



**Government of India  
Ministry of Earth Sciences  
India Meteorological Department**



**Press Release**

**Date: 17<sup>th</sup> June, 2025**

**Time of Issue: 1345 hours IST**

- Subject:** (i) Conditions are favourable for further advance of Southwest monsoon over remaining parts of North Arabian Sea & Gujarat; some parts of Rajasthan; some more parts of Madhya Pradesh; remaining parts of Chhattisgarh, Jharkhand & Bihar and some parts of East Uttar Pradesh during next 2 days.
- (ii) Under the influence of two low pressure areas one over Southwest Bangladesh and adjoining Gangetic West Bengal and another over Gujarat region; very heavy to extremely heavy rainfall at isolated places likely over Gujarat, Coastal & south Interior Karnataka, north Konkan, north Kerala on 17<sup>th</sup>; Gangetic West Bengal, Jharkhand, Odisha on 17<sup>th</sup> & 18<sup>th</sup> June, 2025.
- (iii) Heavy to very heavy rainfall likely to continue over Northeast India during next 5 days with extremely falls over Meghalaya on 18<sup>th</sup> & 19<sup>th</sup> June.

**Southwest Monsoon: (Annexure I):**

- ❖ Southwest Monsoon has further advanced over some more parts of North Arabian Sea and Gujarat and remaining parts of Vidarbha, more parts of Madhya Pradesh; most parts of Chhattisgarh; remaining parts of Odisha; some parts of Jharkhand; entire Gangetic West Bengal and remaining parts of Sub-Himalayan West Bengal and some parts of Bihar.
- ❖ The Northern Limit of Monsoon passes through 24.0°N/60°E, 24.0°N/65°E, Deesa, Indore, Panchmarhi, Mandla, Ambikapur, Hazaribagh, Supaul and 29.0°N/84.0°E.
- ❖ Conditions are favourable for further advance of Southwest monsoon over remaining parts of North Arabian Sea & Gujarat; some parts of Rajasthan; some more parts of Madhya Pradesh; remaining parts of Chhattisgarh, Jharkhand & Bihar and some parts of East Uttar Pradesh during next 2 days.

**Realised weather during past 24 hours till 0830 hours IST of today, the 17<sup>th</sup> June, 2025 (Annexure II):**

- ❖ **Heavy to very heavy rainfall at most places with Extremely heavy rainfall** has been recorded at isolated places over Saurashtra & Kutch; **Heavy to very heavy rainfall with isolated Extremely heavy rainfall** over Ghat areas of Tamil Nadu.
- ❖ **Heavy to very heavy rainfall** has been recorded at isolated places over Coastal & south Interior Karnataka, Kerala, Himachal Pradesh, Gangetic West Bengal, north interior Odisha, Mizoram; **Heavy rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim, Gujarat Region, Bihar, Chhattisgarh, Jharkhand, Punjab, East Rajasthan, West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Arunachal Pradesh, Nagaland, Manipur and Assam & Meghalaya.
- ❖ **Thunderstorm accompanied with Squally/Gusty** winds with speed 60-70 kmph at isolated places over Gujarat Region, Konkan and Madhya Maharashtra; with speed 30-59 kmph at isolated places over Andaman & Nicobar Islands, Marathwada, Saurashtra & Kutch, Punjab, West Madhya Pradesh, Jharkhand, East Madhya Pradesh, East Uttar Pradesh, Chhattisgarh, Gangetic West Bengal, Odisha, Bihar, Himachal Pradesh and Vidarbha.

**For more details of realised weather, kindly refer Annexure II,**

Detailed observations of Maximum Temperature during past 24 hours till 0830 hours IST of today are appended in **Annexure III.**

**i. Weather Systems, Forecast and Warnings (refer to Annexure IV & V):**

- ❖ A **low pressure area** lies over Southwest Bangladesh and adjoining Gangetic West Bengal. It is likely to move slowly west-northwestwards and become more marked over Gangetic West Bengal & neighbourhood during next 24 hours.
- ❖ Another **low pressure area** lies over Gujarat region. It is likely to move nearly northwards during next 24 hours.
- ❖ A **trough** runs form cyclonic circulation associated with low pressure area over Gujarat region & neighbourhood to Jharkhand across Madhya Pradesh & north Chhattisgarh at 0.9 km above mean sea level.
- ❖ A **Western Disturbance** as a trough in middle tropospheric westerlies runs roughly along Long. 72°E to the north of Lat. 30°N.
- ❖ An **upper air cyclonic circulation** lies over northeast Assam in lower tropospheric levels.
- ❖ Under the influence of these systems, the following weather is likely:

#### East & Central India:

- ✓ Light/moderate rainfall at most/many places accompanied with **thunderstorm, lightning & gusty winds speed reaching 40-50 kmph** likely over Andaman & Nicobar Islands on 17<sup>th</sup> & 18<sup>th</sup>; Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand, Odisha during 17<sup>th</sup>-21<sup>st</sup> with **Thundersquall (wind speed reaching 50-60 kmph gusting to 70 kmph)** very likely at isolated places over Madhya Pradesh on 17<sup>th</sup> & 18<sup>th</sup> June.
- ✓ Isolated **heavy rainfall** also likely over West Bengal & Sikkim during 17<sup>th</sup>-19<sup>th</sup>; Bihar, Jharkhand, Odisha, Chhattisgarh, Madhya Pradesh during 17<sup>th</sup>-21<sup>st</sup> June with **very heavy rainfall** over East Madhya Pradesh on 20<sup>th</sup> & 21<sup>st</sup>; Chhattisgarh during 17<sup>th</sup>-20<sup>th</sup>; Bihar on 18<sup>th</sup> & 19<sup>th</sup>; Jharkhand on 17<sup>th</sup>; Odisha on 17<sup>th</sup> & 19<sup>th</sup> June.
- ✓ **Extremely heavy rainfall (>20 cm/24 hours) likely at isolated places over Gangetic West Bengal on 17<sup>th</sup> & 18<sup>th</sup>; Odisha on 18<sup>th</sup>; Jharkhand on 18<sup>th</sup> & 19<sup>th</sup> June.**

#### West India:

- ✓ Light/moderate rainfall at most/many places accompanied with **thunderstorm, lightning & gusty winds speed reaching 30-40 kmph** likely over Gujarat State, Konkan & Goa, Madhya Maharashtra, Marathawada during 17<sup>th</sup> -20<sup>th</sup> June.
- ✓ Isolated **heavy to very heavy rainfall** likely over Konkan & Goa, Madhya Maharashtra, Gujarat Region during 17<sup>th</sup>-23<sup>rd</sup>; Saurashtra & Kutch during 17<sup>th</sup>-19<sup>th</sup> and 22<sup>nd</sup> & 23<sup>rd</sup> with **Extremely heavy rainfall (>20 cm/24 hours) likely at isolated places over Gujarat state on 17<sup>th</sup> June.**

#### South Peninsular India:

- ✓ Light/moderate rainfall at many/some places accompanied with isolated **thunderstorm, lightning & gusty winds speed reaching 40-50 kmph** over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Karnataka during 17<sup>th</sup>-19<sup>th</sup>; Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana during 17<sup>th</sup>-20<sup>th</sup> June.
- ✓ Isolated **heavy rainfall** likely over Tamil Nadu on 17<sup>th</sup> & 18<sup>th</sup>; Kerala, Coastal Karnataka, South Interior Karnataka during 17<sup>th</sup>-19<sup>th</sup>; north Interior Karnataka on 17<sup>th</sup>; with **very heavy rainfall** likely at isolated places over ghat areas of Tamil Nadu and North Kerala on 17<sup>th</sup> June.
- ✓ **Extremely heavy rainfall (>20 cm/24 hours) likely at isolated places over Coastal & South Interior Karnataka on 17<sup>th</sup> June.**
- ✓ **Strong surface winds** (speed reaching 40-60 kmph) very likely over Kerala & Mahe, Lakshadweep, Karnataka on 17<sup>th</sup> & 18<sup>th</sup>; Rayalaseema, Telangana and Coastal Andhra Pradesh & Yanam during 17<sup>th</sup>-20<sup>th</sup> June.

