

Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 30<sup>th</sup> June, 2024

Time of Issue: 1345 hours IST

**Subject: Heavy to very heavy rainfall very likely over Northwest, East & Northeast India during next 4-5 days.**

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

- ❖ **Heavy to very heavy rainfall with extremely heavy falls occurred** at isolated places over Assam & Meghalaya, Arunachal Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim; **Heavy to very heavy rainfall** at isolated places over East Rajasthan, Haryana, Chhattisgarh; **Heavy rainfall** at isolated places over Uttarakhand, Uttar Pradesh, Odisha, Madhya Pradesh, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Madhya Maharashtra, Konkan & Goa, Tamil Nadu, Coastal & South Interior Karnataka, Telangana, Coastal Andhra Pradesh & Yanam.
- ❖ *Gusty winds/squally winds data reported over the country is attached in [Annexure II](#).*

**Advance of Southwest Monsoon: (Annexure III)**

- ❖ Northern Limit of Monsoon now passes through 26°N/65°E, Jaisalmer, Churu, Hissar, Karnal, Jalandhar, Tarn Taran and 31.5°N/74.5°E.
- ❖ Southwest monsoon has further advanced into some more parts of West Rajasthan & Haryana, remaining parts of Uttar Pradesh, some more parts of Punjab and remaining parts of Himachal Pradesh & Jammu.
- ❖ Conditions are favourable for further advance of southwest Monsoon into some more parts of West Rajasthan, Haryana-Chandigarh & Punjab during next 2-3 days.

**Weather Systems and Forecast & Warnings: (Annexure IV)**

- ❖ A cyclonic circulation lies over southeast Pakistan adjoining Kutch in lower tropospheric levels. A cyclonic circulation lies over north Gujarat & neighbourhood in middle tropospheric levels. The off-shore trough at mean sea level along Maharashtra- Kerala coasts. Under their influence:
  - Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Kerala & Mahe, Lakshadweep, Coastal Karnataka, Konkan & Goa, Gujarat State; scattered to fairly widespread light to moderate rainfall over Madhya Maharashtra, Coastal Andhra Pradesh & Yanam; isolated to scattered light to moderate rainfall over Marathwada, Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Telangana, North & South Interior Karnataka during next 5 days.

- Isolated **heavy rainfall** very likely over Saurashtra & Kutch on 01<sup>st</sup> July; Gujarat Region during 02<sup>nd</sup> -04<sup>th</sup> July; Ghat areas of Madhya Maharashtra on 02<sup>nd</sup> & 04<sup>th</sup> July; Konkan & Goa on 02<sup>nd</sup> & 03<sup>rd</sup> July; Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe & South Interior Karnataka on 30<sup>th</sup> June & 01<sup>st</sup> July; Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana on 30<sup>th</sup> June and Coastal Karnataka during 30<sup>th</sup> June-03<sup>rd</sup> July.
  - **Isolated very heavy rainfall very likely over Saurashtra & Kutch on 30<sup>th</sup> June; Gujarat Region, Madhya Maharashtra on 30<sup>th</sup> June & 01<sup>st</sup> July; Konkan & Goa on 30<sup>th</sup> June, 01<sup>st</sup> & 04<sup>th</sup> July.**
- ❖ A cyclonic circulation lies over east Jharkhand and another over northeast Assam in lower tropospheric levels. A trough runs from West Assam to North Odisha in lower tropospheric levels. A cyclonic circulation lies over central Madhya Pradesh and a trough runs from northeast Arabian Sea off south Gujarat coast to northwest Bihar across this cyclonic circulation in middle tropospheric levels. Under their influence;
- Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm, lightning very likely over Northwest, Central, East and Northeast India during next 5 days.
  - Isolated **heavy rainfall** very likely over Punjab on 30<sup>th</sup> June, 03<sup>rd</sup> & 04<sup>th</sup> July; Delhi during 01<sup>st</sup>-03<sup>rd</sup> July; Haryana-Chandigarh on 04<sup>th</sup> July; Himachal Pradesh on 03<sup>rd</sup> & 04<sup>th</sup> July; East Rajasthan during 02<sup>nd</sup> July -04<sup>th</sup> July; West Madhya Pradesh on 30<sup>th</sup> June & 04<sup>th</sup> July; East Madhya Pradesh on 30<sup>th</sup> June, 03<sup>rd</sup> & 04<sup>th</sup> July; Vidarbha & Odisha on 30<sup>th</sup> June; Gangetic West Bengal on 30<sup>th</sup> June & 03<sup>rd</sup> July; Sub-Himalayan West Bengal & Sikkim on 03<sup>rd</sup> & 05<sup>th</sup> July; Jharkhand during 30<sup>th</sup> June-03<sup>rd</sup> July; Bihar on 03<sup>rd</sup> & 04<sup>th</sup> July and over Chhattisgarh during 30<sup>th</sup> June-4<sup>th</sup> July.
  - **Isolated very heavy rainfall likely over Himachal Pradesh during 30<sup>th</sup> June-02<sup>nd</sup> July; Uttarakhand during 30<sup>th</sup> June-04<sup>th</sup> July; Punjab on 01<sup>st</sup> & 02<sup>nd</sup> July; Haryana-Chandigarh & Uttar Pradesh during 30<sup>th</sup> June-03<sup>rd</sup> July; East Rajasthan on 30<sup>th</sup> June & 01<sup>st</sup> July; Sub-Himalayan West Bengal & Sikkim on 01<sup>st</sup> & 03<sup>rd</sup> July, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 30<sup>th</sup> June-4<sup>th</sup> July and over Bihar during 30<sup>th</sup> June-02<sup>nd</sup> July.**
  - **Isolated extremely heavy rainfall very likely over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya on 30<sup>th</sup> June; Arunachal Pradesh on 30<sup>th</sup> June & 01<sup>st</sup> July.**

