & Nicobar Islands. These were **markedly below normal (-5.1°C or less)** at isolated places over East Madhya Pradesh and Telangana; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Vidarbha and Marathwada; at isolated places over Interior Karnataka; **below normal (-1.6°C to -3.0°C)** at a few places over West Madhya Pradesh, Chhattisgarh and Tamil Nadu, Puducherry & Karaikal; at isolated places over Madhya Maharashtra and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature** of 47.8°C was reported at **Najafgarh (Delhi)** over the country.

## Meteorological Analysis (Based on 0530 hours IST)

- ❖ Yesterday, the Southwest Monsoon had advanced into some parts of Maldives & Comorin area and some parts of South Bay of Bengal, Nicobar Islands and South Andaman Sea.
- ❖ The Northern Limit of Monsoon continues to pass through 5°N/75°E, 6°N/80°E, 7°N/85°E, Nancowry and 10°N/100°E.
- ❖ The Western Disturbance as a cyclonic circulation over Afghanistan & north Pakistan now lies over north Pakistan & neighbourhood at 3.1 km above mean sea level with the trough aloft in middle tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along long. 65°E to the north of lat. 28°N.
- ❖ The cyclonic circulation over northwest Uttar Pradesh & neighbourhood extending upto 1.5 km above mean sea level persists.
- ❖ The trough from northwest Uttar Pradesh to north Bihar now runs from northwest Uttar Pradesh to Gangetic West Bengal across East Uttar Pradesh, south Bihar & Jharkhand at 0.9 km above mean sea level.
- ❖ The trough from East Uttar Pradesh to Madhya Maharashtra across Madhya Pradesh at 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over Gangetic West Bengal & neighbourhood at 3.1 km above mean sea level persists.
- ❖ The cyclonic circulation over northeast Assam & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over south interior Tamil Nadu & neighbourhood persists and now extends upto 5.8 km above mean sea level tilting southwestwards with height.
- ❖ The cyclonic circulation over Madhya Maharashtra & neighbourhood now lies over west Vidarbha & neighbourhood at 0.9 km above mean sea level.
- ❖ The trough now runs from above cyclonic circulation over west Vidarbha to south Tamil Nadu across Marathwada & Interior Karnataka at 0.9 km above mean sea level.
- ❖ The cyclonic circulation over Westcentral & adjoining Southwest Arabian Sea off south Yemen & Somalia coast at 3.1 km above mean sea level persists.

## Weather Forecast for next 7 days (Upto 0830 hours IST of 27<sup>th</sup> May, 2024)

- ❖ Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- ❖ Gradual rise by about 2-3°C in maximum temperatures very likely over many parts of Central India during next 4 days.
- ❖ Gradual rise by about 2-3°C in maximum temperatures very likely over many parts of Maharashtra during next 3 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures very likely over many parts of Northwest India during next 2 days and gradual rise by about 2°C thereafter.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

## Weather Outlook for subsequent 3 days (During 27<sup>th</sup>-29<sup>th</sup> May, 2024)

- ❖ Isolated to scattered light/moderate rainfall likely over Western Himalayan Region, East, Northeast & south Peninsular India.
- ❖ Fairly widespread to widespread rainfall likely over Islands.
- ❖ Dry weather likely to prevail over rest parts of the country.

Table-1

7 Days Rainfall Forecast								
S. No.	Subdivision	20-May	21-May	22-May	23-May	24-May	25-May	26-May
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	WS	FWS	FWS	SCT	SCT	FWS	FWS
3	ASSAM & MEGHALAYA	WS	FWS	FWS	SCT	SCT	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	SCT	FWS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	WS	FWS	SCT	SCT	FWS	FWS
6	GANGETIC WEST BENGAL	FWS	FWS	SCT	ISOL	SCT	FWS	WS
7	ODISHA	ISOL	SCT	SCT	ISOL	FWS	FWS	FWS
8	JHARKHAND	ISOL	SCT	SCT	ISOL	ISOL	ISOL	FWS
9	BIHAR	ISOL	SCT	FWS	SCT	ISOL	ISOL	SCT
10	EAST UTTAR PRADESH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	SCT	ISOL	DRY	DRY	DRY	DRY	DRY
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	ISOL	DRY	DRY	DRY	ISOL	ISOL	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
26	VIDARBHA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
27	CHHATTISGARH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
29	TELANGANA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	ISOL	ISOL	ISOL	ISOL	SCT	SCT	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	WS	FWS	FWS	FWS	SCT	ISOL	ISOL
32	COASTAL KARNATAKA	WS	WS	WS	FWS	FWS	FWS	FWS
33	NORTH INTERIOR KARNATAKA	FWS	SCT	SCT	SCT	FWS	FWS	SCT
34	SOUTH INTERIOR KARNATAKA	WS	WS	WS	FWS	FWS	FWS	SCT
35	KERALA & MAHE	WS	WS	WS	WS	WS	WS	FWS
36	LAKSHADWEEP	WS	WS	WS	WS	WS	WS	WS

Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many Places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

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Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

