

Friday, June 28, 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 26.5°N/60°E, 25.5°N/65°E, Barmer, Jaipur, Agra, Banda, Siddhi, Chaibasa, Haldia, Pakur, Patna, Maharajganj, Dehradun, Una, Pathankot, Jammu, 33°N/74°E.
- ❖ Conditions are likely to become favourable for further advance of southwest Monsoon into some more parts of Rajasthan; remaining parts of Madhya Pradesh, Chhattisgarh, West Bengal, Jharkhand, Bihar, some more parts of Uttar Pradesh, Delhi, Chandigarh and some parts of Haryana, some more parts of Punjab, remaining parts of Uttarakhand, Himachal Pradesh and Jammu during next 2 days.

**Weather Systems and Forecast & Warnings:**

- ❖ A trough at mean sea level runs off Maharashtra-north Kerala coasts. A cyclonic circulation lies over central Gujarat and a trough runs from this cyclonic circulation to west Bihar in lower tropospheric levels. Under their influence:
  - Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Konkan & Goa, Madhya Maharashtra, Karnataka, Kerala & Mahe, Lakshadweep, Gujarat state, Madhya Pradesh, Vidarbha, Chhattisgarh; scattered to fairly widespread light to moderate rainfall over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Marathwada and Tamil Nadu, Puducherry & Karaikal during next 5 days.
  - Isolated **heavy rainfall** very likely over Gujarat Region, Konkan & Goa, Madhya Maharashtra, Coastal Karnataka during 28<sup>th</sup> June-02<sup>nd</sup> July; West Madhya Pradesh, Saurashtra & Kutch, Kerala & Mahe, South Interior Karnataka on 28<sup>th</sup> June 2024
  - **Isolated very heavy rainfall very likely over Konkan & Goa during 28<sup>th</sup> June-02<sup>nd</sup> July; Coastal Karnataka, Saurashtra & Kutch on 28<sup>th</sup> June.**
- ❖ A Western Disturbance as a trough in middle tropospheric westerlies runs roughly along Long. 64°E to the north of Lat. 28°N. A cyclonic circulation lies over northwest Rajasthan and another over east Assam in the lower tropospheric levels. Strong southerly/southwesterly winds prevail in the lower tropospheric levels from the Bay of Bengal into east & northeast India. Under their influence;
  - Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm, lightning & **isolated heavy rainfall** likely over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 5 days.
  - Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning** very likely over Northwest and east India during next 5 days.
  - Isolated **heavy rainfall** very likely over Himachal Pradesh, Uttarakhand, East Rajasthan, Uttar Pradesh, Punjab, Haryana during next 5 days; Delhi on 29<sup>th</sup> & 30<sup>th</sup>; West Rajasthan on 28<sup>th</sup> June & 01<sup>st</sup> July; East Madhya Pradesh, Gangetic West Bengal, Chhattisgarh, Odisha during 28<sup>th</sup>-30<sup>th</sup>; Bihar during 28<sup>th</sup> June-02<sup>nd</sup> July; Jharkhand during 29<sup>th</sup> June-02<sup>nd</sup> July.
  - **Isolated very heavy rainfall very likely over East Rajasthan during 28<sup>th</sup> June-02<sup>nd</sup> July; Uttarakhand, East Uttar Pradesh, Odisha on 28<sup>th</sup> & 29<sup>th</sup> and Bihar on 29<sup>th</sup>; over Haryana and West Uttar Pradesh on 29<sup>th</sup> & 30<sup>th</sup> June, 2024.**

## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places over** Kerala & Mahe and Lakshadweep; **at many places over** Gangetic West Bengal, Gujarat state, Konkan & Goa and Andaman & Nicobar Islands; **at a few places over** Haryana-Chandigarh-Delhi, West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Jharkhand, Assam & Meghalaya, West Rajasthan, Madhya Pradesh, Odisha, Madhya Maharashtra, Telangana and Coastal Andhra Pradesh & Yanam; **at isolated places over** Himachal Pradesh, Uttarakhand, Punjab, East Uttar Pradesh, East Rajasthan, Nagaland, Manipur, Mizoram & Tripura, Chhattisgarh, Vidarbha, Coastal & North Interior Karnataka, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday): **Coastal Karnataka:** Honavar-1; **North Interior Karnataka:** Gadag-1; **Kerala:** Karipur, Kozhikode, Kochi, Alapuzha & Thiruvananthapuram-1 each; **Konkan & Goa:** Ratnagiri-3, Matheran & Panjim-2 each, Dahanu, Alibag, Harnai and Mumbai (Santacruz & Colaba)-1 each; **Telangana:** Adilabad, Hyderabad & Khammam-1 each; **Odisha:** Jharsuguda, Keonjhar, Puri & Bhubaneswar-1 each; **Tamil Nadu:** Valprai-2; **Rajasthan:** Mount Abu-4, Pilani & Jodhpur-3 each, Chittorgarh-2; **Madhya Pradesh:** Khajuraho-4, Nowgong & Pachmarhi-3 each, Bhopal & Chhindwara-1 each; **West Bengal:** Midnapore-3, Uluberia-2, Panagarh, Burdwan, Kolkata (Salt Lake), Contai, Haldia, Digha & Darjeeling-1 each; **Gujarat:** Bhuj-5, Bhavnagar-3, Deesa, Naliya & Mahuva-2 each, Rajkot, Porbandar & Kandla-1 each; **Bihar:** Patna-4, Motihari & Chapra-1 each; **Madhya Maharashtra:** Jalgaon-3, Mahabaleshwar-2; **Coastal Andhra Pradesh:** Tuni-6, Kalingapatnam-3, Kakinada & Narsapur-1 each; **Assam:** North Lakhimpur-2, Goalpara-1; **Andaman & Nicobar Islands:** Car Nicobar & Nancowry-1 each; **Nagaland, Manipur, Mizoram & Tripura:** Aizwal-3, Agartala & Kohima-1 each; **Chhattisgarh:** Ambikapur-5; **Punjab:** Ludhiana & Patiala-1 each; **Uttar Pradesh:** Lakhimpur Kheri-3, Ballia, Gazipur, Muzaffarnagar, Bareilly, Moradabad, Orai & Shahjahanpur-1 each; **Delhi:** Palam-2, Ridge-1; **Arunachal Pradesh:** Itanagar-3; **Jharkhand:** Ranchi-1.
- ❖ **Reported maximum wind speed (in knot)** (from 0830 hours IST to 1730 hours IST of yesterday): **Chhattisgarh:** Koriya-23; **Kerala & Mahe:** Wayanad-35; **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Kulgam-28, Yokma-27, Nyoma-27, Padum-26, Shopian-24, Upshi, Durbuk & Khaltse-23 each; **Rajasthan:** Jaisalmer-36, Bikaner-31, Churu-24, Banas-24, Jodhpur-22, Sirohi-22; **Madhya Pradesh:** Jabalpur-28, Ahmadpur-27, Sehore-25; **Bihar:** IIT Patna-27, Bhojpur-24, Bikramganj-22; **Punjab:** Faridkot-31, Barnala-21; **Maharashtra:** Alibag-33, Mahabaleshwar-31, Devgad-27, Lonavala-26, Rahuri-23; **Tamil Nadu, Puducherry & Karaikal:** Thirupathisaram-27, Kadavur-26, Sirugamani-25; **Himachal Pradesh:** Kinnaur-35, Tabo-22; **Karnataka:** Gangavathi-29, Kawadimatti-26, Gadag-23; **Haryana:** Sirsa-22; **Uttarakhand:** Roorkee 21; **Jharkhand:** Jamtara-22, Barhi-21.
- ❖ **Minimum Temperature Departures (as on 27-06-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over West Rajasthan, East Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at many places over Himachal Pradesh, Gangetic West Bengal, Gujarat state; at a few places over Madhya Maharashtra, Marathwada, Bihar, Assam & Meghalaya, Haryana-Chandigarh-Delhi; at isolated places over Vidarbha, Coastal Andhra Pradesh & Yanam, Rayalaseema, Jharkhand, Odisha, West Madhya Pradesh. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Punjab, East Rajasthan, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 20.0°C** was reported at **Bulandshahr (West Uttar Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 27-06-2024):** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at most places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Arunachal Pradesh; at many places over Bihar, Jharkhand, Gangetic West Bengal and Nagaland, Manipur, Mizoram & Tripura; at a few places over Chhattisgarh, East Madhya Pradesh and Vidarbha and at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Odisha. These were **markedly below normal (-5.1°C or less)** at a few places over Coastal Andhra Pradesh & Yanam; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over wup a few places over West Uttar Pradesh; at isolated places over Haryana-Chandigarh-Delhi and Tamil Nadu, Puducherry & Karaikal; **below normal (-1.6°C to -3.0°C)** at most places over Punjab; at many places over East Rajasthan; at a few places over Himachal Pradesh, Uttarakhand, West Rajasthan, Rayalaseema and Kerala & Mahe; at isolated places over East Uttar Pradesh, Madhya Maharashtra, West Madhya Pradesh, Karnataka and Telangana and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature of 41.4°C** was reported at **Jaisalmer (West Rajasthan)** over the country.