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

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

**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):**

- ❖ **Assam & Meghalaya:** Mawsynram (dist East Khasi Hills) 33, Mawkyrwat (dist South West Khasi Hills) 23, Cherrapunji(rkm) (dist East Khasi Hills) 20, Mawkyrwat\_arg (dist South West Khasi Hills) 20, Cherrapunji (dist East Khasi Hills) 19, Jiagaon (dist Tinsukia) 16, Chauldhowaghat (dist Lakhimpur) 15, Hailakandi\_ Aws (dist Hailakandi) 11;
- ❖ **Bihar:** Chanan (dist Lakhisarai) 24, Kaler (dist Arwal) 16, Tekari (dist Gaya) 14, Jahanabad (dist Jahanabad) 12, Laxmipur (dist Jamui) 12, Jamui (dist Jamui) 12, Belaganj (dist Gaya) 11, Nawada (dist Nawada) 11, Khizirsarai (dist Gaya) 11, Lalbegiaghat (dist East Champaran) 11;
- ❖ **Arunachal Pradesh:** Roing (dist Lower Dibang Valley) 22, Pasighat\_ Aero (dist East Siang) 19, Namsai Kvk Aws (dist Lohit) 12, Miao (dist Changlang) 10;
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Sevoke (dist Darjeeling) 22, Jhallong (dist Kalimpong) 17, Jalpaiguri (dist Jalpaiguri) 14, Neora (dist Jalpaiguri) 13, Gajoldoba (dist Jalpaiguri) 12, Siliguri Pto (dist Darjeeling) 12, Bagdogra Iaf (dist Darjeeling) 11, Champasari (dist Darjeeling) 11;
- ❖ **Chhattisgarh:** Kusmi (dist Balrampur) 16, Patna (dist Koriya) 14, Pendra Road (dist Gaurela Pendra Marwahi) 10, Dornapal (dist Sukma) 9, Shankargarh (dist Balrampur) 8, Naya Baradwar (dist Sakti) 7, Pasaan (dist Korba) 7, Darri (dist Korba) 7, Hardibazar (dist Korba) 7, Bamhndih (dist Janjgir) 7, Korba (dist Korba) 7, Kapu (dist Raigarh) 7, Konta (dist Sukma) 7, Kukdur (dist Kabirdham) 7, Akaltara (dist Janjgir) 6, Saragaon (dist Janjgir) 6, Ratanpur (dist Bilaspur) 6, Lormi (dist Mungeli) 6, Masturi (dist Bilaspur) 6;
- ❖ **Haryana:** Samalkha (dist Panipat) 13, Hansi Arg (dist Hisar) 9, Ganaur (dist Sonapat) 8, Rohtak Rev (dist Rohtak) 5;
- ❖ **East Rajasthan:** Bari (dist Dholpur) 12, Baseri Sr (dist Dholpur) 11, Nagar Sr (dist Bharatpur) 10, Kumher Sr (dist Bharatpur) 9, Deeg Sr (dist Bharatpur) 8, Pahari Sr (dist Bharatpur) 6, Rupbas (dist Bharatpur) 6;
- ❖ **East Madhya Pradesh:** Mohargarh (dist Tikamgarh) 11, Jabalpur-aws (dist Jabalpur) 10, Baihar (dist Balaghat) 10, Patan (dist Jabalpur) 9, Patera (dist Damoh) 8, Khargapur (dist Tikamgarh) 8, Badagaon Dhasan (dist Tikamgarh) 7, Paraswada (dist Balaghat) 7, Umaria-aws (dist Umaria) 7, Bahoriband (dist Katni) 7, Shahpura (dist Dindori) 7, Patharia (dist Damoh) 7, Baldevgarh (dist Tikamgarh) 7, Mawai (dist Mandla) 7, Venkatnagar (dist Anuppur) 7;
- ❖ **Coastal Andhra Pradesh & Yanam:** Guntur (dist Guntur) 11, Kunavaram (dist Alluri Sitharamaraju) 7, Tiruvuru (dist Ntr District) 7, Amaravati (dist Guntur) 6, Bapatla (dist Bapatla) 6, Vararamachandrapur (dist Alluri Sitharamaraju) 6, Mangalagiri (dist Guntur) 6, Chintalapudi (dist Eluru) 6, Tadepalligudem (dist West Godavari) 6, Lam(a) (dist Guntur) 5, Tenali (dist Guntur) 5, Nuzvid (dist Eluru) 5, Karamchedu (dist Bapatla) 5, Gudivada (dist Krishna) 5, Kukunoor (dist Eluru) 5, Atchampet (dist Palnadu) 5, Piduguralla (dist Palnadu) 5;
- ❖ **East Uttar Pradesh:** Ramnagar (dist Barabanki) 11, Kaiserganj (dist Bahraich) 11, Balrampur (dist Balrampur) 8, Nanpara (dist Bahraich) 7, Mohammedabad (dist Ghazipur) 7;
- ❖ **Odisha:** Banki (Dist Cuttack) 11, Bahanga (dist Balasore) 10, Bhograi (dist Balasore) 10;
- ❖ **South Interior Karnataka:** Agumbe EMO (dist Shivamogga) 9, Kottigehara (dist Chikkamagaluru) 9, Bhagamandala (dist Kodagu) 5;
- ❖ **Konkan & Goa:** Kankavli (dist Sindhudurg) 9, Dapoli\_agri (dist Ratnagiri) 8, Lanja (dist Ratnagiri) 6, Wakwali\_agri (dist Ratnagiri) 6, Harnai Imd Obsy (dist Ratnagiri) 6;
- ❖ **Telangana:** Mulakalapalle (dist B. Kothagudem) 9, Burgampadu (dist B. Kothagudem) 7, Bhadrachalam (dist B. Kothagudem) 7, Julurpad (dist B. Kothagudem) 7, Naga Reddipet (dist Kamareddy) 7, Utnur (dist Adilabad) 7, Manuguru (dist B. Kothagudem) 7, Chandrugonda (dist B. Kothagudem) 6, Aswapuram (dist B. Kothagudem) 6, Jainoor (dist Kumaram Bheem) 6, Kothagudem (dist B. Kothagudem) 6;