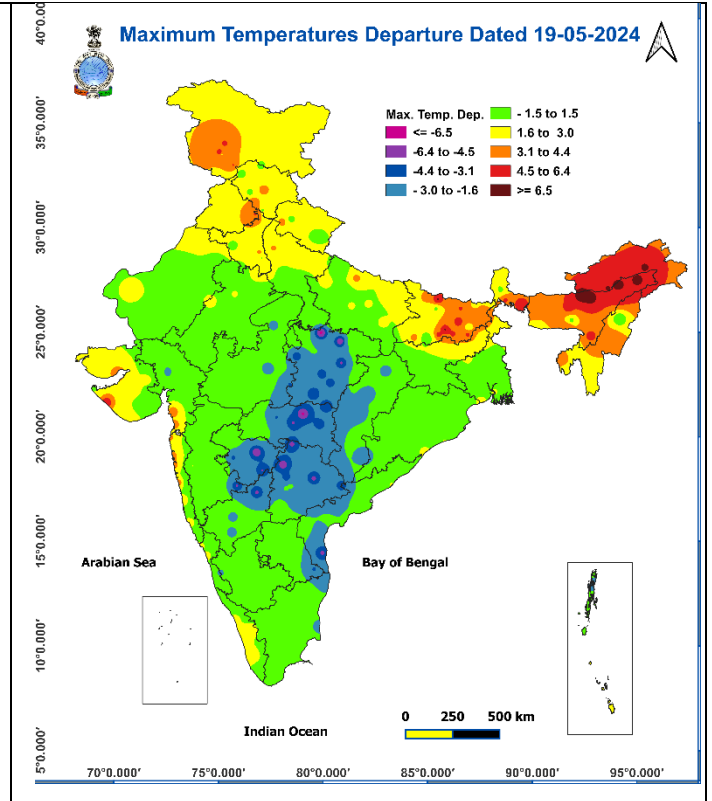
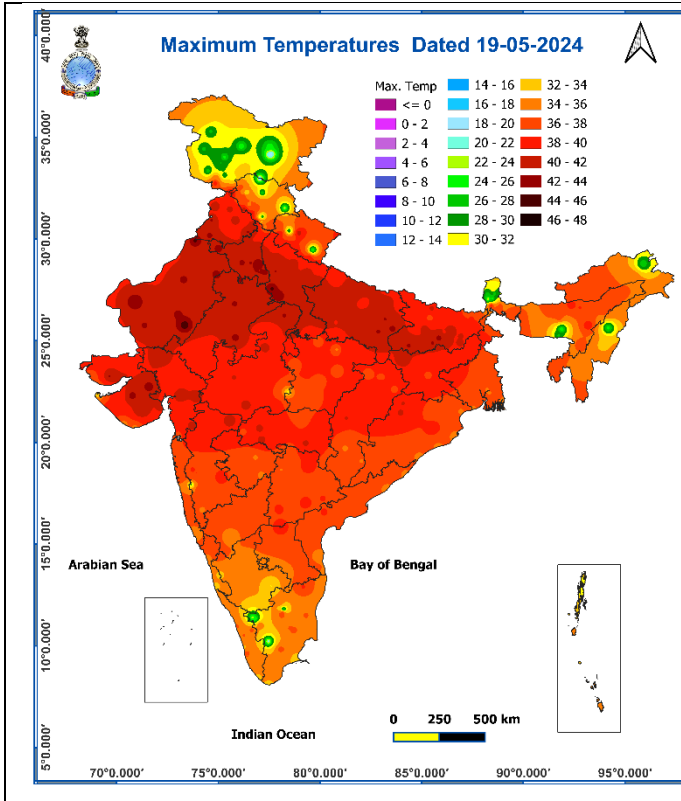


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

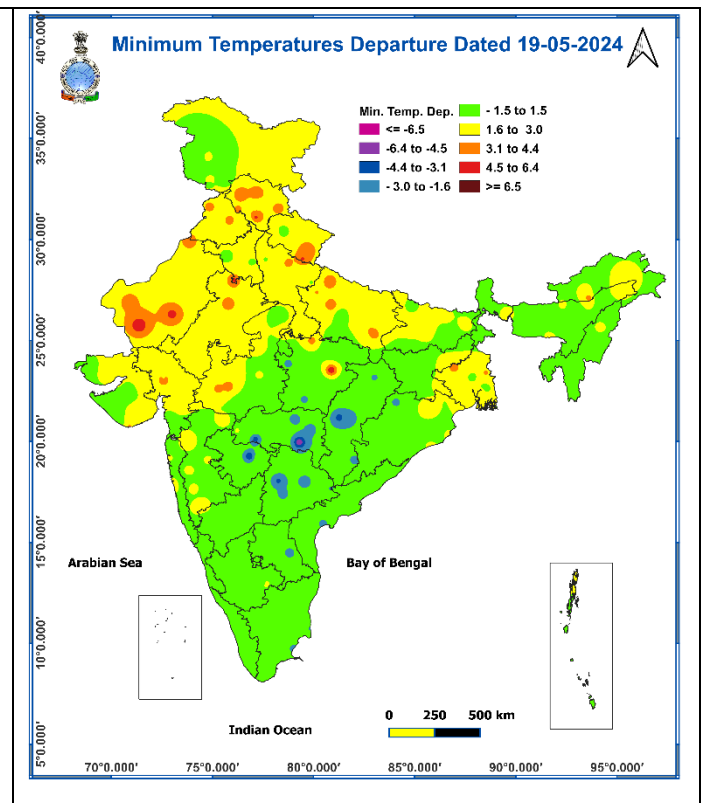
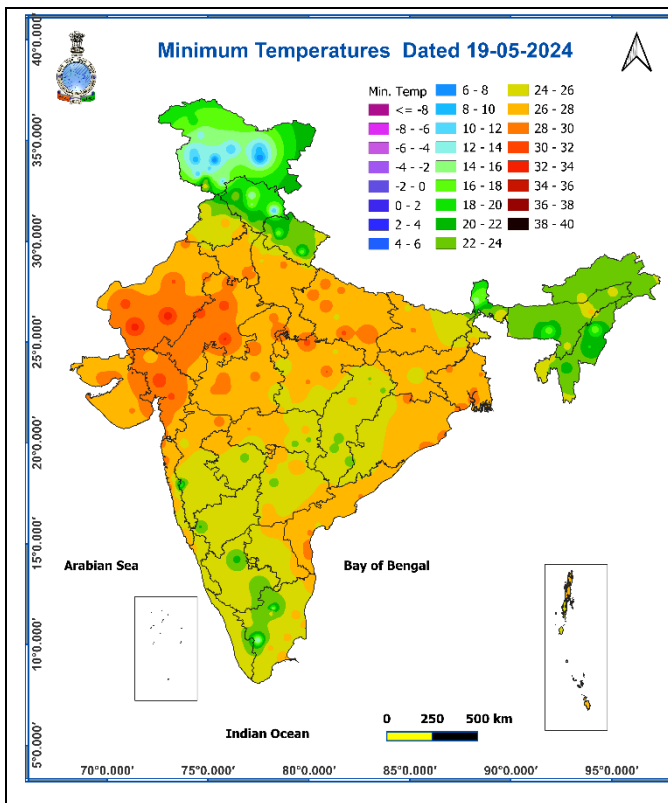
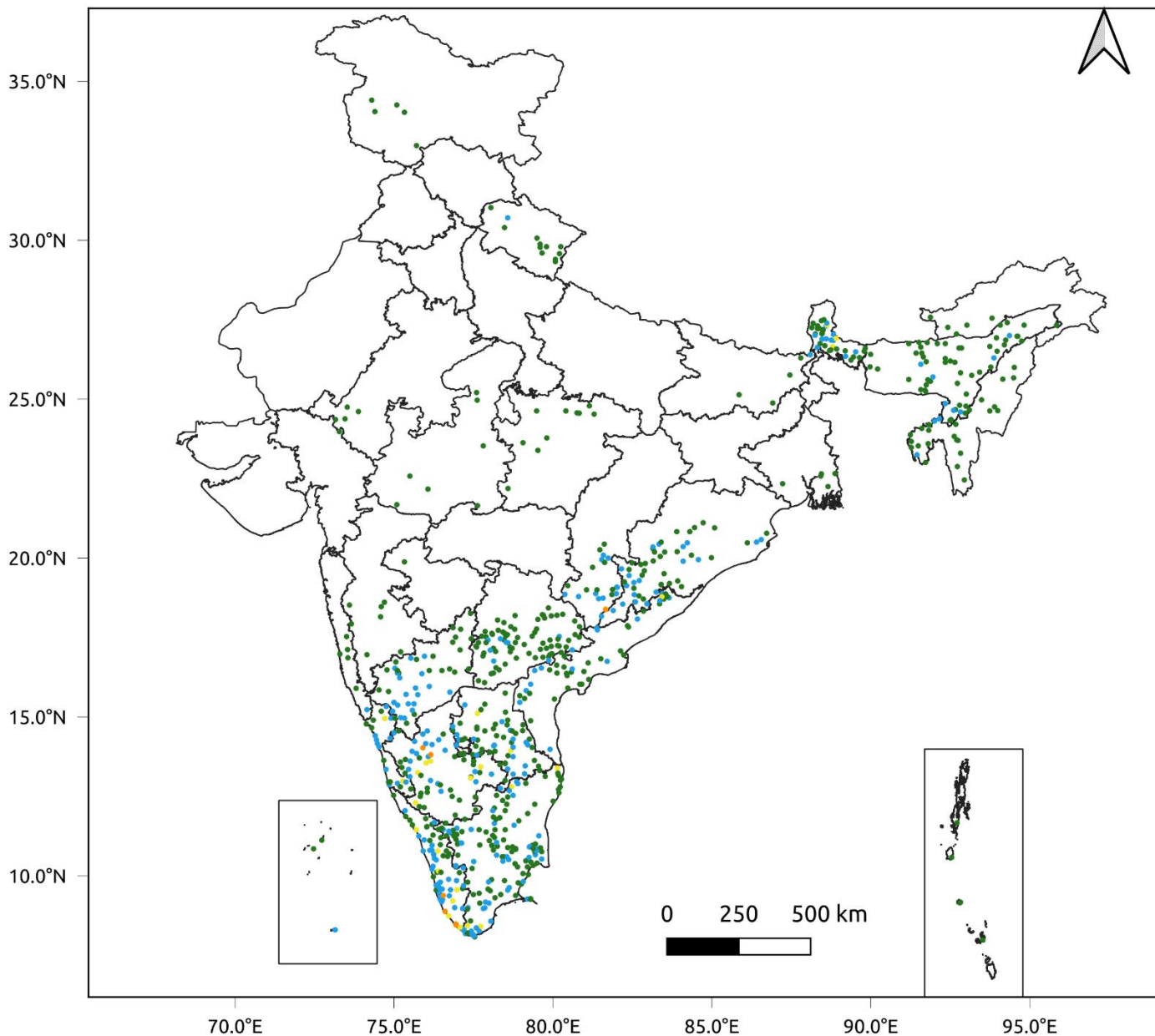


