

Wednesday, June 19, 2024
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Advance of Southwest Monsoon:

- ❖ The Northern Limit of Monsoon continues to pass through 20.5°N/60°E, 20.5°N/63°E, 20.5°N/70°E, Navsari, Jalgaon, Amravati, Chandrapur, Bijapur, Sukma, Malkangiri, Vizianagaram, 19.5°N/88°E, 21.5°N/89.5°E, 23°N/89.5°E and Islampur.
- ❖ Conditions are favourable for further advance of Southwest Monsoon into some more parts of Maharashtra, Chhattisgarh, Odisha, Coastal Andhra Pradesh & Northwest Bay of Bengal, some parts of Gangetic West Bengal, remaining parts of Sub Himalayan West Bengal and some parts of Bihar & Jharkhand during next 3-4 days.

Weather Systems and Forecast & Warnings:

- ❖ A cyclonic circulation lies over northeast Assam in lower tropospheric levels. Strong southwesterly/southerly winds are prevailing from Bay of Bengal to northeast India in lower tropospheric levels. Under their influence:
 - Widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal during next 5 days.
 - Isolated **heavy to very heavy rainfall** very likely over Sub-Himalayan West Bengal, Assam & Meghalaya, Arunachal Pradesh during 19th-21st; Nagaland, Manipur, Mizoram & Tripura during 19th-23rd with **isolated extremely heavy rainfall over Assam & Meghalaya and Sub-Himalayan West Bengal, Arunachal Pradesh on 19th June, 2024.**
 - Widespread light to moderate rainfall with isolated **heavy to very heavy rainfall** very likely over Sikkim on 19th and heavy rainfall during 20th-23rd June, 2024.
 - Scattered to fairly widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Gangetic West Bengal, Bihar, Jharkhand, Odisha during next 5 days.
 - Isolated **heavy rainfall** very likely over Odisha and Bihar during next 5 days.
- ❖ A cyclonic circulation lies over Northeast Arabian Sea adjoining Saurashtra in lower and middle levels and another over Westcentral Bay of Bengal adjoining Coastal Andhra Pradesh in lower tropospheric levels. Under their influence:
 - Scattered to fairly widespread light to moderate rainfall accompanied with **thunderstorm, lightning** likely over Gujarat state, Konkan & Goa, Madhya Maharashtra & Marathwada during next 5 days.
 - Isolated **heavy rainfall** very likely over Konkan & Goa and ghat areas of Madhya Maharashtra during 19th-21st and Gujarat Region on 20th & 21st June, 2024.
 - Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** likely over Karnataka, Kerala & Mahe, Lakshadweep; isolated to scattered light to moderate rainfall over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Tamil Nadu, Puducherry & Karaikal during next 5 days.
 - Isolated **heavy rainfall** very likely over Kerala & Mahe, Coastal Karnataka during 19th-23rd; Tamil Nadu on 22nd & 23rd and South Interior Karnataka during 21st-23rd June, 2024 with possibility of **very heavy rainfall** over Coastal & South Interior Karnataka during 21st-23rd; Kerala & Mahe on 21st & 22nd June and **isolated extremely heavy rainfall over Kerala & Mahe on 23rd June, 2024.**
- ❖ Isolated to scattered light to moderate rainfall with **thunderstorm, lightning & gusty winds (40-60 kmph)** very likely over West Madhya Pradesh and scattered to fairly widespread rainfall over East Madhya Pradesh, Vidarbha, Chhattisgarh during next 5 days. Isolated **hailstorm** likely over East Madhya Pradesh on 19th June.
- ❖ A Western Disturbance as a trough in mid-tropospheric westerlies runs roughly along long. 70°E to the north of Lat. 30°N. Under its influence; isolated to scattered light rainfall with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand during 19th-23rd and over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh and Rajasthan during 19th-20th June, 2024.
- ❖ **Strong surface winds** (speed reaching 25-35 kmph) very likely over plains of Northwest India during next 2 days.

Heat Wave, Hot & Humid Weather and Warm Night warning for next 5 days:

- ❖ Yesterday, **Maximum temperatures** were in the range of 44-46°C over in many parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh; in some parts over north Madhya Pradesh, south Bihar, north Rajasthan.
- ❖ **Heat wave to severe heat wave conditions** very likely in many/most parts of Uttar Pradesh on 19th; in some parts on 20th; **decrease in intensity thereafter over above regions.**
- ❖ **Heat wave conditions** very likely in isolated parts of north Madhya Pradesh, north Rajasthan on 19th June, 2024 and abate thereafter.
- ❖ **Warm night to severe warm night conditions** very likely in some parts of pockets of Uttar Pradesh and **Warm night conditions** in isolated/some pockets of Punjab, Haryana-Chandigarh-Delhi on 19th June, 2024.
- ❖ **Hot & Humid weather** very likely over Odisha on 19th & 20th; Bihar on 20th June, 2024.

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Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Kerala & Mahe, Konkan & Goa, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya; **at a few places** over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura; **at isolated places** over Madhya Pradesh, Chhattisgarh, Odisha, East Uttar Pradesh, Gangetic West Bengal, Madhya Maharashtra, Telangana, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Gujarat state, Uttarakhand, Jharkhand, Bihar, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy rainfall** at isolated places over Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Nagaland, Manipur, Mizoram & Tripura:** West Tripura 11, Unakoti 10, Khowai 9, Kolasib 7; **Assam & Meghalaya:** Cacher 6, Hailakandi 5, East Khasi Hills 4, Karimganj 3, Bongaigaon 2; **Arunachal Pradesh:** East Siang 5, Lohit 2; **Kerala & Mahe:** Ernakulam 5, Idukki, Kannur 3 each; East Madhya Pradesh: Chhinwara 4, Seoni 3; Chhattisgarh: Pendra Road 5, Mungeli 2.
- ❖ Yesterday, **Heatwave to severe heat wave conditions** observed in most parts of Uttar Pradesh; in some parts of south Uttarakhand & Himachal Pradesh. **Heatwave conditions over** many parts of Haryana-Chandigarh-Delhi & Punjab and in isolated pockets over north Madhya Pradesh, Odisha, Jharkhand, Bihar & Jammu division.
- ❖ **Minimum Temperature Departures (as on 18-06-2024):** Minimum temperatures were **markedly above normal (5.1°C or more)** at many places over Uttar Pradesh; **at a few places over Rajasthan;** at isolated places over Haryana-Chandigarh-Delhi, Odisha and Punjab; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Madhya Pradesh, Chhattisgarh and Gangetic West Bengal; at isolated places over Uttarakhand, Gujarat state and Himachal Pradesh; **above normal (1.6°C to 3.0°C)** at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Coastal Andhra Pradesh & Yanam and Kerala & Mahe; at a few places over Bihar; at isolated places over Andaman & Nicobar Islands, Jharkhand and Madhya Maharashtra. These were **markedly below normal (-5.1°C or less)** at isolated places over Tamil Nadu, Puducherry & Karaikal; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Rayalaseema and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature** of 22.6°C was reported at **Narsinghpur (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 18-06-2024):** Maximum temperatures were **markedly above normal (5.1°C or more)** at many places over Uttar Pradesh; at a few places over Haryana-Chandigarh-Delhi and at isolated places over Bihar, Chhattisgarh, Himachal Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at a few places over East Madhya Pradesh, Odisha, Jharkhand; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Vidarbha, Telangana; **above normal (1.6°C to 3.0°C)** at most place over Andaman & Nicobar Islands, Gangetic West Bengal; at a few places over Konkan & Goa, Madhya Maharashtra, Marathwada, Kerala & Mahe and at isolated places over Tamil Nadu, Puducherry & Karaikal, Rajasthan. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature** of 46.4°C was reported at **Orai (West Uttar Pradesh)** over the country.