### Meteorological Analysis (Based on 0530 hours IST)

- ❖ The Northern Limit of Monsoon continues to pass through 26.5°N/60°E, 25.5°N/65°E, Barmer, Jaipur, Agra, Banda, Siddhi, Chaibasa, Haldia, Pakur, Patna, Maharajganj, Dehradun, Una, Pathankot, Jammu, 33°N/74°E.
- ❖ Conditions are likely to become favourable for further advance of southwest Monsoon into some more parts of Rajasthan; remaining parts of Madhya Pradesh, Chhattisgarh, West Bengal, Jharkhand, Bihar, some more parts of Uttar Pradesh, Delhi, Chandigarh and some parts of Haryana, some more parts of Punjab, remaining parts of Uttarakhand, Himachal Pradesh and Jammu during next 2 days.
- ❖ The Western Disturbance as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 64°E to the north of Lat. 28°N persists.
- ❖ The cyclonic circulation over central Rajasthan at 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over east Assam & neighbourhood between 1.5 & 3.1 km above mean sea level persists.
- ❖ The cyclonic circulation over north Bangladesh & neighbourhood at 0.9 km above mean sea level persists.
- ❖ The cyclonic circulation over central Gujarat & neighbourhood extending upto 4.5 km above mean sea level tilting southwards with height persists.
- ❖ The trough from above cyclonic circulation over central Gujarat to west Bihar across East Rajasthan, northwest Madhya Pradesh & East Uttar Pradesh at 0.9 km above mean sea level persists.
- ❖ The shear zone roughly along 17°N between 3.1 & 5.8 km above mean sea level tilting southwards with height persists.
- ❖ The trough at mean sea level now runs off Maharashtra-north Kerala coasts.
- ❖ The cyclonic circulation over northwest & adjoining westcentral Bay of Bengal extending upto 5.8 km above mean sea level tilting southwestwards with height persists.

### Weather Forecast for next 7 days (Upto 0830 hours IST of 05<sup>th</sup> July, 2024)

- ❖ Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- ❖ Fall in maximum temperatures by 3-5°C very likely over Northwest India during next 4-5 days.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

### Weather Outlook for subsequent 3 days (During 05<sup>th</sup>-07<sup>th</sup> July, 2024)

- ❖ Scattered to fairly widespread rainfall likely over Islands, Northeast India, East India, west coast and Scattered rainfall likely over Northwest, Central & Peninsular India.

Table-1

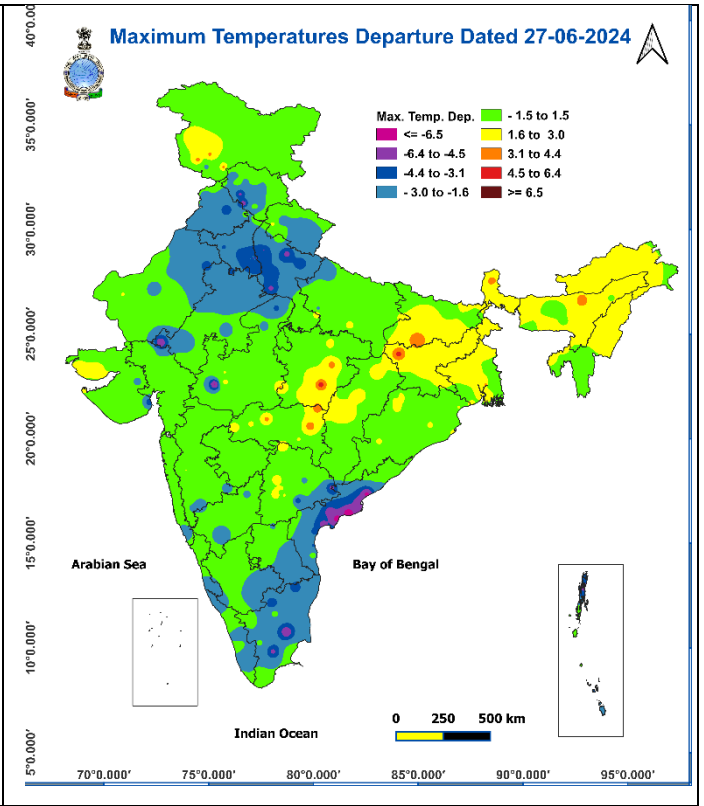
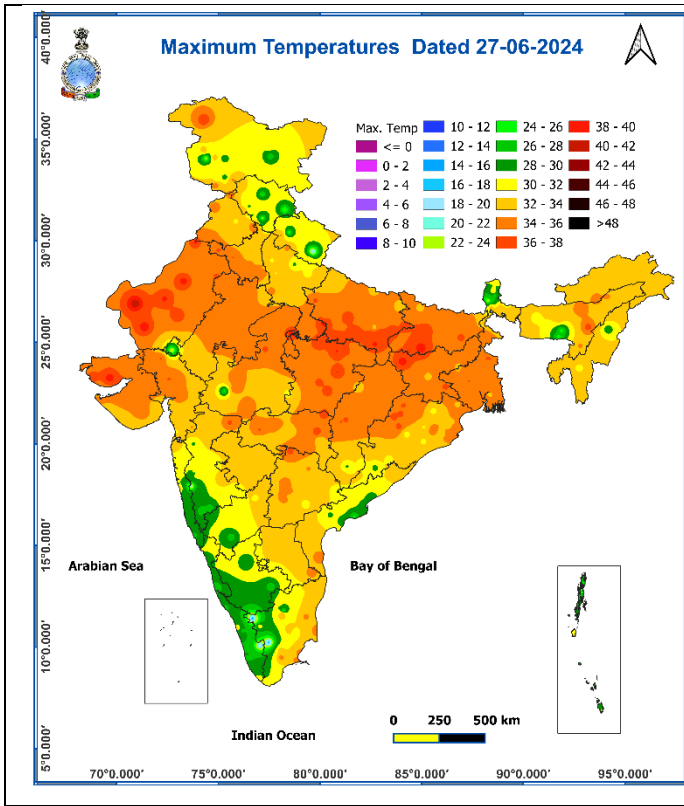
7 Days Rainfall Forecast								
S. No.	Subdivision	28-Jun	29-Jun	30-Jun	01-Jul	02-Jul	03-Jul	04-Jul
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	FWS	SCT	SCT	FWS	FWS
2	ARUNACHAL PRADESH	WS	WS	WS	WS	WS	WS	WS
3	ASSAM & MEGHALAYA	WS	WS	WS	WS	WS	WS	WS
4	NAGALAND, MANIPUR, 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	WS	WS	WS	FWS	FWS	FWS
7	ODISHA	WS	WS	FWS	FWS	FWS	FWS	FWS
8	JHARKHAND	FWS	WS	WS	WS	FWS	FWS	FWS
9	BIHAR	SCT	FWS	WS	WS	FWS	FWS	FWS
10	EAST UTTAR PRADESH	FWS	WS	FWS	FWS	FWS	FWS	FWS
11	WEST UTTAR PRADESH	FWS	WS	WS	FWS	FWS	FWS	FWS
12	UTTARAKHAND	WS	WS	WS	WS	WS	WS	WS
13	HARYANA CHANDIGARH & DELHI	FWS	WS	WS	FWS	FWS	FWS	FWS
14	PUNJAB	SCT	FWS	FWS	FWS	FWS	FWS	FWS
15	HIMACHAL PRADESH	FWS	FWS	FWS	FWS	FWS	FWS	FWS
16	JAMMU & KASHMIR AND LADAKH	FWS	FWS	FWS	FWS	FWS	FWS	FWS
17	WEST RAJASTHAN	SCT	ISOL	ISOL	SCT	SCT	SCT	SCT
18	EAST RAJASTHAN	FWS	FWS	WS	WS	WS	FWS	FWS
19	WEST MADHYA PRADESH	WS	WS	WS	FWS	FWS	WS	WS
20	EAST MADHYA PRADESH	WS	WS	WS	WS	WS	WS	WS
21	GUJARAT REGION	WS	FWS	WS	WS	FWS	FWS	FWS
22	SAURASHTRA & KUTCH	WS	FWS	FWS	FWS	SCT	SCT	SCT
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	SCT	SCT	SCT	SCT	SCT	SCT	SCT
25	MARATHAWADA	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
26	VIDARBHA	WS	FWS	FWS	FWS	FWS	FWS	FWS
27	CHHATTISGARH	WS	WS	WS	FWS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	FWS	SCT	SCT	SCT	ISOL	ISOL	ISOL
29	TELANGANA	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	ISOL	ISOL	SCT	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	SCT	SCT	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	SCT	ISOL	ISOL	SCT	SCT	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	SCT	ISOL	ISOL	SCT	FWS	FWS	FWS
35	KERALA & MAHE	WS	FWS	FWS	FWS	FWS	FWS	FWS
36	LAKSHADWEEP	FWS	FWS	FWS	FWS	FWS	FWS	FWS