Fig. 5: Accumulated Rainfall (mm) during past 24 hours



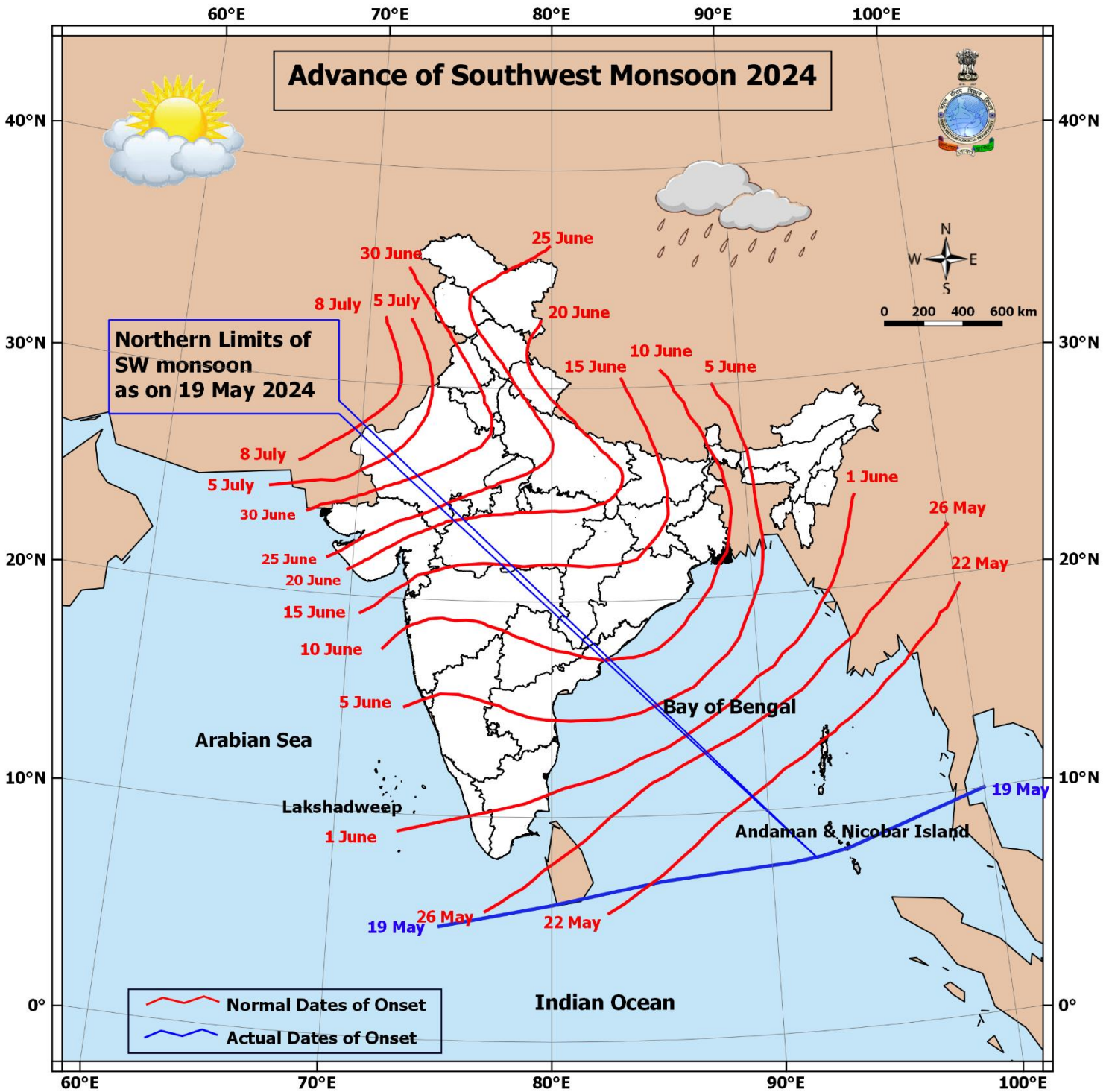
24 Hr cumulative rainfall recorded over different stations during 0830 IST of 18-5-2024 to 0830 IST of 19-5-2024



