



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release
Date: 05th July, 2024
Time of Issue: 1350 hours IST

Subject: Heavy to very heavy rainfall spell likely to continue over Northwest & East India during next 2 days and over 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 and **Very heavy rainfall** at isolated places over Gujarat Region, Uttar Pradesh, East Rajasthan, Coastal Karnataka, Arunachal Pradesh, Himachal Pradesh, Konkan & Goa; **Heavy rainfall** at isolated places over Uttarakhand, West Madhya Pradesh, Chhattisgarh, Haryana, Madhya Maharashtra, East Madhya Pradesh, Bihar, Telangana.
- ✓ **Gusty winds/squally winds** data reported over the country is attached in [Annexure II](#).

Weather Systems and Forecast & Warnings: (Annexure III)

- ❖ Monsoon trough is near normal position at mean sea level and a cyclonic circulation lies over southwest Uttar Pradesh upto mid-tropospheric levels; another cyclonic circulation lies over West Rajasthan & adjoining Pakistan and a trough runs from West Rajasthan to Manipur in lower tropospheric levels. Under their influence;
 - ✓ Fairly widespread to widespread light/moderate rainfall accompanied with thunderstorm, lightning very likely over Northwest and Central India during next 5 days.
 - ✓ Isolated heavy rainfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and West Rajasthan on 05th; Himachal Pradesh, Haryana-Chandigarh on 05th & 06th; Uttarakhand, Uttar Pradesh, East Rajasthan, East Madhya Pradesh during 05th – 09th; Punjab West Madhya Pradesh on during 05th – 07th; Vidarbha on 08th & 09th; Chhattisgarh during 07th – 09th July.
 - ✓ **Isolated very heavy rainfall likely over Himachal Pradesh, West Madhya Pradesh on 05th; Uttarakhand, East Uttar Pradesh during 05th – 07th; Punjab, West Uttar Pradesh on 05th & 06th July.**
 - ✓ **Isolated extremely heavy rainfall very likely over East Rajasthan on 05th July.**
 - ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm, lightning very likely over East & Northeast India during next 5 days.
 - ✓ Isolated **heavy rainfall** very likely over Andaman & Nicobar Islands on 05th; West Bengal & Sikkim, Bihar during 07th – 09th; Jharkhand on 07th; Odisha on 06th & 08th; Nagaland, Manipur, Mizoram & Tripura during 05th – 09th July.
 - ✓ **Isolated very heavy rainfall likely over West Bengal & Sikkim on 05th & 06th; Bihar on 06th; Odisha on 07th; Arunachal Pradesh, Assam & Meghalaya during 06th – 09th July.**
 - ✓ **Isolated extremely heavy rainfall very likely over Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh, Assam & Meghalaya on 05th July.**
- ❖ A cyclonic circulation lies over south Gujarat in lower tropospheric levels. The off-shore trough at mean sea level runs along south Gujarat- Kerala coasts. Under the influence of these systems;

- ✓ 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, Marathwada Coastal Andhra Pradesh & Yanam and Interior Karnataka; isolated to scattered light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Telangana during next 5 days.
- ✓ Isolated **heavy rainfall** very likely over Saurashtra & Kutch on 05th; Gujarat Region on 06th; Kerala & Mahe during 05th – 08th; Coastal Andhra Pradesh & Yanam on 07th & 08th; Telangana on 08th & 09th ; Coastal & South Interior Karnataka during 07th – 09th; North Interior Karnataka on 08th ;
- ✓ **Isolated very heavy rainfall very likely over Konkan & Goa, Coastal Karnataka on 05th & 06th; Madhya Maharashtra during 05th – 07th; South Interior Karnataka on 06th July.**