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

\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
(Service to the Nation since 1875)

**Fig. 1: Maximum Temperatures**

**Fig. 2: Departure of Maximum Temperatures**



**Fig. 3: Minimum Temperatures**

**Fig. 4: Departure of Minimum Temperatures**

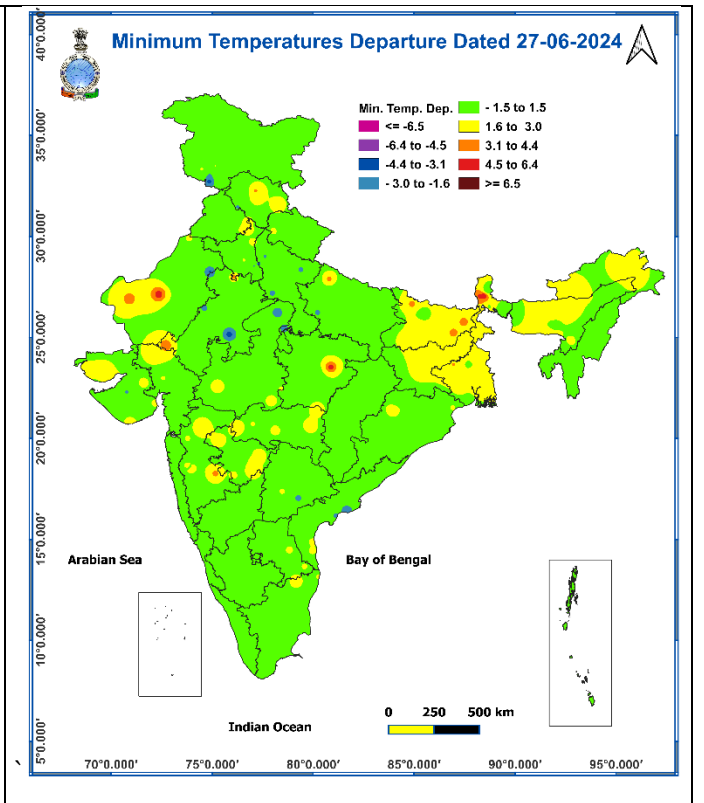
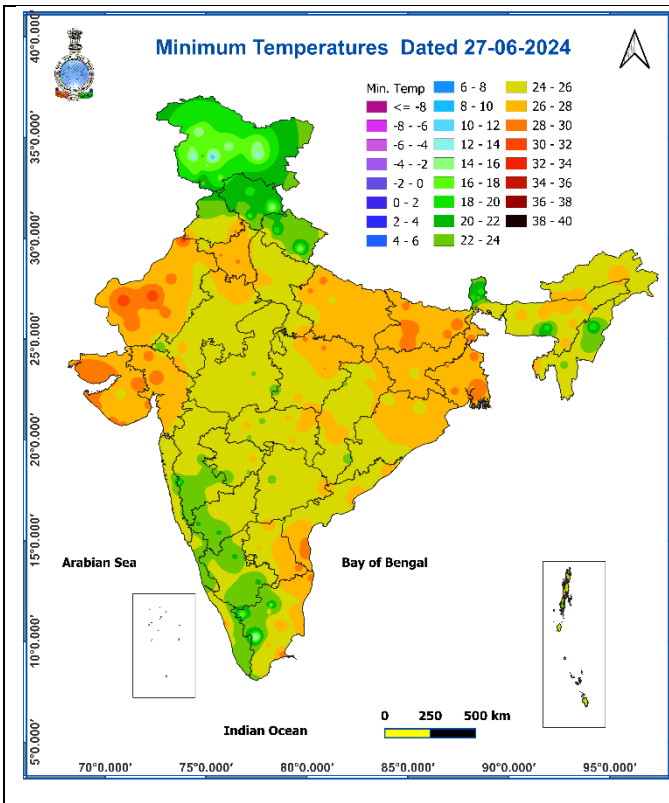
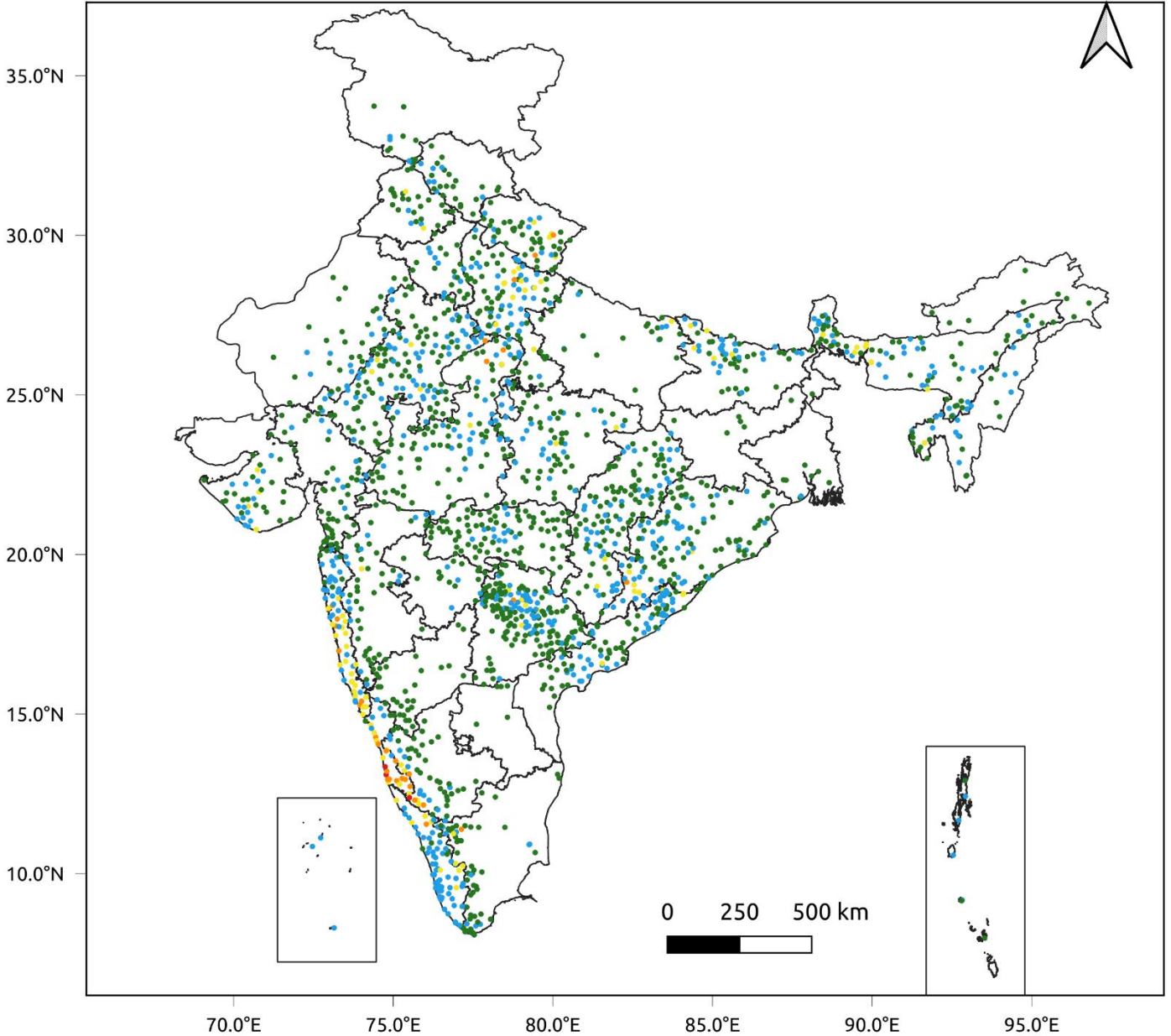