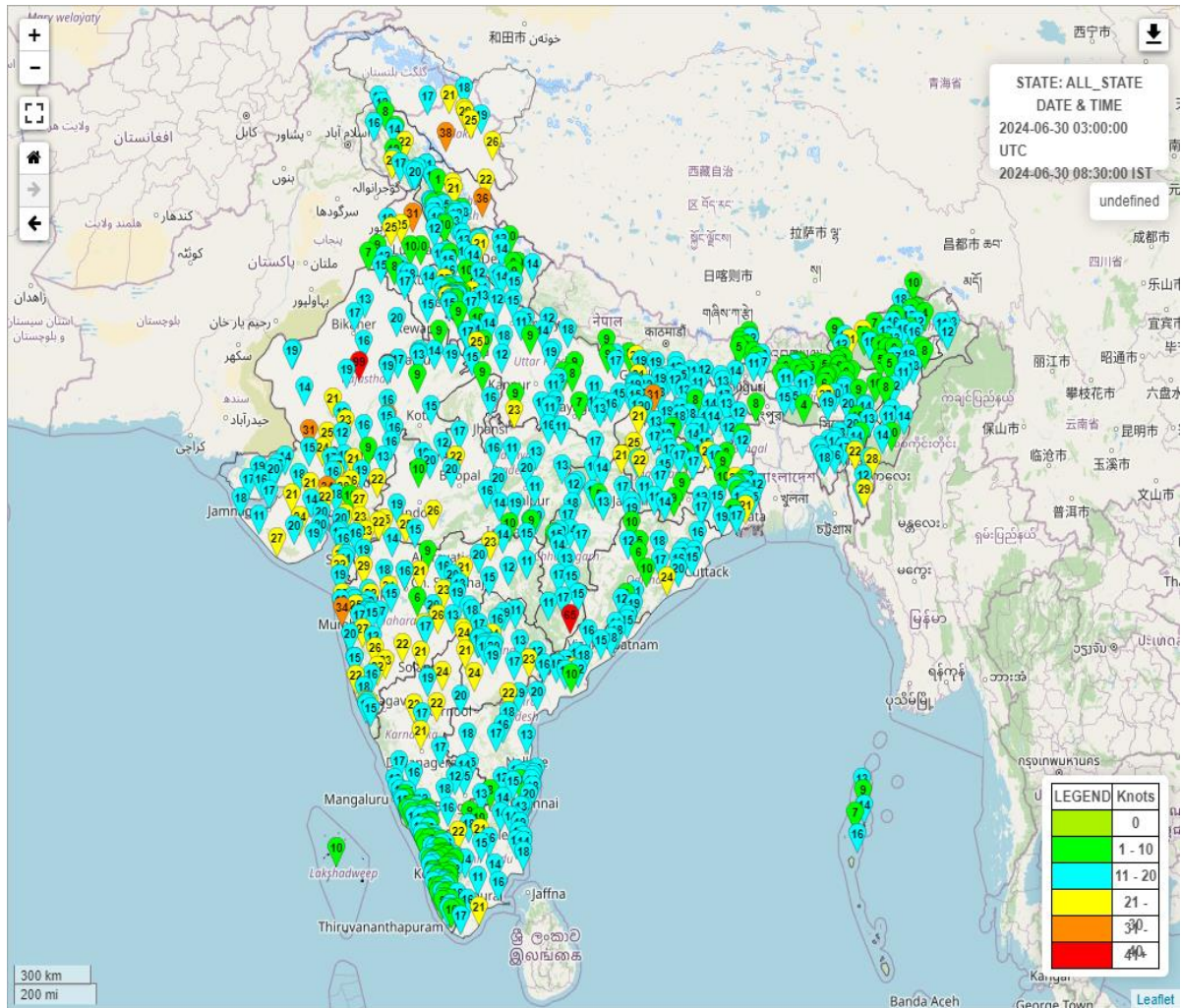
- ❖ **Gangetic West Bengal:** Harinkhola (dist Hooghly) 8, Simula (dist Purulia) 6, Barrackpur( Iaf) (dist North 24 Parganas) 5;
- ❖ **Madhya Maharashtra:** Mahabaleshwar- Imd Obsy (dist Satara) 8;
- ❖ **West Madhya Pradesh:** Mungaoli (dist Ashoknagar) 7, Chanderi (dist Ashoknagar) 7, Isagarh (dist Ashoknagar) 6, Khaniyadana (dist Shivpuri) 5, Pathari (dist Vidisha) 5;
- ❖ **Tamil Nadu:** Taluk Office Pandalur (dist The Nilgiris) 7, Vint Worth Estate (dist The Nilgiris) 5, Devala (dist The Nilgiris), Annavasal (dist Pudukkottai), Wood Braiyar Estate (dist The Nilgiris), Harisan Malayalam Ltd. (dist The Nilgiris), Illupur (dist Pudukkottai) 3 each;
- ❖ **Coastal Karnataka:** Mangaluru Ap Obsy (dist Dakshina Kannada) 7, Siddapura (dist Udupi) 6, Karkala (dist Udupi) 6, Kadra (dist Uttara Kannada) 5, Kundapur (dist Udupi) 5, Gersoppa (dist Uttara Kannada) 5;
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Sabroom (dist South Tripura) 7, Belonia (dist South Tripura) 4;
- ❖ **West Uttar Pradesh:** Patiyali (dist Kasganj) 7, Gunnaur (dist Sambhal) 7, Mainpuri (dist Mainpuri) 7, Sahaswan (dist Badaun) 7;
- ❖ **Uttarakhand:** Chamoli (dist Chamoli) 7, Nainital (dist Nainital) 5, Haldwani (dist Nainital) 4;
- ❖ **Kerala & Mahe:** Quilandi (dist Kozhikode) 6, Pinarayi Aws (dist Cannur) 5, Tellichery (dist Cannur) 5, Idamalayar Dam Aws (dist Ernakulam) 5, Chalakudi (dist Thrissur) 5, Vadakara Aws (dist Kozhikode) 5, Vadakara (dist Kozhikode) 4, Kannur (dist Cannur) 4, Cheruvanchery Aws (dist Cannur) 4, Aralam Aws (dist Cannur) 4, Kannur Icar Aws (dist Cannur) 4;
- ❖ **Gujarat Region:** Vadodara (dist Vadodara) 6, Chhotaudepur\_kvks Aws (dist Chhota Udepur) 6, Umergam (dist Valsad) 6, Maktampur\_aws (dist Bharuch) 5, Vagra (dist Bharuch) 5, Daman (dist Daman) 5, Kamrej (dist Surat) 5, Anand (dist Anand) 5, Daman\_aws (dist Daman) 5;
- ❖ **Saurashtra & Kutch:** Dhrol (dist Jamnagar) 6, Malia (dist Junagadh) 5, Rajkot (dist Rajkot) 5, Mendarda (dist Junagadh) 5;
- ❖ **Punjab:** Athwal (dist Gurdaspur) 6, Jandiala (dist Amritsar) 5, Amritsar (dist Amritsar) 4, Rasulpur (dist Tarn Taran) 4;
- ❖ **West Rajasthan:** Nagaur Tehsil (dist Nagaur) 5, Ratangarh (dist Churu) 4, Makrana (dist Nagaur) 3
- ❖ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Chatha\_agro Aws (dist Jammu) 3, RS Pura Arg (dist Jammu) 3, Jammu Aero (dist Jammu) 2, Tral Arg (dist Pulwama) 2.

