



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 26<sup>th</sup> June, 2024

Time of Issue: 1315 hours IST

**Subject: 1) Heavy to very heavy rainfall very likely along the West Peninsular Coast during next 3-4 days and over Northeast India likely during 27<sup>th</sup>-30<sup>th</sup> June.**  
**2) Rainfall activity is likely to increase over Northwest India with heavy to very heavy rainfall likely during 28<sup>th</sup>-30<sup>th</sup> June.**

**Realised weather during past 24 hours till 0830 hours IST of today: (details in Annexure I)**

- ❖ *Yesterday, Maximum temperatures were in the range of 40-43°C over some parts of Punjab and West Rajasthan and in isolated pockets of Haryana, south Uttar Pradesh, southwest Bihar and northwest Jharkhand. These were above normal by 2-4°C over these regions.*
- ❖ *Yesterday, Heat wave conditions observed in isolated pockets of Punjab and west Bihar.*
- ❖ *Yesterday, the highest Maximum Temperature of 45.4°C was reported at Jaisalmer (West Rajasthan) over the country.*
- ❖ *Heavy to very heavy rainfall with extremely heavy falls occurred at isolated places over Bihar; Heavy to very heavy rainfall at isolated places over Tamil Nadu, Kerala, Coastal Karnataka, South Interior Karnataka, Konkan & Goa, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, East Uttar Pradesh; heavy rainfall at isolated places over Arunachal Pradesh, Saurashtra & Kutch, southwest Rajasthan, Coastal Andhra Pradesh, Mahe, Madhya Maharashtra, Uttarakhand and Odisha.*
- ❖ *Gusty winds/squally winds data reported over the country is attached in Annexure II.*

**Advance of Southwest Monsoon:**

- ❖ The Northern Limit of Monsoon continues to pass through 23°N/60°E, 23°N/65°E, Mundra, Mehsana, Udaipur, Shivpuri, Siddhi, Lalitpur, Chaibasa, Haldia, Pakur, Sahibganj and Raxaul.
- ❖ Conditions are likely to become favourable for further advance of Southwest Monsoon into remaining parts of North Arabian Sea, Gujarat State, Madhya Pradesh; some more parts of Rajasthan; remaining parts of Chhattisgarh, West Bengal, Jharkhand and Bihar; most parts of East Uttar Pradesh; some more parts of West Uttar Pradesh; some parts of Uttarakhand, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, northern parts of Punjab and northern parts of Haryana during next 3-4 days.

**Weather Systems and Forecast & Warnings:**

- ❖ A trough at mean sea level runs off Maharashtra-central Kerala coasts. A cyclonic circulation lies over central Gujarat in lower & middle tropospheric levels and a trough runs from this cyclonic circulation to east Vidarbha 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, Marathwada, 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, Tamil Nadu, Puducherry & Karaikal during next 5 days.
  - Isolated **heavy rainfall** very likely over Gujarat Region, Konkan & Goa, Madhya Maharashtra, Coastal Karnataka during 26<sup>th</sup>-30<sup>th</sup>; Tamil Nadu, North Interior Karnataka, Telangana, Saurashtra & Kutch on 26<sup>th</sup> & 27<sup>th</sup> and over Coastal Andhra Pradesh, Kerala & Mahe, South Interior Karnataka during 26<sup>th</sup>-28<sup>th</sup> June, 2024.
  - Isolated **heavy rainfall** also very likely over Madhya Pradesh during 27<sup>th</sup>-30<sup>th</sup>; Vidarbha on 27<sup>th</sup> & 28<sup>th</sup> and over Chhattisgarh during 26<sup>th</sup>-30<sup>th</sup> June.
  - Isolated **very heavy rainfall** very likely over Konkan & Goa, Coastal Karnataka on 27<sup>th</sup> & 28<sup>th</sup>; South Interior Karnataka, Kerala & Mahe on 26<sup>th</sup> & 27<sup>th</sup>; Tamil Nadu on 26<sup>th</sup> June.

➤ **Isolated extremely heavy rainfall** also likely over Coastal Karnataka today.