Meteorological Analysis (Based on 0530 hours IST)

- ❖ The Northern Limit of Monsoon continues to pass through 20.5°N/60°E, 20.5°N/63°E, 20.5°N/70°E, Navsari, Jalgaon, Amravati, Chandrapur, Bijapur, Sukma, Malkangiri, Vizianagaram, 19.5°N/88°E, 21.5°N/89.5°E, 23°N/89.5°E and Islampur.
- ❖ Conditions are favourable for further advance of Southwest Monsoon into some more parts of Maharashtra, Chhattisgarh, Odisha, Coastal Andhra Pradesh & Northwest Bay of Bengal, some parts of Gangetic West Bengal, remaining parts of Sub Himalayan West Bengal and some parts of Bihar and Jharkhand during next 3-4 days.
- ❖ The Western Disturbance as a trough in mid-tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along long. 70°E to the north of Lat. 30°N persists.
- ❖ The cyclonic circulation over Northeast Arabian Sea adjoining Saurashtra between 3.1 & 5.8 km above mean sea level persists.
- ❖ The cyclonic circulation over northeast Assam & neighbourhood extending upto 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over westcentral Bay of Bengal adjoining Coastal Andhra Pradesh at 3.1 km above mean sea level persists.
- ❖ The cyclonic circulation over Rayalaseema & neighbourhood at 4.5 km above mean sea level persists.

Weather Forecast for next 7 days (Upto 0830 hours IST of 26th June, 2024)

- ❖ Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- ❖ Thunderstorm/lightening very likely at isolated places over northeast and south peninsular India.
- ❖ **Fall in maximum temperatures by about 2°C very likely over Northwest India during next 2 days and rise by 2-3°C thereafter.**
- ❖ Fall in maximum temperatures by about 2-3°C very likely over East India during next 2 days and no significant change thereafter.
- ❖ Fall in maximum temperatures by about 2-3°C very likely over Central India during next 5 days.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

Weather Outlook for subsequent 3 days (During 26th-28th June, 2024)

- ❖ Scattered to fairly widespread rainfall likely over Islands, Northeast India, East India, west coast and Peninsular India. Isolated to Scattered rainfall likely over Northwest, Central India.
- ❖ Mainly dry weather likely to prevail over rest parts of the country.

Table-1

7 Days Rainfall Forecast

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

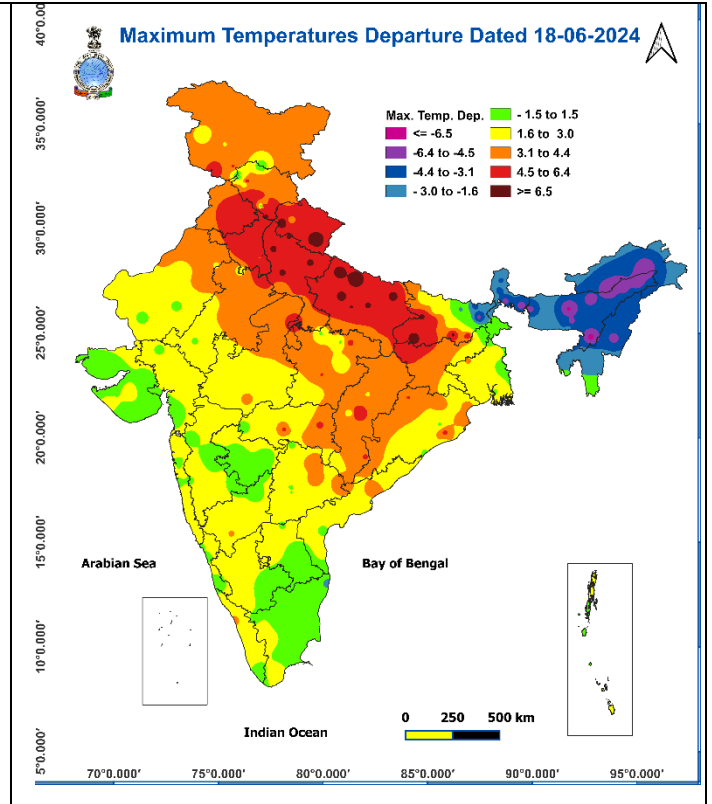
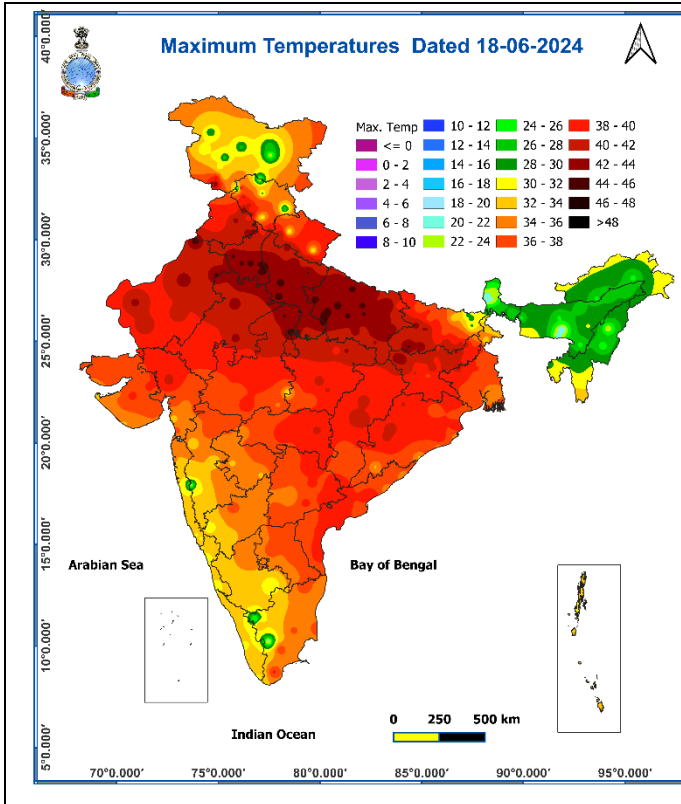