Fig. 5: Accumulated Rainfall (mm) during past 24 hours



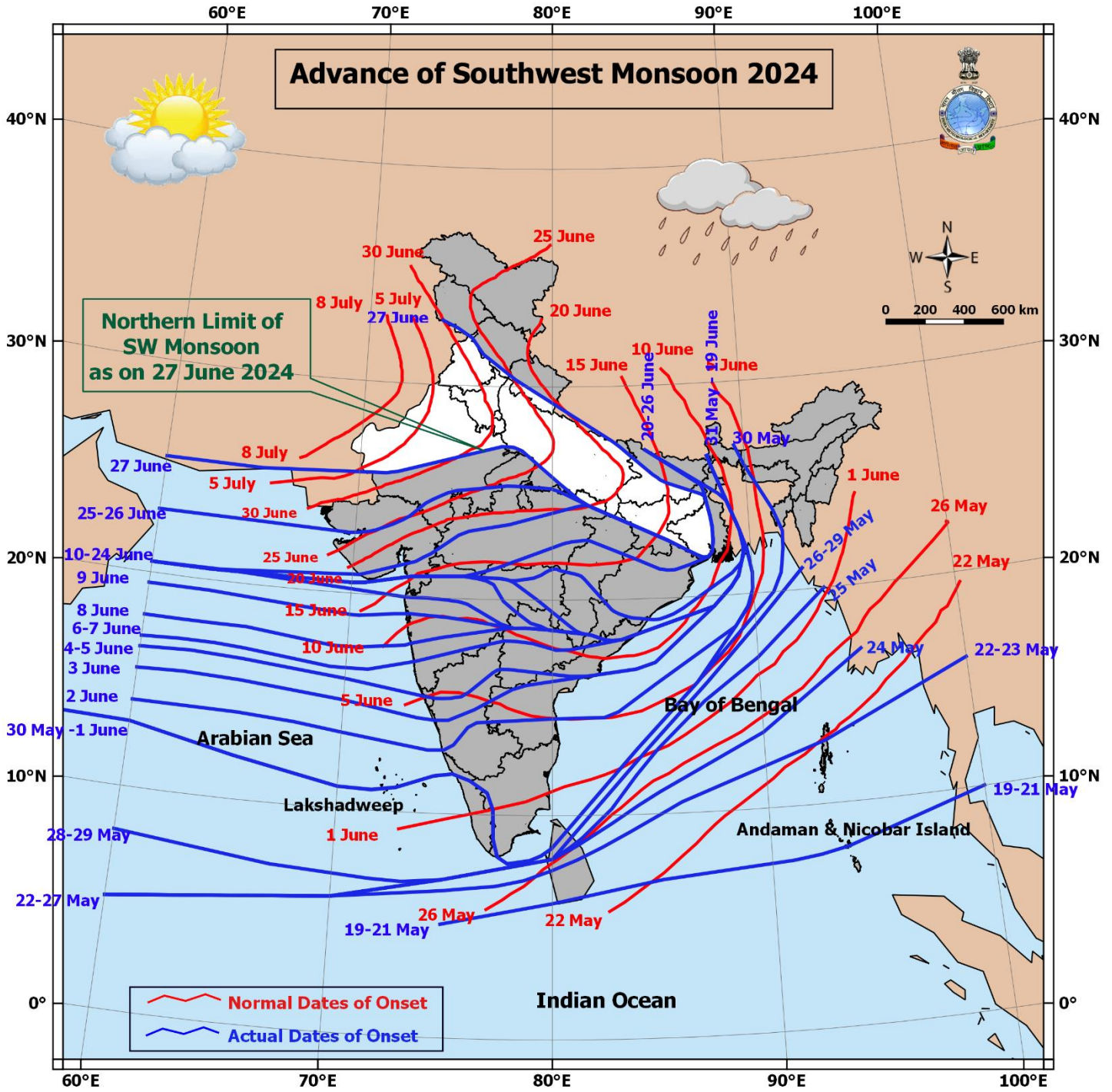
## 24 Hr cumulative rainfall recorded over different stations during 0830 IST of 26-6-2024 to 0830 IST of 27-6-2024