- ❖ 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 a trough runs from this cyclonic circulation to Manipur 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 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 & gusty winds (30-40 kmph)** very likely over East Rajasthan, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, Odisha and Gangetic West Bengal during next 5 days.
  - Isolated to Scattered light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, West Rajasthan on 26<sup>th</sup> & 27<sup>th</sup>; and likely to increase with fairly widespread to widespread light to moderate rainfall during 28<sup>th</sup>-30<sup>th</sup> over these regions.
  - Isolated **heavy rainfall** very likely over Uttarakhand, East Rajasthan, East Uttar Pradesh during 26<sup>th</sup>-30<sup>th</sup>; West Uttar Pradesh during 27<sup>th</sup>-30<sup>th</sup>; West Rajasthan on 26<sup>th</sup> & 27<sup>th</sup>; Himachal Pradesh, Haryana and over Punjab during 28<sup>th</sup>-30<sup>th</sup> June.
  - **Isolated very heavy rainfall** very likely over Uttarakhand during 28<sup>th</sup>-30<sup>th</sup>; East Uttar Pradesh during 28<sup>th</sup>-29<sup>th</sup>; over Haryana and West Uttar Pradesh on 29<sup>th</sup> & 30<sup>th</sup> June, 2024.
  - Isolated **heavy rainfall** very likely over Arunachal Pradesh on 26<sup>th</sup>; Assam & Meghalaya on 26<sup>th</sup> & 27<sup>th</sup>; Andaman & Nicobar Islands on 27<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim during 27<sup>th</sup>-30<sup>th</sup>; Bihar on 27<sup>th</sup>, 29<sup>th</sup> & 30<sup>th</sup>; Jharkhand during 28<sup>th</sup>-30<sup>th</sup>; Odisha on 26<sup>th</sup> & 29<sup>th</sup>; Gangetic West Bengal on 30<sup>th</sup> June.
  - **Isolated very heavy rainfall** very likely over Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Bihar on 26<sup>th</sup>; Odisha on 27<sup>th</sup> & 28<sup>th</sup>; Arunachal Pradesh during 27<sup>th</sup>-30<sup>th</sup>; Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 28<sup>th</sup>-30<sup>th</sup> June 2024.

#### Maximum temperature forecast for next 5 days:

- ❖ No significant change in maximum temperatures very likely over Northwest India during next 2 days and fall by 3-5°C thereafter.
- ❖ Fall by 2-4°C in maximum temperatures very likely over Central India during next 5 days.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

#### Heat Wave warning for next 5 days:

- ❖ **Heat wave conditions** very likely in isolated pockets of Punjab on 26<sup>th</sup> June and **abate thereafter**.