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

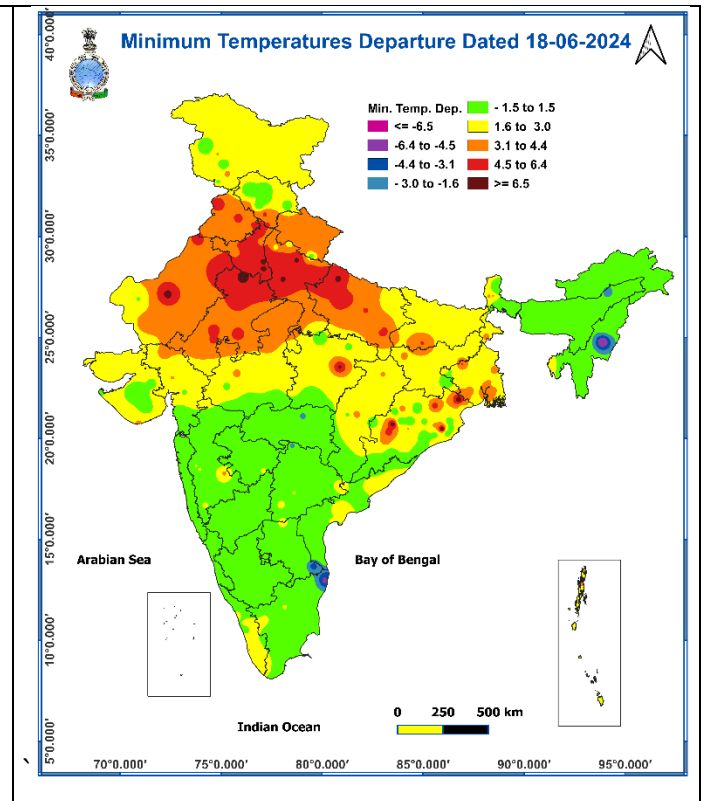
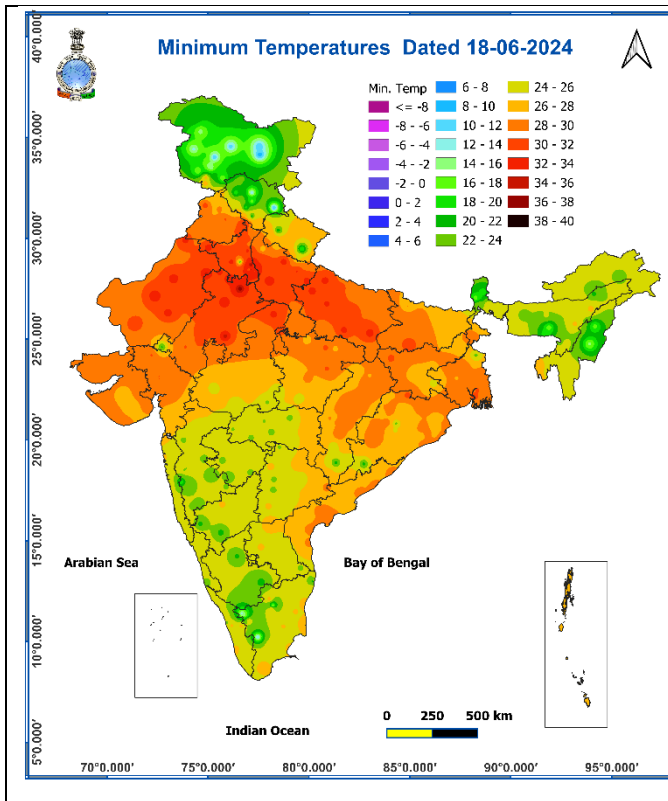
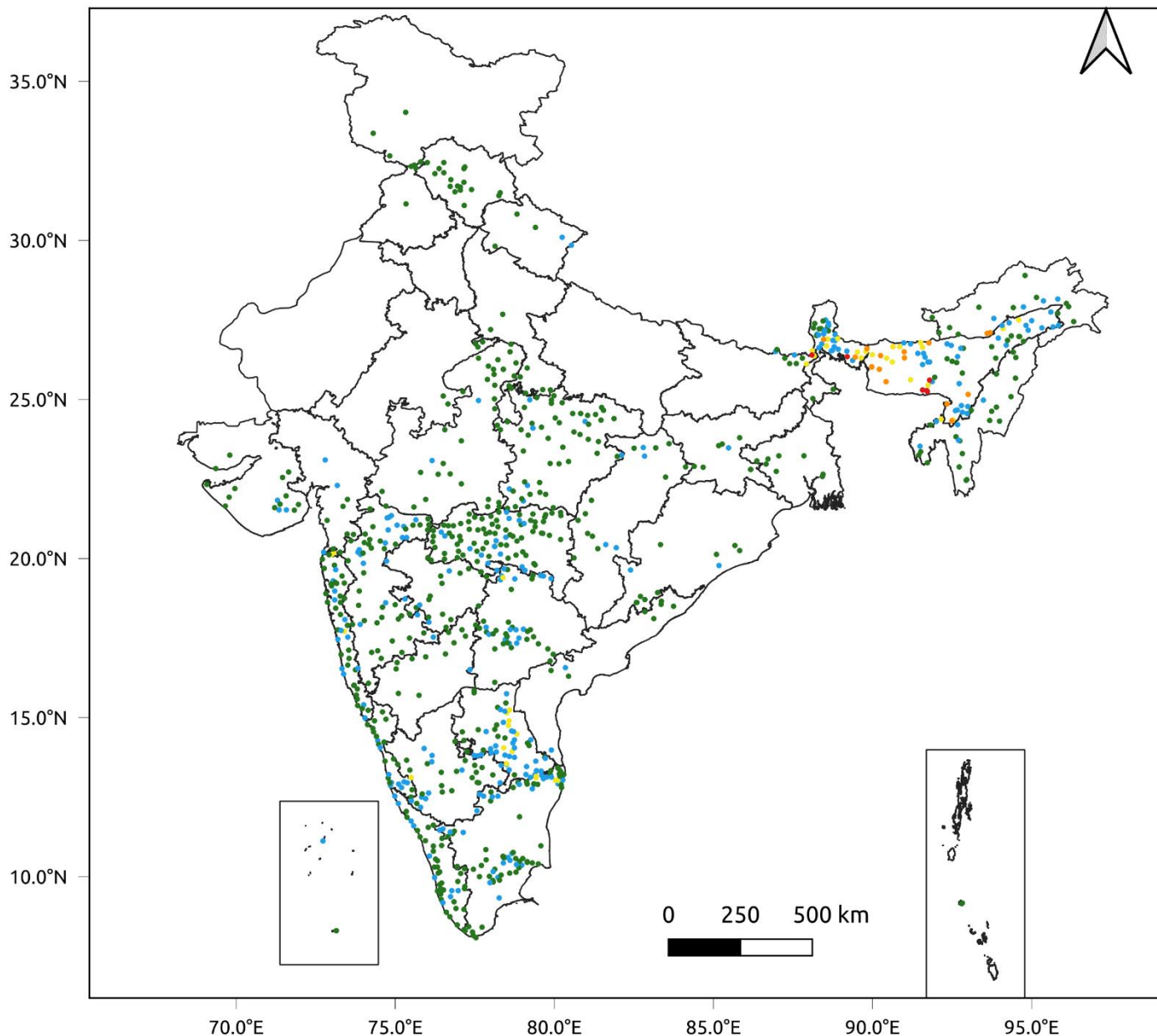