#### Northeast India:

- ✓ Light/moderate rainfall at many/most places accompanied with **thunderstorm, lightning and isolated heavy to very heavy rainfall** likely to continue over Northeast India during next 7 days with **extremely heavy rainfall** over Meghalaya on 18<sup>th</sup> & 19<sup>th</sup> June.

#### Northwest India:

- ✓ Light/moderate rainfall at some/many places accompanied with **thunderstorm, lightning & gusty winds speed reaching 40-50 kmph** likely over Northwest India during 17<sup>th</sup>-23<sup>rd</sup> June.
- ✓ Isolated **heavy rainfall** likely over Uttarakhand, East Uttar Pradesh, East Rajasthan during 17<sup>th</sup>-23<sup>rd</sup>; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 17<sup>th</sup> & 22<sup>nd</sup>; Himachal Pradesh during 20<sup>th</sup>-22<sup>nd</sup>; Punjab, Haryana on 17<sup>th</sup> & during 20<sup>th</sup>-22<sup>nd</sup>; West Uttar Pradesh during 19<sup>th</sup>-22<sup>nd</sup> with **very heavy rainfall** on East Uttar Pradesh on 19<sup>th</sup> & 20<sup>th</sup>; West Uttar Pradesh on 20<sup>th</sup> & 21<sup>st</sup> June.

### Maximum Temperature Forecast:

- ❖ No significant change in maximum temperatures likely over most parts of the country.

### Fishermen Warnings:

- ❖ Fishermen are advised to avoid venturing into the following from 17<sup>th</sup> to 21<sup>st</sup> June 2025:

#### **Arabian Sea:**

- ❖ Fishermen are advised not to venture over Comorin area, Konkan, Karnataka coasts during 17<sup>th</sup> to 19<sup>th</sup>; eastcentral Arabian Sea Along and off Gujarat coast; over most parts of westcentral & northeast Arabian Sea during 17<sup>th</sup>-22<sup>nd</sup> June; Goa-Kerala coast and over Lakshadweep, Maldives areas, south east Arabian Sea on 17<sup>th</sup> & 18<sup>th</sup> June.
- ❖ Fishermen are advised not to venture along and off the Somalia coast and adjoining sea areas, Oman and adjoining Yemen coast & adjoining sea areas during 17<sup>th</sup>-22<sup>nd</sup> June.

#### **Bay of Bengal:**

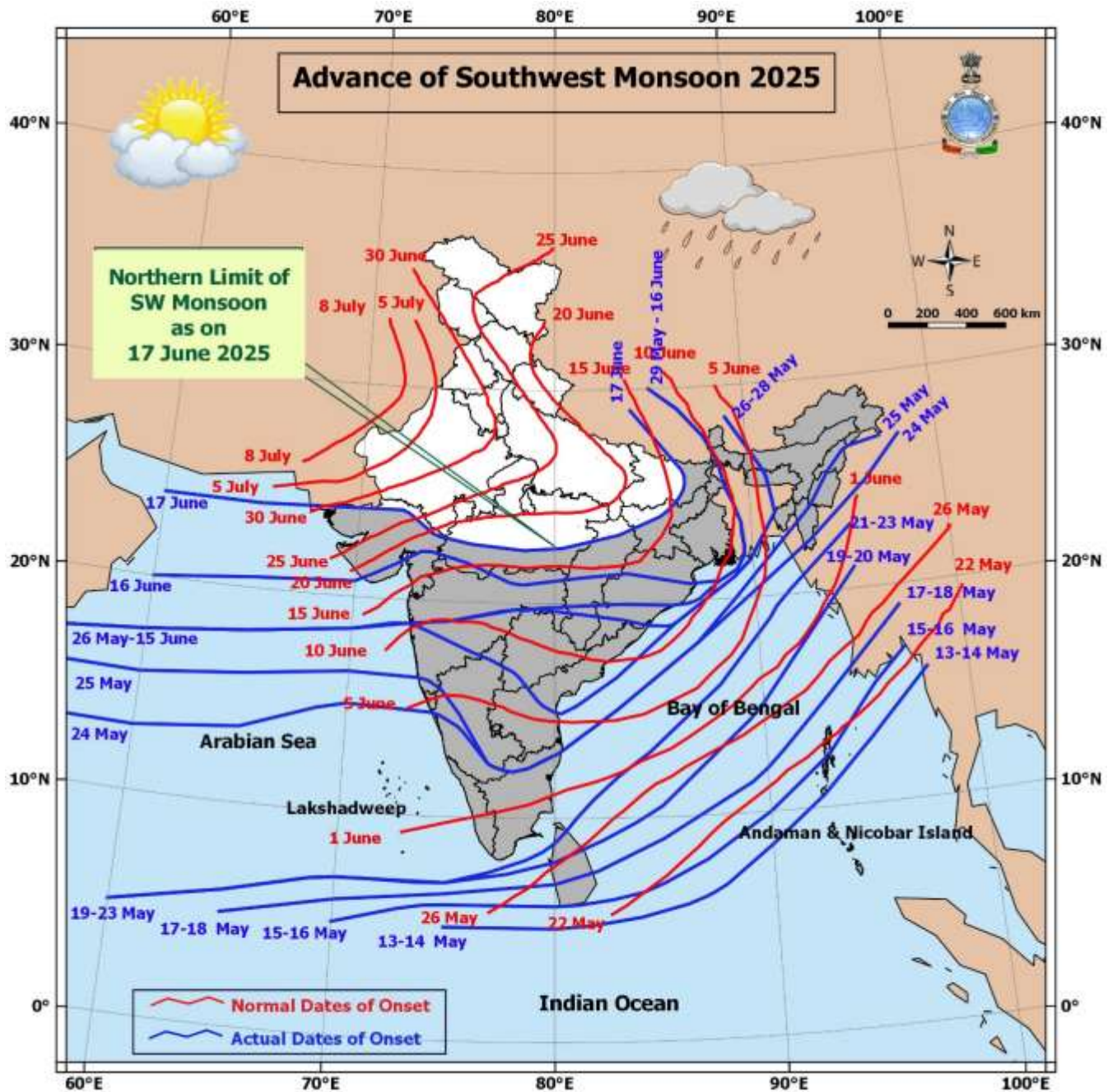
- ❖ Fishermen are advised not to venture over many parts of southwest and adjoining southeast Bay of Bengal on 17<sup>th</sup>; over central Bay of Bengal during 17<sup>th</sup>-19<sup>th</sup>; over north Bay of Bengal on 17<sup>th</sup> & 18<sup>th</sup>; many parts of central Bay of Bengal on 21<sup>st</sup>; and some parts of central Bay of Bengal on 22<sup>nd</sup>; Along and off Sri Lanka, Tamil Nadu coasts on 17<sup>th</sup>; Andhra Pradesh coast during 17<sup>th</sup>-19<sup>th</sup>; Odisha, West Bengal, Bangladesh, Myanmar coasts on 17<sup>th</sup> & 18<sup>th</sup> June.
- ❖ Fishermen are advised not to venture over the Gulf of Mannar and Andaman Sea on 17<sup>th</sup> & 18<sup>th</sup> June.
- ❖ Total suspension of fishing operations is advised over these areas during the specified dates.