### Legends

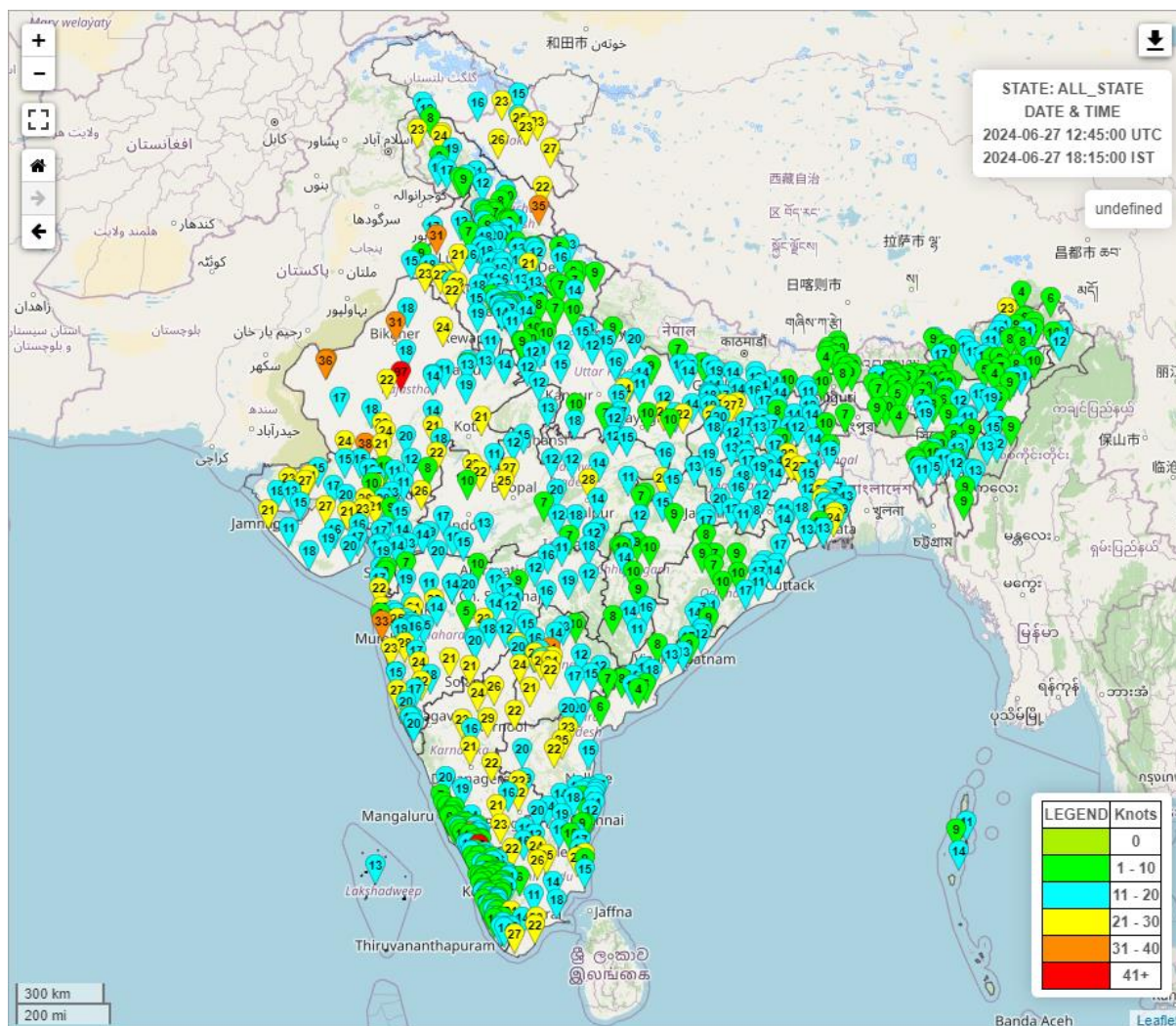
- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)

Fig. 6: Advance of Southwest Monsoon 2024



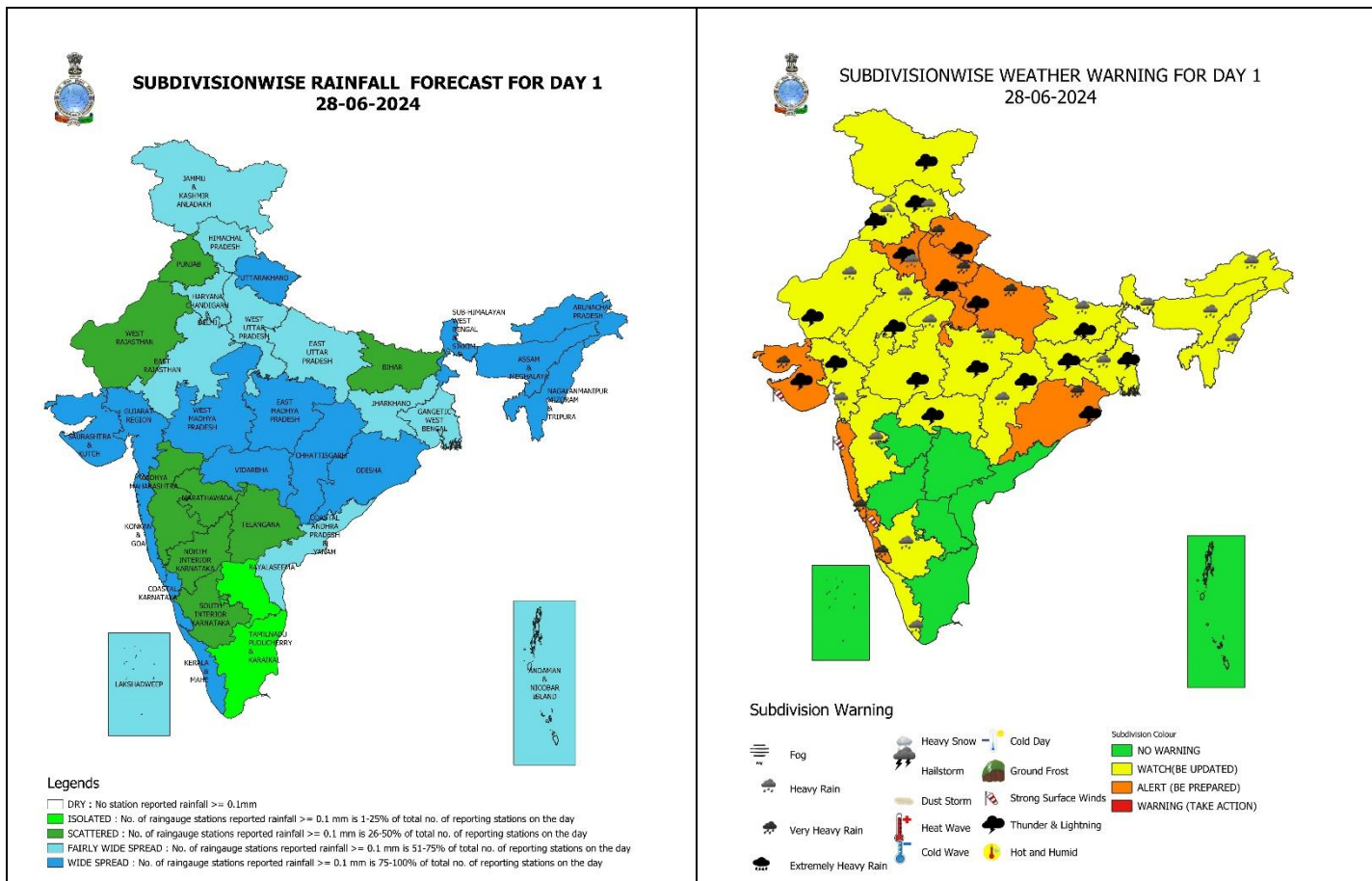
\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
 Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
 For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
 (Service to the Nation since 1875)