Fig. 5: Accumulated Rainfall (mm) during past 24 hours



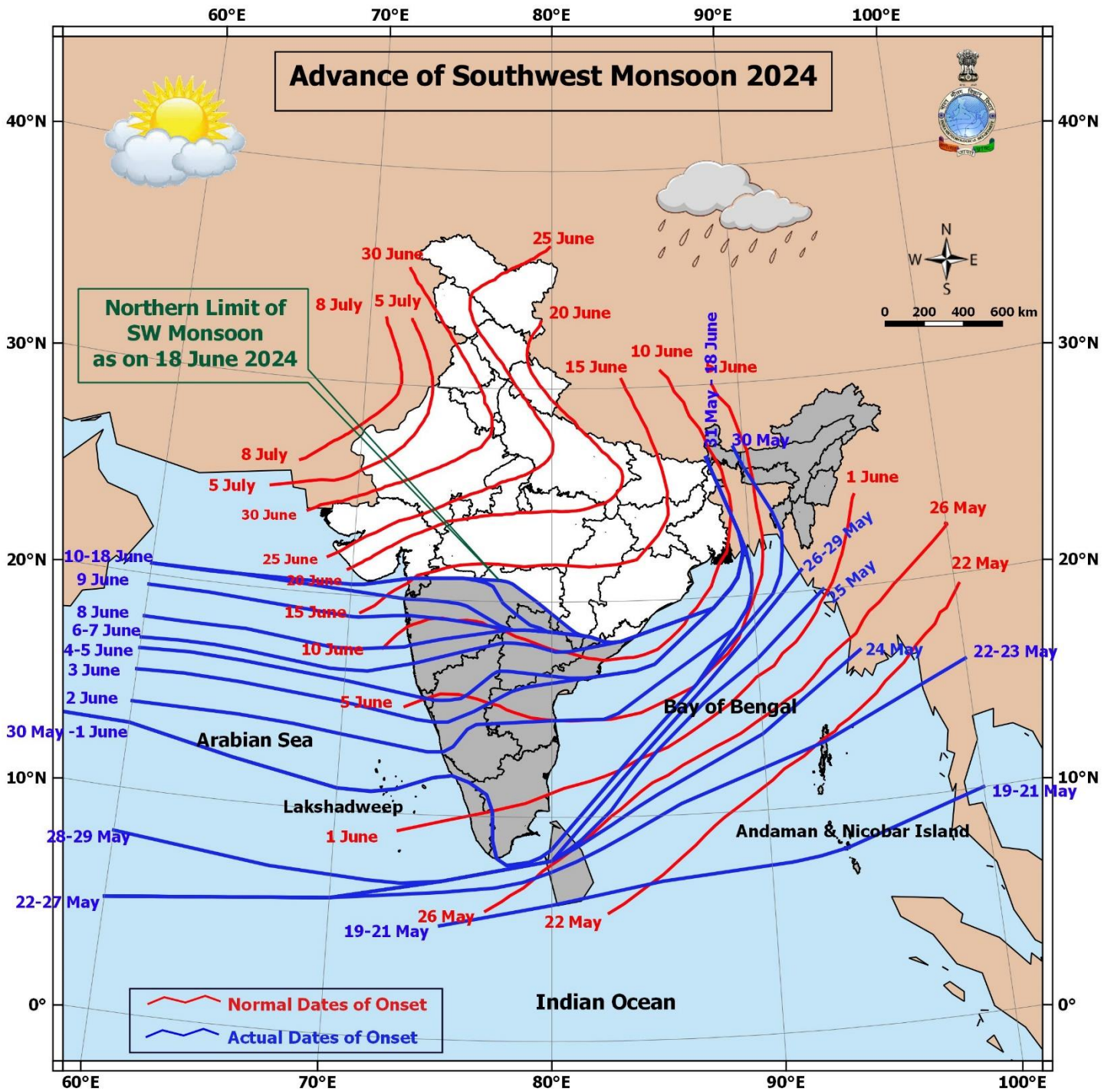
24 Hr cumulative rainfall recorded over different stations during 0830 IST of 17-6-2024 to 0830 IST of 18-6-2024



Legends

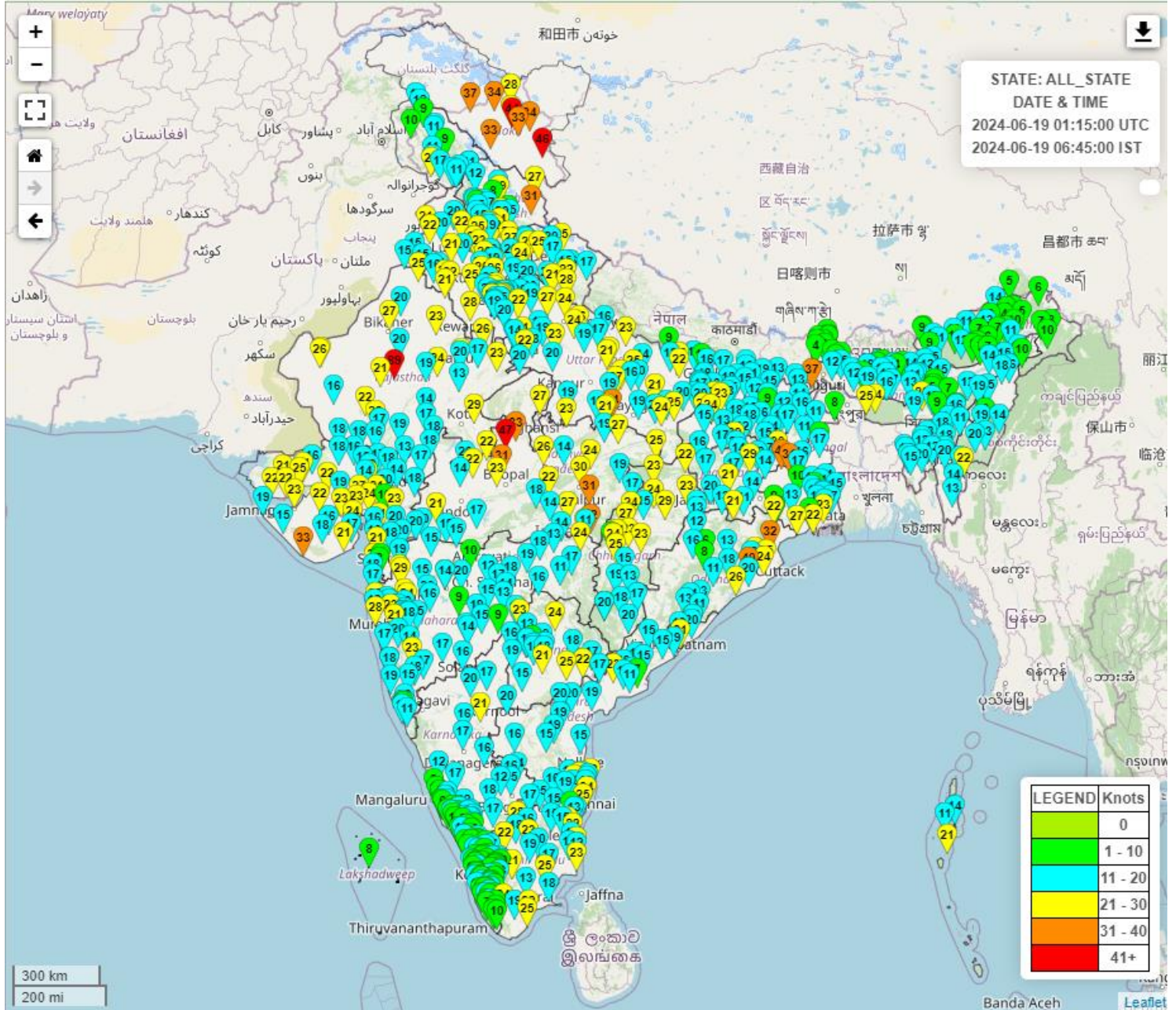
- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall (≥ 204.5 mm)