For more details, kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

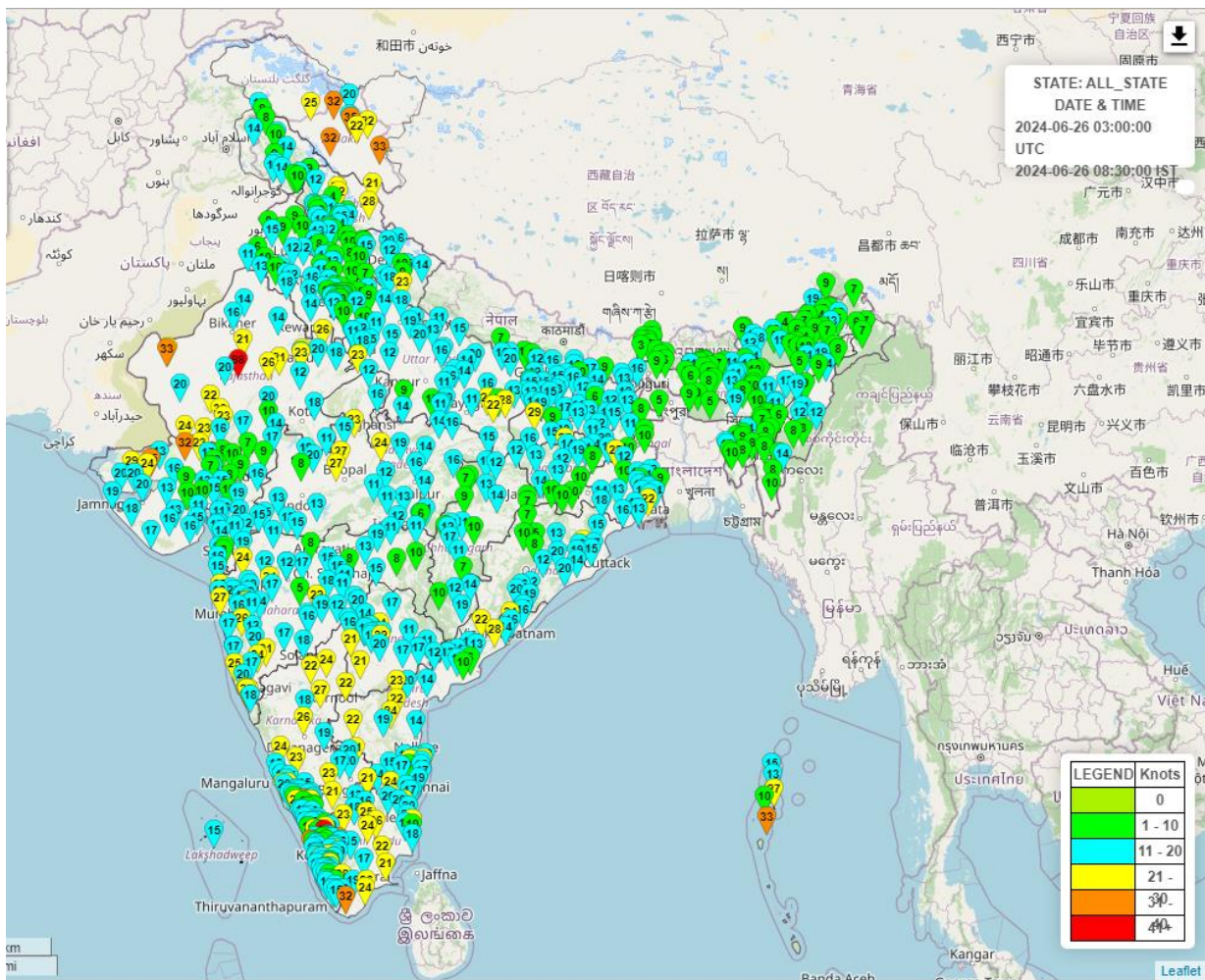
**Significant Rainfall during past 24 hours till 0830 hours IST of today (in cm):**