## Legends

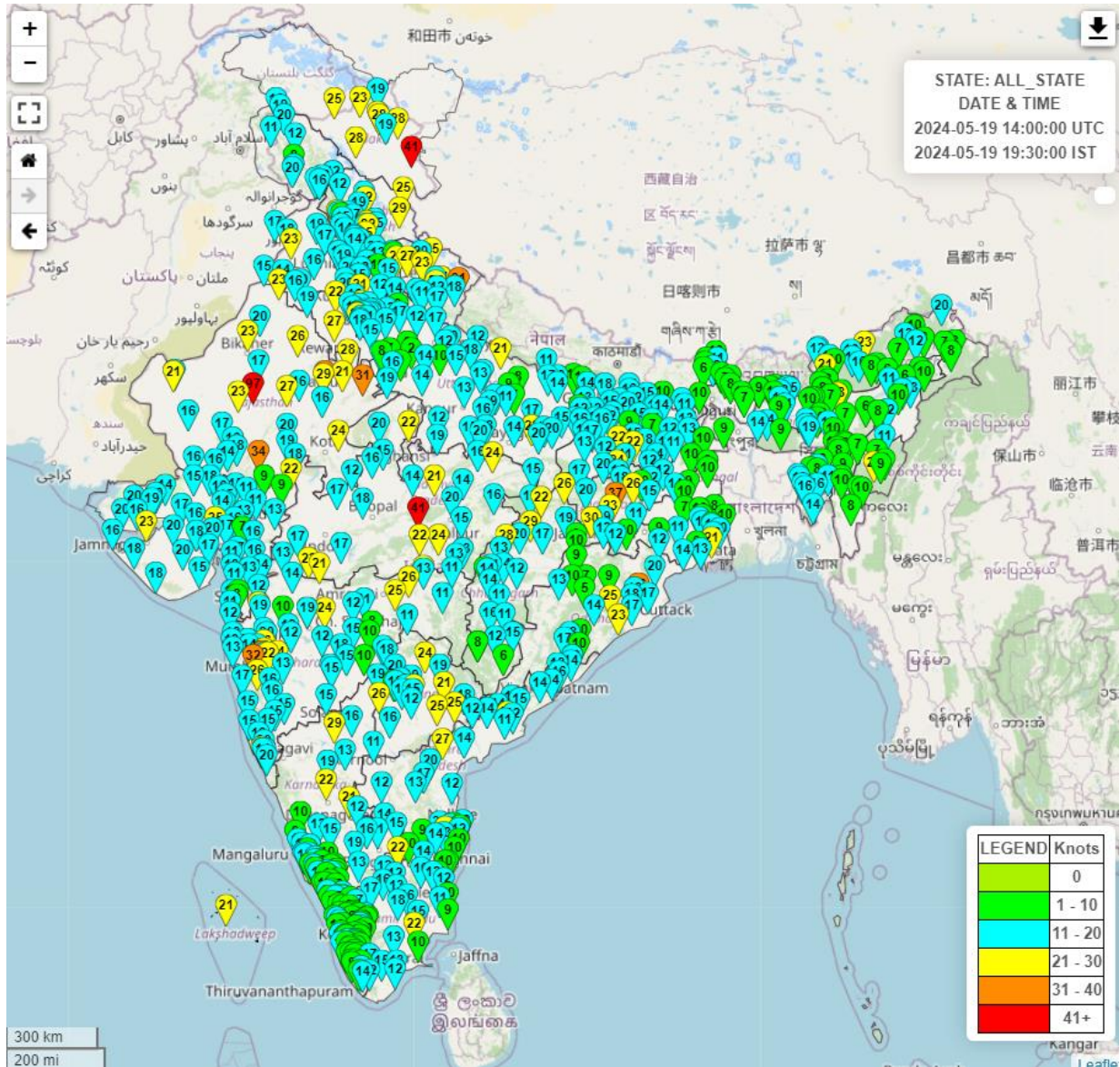
- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)

**Fig. 6: Advance of Southwest Monsoon 2024**



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Fig. 7: Gusty winds reported over the country (in knots) from 0830 hrs IST to 1730 hrs IST of 19.05.2024