Fig. 6: Advance of Southwest Monsoon 2024



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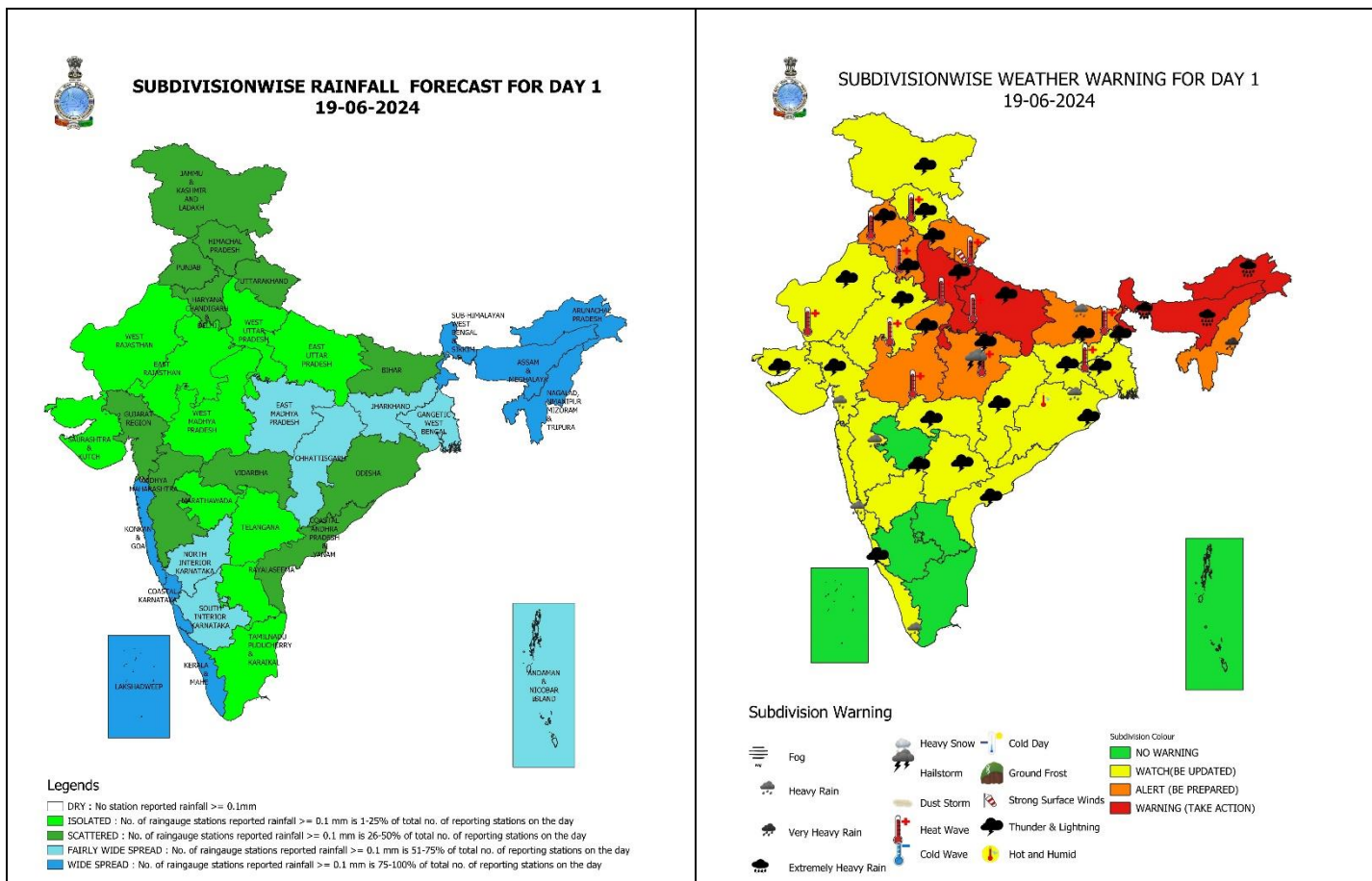
Fig. 7: Gusty winds reported over the country (in knots) from 0830 hours IST of 18.06.2024 to 0645 hours IST of 19.06.2024