## ANNEXURE II

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

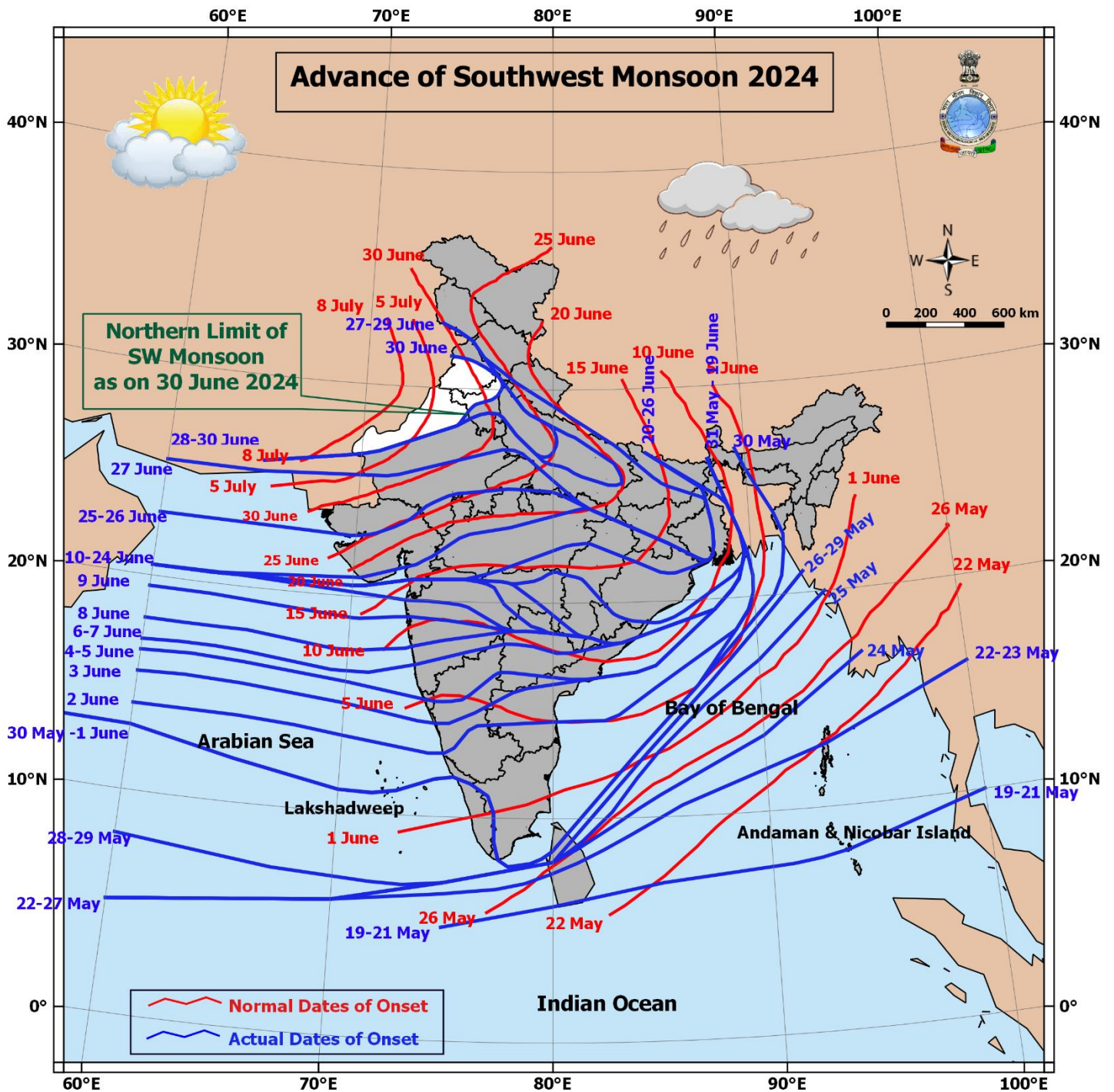
- ❖ **Ladakh:** Padum-70, Chuchot\_Yokma-54, Nyoma-48, Upshi and Leh-46 each;
- ❖ **Himachal Pradesh:** Reckon-67; **Gujarat:** Arnej-63, Tharad-57, Anand and Ahmedabad-52 each, Chhotaudepur and Verawal-50 each, Godra-48, Dantewada-46;
- ❖ **Maharashtra:** Mo Alibagh-63, Kalwan-54, Jalgong-52, Mahabaleshwar-50, Latur-48, Satara-47, Sahahda and Lonawala-46 each; **Bihar:** Patna-57;
- ❖ **Jammu & Kashmir:** Chatha-54; **Mizoram-** Saiha-54, Champhai-52; **Goa:** North Goa-52,
- ❖ **Haryana:** Saragthal-50; **Meghalaya-** Nongstoin-50;
- ❖ **Andhra Pradesh:** Maruteru-50;
- ❖ **Madhya Pradesh:** Khandwa-48;
- ❖ **Punjab:** Faridkot and Moga-46 each;
- ❖ **West Uttar Pradesh:** Agra-46;
- ❖ **Jharkhand:** Palmau-46.