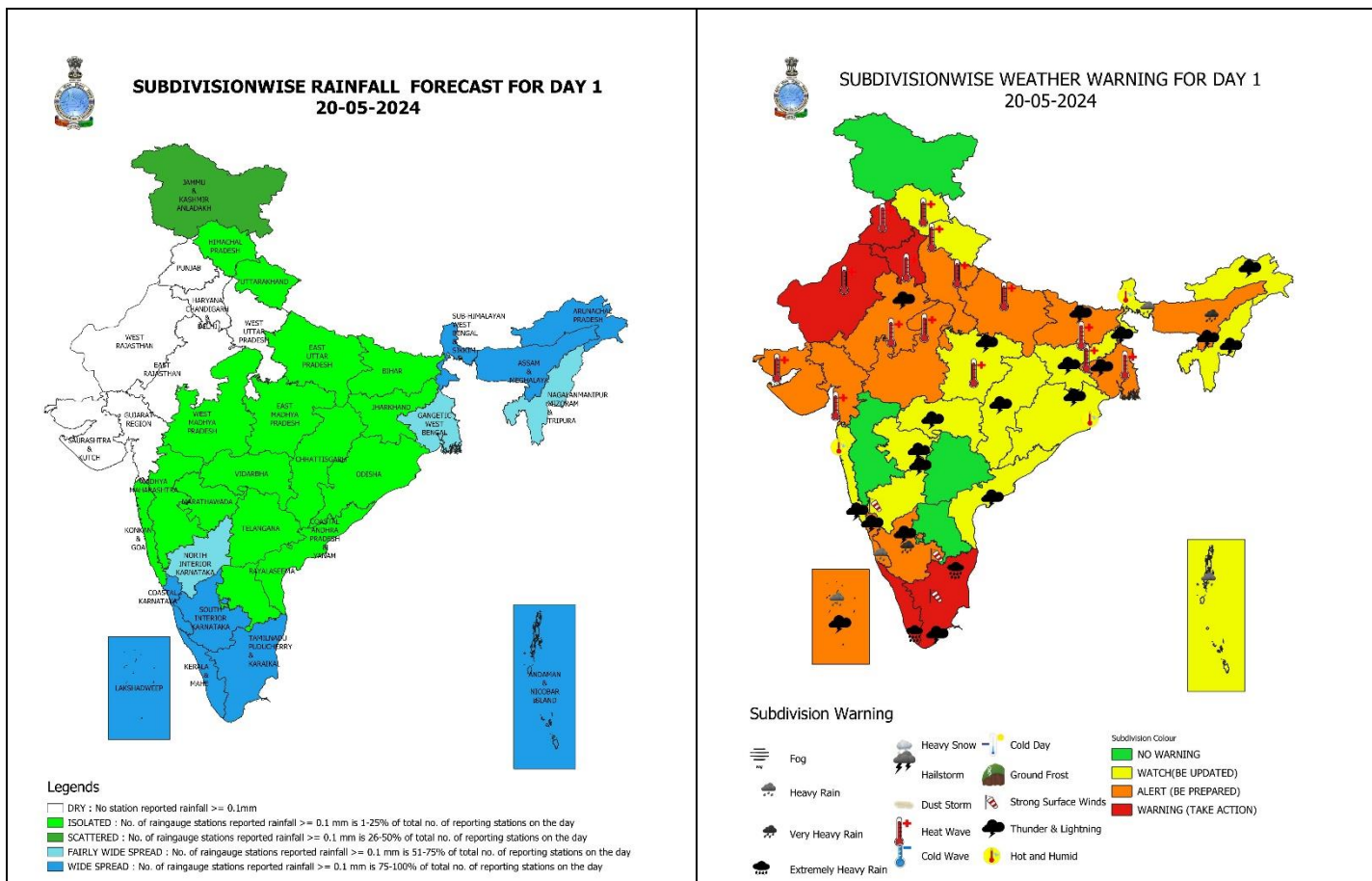


1 Knot = 1.852 kmph

For more details, kindly refer: <http://aws.imd.gov.in:8091/>

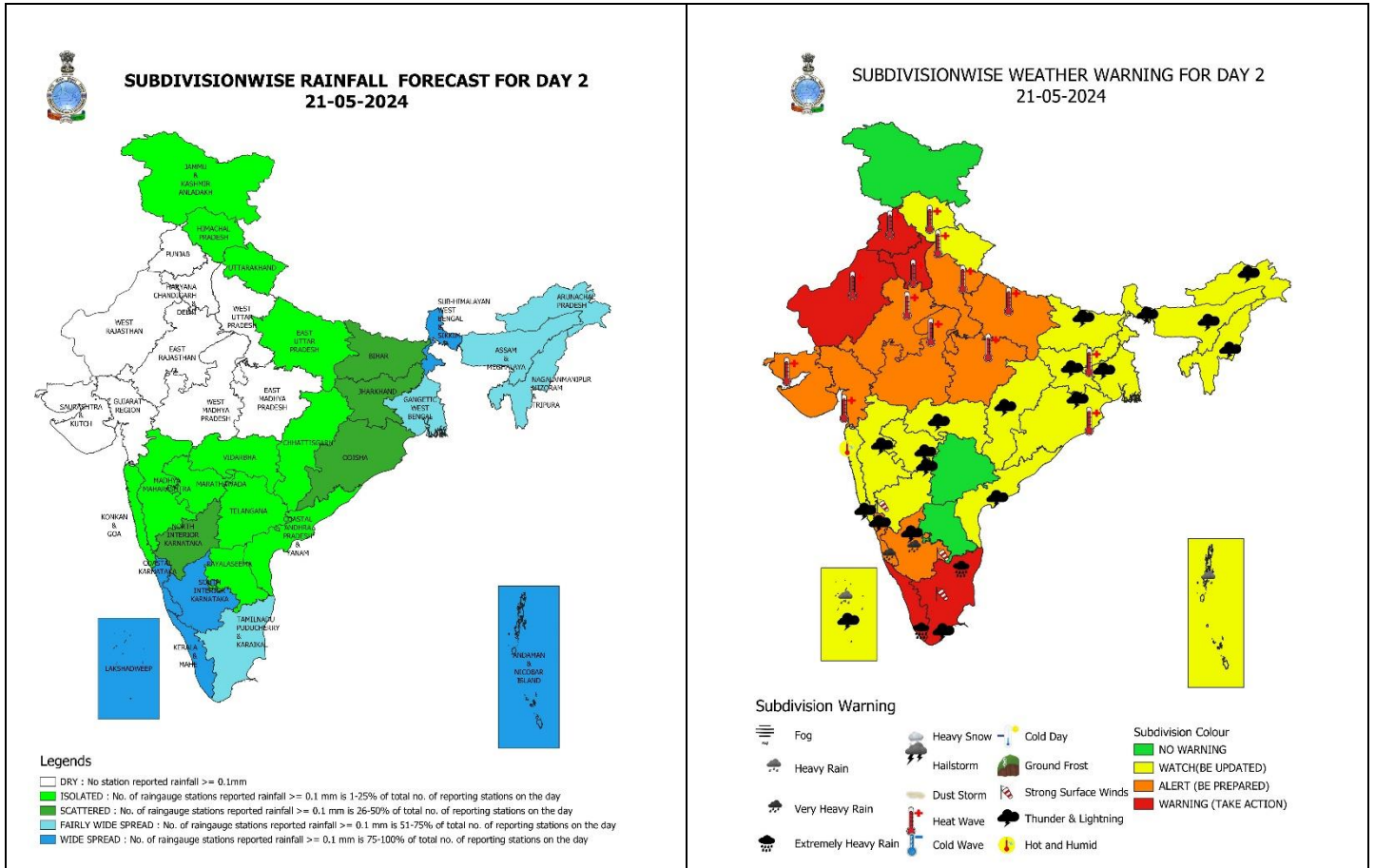
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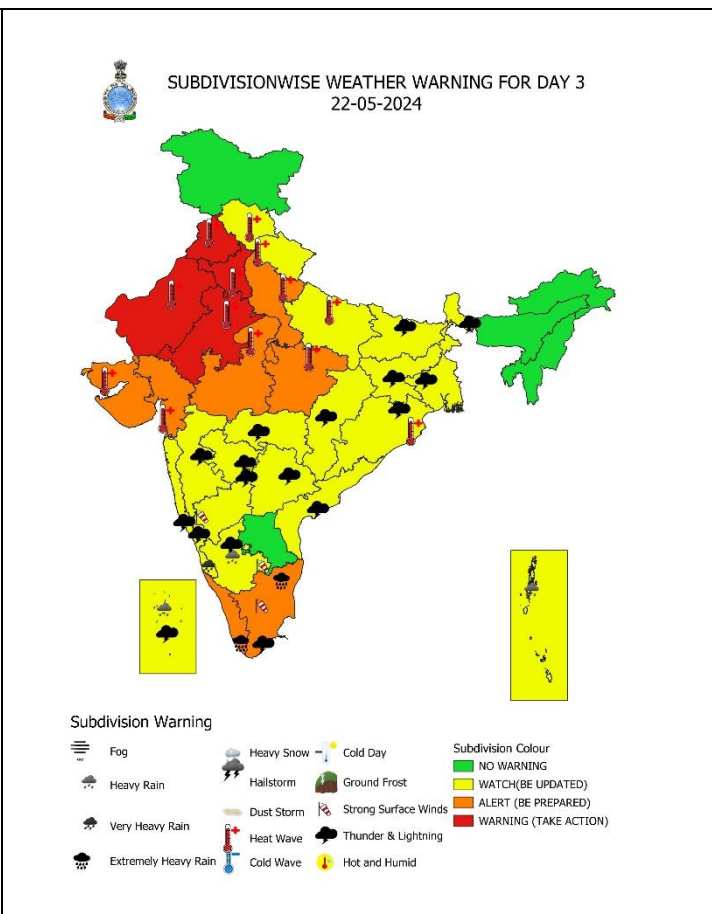
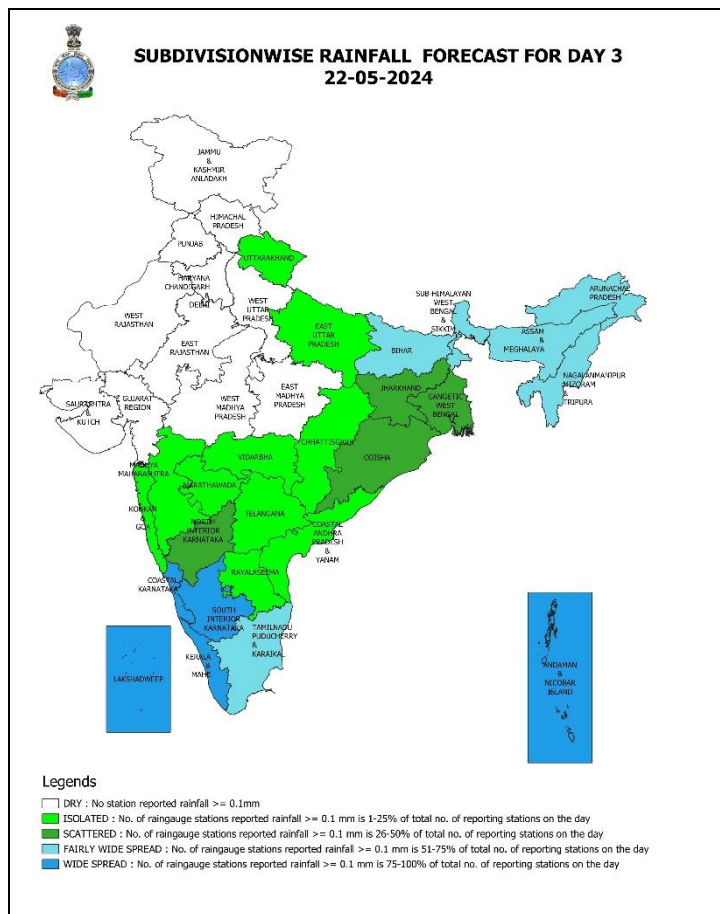
**20 May (Day 1):**

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** very likely at isolated places over Tamil Nadu, Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Coastal & South Interior Karnataka Lakshadweep, and Assam & Meghalaya; **Heavy rainfall** at isolated places over Nicobar Islands and Sub-Himalayan West Bengal & Sikkim.
- ❖ **Heat Wave to severe heat wave Conditions** very likely to prevail in many parts over Punjab, Haryana-Chandigarh-Delhi; in some parts of Uttar Pradesh and **heat wave conditions** in many parts over West Rajasthan; in some parts of East Rajasthan; in isolated pockets over Himachal Pradesh, Uttarakhand, Madhya Pradesh, Gangetic West Bengal, Bihar, Jharkhand and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & squally winds (speed reaching 50-60 kmph)** very likely at isolated places over Gangetic West Bengal; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Konkan & Goa; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka; **with lightning** at isolated places over Jharkhand, Odisha, Arunachal Pradesh, Lakshadweep and Coastal Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over Sub-Himalayan West Bengal, Odisha and Konkan & Goa.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over Karnataka coasts, Tamil Nadu adjoining south west Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.