1 Knot = 1.852 kmph

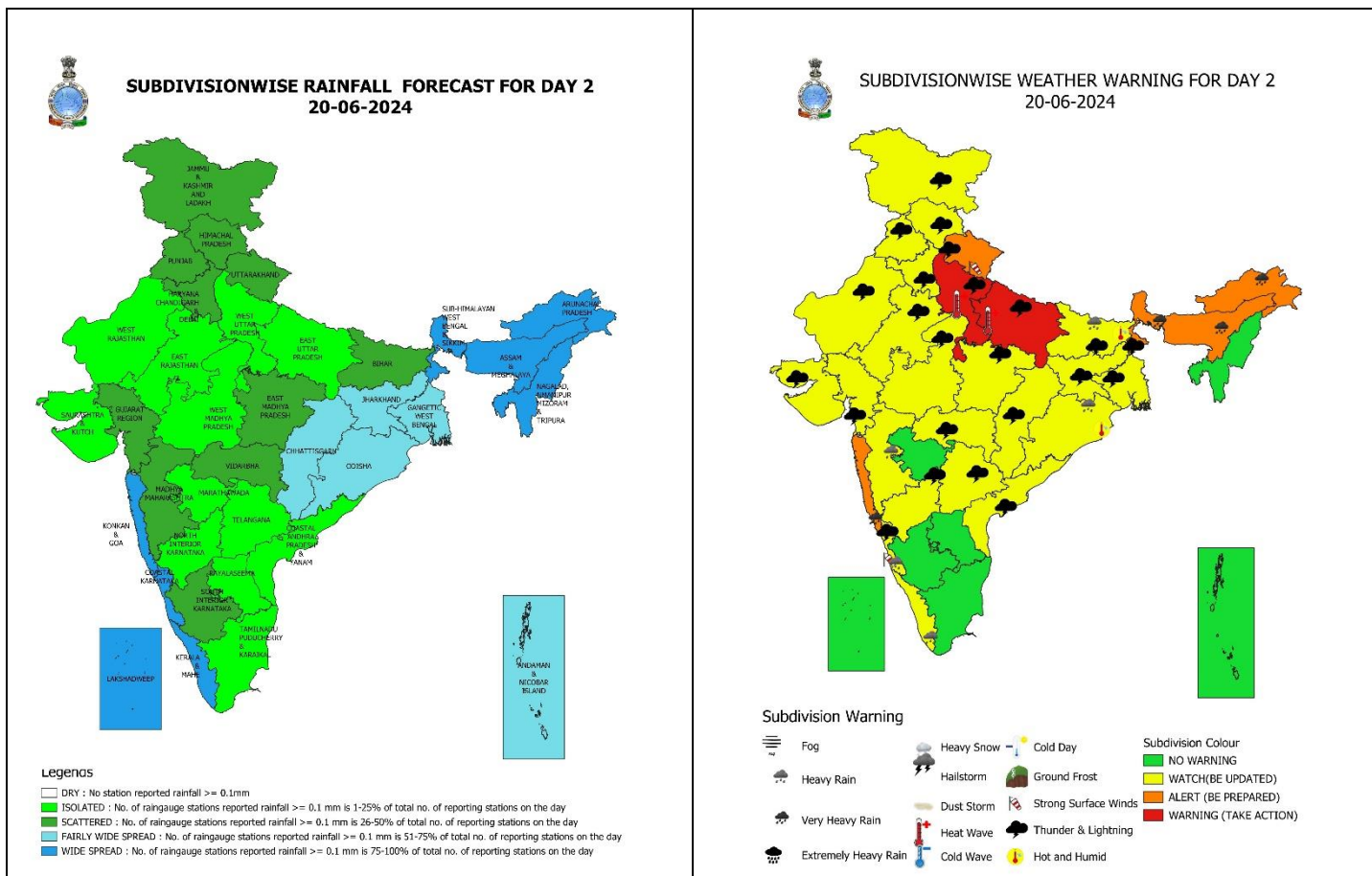
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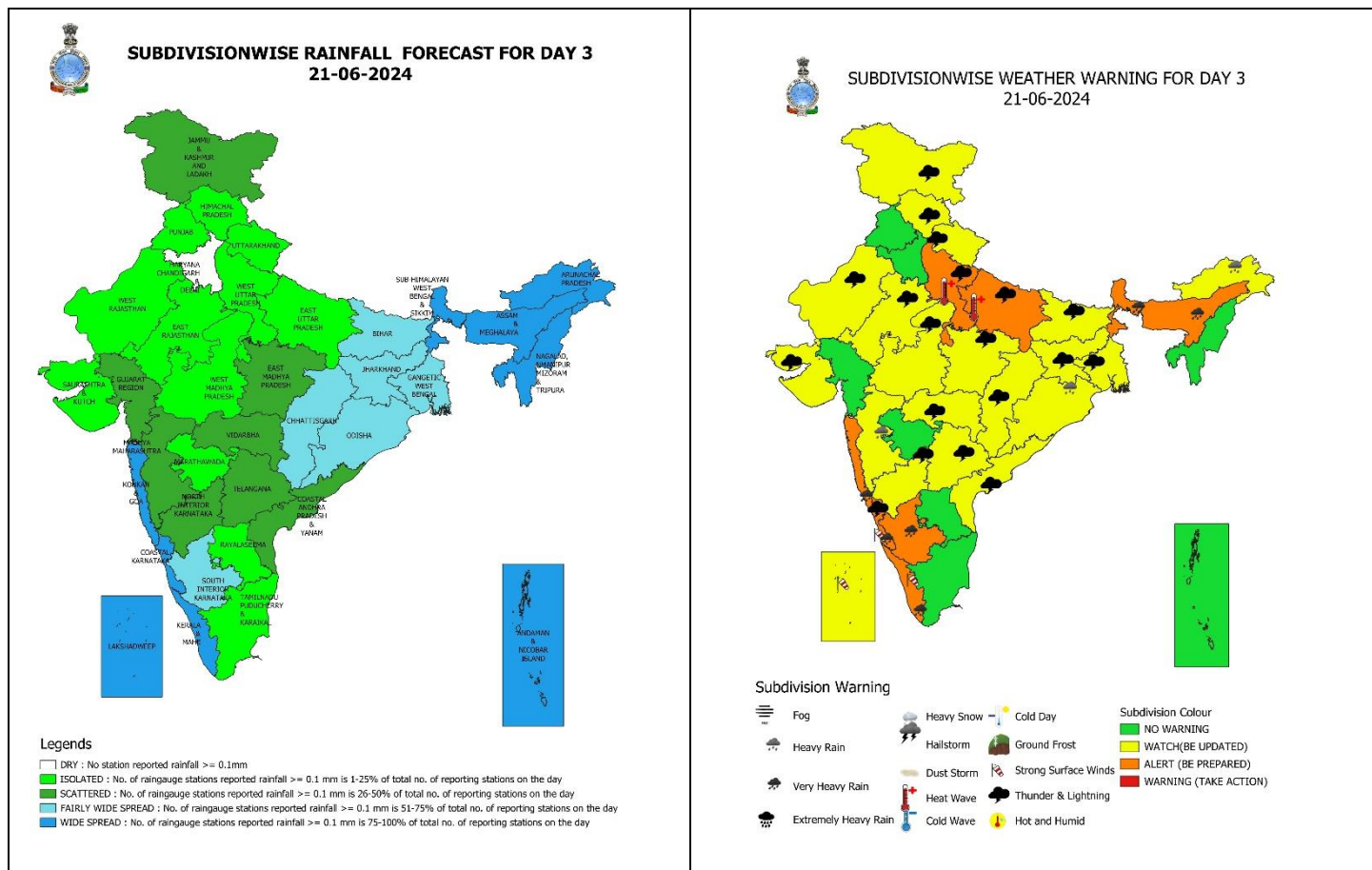
19 June (Day 1):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya; **Heavy to very heavy rainfall** at isolated places over Nagaland, Manipur, Mizoram & Tripura; **heavy rainfall** at isolated places over Konkan & Goa, Madhya Maharashtra, Gujarat Region, Kerala & Mahe, Bihar and Odisha.
- ❖ **Thunderstorm accompanied with lightning & squally winds (speed reaching 50-60 kmph gusting to 70 kmph)** very likely at isolated places over Uttarakhand and East Madhya Pradesh; **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph)** at isolated places over Vidarbha, Gangetic West Bengal, Telangana, Coastal Andhra Pradesh & Yanam; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan, West Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Odisha and North Interior Karnataka; with **lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Bihar, Gujarat state and Coastal Karnataka.
- ❖ **Heat wave conditions to severe heat wave conditions** very likely in many parts of Uttar Pradesh. **Heat wave conditions** in isolated pockets over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi and north Rajasthan.
- ❖ **Hot & Humid weather** very likely to prevail over Odisha.
- ❖ **Warm night to severe warm night conditions** very likely in isolated pockets of Uttar Pradesh; **Warm night conditions** to prevail in isolated pockets over Punjab, Haryana-Chandigarh-Delhi and Rajasthan
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over along and off Sri Lanka coast, Gulf of Mannar, Southwest and adjoining Westcentral Bay of Bengal, along and off Andhra Pradesh coast. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail along and off Somalia coast, southwest & west central Arabian sea. Fishermen are advised not to venture into these areas.