### ii. Weather conditions and forecast over Delhi/NCR during 17<sup>th</sup> June to 20<sup>th</sup> June, 2025 (Annexure VI)

For more details, kindly refer National Weather Bulletin:

[https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

For District wise warnings refer: <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>





**Significant weather reported during past 24 hours till 0830 hours IST of today:****Rainfall recorded (in cm) reported during past 24 hours till 0830 hours IST of today, the 17<sup>th</sup> June:**

- ❖ **Saurashtra & Kutch:** Gadhdha (dist Botad) 36; Palitana (dist Bhavnagar) 29; Botad (dist Botad) 28; Shihor (dist Bhavnagar), Umralla (dist Bhavnagar), Jesar (dist Bhavnagar) 27 Each; Savarkundla (dist Amreli) 25; Mahuva(b) (dist Bhavnagar) 22; Chotila (dist Surendranagar), Rajula (dist Amreli), Lilia (dist Amreli) 17 Each; Vallabhipur (dist Bhavnagar) 16; Amreli (dist Amreli), Gariadhar (dist Bhavnagar), Vichhiya (dist Rajkot) 15 Each; Rajula ARG (dist Amreli) 14; Talaja (dist Bhavnagar) 13; Babra (dist Amreli), Morbi (dist Morbi) 12 Each; Jasdan (dist Rajkot), Sayla (dist Surendranagar), Lathi (dist Amreli), Khambha (dist Amreli), Barvala (dist Botad), Chuda (dist Surendranagar), Tankara (dist Morbi), Thangadh (dist Surendranagar) 10 Each; Jetpur (dist Rajkot), Junagarh AWS (dist Junagadh), Halvad (dist Morbi), Okha (dist Devbhoomi Dwarka), Junagadh (dist Junagadh), Muli (dist Surendranagar) 9 Each; Lodhika (dist Rajkot), Rajkot (dist Rajkot), Bhesan (dist Junagadh), Ranpur (dist Botad), Porbandar (dist Porbandar), Vadia (dist Amreli), Targhadia AWS (dist Rajkot), Kalyanpur (dist Devbhoomi Dwarka) 7 Each;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Avalanche (dist Nilgiris) 21; Upper Bhavani (dist Nilgiris) 10; Valparai PTO (dist Coimbatore) 9; Chinnakalar (dist Coimbatore), Sholayar (dist Coimbatore) 8 Each; Periyar (dist Theni), Emeraldad (dist Nilgiris), Worth Estate Cher (dist Nilgiris) 7 Each;
- ❖ **South Interior Karnataka:** Bhagamandala (dist Kodagu) 19; Agumbe Emo (dist Shivamogga) 14; Kammardi (dist Chikkamagaluru), Napoklu (dist Kodagu) 9 Each; Sringeri HMS (dist Chikkamagaluru), Virajpet (dist Kodagu), Ponnampet PWD (dist Kodagu), Kottigehara (dist Chikkamagaluru), Jayapura (dist Chikkamagaluru) 8 Each; Somwarpet (dist Kodagu) 7;
- ❖ **Coastal Karnataka:** Gersoppa (dist Uttara Kannada) 17; Siddapura (dist Udupi) 13; Karkala (dist Udupi), Sulya (dist Dakshina Kannada) 11 Each; Dharmasthala (dist Dakshina Kannada), Kota (dist Udupi) 10 Each; Mani (dist Dakshina Kannada), Udupi (dist Udupi), Castle Rock (dist Uttara Kannada), Honavar (dist Uttara Kannada), Uppinangadi (dist Dakshina Kannada), Kundapur (dist Udupi), Siddapur (dist Uttara Kannada), Belthangadi (dist Dakshina Kannada) 9 Each; Manki (dist Uttara Kannada), Puttur HMS (dist Dakshina Kannada) 8 Each; Kumta (dist Uttara Kannada), Mangaluru (dist Dakshina Kannada) 7 Each;
- ❖ **Gangetic West Bengal:** PTO Tarakeswar (dist Hooghly) 14; Sagar Island PTO (dist South 24 Parganas) 12; Burnpur (dist Paschim Bardhaman) 7;
- ❖ **Kerala & Mahe:** Panathur AWS (dist Kasargod) 14; Hosdurg (dist Kasargod), Muliya AWS (dist Kasargod) 13 Each; Taliparamba (dist Cannur), Cheruvanchery AWS (dist Cannur), Chemberi AWS (dist Cannur), Peringome AWS (dist Cannur) 12 Each; Irikkur (dist Cannur), Peermade To (dist Idukki), Idamalayar Dam AWS (dist Ernakulam), Vadakara AWS (dist Kozhikode) 11 Each; Kudulu (dist Kasargod), Ayyankunnu AWS (dist Cannur) 10 Each; Quilandi (dist Kozhikode), Vyttili (dist Wynad), Mahe (dist Mahe), Pinarayi AWS (dist Cannur), Bayar AWS (dist Kasargod) 9 Each; Munnar Kseb (dist Idukki), Kannur (dist Cannur) 8 Each; Tellichery (dist Cannur), Nilambur (dist Malappuram), Angadipuram (dist Malappuram), Vellanikkara (dist Thrissur), Kunnankulam (dist Thrissur), Kannur Airport AWS (dist Cannur), Kannur Icar AWS (dist Cannur), Kalamassery AWS (dist Ernakulam), Lower Sholayar AWS (dist Thrissur), Peechi AWS (dist Thrissur), Ams Kannur (dist Cannur), Manantoddy (dist Wynad) 7 Each;
- ❖ **Odisha:** Deogarh (dist Deogarh) 13; Kuchinda (dist Sambalpur), Jenapur (dist Jajpur), Rairangpur (dist Mayurbhanj) 9 Each; Gurundia (dist Sundargarh), Jajpur (dist Jajpur), Oupada (dist Balasore) 8 Each; Sukinda (dist Jajpur), Khaira (dist Balasore), Jamda (dist Mayurbhanj), Jharsuguda (dist Jharsuguda), Balisankara (dist Sundargarh) 7 Each;
- ❖ **Madhya Maharashtra:** Radhanagari (dist Kolhapur) 13; Igatpuri (dist Nashik) 11; Lonavala ARG (dist Pune) 10; Mahabaleshwar (dist Satara) 8; Ajra (dist Kolhapur), Shahuwadi (dist Kolhapur) 7 Each;
- ❖ **Konkan & Goa:** Bhiwandi (dist Thane) 13; Matheran (dist Raigad), Thane (dist Thane), Rajapur (dist Ratnagiri) 11 Each; Murbad (dist Thane), Pen (dist Raigad), Uran (dist Raigad), Vasai (dist Palghar), Savarde-arg (dist Ratnagiri) 10 Each; Tbia IMD Part Time (dist Thane), Panvel ARG (dist Raigad), Talasari (dist Palghar), Chiplun (dist Ratnagiri) 9 Each; Santacruz (dist Mumbai Suburban), Sudhagad Pali (dist Raigad), Ambarnath (dist Thane), Ulhasnagar (dist Thane) 8 Each; Alibag - IMD Part Time (dist Raigad), Vikramgad (dist Palghar), Wada (dist Palghar), Khalapur (dist Raigad), Palghar ARG (dist Palghar), Dapoli ARG (dist Ratnagiri), Wakwali ARG (dist Ratnagiri) 7 Each;