- ❖ **Bihar:** Bahadurganj (dist Kishanganj) 28, Dighalbank (dist Kishanganj) 12, Taibpur (dist Kishanganj) 9, Thakurganj (dist Kishanganj) 8, Kishanganj (dist Kishanganj) 7,
- ❖ **Tamil Nadu:** Chinnakalar (dist Coimbatore) 20, Devala (dist The Nilgiris) 19, Gudalur Bazar (dist The Nilgiris), Upasi TRF AWS (dist Coimbatore), Cincona (dist Coimbatore) 15 each, Upper Gudalur (dist The Nilgiris) 14, Taluk Office Pandalur (dist The Nilgiris) 13, Went Worth Estate (dist The Nilgiris), Sholayar (dist Coimbatore) 12 each, Avalanche (dist The Nilgiris), Valparai Taluk Office (dist Coimbatore), Valparai PAP (dist Coimbatore) 11 each, Nalumukku (dist Tirunelveli), Wood Braiyar Estate (dist The Nilgiris), Oothu (dist Tirunelveli), Barwood (dist The Nilgiris) 9 each, Kakkachi (dist Tirunelveli) 8, Periyar (dist Theni), Harisan Malayalam Ltd, Cherumulli (dist The Nilgiris), Upper Bhavani (dist The Nilgiris), Shencottah (dist Tenkasi) 7 each,
- ❖ **Coastal Karnataka:** Mulki (dist Dakshina Kannada) 18, Manki (dist Uttara Kannada) 17, Mani (dist Dakshina Kannada) 14, Mangaluru Ap Obsy (dist Dakshina Kannada) 13, Kundapur (dist Udupi) 13, Ankola (dist Uttara Kannada) 11, Gokarna (dist Uttara Kannada) 11, Sulya (dist Dakshina Kannada) 10, Panambur Obsy (dist Dakshina Kannada) 10, Puttur Hms (dist Dakshina Kannada) 10, Uppinangadi (dist Dakshina Kannada) 9, Mangaluru (dist Dakshina Kannada) 9, Siddapura (dist Udupi) 9, Kumta (dist Uttara Kannada) 8, Gersoppa (dist Uttara Kannada) 8, Honavar Obsy (dist Uttara Kannada) 8, Shirali Pto (dist Uttara Kannada) 7, Kota (dist Udupi) 7
- ❖ **East Uttar Pradesh:** Ayoadhya (dist Ayodhya) 18, Rajghat ( Vns Cwc ) (dist Varanasi) 9, Meja (dist Prayagraj) 9, Birdghat (dist Gorakhpur) 7, Sultanpur Cwc (dist Sultanpur) 7, Chandauli (dist Chandauli) 7, Chopan Fmo (dist Sonbhadra) 7,
- ❖ **Kerala:** Padinjarathara Dam AWS (Wayanad district) 17, Munnar (Idukki district) 15, Peerumedu (Idukki district), Vadakara (Kozhikode district), Vythiri (Wayanad district) & Lower Sholayar AWS (Thrissur district) 14 each, Idamalayar Dam AWS (Ernakulam district) 13, Kottayam, Thalassery (Kannur district), Venkurinji AWS (Pathanamthitta district), Vadakara AWS (Kozhikode district), Ayyankunnu AWS (Kannur district) & Padannakkad AWS (Kasargod district) 12 each, Aryankavu (Kollam district), Cherthala (Alappuzha district), Kumarakom & Vadavathur AWS (both in Kottayam district), Choondy AWS (Ernakulam district), Munderi AWS (Malappuram district), Cheruvanchery AWS (Kannur district) & Vellarikkundu AWS (Kasaragod district) 11 each, Kannur, Vaikom (Kottayam district), Piravam (Ernakulam district), Ernakulam South, Mahe (Puducherry UT), Athirappalli AWS (Thrissur district) & Panathur AWS (Kasargod district) 10 each;
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Sevoke (dist Darjeeling) 17, Siliguri Pto (dist Darjeeling) 15, Hasimara (dist Alipurduar) 9, Champasari (dist Darjeeling) 8, Yuksom (dist Gyalshing) 7,
- ❖ **South Interior Karnataka:** Bhagamandala (dist Kodagu) 15, Agumbe Emo (dist Shivamogga) 9, Napoklu (dist Kodagu) 9, Ponnampet Pwd (dist Kodagu) 8, Kottigehara (dist Chikkamagaluru) 7, Murnadu (dist Kodagu) 7,
- ❖ **Andaman & Nicobar Islands:** Long Island (dist North & Middle Andaman) 14, Port Blair (dist South Andaman) 9,
- ❖ **Saurashtra & Kutch:** Visavadar (dist Junagadh) 11, Gandhidham (dist Kutch) 10, Jamjodhpur (dist Jamnagar) 5,
- ❖ **Coastal Andhra Pradesh & Yanam:** Srungavarapukota (dist Vizianagaram) 9, Mandasa (dist Srikakulam) 6,
- ❖ **Konkan & Goa:** Sawantwadi (dist Sindhudurg) 9, Malvan (dist Sindhudurg) 9, Ratnagiri - Imd Obsy (dist Ratnagiri) 9, Awalegaon - Arg (dist Sindhudurg) 8, Canacona (dist South Goa) 7, Ponda (dist North Goa) 7, Kudal (dist Sindhudurg) 7, Rajapur (dist Ratnagiri) 7, Mulde\_ Agri (dist Sindhudurg) 7,
- ❖ **West Rajasthan:** Sedwa Sr (dist Barmer) 7,
- ❖ **Uttarakhand:** Dehradun, Pithoragarh-7 each
- ❖ **Arunachal Pradesh:** Nachu Arg (dist Upper Subansiri) 7, Bhalukpong (dist West Kameng) 6,
- ❖ **East Rajasthan:** Mahwa (dist Dausa) 6, Khandar Sr (dist Sawai Madhopur) 5,