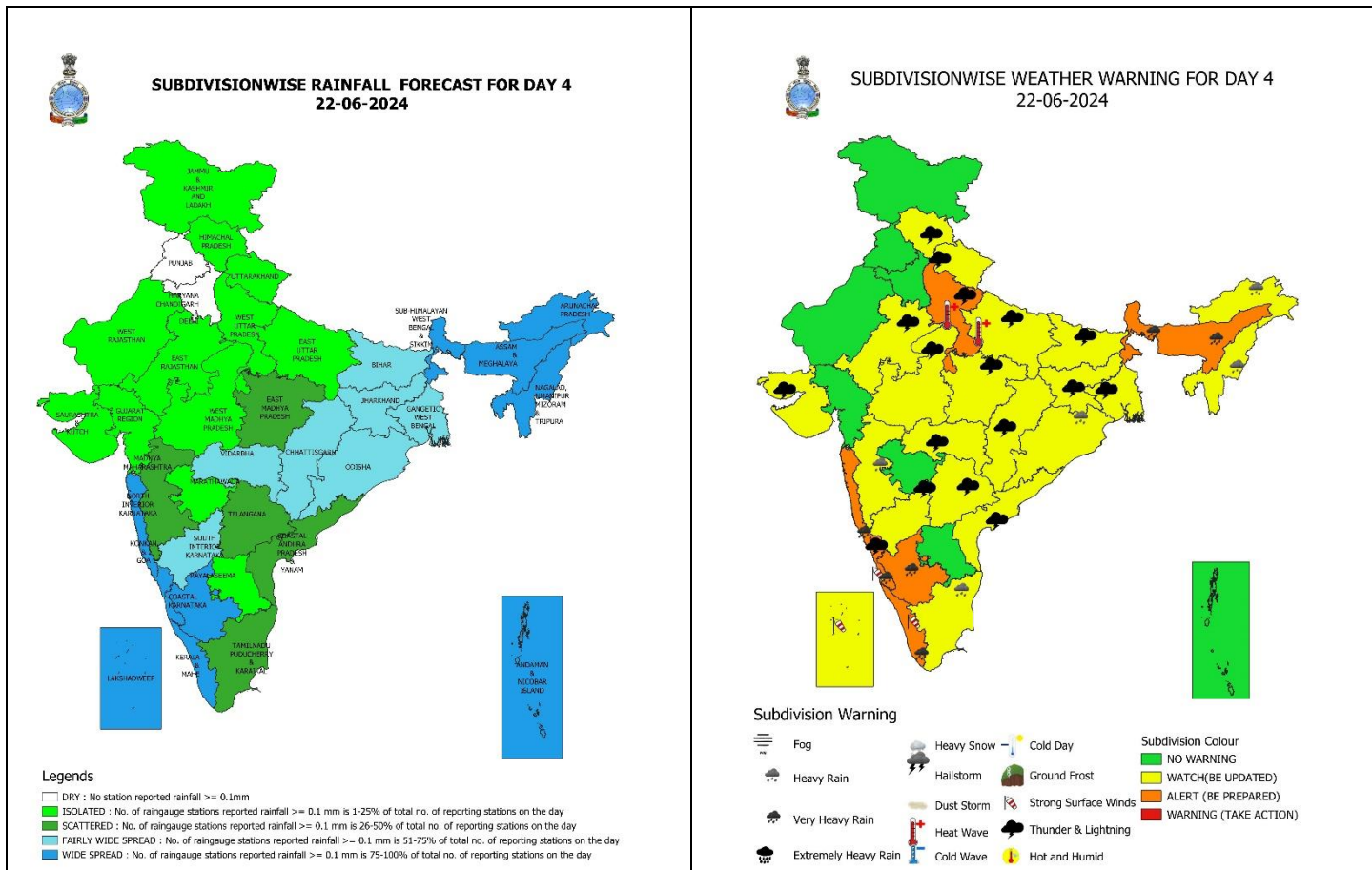
20 June (Day 2):

- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa; **heavy rainfall** at isolated places over Odisha, Bihar, Madhya Maharashtra, Kerala & Mahe and Coastal Karnataka.
- ❖ **Thunderstorm accompanied with lightning & squally winds (speed reaching 50-60 kmph gusting to 70 kmph)** very likely at isolated places over Uttarakhand; **with lightning, gusty winds (speed reaching 40-50 kmph)** at isolated places over West Rajasthan, East Madhya Pradesh, Gangetic West Bengal, Bihar, Coastal Andhra Pradesh & Yanam; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Telangana and North Interior Karnataka; with **lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Gujarat state and Coastal Karnataka.
- ❖ **Heat wave conditions to severe heat wave conditions** very likely in some parts of Uttar Pradesh.
- ❖ **Hot & Humid weather** very likely to prevail over Bihar and Odisha.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over along and off Gujarat coast, Maharashtra, Konkan, Goa, off Sri Lanka coast, Gulf of Mannar, South Central Bay of Bengal, off Andhra Pradesh coast. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail along and off Somalia & Oman coast, southwest, west central and adjoining East & north Arabian sea. Fishermen are advised not to venture into these areas.