- ❖ **Punjab:** Ludhiana (dist Ludhiana) 11; Halwara IAF (dist Ludhiana) 8;
- ❖ **Assam & Meghalaya:** Neamatighat (dist Jorhat) 11; Jorhat (dist Jorhat) 7;
- ❖ **Gujarat Region:** Hansot (dist Bharuch) 11; Vagra (dist Bharuch), Dhandhuka (dist Ahmedabad) 9 Each; Olpad (dist Surat) 8; Ankleshwer (dist Bharuch), Balasinor (dist Mahisagar), Bharuch (dist Bharuch), Umergam (dist Valsad), Vadodara (dist Vadodara), Bodeli (dist Chhota Udepur) 7 Each;
- ❖ **West Madhya Pradesh:** Biaora (dist Rajgarh) 9;
- ❖ **Arunachal Pradesh:** Naharlagun AWS (dist Papumpara) 9; Itanagar (dist Papumpara) 8;
- ❖ **Himachal Pradesh:** Mehre (barsar) (dist Hamirpur) 9;
- ❖ **Sub Himalayan West Bengal & Sikkim:** Karballa Tea Estate (dist Jalpaiguri) 9; Singimari (dist Cooch Behar) 7;
- ❖ **Bihar:** Andar (dist Siwan) 8;
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Thoubal (dist Thoubal) 7;
- ❖ **Jharkhand:** Panchet Dvc (dist Dhanbad), Bandgaon (dist West Singhbhum) 7 Each;
- ❖ **East Uttar Pradesh:** Shardanagar (dist Kheri) 7;
- ❖ **East Rajasthan:** Sikar (dist Sikar) 7;
- ❖ **Chhattisgarh:** Kusmi (dist Balrampur), Gidam (dist Dantewada) 7 Each.

#### **Realised Gusty Winds (kmph) During Past 24hours ending at 0830 hrs IST of today the 17<sup>th</sup> June:**

- ❖ **Gujarat Region:** Bharuch 70;
- ❖ **Konkan:** Alibag (Raigad)- 68, Devgad (Sindhudurg)- 56, Santacruz (Mumbai)- 46, Palghar-46, Dapoli (Ratnagiri)- 39;
- ❖ **Madhya Maharashtra:** Mahabaleshwar (Satara)- 61, Kalwan (Nashik)- 56, Sangli-56, Vilholi (Nashik)- 52, Kurvande (Pune)-48, Narayangaon (Pune)-48, Karjat (Raigad)- 48;
- ❖ **Andaman & Nicobar Islands:** Sri Vijayapuram (53);
- ❖ **Marathwada:** Parbhani- 52, Jalna- 50, Ambejogai (Beed)- 48, Hingoli- 44;
- ❖ **Saurashtra-Kutch:** Botad 50;
- ❖ **Punjab:** Rupnagar 50;
- ❖ **West Madhya Pradesh:** Ashoknagar (50);
- ❖ **Jharkhand:** Simdega (48), Giridih (41), Barhi (39), Palamu, Bano Simdega (37), Bokaro (35), Garhwa (31);
- ❖ **East Madhya Pradesh:** Jabalpur, Rewa (46);
- ❖ **East Uttar Pradesh:** Lucknow (Ap)-43, Kanpur (IAF)-37, Varanasi (Ap)-35;
- ❖ **Chhattisgarh:** Koriya (43);
- ❖ **Gangetic West Bengal:** Sagar Island (43), Durgapur (37), Berhampore, Gangasagar, Alipore (30);
- ❖ **Odisha:** Jagatsinghpur (43), Rourkela (33), Cuttack, Kendrapara, Mayurbhanj (31), Dhankauda (30);
- ❖ **Bihar:** Aurangabad (41), Madhepura, Sheikhpura (39), Dumaraon, Sukhet Bikramganj, Ziradei (37), Arwal, Bhojpur, East Champaran, Rajgir, Agwanpur (35), Begusarai, Saraiya, IIT Patna, Pusa (31), Araria, Katihar (30);
- ❖ **Himachal Pradesh:** Seobagh-39;
- ❖ **Vidarbha:** Yavatmal (39);

### Temperature observations during past 24 hours till 0830 hours IST of today:

- ❖ Yesterday, Maximum temperatures were in the range of 38-42 °C over few places over East Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh; at isolated places over Rajasthan, West Madhya Pradesh; in the range of 33-37°C over a few places over Punjab, Uttar Pradesh, Gangetic West Bengal, Odisha, Vidarbha, Rayalaseema; at isolated places over Himachal Pradesh, Haryana-Chandigarh-Delhi, Telangana, Coastal Andhra Pradesh & Yanam, Marathwada, Saurashtra & Kutch and below 33 °C elsewhere in the remaining part of the country. **Yesterday, the highest maximum temperature of 41.1°C was reported at CHAPRA (BIHAR).**
- ❖ Maximum Temperature Departures: Maximum Temperatures were markedly above normal (> 5.1°C) at isolated places over Odisha, Bihar and Konkan & Goa. appreciably above normal (3.1°C to 5.0°C) at isolated places over Assam & Meghalaya, Sub Himalayan West Bengal & Sikkim, Himachal Pradesh and Jammu-Kashmir Ladakh-Gilgit-Baltistan- Muzaffarabad. above normal (1.6°C to 3.0°C) at few places over Arunachal Pradesh; at isolated places over Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, East Uttar Pradesh, East Rajasthan, East Madhya Pradesh and Chhattisgarh. near normal (-1.5°C to 1.5°C) at many places over Andaman & Nicobar Islands, Uttarakhand, Punjab, West Madhya Pradesh, Gujarat Region, Coastal Andhra Pradesh & Yanam and Lakshadweep; at most places over Jharkhand and Vidarbha; at few places over Saurashtra & Kutch, Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka and Kerala & Mahe; at isolated places over Haryana-Chandigarh-Delhi, West Rajasthan, Madhya Maharashtra, Telangana, Rayalaseema and North Interior Karnataka.