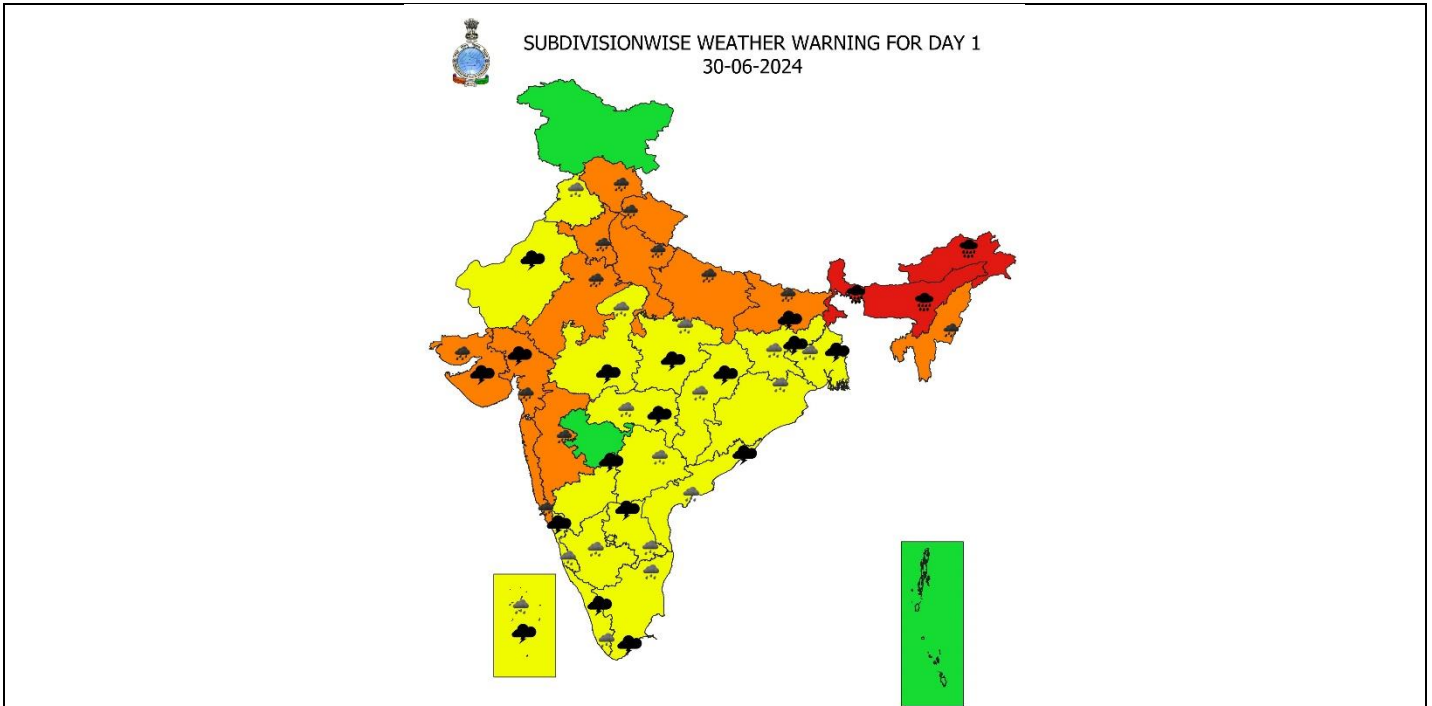
**Fig.: Gusty winds reported over the country (in knots, 1 Knot = 1.85 kmph) from 0830 hrs IST of 29.06.2024 to 0830 hrs IST of 30.06.2024**