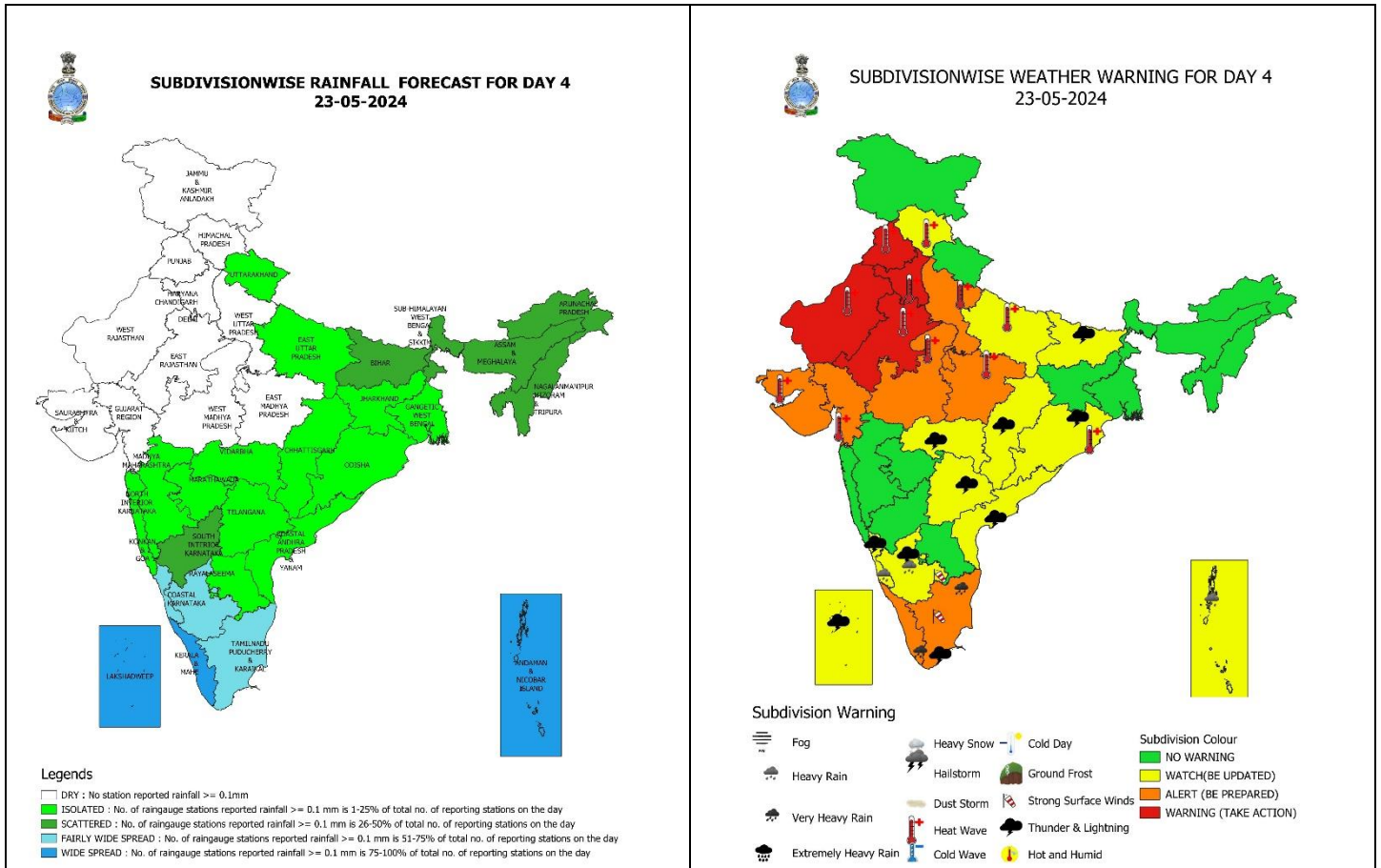
**21 May (Day 2):**

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** very likely at isolated places over Tamil Nadu, Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Coastal & South Interior Karnataka; **Heavy rainfall** at isolated places over Lakshadweep, Nicobar Islands, Sub-Himalayan West Bengal & Sikkim.
- ❖ **Heat Wave to severe heat wave Conditions** very likely to prevail in most parts over West Rajasthan; in many parts over Punjab, Haryana-Chandigarh-Delhi; in isolated pockets over West Uttar Pradesh; **heat wave conditions** in some parts of East Rajasthan; in isolated pockets over East Uttar Pradesh, Himachal Pradesh, Uttarakhand, Madhya Pradesh, Jharkhand, Odisha, Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over West Bengal & Sikkim, Bihar, Konkan & Goa; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Jharkhand, Chhattisgarh, Odisha, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka; **with lightning** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Lakshadweep and Coastal Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over Konkan & Goa.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin Area, Gulf of Mannar & along and off Sri Lanka coast adjoining southwest Bay of Bengal, Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over Karnataka coasts, Tamil Nadu, south west adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.