**Fig.1: Maximum Temperatures**

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

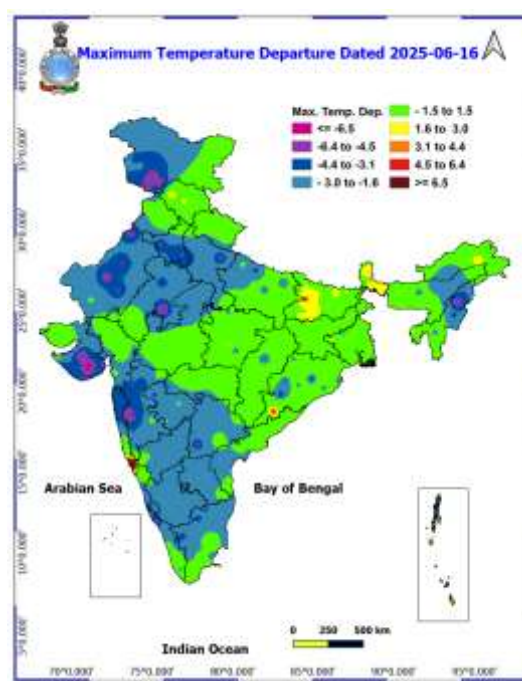
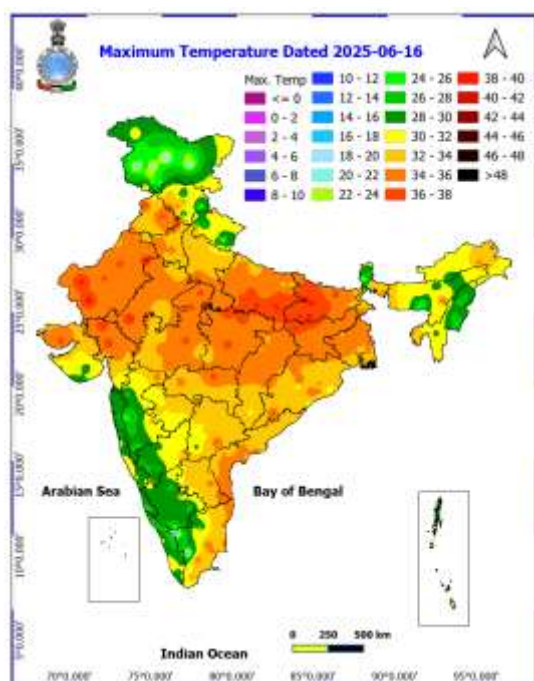
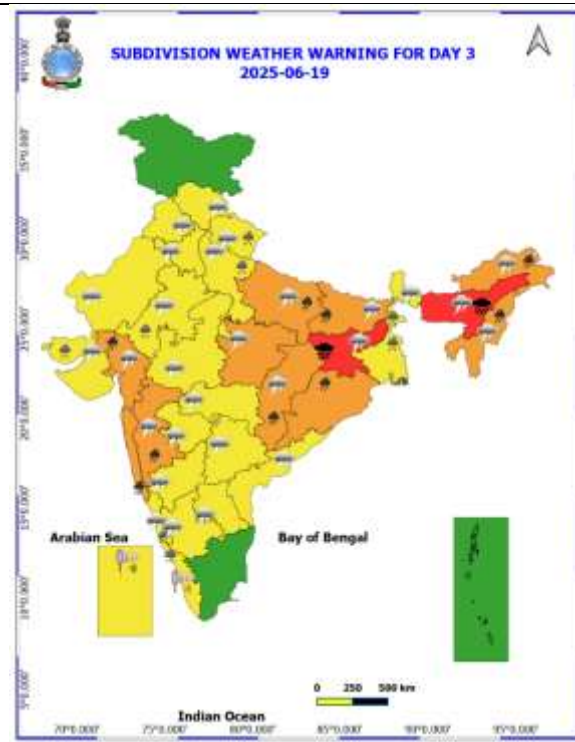
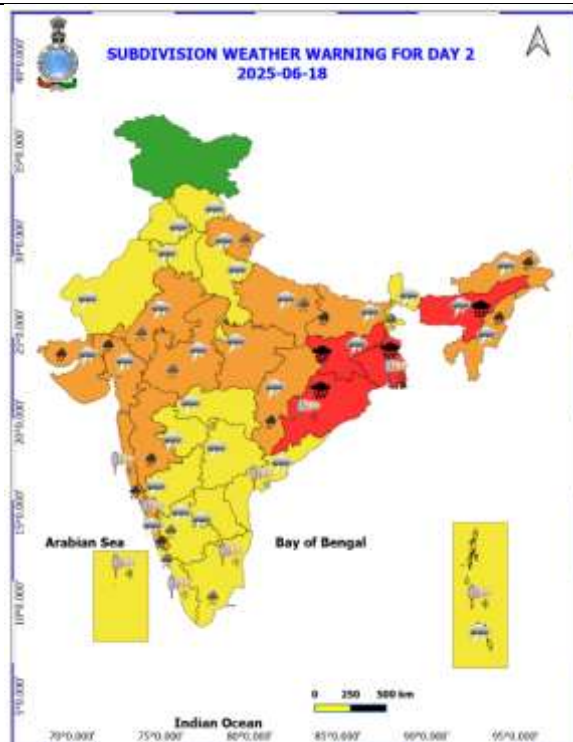
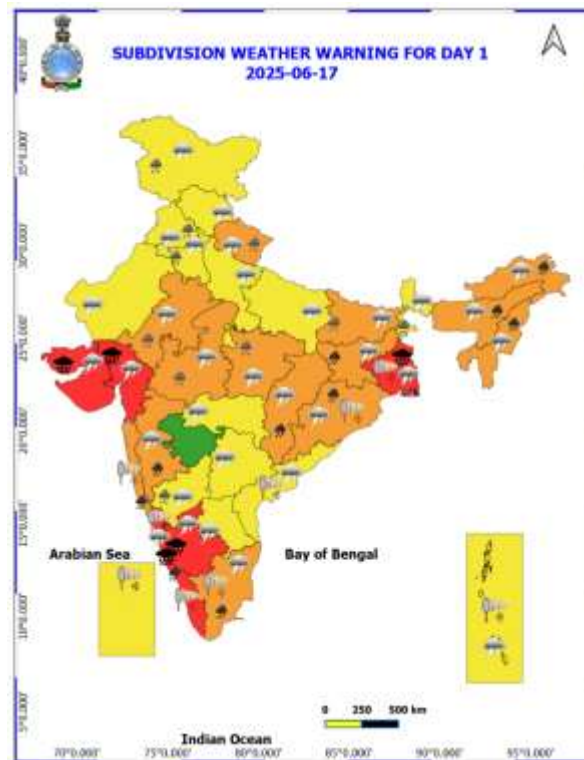