**Fig. 7: Gusty winds reported over the country (in knots) from 0830 hours IST of 27.06.2024 to 1815 hours IST of 27.06.2024**



**1 Knot = 1.852 kmph**

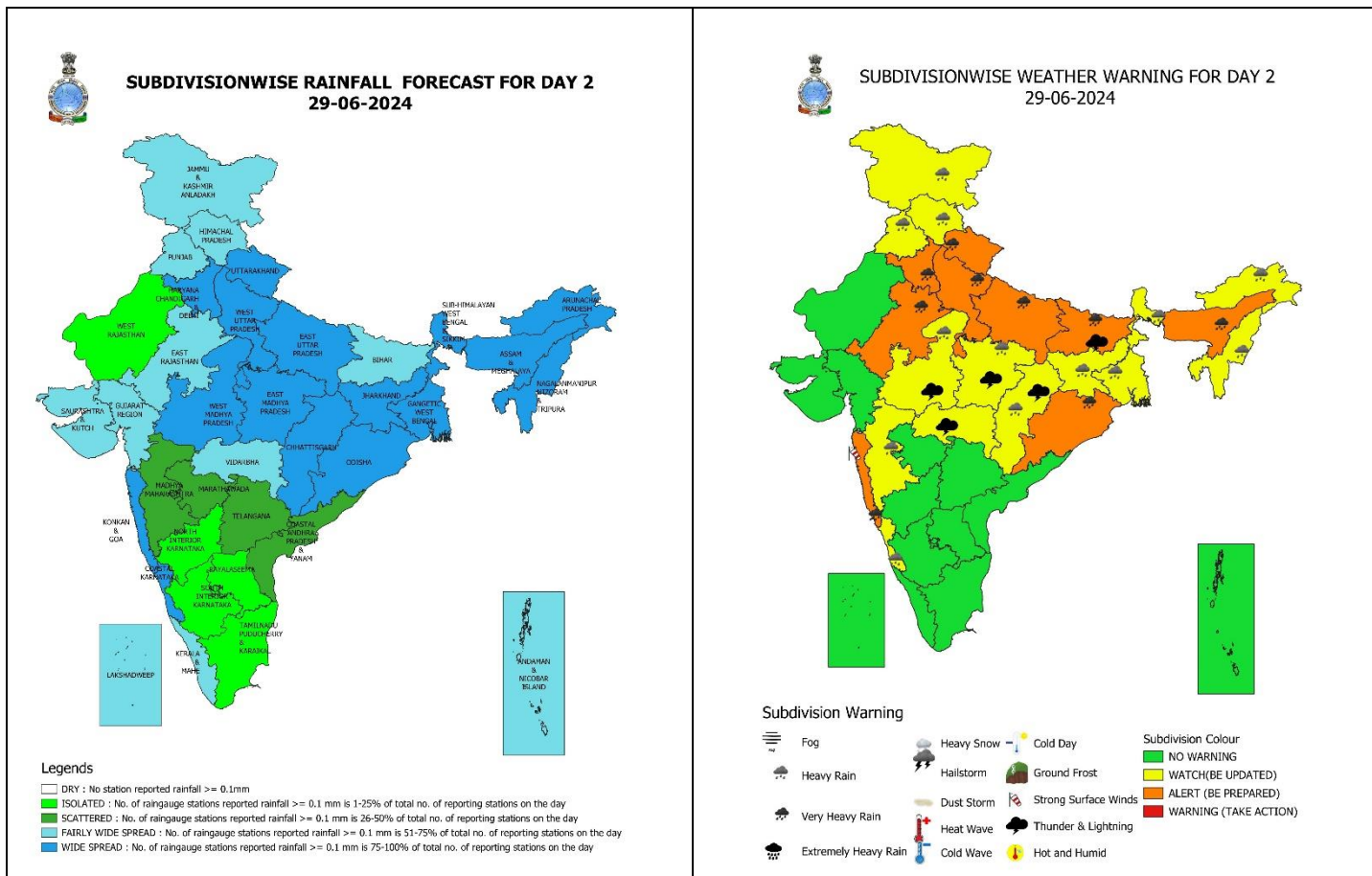
For more details, kindly refer: <http://aws.imd.gov.in:8091/>



**28 June (Day 1):**

- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Uttarakhand, Uttar Pradesh, Odisha, Konkan & Goa, Saurashtra & Kutch and Coastal Karnataka; **heavy rainfall** at isolated places over Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh, Chhattisgarh, West Bengal & Sikkim, Bihar, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Gujarat Region, Kerala & Mahe and South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Uttar Pradesh, Gangetic West Bengal, Bihar, Jharkhand, Odisha, Telangana; **with lightning** at isolated places over Gujarat state, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over eastcentral and adjoining westcentral Arabian sea, northern parts of southeast & southwest Arabian sea, along and off Maharashtra, Konkan, goa, Karnataka, Kerala coasts, over gulf of Mannar, off Sri Lanka coast, south and central Bay of Bengal & north Bay of Bengal, off north Andhra Pradesh, off Odisha, off west Bengal coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** to prevail over off north Andhra Pradesh coast and adjoining areas, along and off Somalia coast, southwest and adjoining southeast Arabian sea & central Arabian sea, along and off Yemen and Oman coasts. Fishermen are advised not to venture into these areas.

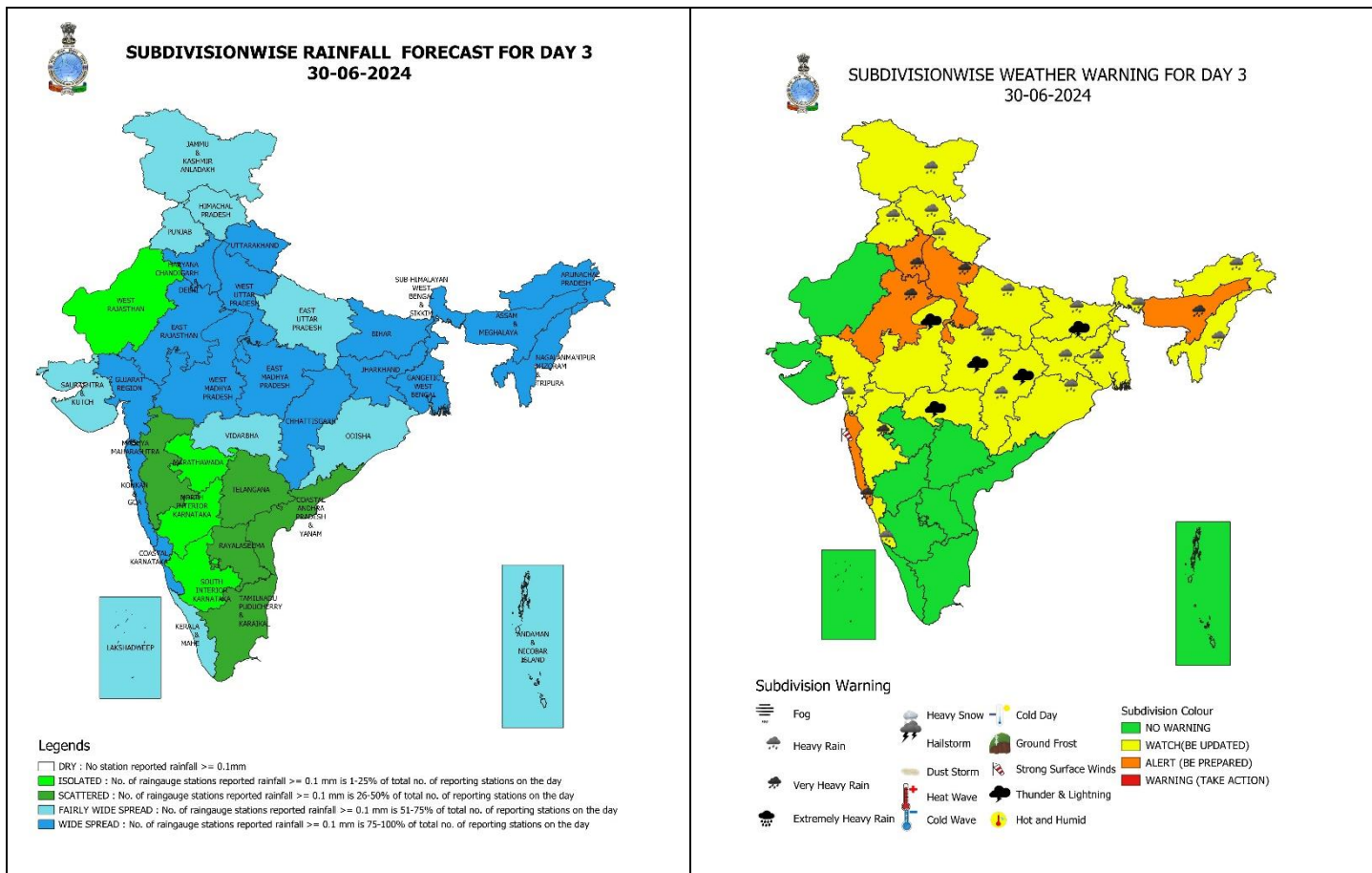
\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
(Service to the Nation since 1875)