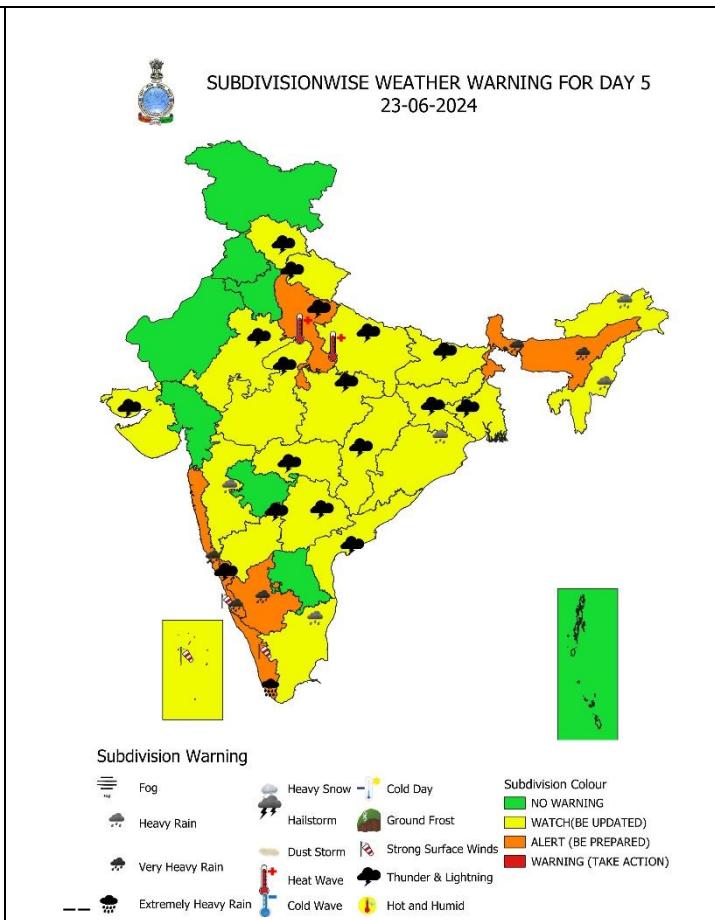
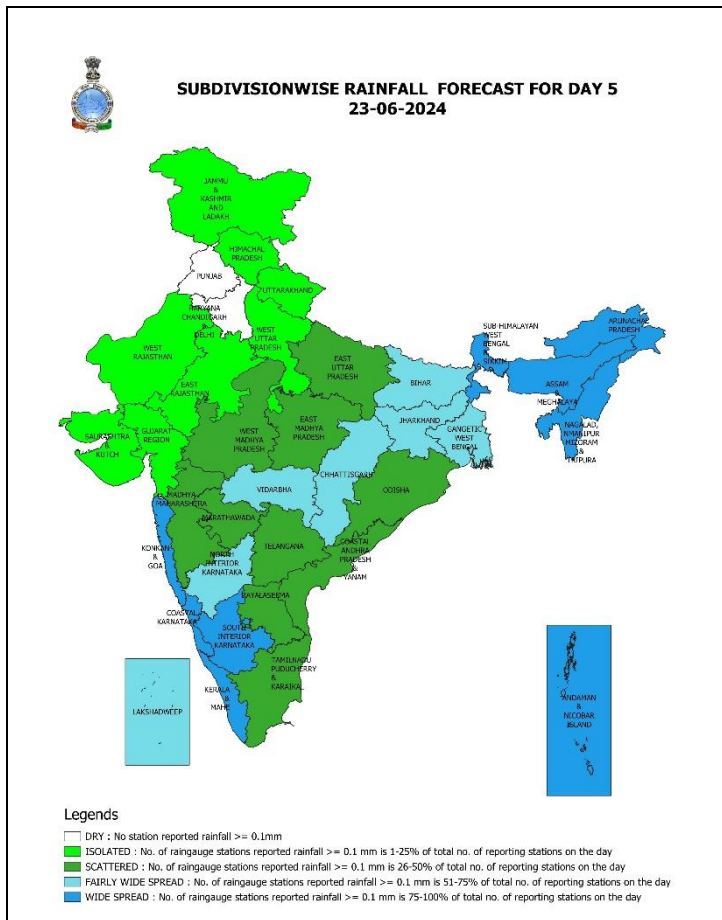
21 June (Day 3):

- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Konkan & Goa, Kerala & Mahe and Coastal & South Interior Karnataka; **heavy rainfall** at isolated places over Arunachal Pradesh, Odisha and Madhya Maharashtra.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over East Madhya Pradesh, Gangetic West Bengal, Bihar, Coastal Andhra Pradesh & Yanam; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places Uttarakhnad, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Jharkhand, Telangana and North Interior Karnataka; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, West Rajasthan, Vidarbha, Chhattisgarh, Saurashtra & Kutch and Coastal Karnataka.
- ❖ **Heat wave conditions to severe heat wave conditions** very likely in some parts of West Uttar Pradesh. **Heat wave conditions** in some parts over East Uttar Pradesh.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over along and off Gujarat, Maharashtra, Konkan, Goa, Karnataka, Kerala coasts, along and off Sri Lanka coast, Gulf of Mannar, South and Central Bay of Bengal, off Andhra Pradesh coast. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail along and off Somalia & Oman coast, southwest, west central and adjoining east & north Arabian sea. Fishermen are advised not to venture into these areas.



22 June (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Konkan & Goa, Kerala & Mahe and Coastal & South Interior Karnataka; **heavy rainfall** at isolated places over Arunachal Pradesh, Odisha, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu and Madhya Maharashtra.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Madhya Pradesh, Coastal Andhra Pradesh & Yanam; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places Uttarakhand, Uttar Pradesh, East Rajasthan, Jharkhand, Telangana, North Interior Karnataka; **with lightning** at isolated places over Himachal Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Bihar, Saurashtra & Kutch and Coastal Karnataka.
- ❖ **Heat wave conditions to severe heat wave conditions** likely in some parts of West Uttar Pradesh. **Heat wave conditions** in isolated pockets over East Uttar Pradesh,
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over along and off Gujarat, Maharashtra, Konkan, Goa, Karnataka, Kerala coasts, Lakshadweep area, off Sri Lanka coast, Gulf of Mannar, South and Central Bay of Bengal, off Andhra Pradesh coast. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail along and off Somalia & Oman coast, southwest, west central and adjoining east & north Arabian sea. Fishermen are advised not to venture into these areas.

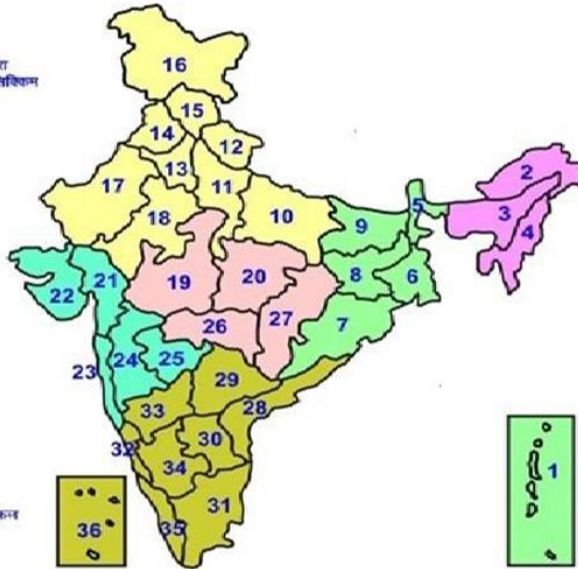


23 June (Day 5):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** likely at isolated places over Kerala & Mahe; **Heavy to very heavy rainfall** likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Konkan & Goa and Coastal & South Interior Karnataka; **heavy rainfall** at isolated places over Arunachal Pradesh, Odisha, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu and Madhya Maharashtra.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Madhya Pradesh, Coastal Andhra Pradesh & Yanam; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places Uttarakhand, Uttar Pradesh, East Rajasthan, Jharkhand, Telangana, North Interior Karnataka; **with lightning** at isolated places over Himachal Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Bihar, Saurashtra & Kutch and Coastal Karnataka.
- ❖ **Heat wave conditions to severe heat wave conditions** likely in some parts of West Uttar Pradesh. **Heat wave conditions** in isolated pockets over East Uttar Pradesh,
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over along and off Gujarat, Maharashtra, Konkan, Goa, Karnataka, Kerala coasts, Lakshadweep area, off Sri Lanka coast, Gulf of Mannar, South and Central Bay of Bengal, off Andhra Pradesh coast. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail along and off Somalia & Oman coast, southwest, west central and adjoining east & north Arabian 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 तेलंगाना
- 29 तेलंगाना
- 30 तेलंगाना
- 31 तेलंगाना
- 32 तेलंगाना
- 33 तेलंगाना
- 34 तेलंगाना
- 35 तेलंगाना
- 36 तेलंगाना



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

* 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)

LEGENDS

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

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