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

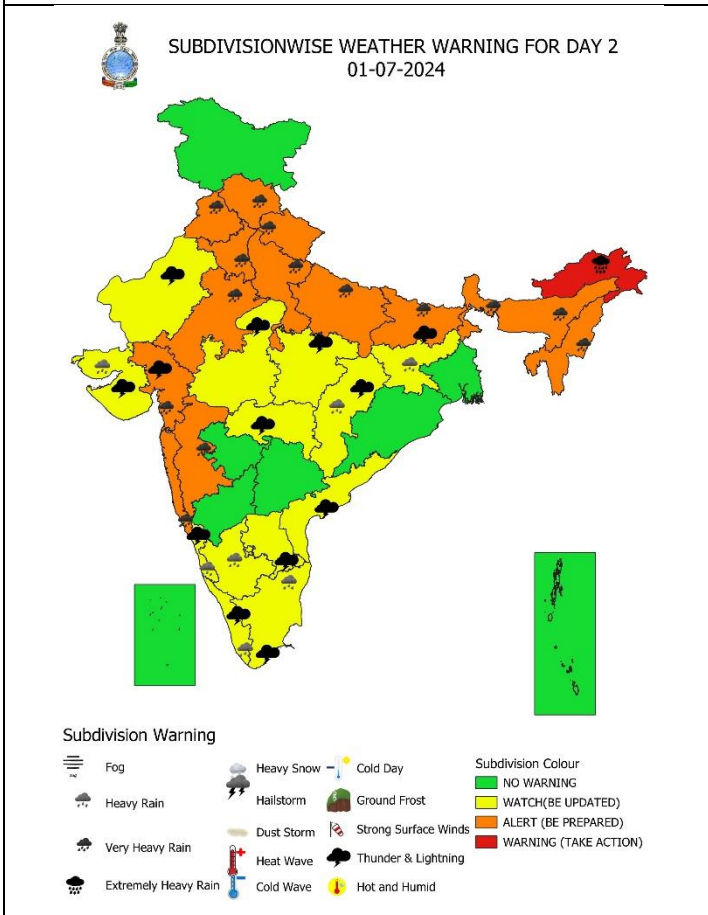
Advance of Southwest Monsoon 2024





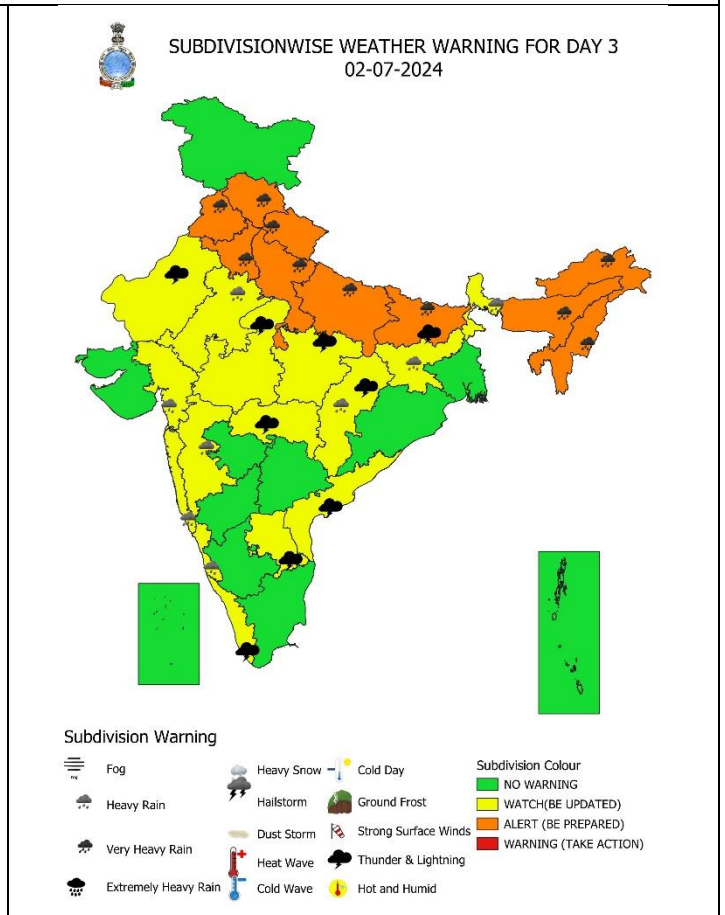
**Subdivision Warning**

Fog	Heavy Snow	Cold Day	<b>Subdivision Colour</b>
Heavy Rain	Hailstorm	Ground Frost	NO WARNING
Very Heavy Rain	Dust Storm	Strong Surface Winds	WATCH (BE UPDATED)