**29 June (Day 2):**

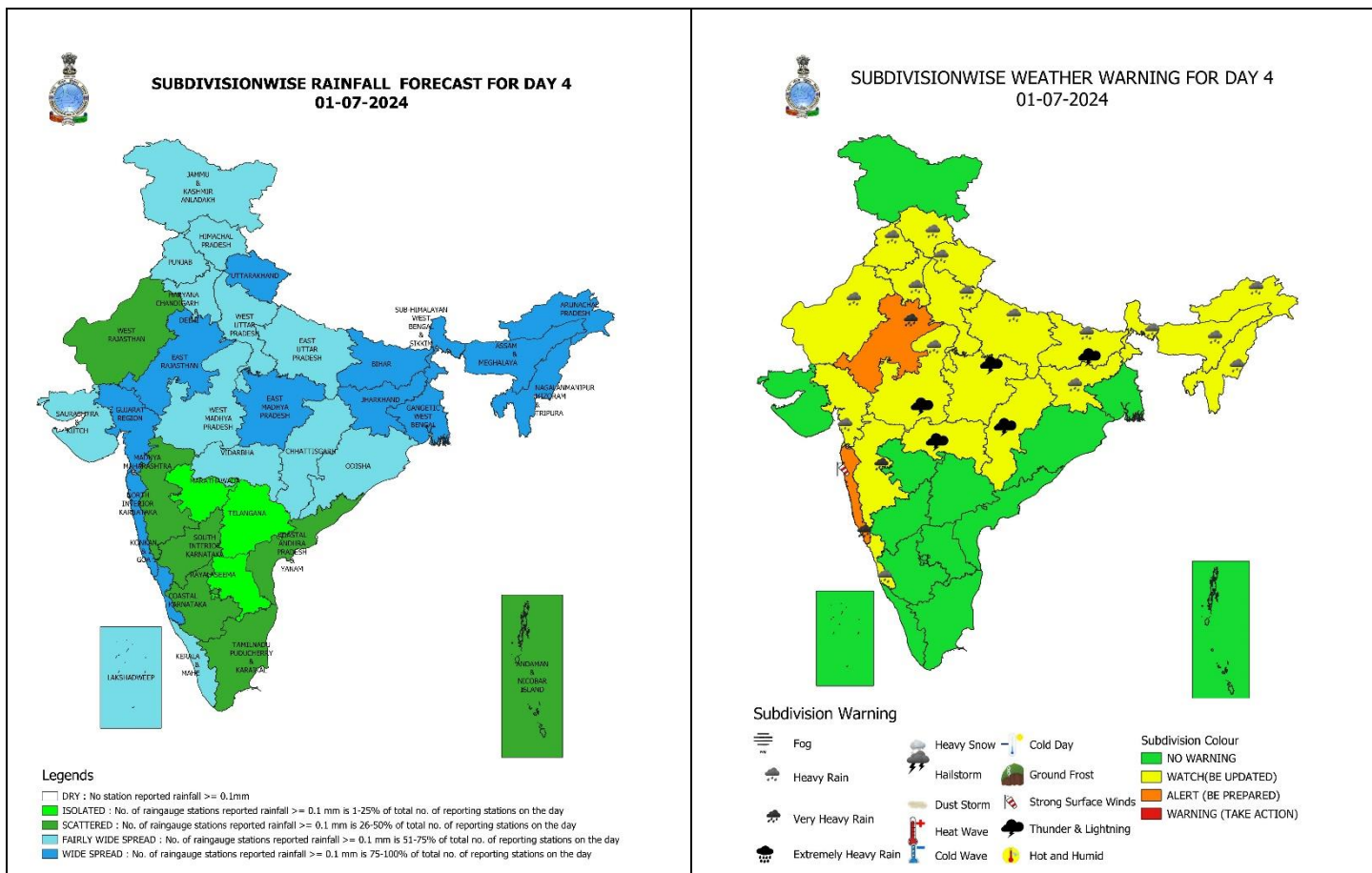
- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Uttarakhand, Haryana-Chandigarh-Delhi, Uttar Pradesh, East Rajasthan, Bihar, Odisha, Assam & Meghalaya, Konkan & Goa; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Delhi, Madhya Pradesh, Chhattisgarh, West Bengal & Sikkim, Jharkhand, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra and Coastal Karnataka.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Bihar and Telangana; **with lightning** at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over eastcentral and adjoining westcentral Arabian sea, northern parts of southeast & southwest Arabian sea, over gulf of Mannar, off Sri Lanka coast, south and central Bay of Bengal & north Bay of Bengal, off north Andhra Pradesh, off Odisha, off west Bengal coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** to prevail along and off Gujarat Maharashtra, Konkan, goa coasts, over off north Andhra Pradesh coast and adjoining areas, along and off Somalia coast, southwest and adjoining southeast Arabian sea & central Arabian sea, along and off Yemen and Oman coasts. Fishermen are advised not to venture into these areas.