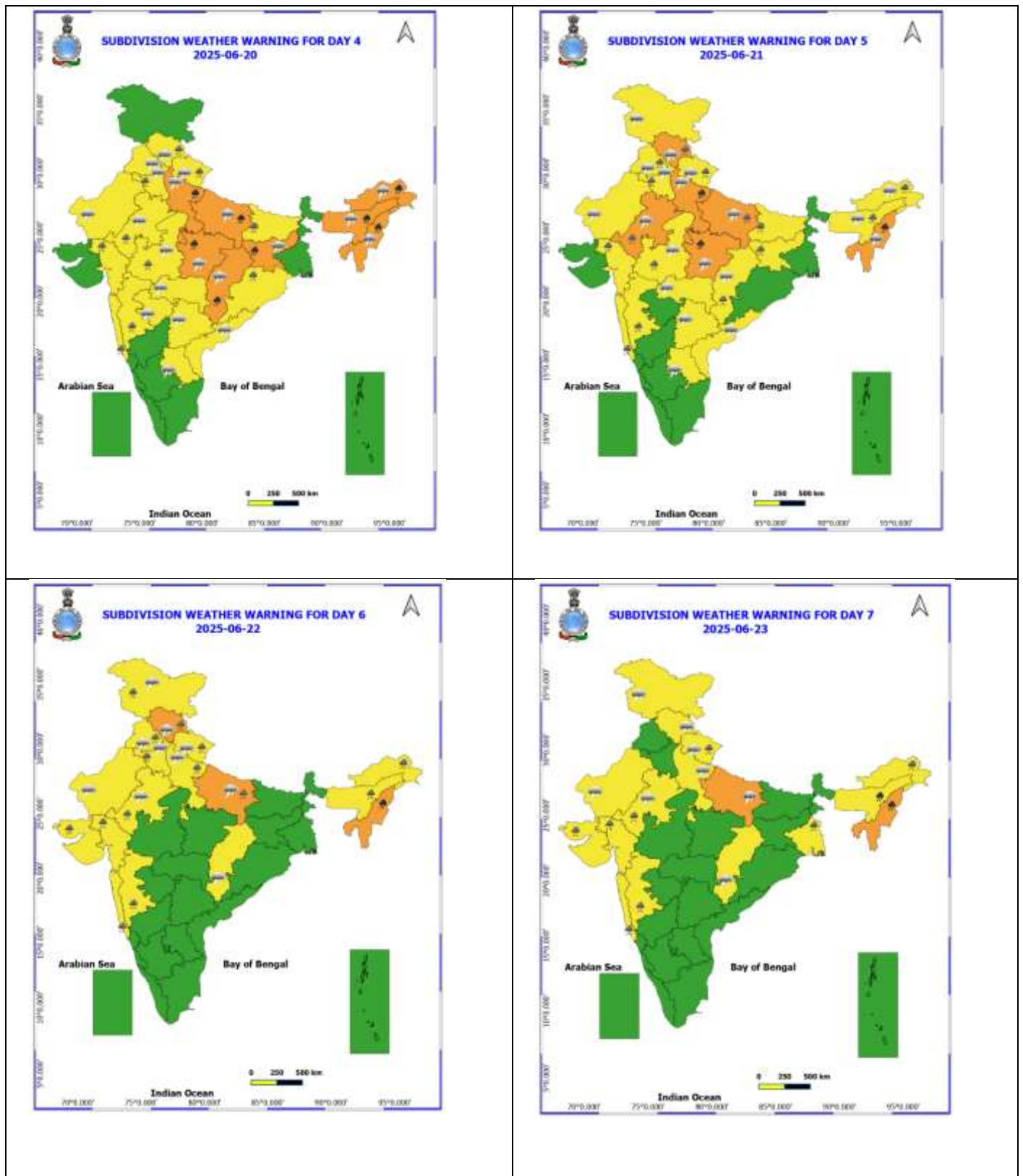


Table-1								
7 Days Rainfall Forecast								
S.No.	Subdivision	17- Jun	18- Jun	19- Jun	20- Jun	21- Jun	22- Jun	23- Jun
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	WB	WB	WB	WB	WB	WB
2	ARUNACHAL PRADESH	WB	WB	WB	WB	FWS	FWS	FWS
3	ASSAM & MEHGHALAYA	WB	WB	WB	WB	FWS	FWS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

- As the lead period increases forecast accuracy decreases.







- Action may be taken based on ORANGE AND REDCOLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

Detailed districtwise Multi Hazard weather warning for next five days available at <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

**Weather forecast over Delhi/NCR during 17<sup>th</sup> to 20<sup>th</sup> June 2025****Past Weather:**

There has been a fall in the minimum temperature up to 1°C and fall in the maximum temperature up to 1°C over Delhi/NCR during the past 24 hours. The maximum and minimum temperatures over Delhi were around 34 to 35°C and 25 to 28° respectively. The minimum temperature was near normal and the maximum temperature was below normal up to 3 - 5°C. Partly cloudy sky conditions with predominant surface wind from the east/southeast direction with wind speeds up to 18 kmph prevailed during the past 24 hours. Partly cloudy sky conditions with wind speed less than 8 kmph from the northeast direction prevailed over the region in the forenoon today.

**Weather Forecast:**

**17.06.2025:** Generally cloudy sky. Light to moderate rain/thunderstorm/lighting with gusty winds 40 - 50 kmph temporary reaching 60 kmph during thunderstorm. The maximum temperatures over Delhi are likely to be in the range of 35 to 37°C. The maximum temperature will be below normal up to 1 - 3°C. The predominant surface wind will likely be from the southeast direction with a wind speed of less than 15 kmph in the afternoon. The wind speed will gradually increase becoming 20-25 kmph from the southeast direction during evening and night.

**18.06.2025:** Generally cloudy sky. Light to moderate rain/thunderstorm/lighting with gusty winds 40 - 50 kmph temporary reaching 60 kmph during thunderstorm towards evening/night. The maximum and minimum temperatures over Delhi are likely to be in the range of 33 to 35°C and 26 to 28°C respectively. The minimum temperature will be near normal and the maximum temperature will be below normal up to 3 - 5°C. The predominant surface wind will likely be from the northeast direction with a wind speed of less than 15 kmph during the morning hours. The wind speed will gradually decrease becoming 08-12 kmph from the southeast direction in the afternoon. It will increase becoming less than 25 kmph from the southeast direction during evening and night.

**19.06.2025:** Partly cloudy sky. Very light to light rain/thunderstorm/lighting accompanied with gusty winds 30 - 40 kmph temporary reaching 50 kmph during thunderstorm. The maximum and minimum temperatures over Delhi are likely to be in the range of 36 to 38°C and 27 to 29°C respectively. The minimum temperature will be near normal and the maximum temperature will be below normal up to 1 - 2°C. The predominant surface wind will likely be from the southeast direction with a wind speed of less than 10 kmph during the morning hours. The wind speed will gradually increase becoming less than 12 kmph from the southeast direction in the afternoon. It will decrease to less than 25 kmph from the southeast direction during the evening and night.

**20.06.2025:** Partly cloudy sky. Very light to light rain/thunderstorm/lighting accompanied with gusty winds 30 - 40 kmph temporary reaching 50 kmph during thunderstorm. The maximum and minimum temperatures over Delhi are likely to be in the range of 36 to 38°C and 28 to 30°C respectively. The minimum temperature will be above normal up to 1 - 2°C and the maximum temperature will be below normal up to 1 - 2°C. The predominant surface wind will likely be from the east direction with a wind speed of less than 15 kmph during the morning hours. The wind speed will gradually decrease becoming less than 12 kmph from the southeast direction in the afternoon. It will increase to less than 18 kmph from the southeast direction during the evening and night.