Extremely Heavy Rain	Heat Wave	Thunder & Lightning	ALERT (BE PREPARED)
	Cold Wave	Hot and Humid	WARNING (TAKE ACTION)



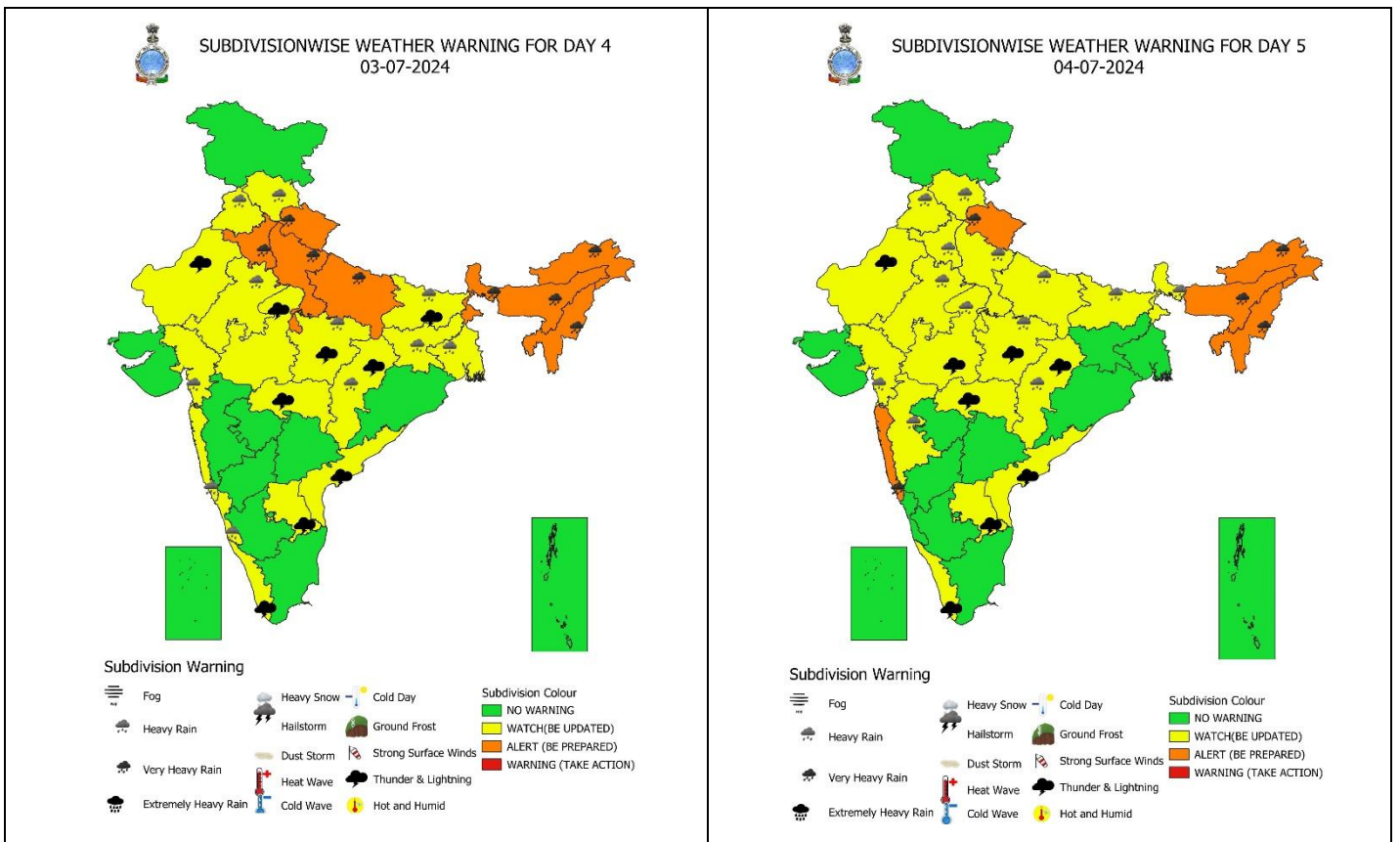
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Fog	Heavy Snow	Cold Day	<b>Subdivision Colour</b>
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**Subdivision Warning**