\* 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)



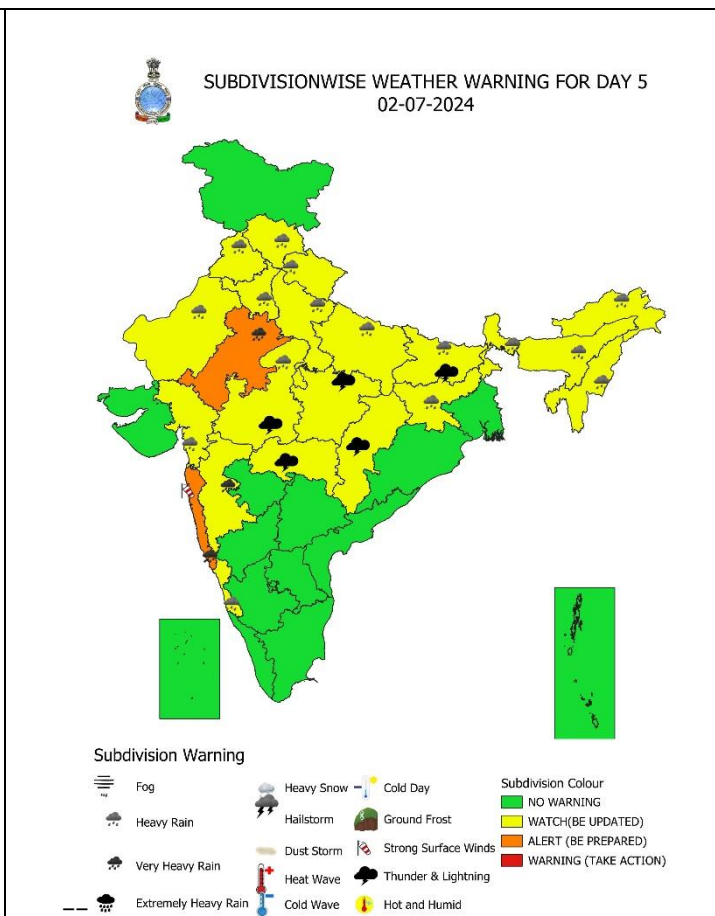
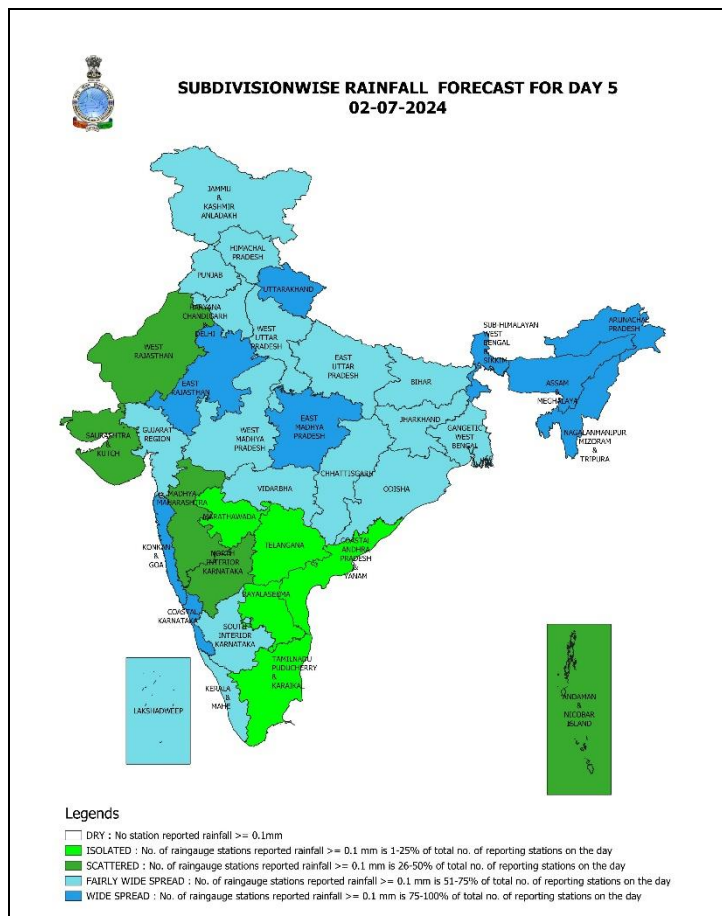
**30 June (Day 3):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Rajasthan, Konkan & Goa, Madhya Maharashtra; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Delhi, East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region, Coastal Karnataka.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Bihar and Telangana; **with lightning** at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over eastcentral and adjoining westcentral Arabian sea, northern parts of southeast & southwest Arabian sea, over gulf of Mannar, off Sri Lanka coast, south and central Bay of Bengal & north Bay of Bengal, off north Andhra Pradesh, off Odisha, off west Bengal coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** to prevail along and off Gujarat Maharashtra, Konkan, goa coasts, over off north Andhra Pradesh coast and adjoining areas, along and off Somalia coast, southwest and adjoining southeast Arabian sea & central Arabian sea, along and off Yemen and Oman coasts. Fishermen are advised not to venture into these areas.



## 01 July (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over East Rajasthan, Konkan & Goa, Madhya Maharashtra; **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, West Rajasthan, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region and Coastal Karnataka.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Bihar and Telangana; **with lightning** at isolated places over Kerala & Mahe and Coastal Andhra Pradesh & Yanam.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over eastcentral and adjoining westcentral Arabian sea, northern parts of southeast & southwest Arabian sea, along and off Gujarat, north Maharashtra coasts, over gulf of Mannar, off Sri Lanka coast, south and central Bay of Bengal & north Bay of Bengal, off north Andhra Pradesh, off Odisha, off west Bengal coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** to prevail along and off Gujarat Maharashtra, Konkan, goa coasts, over off north Andhra Pradesh coast and adjoining areas, along and off Somalia coast, southwest and adjoining southeast Arabian sea & central Arabian sea, along and off Yemen and Oman coasts. Fishermen are advised not to venture into these areas.

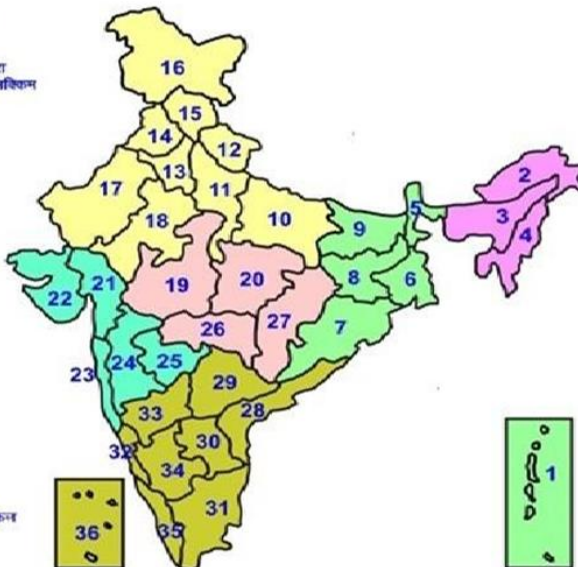


## 02 July (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over East Rajasthan, Konkan & Goa, Madhya Maharashtra; **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, West Rajasthan, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region and Coastal Karnataka.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Bihar and Telangana; **with lightning** at isolated places over Kerala & Mahe and Coastal Andhra Pradesh & Yanam.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over eastcentral and adjoining westcentral Arabian sea, northern parts of southeast & southwest Arabian sea, along and off Gujarat, north Maharashtra coasts, over gulf of Mannar, off Sri Lanka coast, south and central Bay of Bengal & north Bay of Bengal, off north Andhra Pradesh, off Odisha, off west Bengal coasts. **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** to prevail along and off Gujarat Maharashtra, Konkan, goa coasts, over off north Andhra Pradesh coast and adjoining areas, along and off Somalia coast, southwest and adjoining southeast Arabian sea & central Arabian sea, along and off Yemen and Oman coasts. Fishermen are advised not to venture into these areas.

## LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर 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 उत्तराखंड
- 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 क्षेत्र
- 22 सोराष्ट्र एवं कच्छ
- 23 कोकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 महाराष्ट्र
- 26 विदर्भ
- 27 उत्तरीसमूह, पुदुचेरी एवं कराईकल
- 28 तटीय आंध्र प्रदेश एवं यानम
- 29 तेलंगाना
- 30 रायलसेमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 उत्तरी कर्नाटक
- 33 अंतर्देशीय उत्तरी कर्नाटक
- 34 अंतर्देशीय दक्षिणी 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. 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)

## 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)