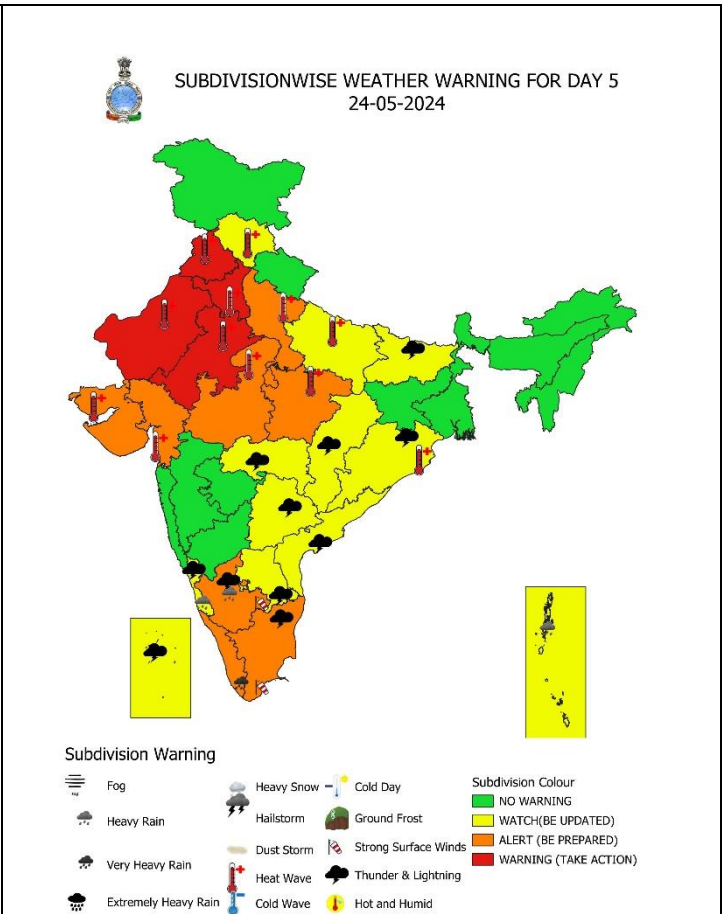
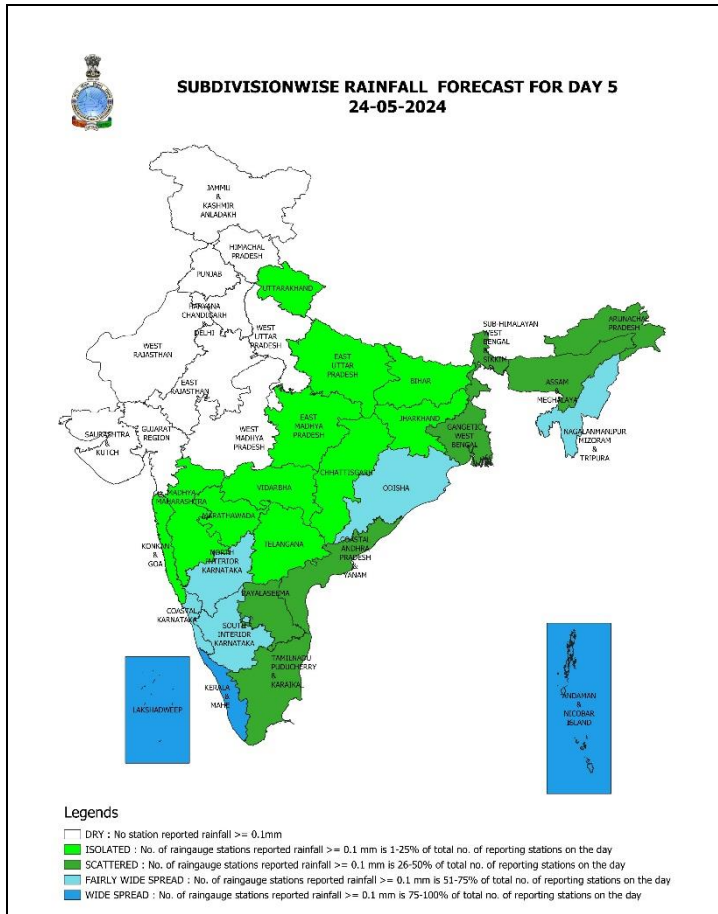
#### 22 May (Day 3):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** likely at isolated places over Tamil Nadu, Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Coastal Karnataka; **Heavy rainfall** at isolated places over Lakshadweep, South Interior Karnataka, Nicobar Islands.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of East Rajasthan, Punjab, Haryana-Chandigarh-Delhi; **heat wave conditions** in isolated pockets over Himachal Pradesh, Uttarakhand, Uttar Pradesh, north Madhya Pradesh, Odisha and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Bihar, Konkan & Goa, Madhya Maharashtra; **with lightning & gusty winds (speed reaching 30-40 kmph)** at some places over Vidarbha, Chhattisgarh, Gangetic West Bengal, Jharkhand, Odisha, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Interior Karnataka; **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Lakshadweep and Coastal Karnataka.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast adjoining south west Bay of Bengal and Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over along over Karnataka coasts, Tamil Nadu, southwest adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.



**23 May (Day 4):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and **Heavy rainfall** at isolated places over Nicobar Islands, Coastal & South Interior Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of East Rajasthan, Punjab, Haryana-Chandigarh-Delhi; **heat wave conditions** in isolated pockets over Himachal Pradesh, Uttar Pradesh, north Madhya Pradesh, Odisha and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Odisha; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Bihar, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, South Interior Karnataka; **with lightning** at isolated places over Lakshadweep and Coastal Karnataka.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast adjoining south west Bay of Bengal and Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over along over Karnataka coasts, Tamil Nadu, southwest adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

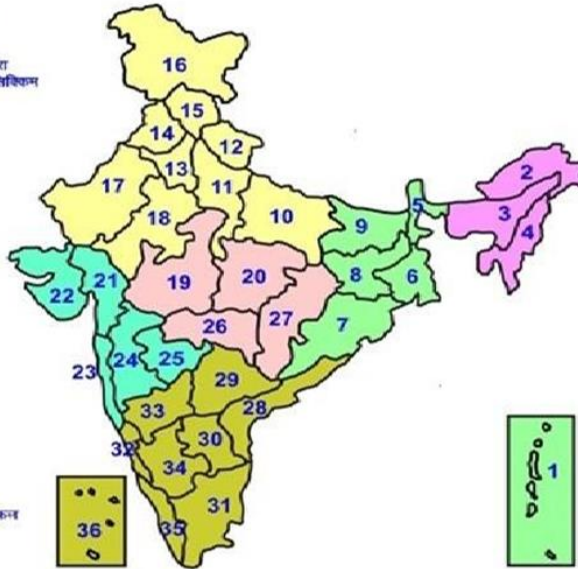


**24 May (Day 5):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Kerala & Mahe and **Heavy rainfall** at isolated places over Nicobar Islands, Coastal Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of East Rajasthan, Punjab, Haryana-Chandigarh-Delhi; **heat wave conditions** in isolated pockets over Himachal Pradesh, Uttar Pradesh, north Madhya Pradesh, Odisha and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Odisha; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Bihar, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, South Interior Karnataka; **with lightning** at isolated places over Rayalaseema, Lakshadweep and Coastal Karnataka.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast adjoining south west Bay of Bengal and Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over along over Karnataka coasts, Tamil Nadu, southwest adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

## LEGENDS

- 1 अंडमन और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
- 5 उप-हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखण्ड
- 13 हरियाणा, चंडीगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात
- 22 सौराष्ट्र
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठवाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 आंध्र प्रदेश एवं यानम
- 29 तेलंगाना
- 30 तमिलनाडु, पुदुचेरी एवं कराईकल
- 31 उत्तर कर्नाटक
- 32 दक्षिण कर्नाटक
- 33 उत्तर कर्नाटक
- 34 दक्षिण कर्नाटक
- 35 केरल एवं 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, Chd & 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. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnada, 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)

## WARNING

WARNING (TAKE ACTION)
ALERT ( BE PREPARED)
WATCH (BE UPDATED)
NO WARNING ( NO ACTION)

## Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

## LEGENDS

### WARNING

WARNING (TAKE ACTION)
ALERT ( BE PREPARED)
WATCH (BE UPDATED)
NO WARNING ( NO ACTION)

### Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75



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  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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 Storm: Wind speed  $> 220$  kmph ( $> 119$  knots)

\* 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)