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### IMPACT & ACTION SUGGESTED due to

- ✓ **Isolated extremely heavy rainfall very likely over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya on 30<sup>th</sup> June; Arunachal Pradesh on 30<sup>th</sup> June & 01<sup>st</sup> July.**
- ✓ **Isolated very heavy rainfall very likely over Saurashtra & Kutch on 30<sup>th</sup> June; Gujarat Region, Madhya Maharashtra on 30<sup>th</sup> June & 01<sup>st</sup> July; Konkan & Goa on 30<sup>th</sup> June, 01<sup>st</sup> & 04<sup>th</sup> July; Himachal Pradesh during 30<sup>th</sup> June-02<sup>nd</sup> July; Uttarakhand during 30<sup>th</sup> June -04<sup>th</sup> July; Punjab on 01<sup>st</sup> & 02<sup>nd</sup> July; Haryana-Chandigarh & Uttar Pradesh during 30<sup>th</sup> June-03<sup>rd</sup> July; East Rajasthan on 30<sup>th</sup> June & 01<sup>st</sup> July; Sub-Himalayan West Bengal & Sikkim on 01<sup>st</sup> & 03<sup>rd</sup> July, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 30<sup>th</sup> June-4<sup>th</sup> July and over Bihar during 30<sup>th</sup> June-02<sup>nd</sup> July.**

#### 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 kutchha 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.



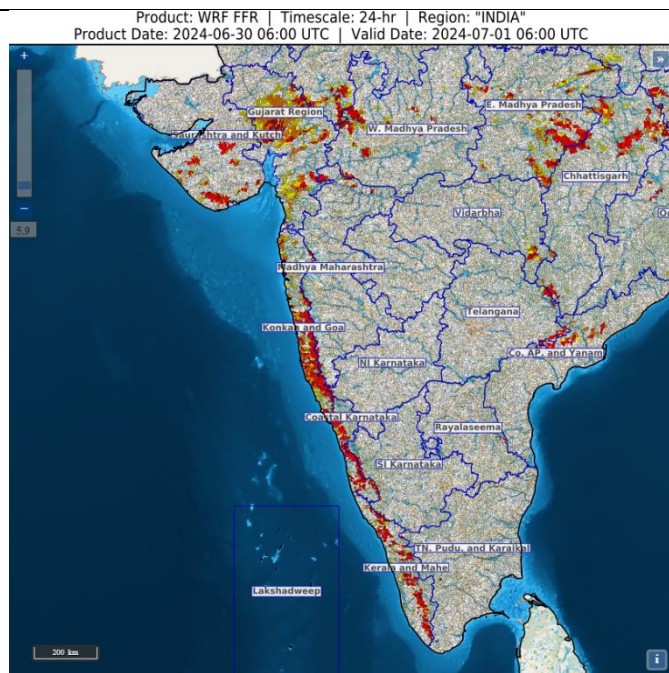
**Agromet advisories for Heavy Rainfall, Gusty winds and Heat Wave likely over various parts of the country:**

- Make provision for draining out excess water from crop fields to avoid water stagnation in North Eastern States, West Bengal & Sikkim, Odisha, Bihar, Jharkhand, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Vidarbha, Gujarat State, Tamilnadu, Kerala, Coastal and South Interior Karnataka, Andhra Pradesh and Telangana.
- Postpone land preparation, nursery preparation and transplantation of WRC rice in Arunachal Pradesh.
- Provide mechanical support to horticultural crops & staking to vegetables.

**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 01-07-2024 :**

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Coastal Karnataka and Kerala & Mahe 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, **Aero:** Aerodrome.
- ❖ **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)

 Fog  Heavy Rain  Very Heavy Rain  Extremely Heavy Rain	 Heavy Snow  Hailstorm  Dust Storm  Heat Wave  Cold Wave	 Cold Day  Ground Frost  Strong Surface Winds  Thunder & Lightning  Hot and Humid	<p style="font-size: small;">Subdivision Colour</p> <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #00FF00; border: 1px solid black; margin-right: 5px;"></span> NO WARNING</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black; margin-right: 5px;"></span> WATCH(BE UPDATED)</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black; margin-right: 5px;"></span> ALERT (BE PREPARED)</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #FF0000; border: 1px solid black; margin-right: 5px;"></span> WARNING (TAKE ACTION)</div> </div>
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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)