**Impact expected and Action Suggested due to thunderstorm with lightning/gusty winds:**

- Be cautious and take precautionary measures, though there is the likelihood of thunderstorm/lighting and gusty winds (speed 40 – 50 kmph) temporarily reaching to 60 kmph during thunderstorm with dust rising surface winds.
- Breaking of tree branches, uprooting of large avenue trees, Large dead limbs blown from trees, Damage to standing crops, Minor to major damage to power and communication lines due to breaking of branches, Partial damage to vulnerable structures due to strong winds, Loose objects may fly.
- People are advised to keep a watch on the weather for worsening conditions and be ready to move to safer places accordingly, stay indoors, close windows & doors and avoid travel if possible, take safe shelters; do not take shelter under trees, do not lie on concrete floors and do not lean against concrete walls, unplug electrical/ electronic appliances, immediately get out of water bodies, keep away from all the objects that conduct electricity.

**Impact & Action Suggested due to extremely heavy falls/ very heavy rainfall:**

- ✓ **Extremely heavy rainfall (>20 cm/24 hours) likely at isolated places over Coastal Karnataka, South Interior Karnataka, Gujarat state on 17<sup>th</sup>; Gangetic West Bengal on 17<sup>th</sup> & 18<sup>th</sup>; Odisha on 18<sup>th</sup>; Jharkhand on 18<sup>th</sup> & 19<sup>th</sup> June.**
- ✓ **Heavy to very heavy rainfall** likely to continue over Northeast India during 17<sup>th</sup>-23<sup>rd</sup>; ghat areas of Tamil Nadu, Kerala & Mahe on 17<sup>th</sup>; Konkan, Konkan & Goa, Madhya Maharashtra during 17<sup>th</sup>-19<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/mudslips/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.

**Impact expected and action suggested due to isolated thunderstorm with lightning/gusty & Squally winds over**

**Thundersquall (wind speed reaching 50-60 kmph gusting to 70 kmph)** at isolated places over Madhya Pradesh on 17<sup>th</sup> & 18<sup>th</sup> June.

**Impact expected:**

- Breaking of tree branches, uprooting of large avenue trees. Large dead limbs blown from trees. Damage to Standing crops.
- Minor to Major damage to banana and papaya trees.
- Minor to major damage to power and communication lines due to breaking of branches.
- Strong wind/hail may damage plantation, horticulture and standing crops.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha houses/walls and huts.
- Loose objects may fly.

**Action suggested:**

- People are advised to keep a watch on the weather for worsening conditions and be ready to move to safer places accordingly.
- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the objects that conduct electricity.



## Agromet advisories for likely impact of Heavy / Heavy to Very Heavy / Extremely Heavy Rainfall

- In **Jharkhand**, make necessary arrangements to drain out excess water from rice nursery, moong, vegetables and fruit orchards. Postpone harvesting of summer maize and keep the already harvested produce in safe place.
- In **South Gujrat**, postpone sowing of soybean and rice nursery. Ensure proper drainage facilities in already sown rice nurseries, soybean and also in banana plantations to prevent water logging. Provide support to sugarcane and banana to prevent lodging.
- In **Gangetic West Bengal**, ensure proper drainage in already sown rice nurseries, sesame and jute. Cover the young seedlings of *kharif* rice with plastic sheets or agro-shade nets to protect them from heavy rains.
- In **Sub-Himalayan West Bengal**, maintain proper drainage channels in rice nurseries and fields of jute and ginger to avoid water stagnation.
- In **North Odisha**, postpone sowing of rice nursery and ensure proper drainage to drain out excess water from already sown rice nurseries, maize and vegetables to prevent water logging. Postpone sowing of millets, maize, pulses and vegetables during heavy rain. Cover rice and vegetable nursery with plastic sheets to prevent washing away seeds.
- In **Kerala**, ensure proper drainage facilities in rice nurseries, transplanted rice fields, coconut and banana plantations to prevent water logging. Undertake propping in banana to protect the plants from heavy rains.
- In **Tamil Nadu**, postpone nursery sowing / transplanting of rice and sowing of sorghum and cumbu. Ensure proper drainage facilities in rice nurseries, cotton, sugarcane, groundnut and transplanted rice fields, coconut and banana plantations to prevent water logging. Provide staking or support to tender plants of cotton, young plants of sugarcane and fruit-bearing plants of banana to avoid lodging.
- In **Coastal Karnataka**, postpone nursery sowing of rice. Ensure proper drainage facilities in rice nurseries, banana, coconut and arecanut plantations to prevent water logging. In **South Interior Karnataka**, postpone nursery sowing of rice and sowing of pigeon pea, maize and onion. Cover young seedlings of rice with plastic sheets or agro-shade nets to protect them from heavy rains. Provide adequate drainage to remove excess water from rice nurseries, coffee, cardamom, coconut and arecanut plantations to prevent water logging. Provide support to sugarcane and banana to prevent lodging. In **North Interior Karnataka**, drain out excess water from the crops which are at seedling stage to prevent water logging.
- In **Konkan & Goa**, postpone nursery sowing of rice. In **Konkan & Goa** and *ghat* areas of **Madhya Maharashtra**, make arrangement to drain out excess water from rice nurseries to prevent water logging.
- In **Bhabar and Tarai Zone of Uttarakhand**, harvest vegetables (tomato, French beans etc.) and fruits and keep them in safer place. Ensure proper drainage in already sown crops of pigeon pea, millets and soybean.
- In **Assam**, keep the harvested produce of sesame, foxtail millet, *Boro* rice, banana and citrus at safer places. Ensure proper drainage in *Sali* rice nursery, maize and sugarcane fields, arecanut and coconut plantations to prevent water logging.
- In **Meghalaya**, ensure proper drainage in the fields of maize, ginger, French bean, cowpea, vegetables and around rice nurseries to prevent water logging. Provide strong bamboo stakes or trellis support to cow pea, cucumber and bottle gourd to prevent vines from trailing on wet ground. Provide support to banana plant to prevent lodging.
- In **Mizoram**, ensure proper drainage facilities in maize and low land pre-*kharif* rice to avoid water stagnation. Undertake propping in five-month-old sugarcane crop to avoid lodging.
- In **Arunachal Pradesh**, keep the harvested produce of soybean and vegetables such as chilli and okra at a safer place. Ensure proper drainage in rice nurseries, kiwi and apple orchards to avoid water logging.

### Livestock / Fishery

- Keep the animals inside the shed during heavy rainfall and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- Construct an outlet with proper netting around the ponds to drain out excess water, thereby preventing fish from escaping in case of overflow.

## Agromet advisories for likely impact of Thunderstorm / Gusty Winds / Squally Winds

### (Based on the IBF and advisories issued by different AMFUs)

- Provide mechanical support to horticultural crops and staking or support to vegetables and young fruit plants / fruit-bearing plants to avoid lodging due to strong winds.