### Reported maximum wind speed (in kmph) during past 24 hours till 0830 hours IST of today:

- ❖ **Kerala & Mahe:** Padinjara-thara-72, Kovilkadavu and Munakkal-57, Karapuzha-48, Cheruthoni and Vadakara-46;
- ❖ **Gujarat:** bachau-65, Radhanpur-59, Bhuj-54;
- ❖ **Ladakh:** Chuchot-65, Nyoma-61, Padum and Khaltse-59 each, Kargil-46;
- ❖ **Rajasthan:** Jaiselmer-61, Sirohi-56, Jaipur, Alwar and Ajmer-48 each;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Kanyakumari-59, Tenkasi-52, Thoothukudi and Sirugamani-48, Namakkal and Ranipet-46;
- ❖ **Goa:** North Goa-54;
- ❖ **Bihar:** Aurangabad-54;
- ❖ **Uttar Pradesh:** Chandauli-52;
- ❖ **Himachal Pradesh:** Reckon-52;
- ❖ **Andhra Pradesh:** Yelamanchili-52;
- ❖ **Madhya Pradesh:** Sehore and Ahmadpur-50 each;
- ❖ **Karnataka:** Gangavathi-50 and Davanagere- 48;
- ❖ **Maharashtra:** Alibagh-50, Mahabaleshwar-48, Devgad-46;
- ❖ **Jharkhand:** Hazaribagh-46.

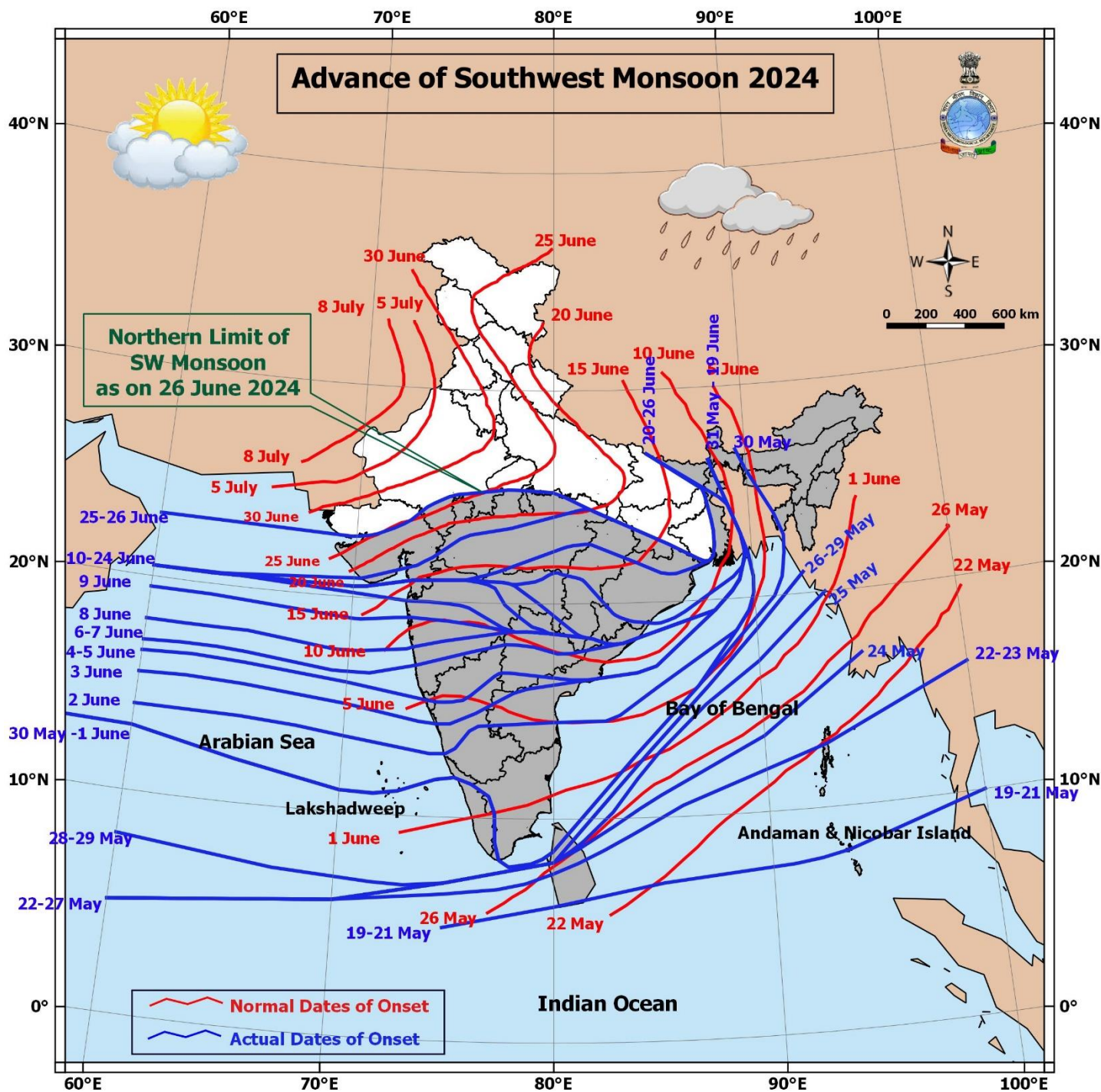
**Fig.: Gusty winds reported over the country (in knots, 1 Knot = 1.85 kmph) from 0830 hrs IST of 25.06.2024 to 0830 hrs IST of 26.06.2024**