## Flash Flood Guidance:

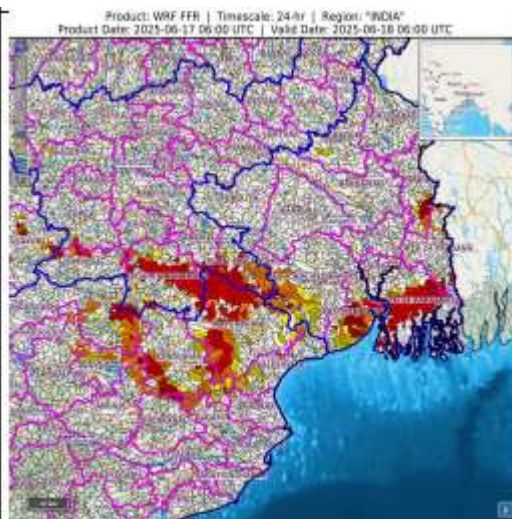
### **24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 18-06-2025 :**

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

**Gangetic West Bengal** - South 24 Parganas, North, Nadia, 24 Parganas East Mednipur, West Mednipur,

**Odisha** – Mayurbhanj, Jharsuguda, Kendujhar, Baleshwar, Bhadrak districts

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



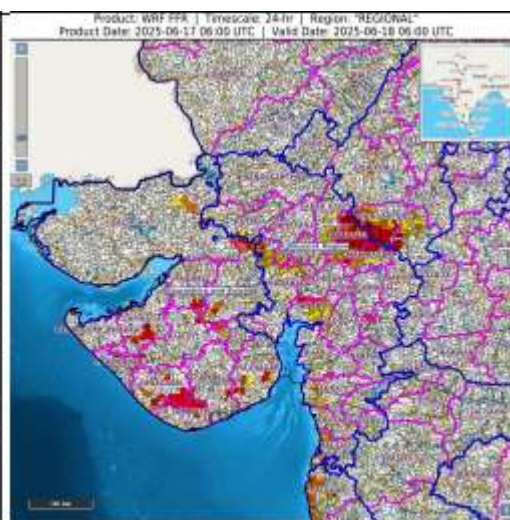
### **24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 18-06-2025 :**

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

**Saurashtra & Kutch** - Amreli, Bhavnagar, Devbhoomi Dwarka, Gir Somnath, Jamnagar, Morbi, surendranagar, Junagarh, Porbandar, Rajkot, districts.

**Gujarat Region** – Patan, Ahmedabad, Mehsana, Aravali, Mahisagar, Anand, surat, Bharuch, Navsari, Valsad districts.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over Area of Concern (AoC) as shown in map due



## Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **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.



## LEGENDS

1. अंडमान और निकोबार द्वीपसमूह

2. अरुणाचल प्रदेश

3. असम और मेघालय

4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा

5. उप-हिमालयी पश्चिम बंगाल और सिक्किम

6. गंगीय पश्चिम बंगाल

7. ओडिशा

8. झारखंड

9. बिहार

10. पूर्वी उत्तर प्रदेश

11. पश्चिम उत्तर प्रदेश

12. उत्तराखंड

13. हरियाणा, चंडीगढ़ और दिल्ली

14. पंजाब

15. हिमाचल प्रदेश

16. जम्मू और कश्मीर और लद्दाख

17. पश्चिम राजस्थान

18. पूर्वी राजस्थान

19. पश्चिम मध्य प्रदेश

20. पूर्वी मध्य प्रदेश

21. गुजरात

22. सौराष्ट्र

23. कोंकण और गोवा

24. मध्य महाराष्ट्र

25. मराठवाड़ा

26. विदर्भ

27. छत्तीसगढ़

28. तटीय आंध्र प्रदेश और यनम

29. तेलंगाना

30. रायलसीमा

31. तमिलनाडु, पुडुचेरी और कराईकल

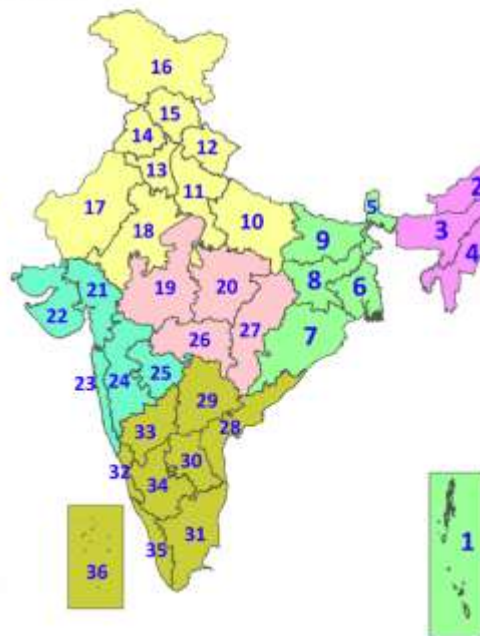
32. तटीय कर्नाटक

33. आंतरिक उत्तरी कर्नाटक

34. आंतरिक दक्षिणी कर्नाटक

35. केरल और माहे

36. लक्षद्वीप



1. Andaman & Nicobar Islands

2. Arunachal Pradesh

3. Assam & Meghalaya

4. Nagaland, Manipur, Mizoram & Tripura

5. Sub-Himalayan West Bengal & Sikkim

6. Gangetic West Bengal

7. Odisha

8. Jharkhand

9. Bihar

10. East Uttar Pradesh

11. West Uttar Pradesh

12. Uttarakhand

13. Haryana, Chandigarh & Delhi

14. Punjab

15. Himachal Pradesh

16. Jammu & Kashmir and Ladakh

17. West Rajasthan

18. East Rajasthan

19. West Madhya Pradesh

20. East Madhya Pradesh

21. Gujarat

22. Saurashtra

23. Konkan & Goa

24. Madhya Maharashtra

25. Marathwada

26. Vidarbha

27. Chhattisgarh

28. Coastal Andhra Pradesh & Yanam

29. Telangana

30. Rayalaseema

31. Tamilnadu, Puducherry & Karaikal

32. Coastal Karnataka

33. North Interior Karnataka

34. South Interior Karnataka

35. Kerala & Mahe

36. Lakshadweep

## SPATIAL DISTRIBUTION (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/A Few Places)
51-75	Fairly Widespread (FWS/Many Places)	1-25	Isolated (ISOL)



Fog



Heavy Snow



Cold Wave



Heavy Rain



Dust Storm



Cold Day



Very Heavy Rain



Heat Wave



Ground Frost



Extremely Heavy Rain



Warm Night



Thunder & Lightning



Hot Day



Hailstorm



Hot & Humid



Dust Raising Winds



Strong Surface Winds

### COLOUR CODED WARNING

No Warning (No Action)

Watch (Be Aware)

Alert (Be Prepared To Take Action)

Warning (Take Action)

### Probabilistic Forecast

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

\* 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)



## DEFINITION/CRITERIA

### Rain/ Snow \*

Heavy: 64.5 to 115.5 mm/cm \*  
Very Heavy: 115.6 to 204.4 mm/cm \*  
Extremely Heavy: > 204.4 mm/cm \*

### Heat Wave

When maximum temperature of a station reaches  $\geq 40^{\circ}\text{C}$  for plains and  $\geq 30^{\circ}\text{C}$  for hilly regions

(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal  $4.5^{\circ}\text{C}$  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 62-67 kmph

Very Severe: Wind speed  $> 67$  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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**Hot and Humid:** When maximum temperatures remain  $3^{\circ}\text{C}$  above normal along with the above normal relative humidity.