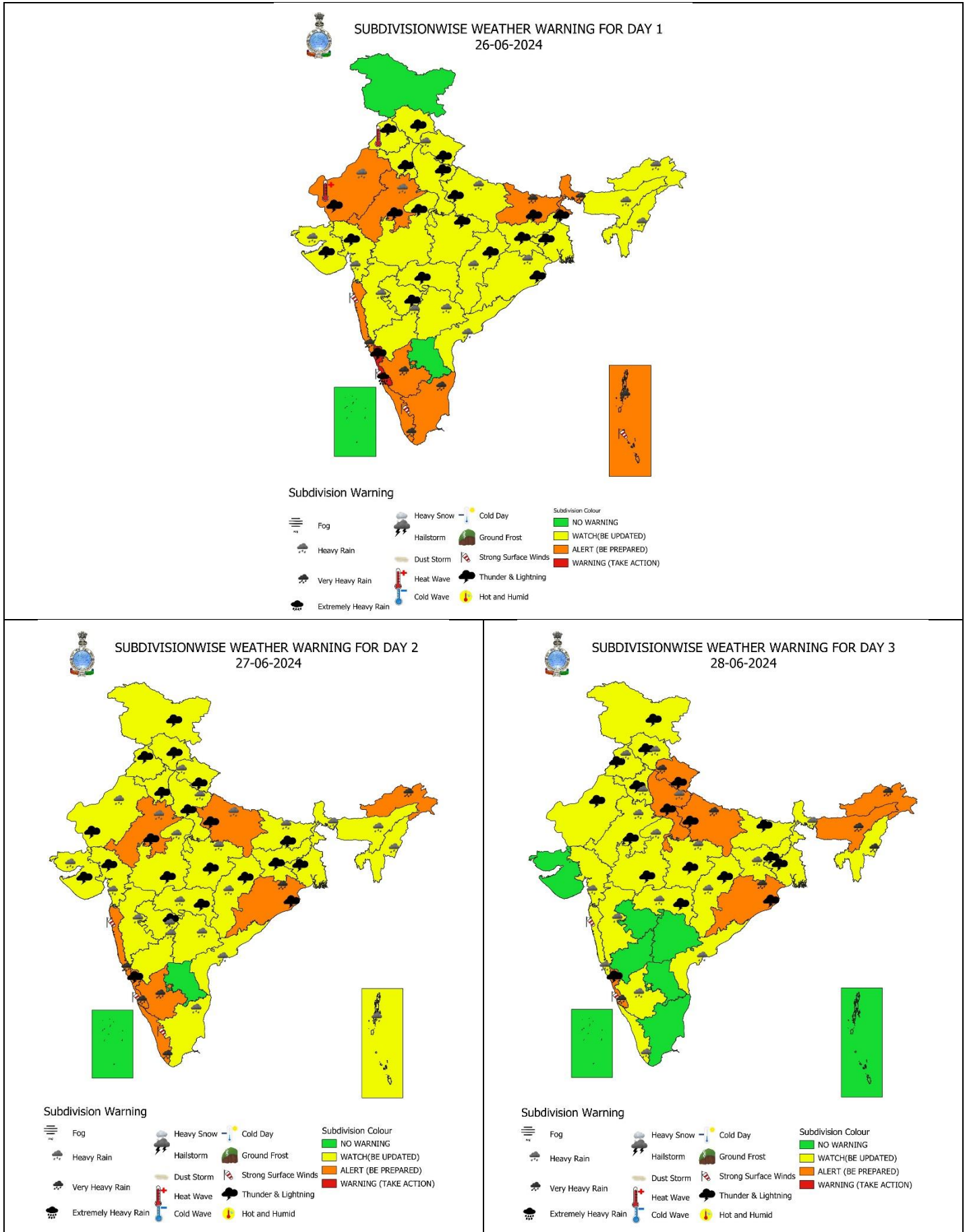


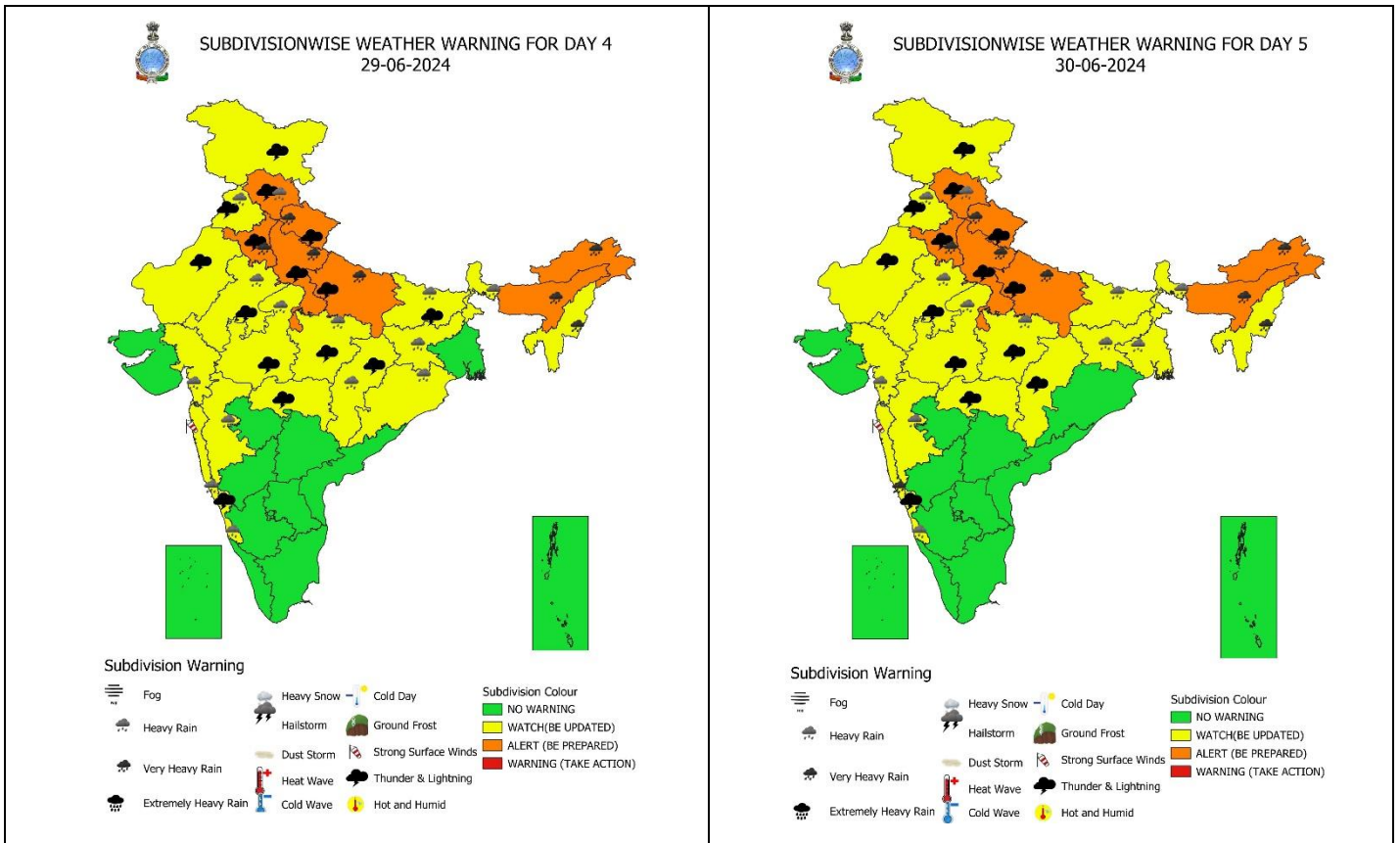
For more details, kindly refer: <http://aws.imd.gov.in:8091/>



### Advance of Southwest Monsoon 2024







**IMPACT & ACTION SUGGESTED due to very heavy/extremely heavy rainfall over Coastal Karnataka during 26<sup>th</sup>-28<sup>th</sup>; Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Bihar on 26<sup>th</sup>; South Interior Karnataka, Kerala & Mahe, Konkan & Goa on 26<sup>th</sup> & 27<sup>th</sup>; Uttarakhand, East Uttar Pradesh during 28<sup>th</sup>-30<sup>th</sup> June.**

### Impact Expected

- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutcha roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides/landslips/mud slips/landsinks/mudsinks.
- Damage to horticulture and standing crops in some areas due to inundation.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

### Action Suggested

- Check for traffic congestion on your route before leaving for your destination.
- Follow any traffic advisories that are issued in this regard.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

### Agromet advisories for Heavy Rainfall, Gusty winds and Heat Wave likely over various parts of the country:

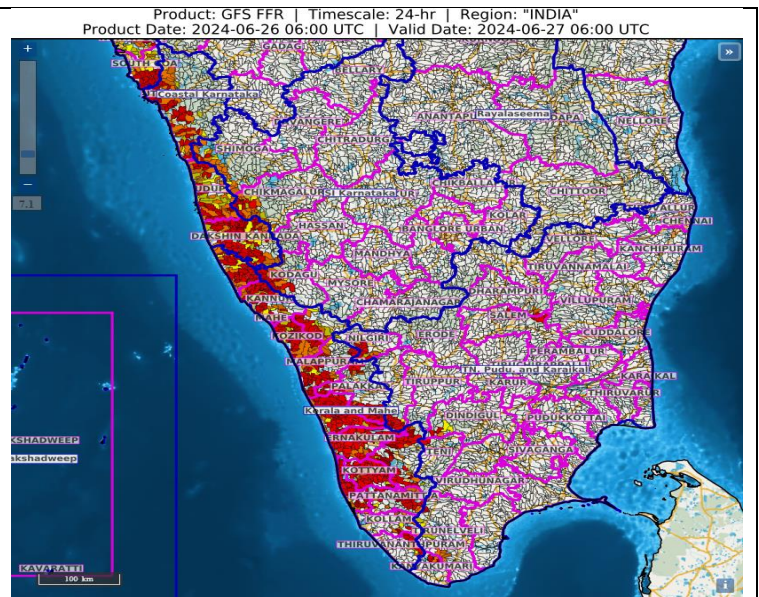
- Make provision for draining out excess water from crop fields to avoid water stagnation in Arunachal Pradesh, Assam & Meghalaya, Andaman & Nicobar Islands, Sub Himalayan West Bengal & Sikkim, Uttarakhand, Madhya Pradesh, Vidarbha, Konkan & Goa, Madhya Maharashtra, Gujarat State, Tamil Nadu, Kerala, Coastal and South Interior Karnataka and Coastal Andhra Pradesh.
- Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation in Jammu, Punjab and West Rajasthan.
- Provide mechanical support to horticultural crops & staking to vegetables.



**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 27-06-2024 :**

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Kerala & Mahe and adjoining parts of southern Coastal Karnataka Met Sub-divisions during next 24 hours.

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





## Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office.
- ❖ **Region wise classification of meteorological Sub-Divisions:**
  - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
  - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
  - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
  - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
  - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and 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)



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

## LEGENDS

### WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

### 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)	
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**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)	