For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

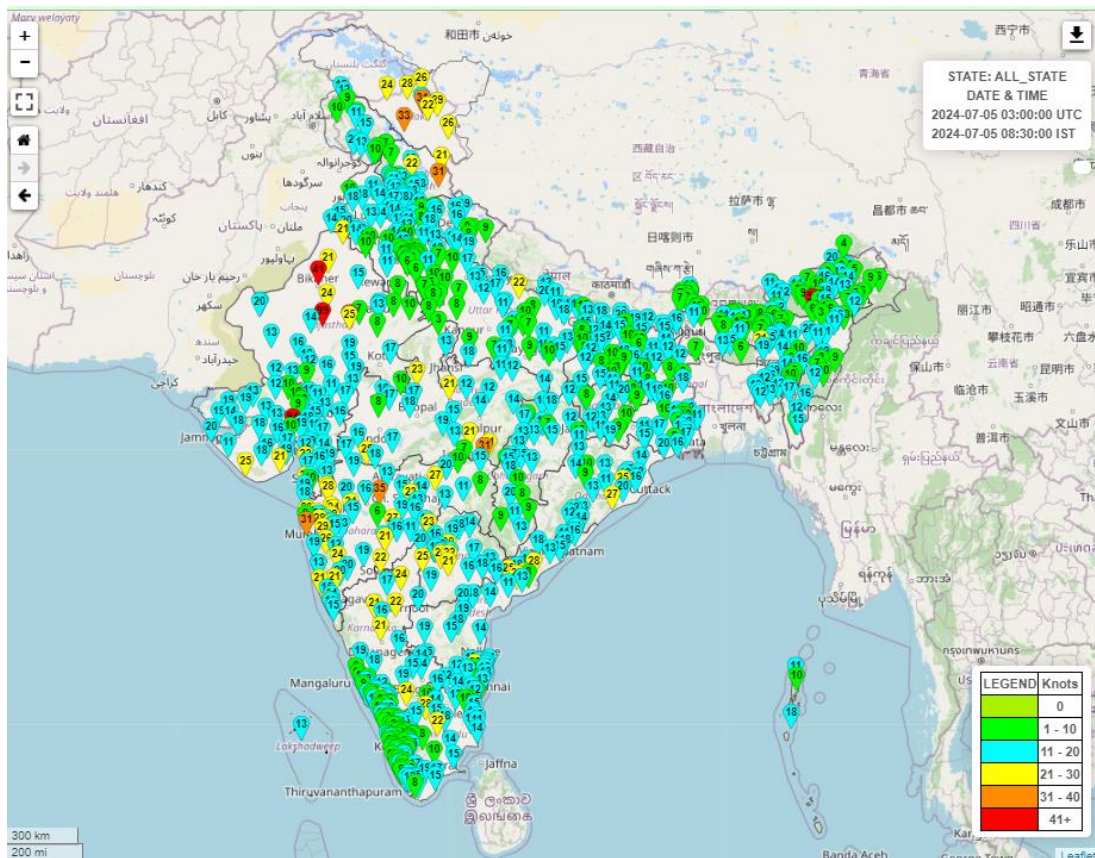
Significant Rainfall during past 24 hours till 0830 hours IST of today (in cm):

- ❖ **Assam & Meghalaya:** Mawsynram (dist East Khasi Hills) 21, Mawkyrwat (dist South West Khasi Hills) 13, Gossaigaon (dist Kokrajhar) 13, Mawkyrwat_arg (dist South West Khasi Hills) 12, Nalbari/pagladia (dist Nalbari) 11, Cherrapunji (dist East Khasi Hills) 11, Chauldhowaghat (dist Lakhimpur) 11, Kokrajhar (dist Kokrajhar) 11, Dhemaji (dist Dhemaji) 10, Tihu Arg (dist Nalbari) 9, Cherrapunji(rkm) (dist East Khasi Hills) 9, Manash Nh Xing (dist Barpeta) 9, Barpeta (dist Barpeta) 9, Beki Mathungari (dist Barpeta) 9, Mirza Circle Office Arg (dist Kamrup (rural)) 9, Goalpara_cwc (dist Goalpara) 8, Puthimari (dist Kamrup (rural)) 8, Beky Rly.bridge (dist Barpeta) 7, Panbari (dist Chirang) 7, Khanapara (dist Kamrup Metropolitan) 7, N.lakhimpur/lilabari (dist Lakhimpur) 7, Goalpara_aws (dist Goalpara) 7, Bahalpur (dist Dhubri) 7;
- ❖ **Gujarat Region:** Danta (dist Banaskantha) 20, Vadgam (dist Banaskantha) 10, Valsad_Kvk Aws (dist Valsad) 9, Silvassa (dist Dadara & Nagar Haveli) 8, Kadana (dist Mahisagar) 8, Shahera (dist Panchmahal) 7, Tilakwada (dist Narmada) 7;
- ❖ **East Uttar Pradesh:** Balrampur (dist Balrampur) 20, Bahraich (dist Bahraich) 19, Bansi Tehsil (dist Siddharth Nagar) 17, Meja (dist Prayagraj) 11, Balrampur(t) (dist Balrampur) 11, Trimohani Ghat Fmo (dist Maharajganj) 11, Bhanpur (dist Basti) 8, Jalalpur Fmo (dist Ambedkar Nagar) 8, Ghanghata (dist Sant Kabir Nagar) 7, Karchhana (dist Prayagraj) 7, Dalmau Cwc (dist Rae Bareilly) 7, Mahsi (dist Bahraich) 7, Tulasipur (dist Balrampur) 7;
- ❖ **West Uttar Pradesh:** Mirganj (dist Bareilly) 18, Pawayan (dist Shahjahanpur) 9, Sahabad (dist Rampur) 9, Bilari (dist Moradabad) 8, Pali (dist Lalitpur) 7, Malpura (Tonk) 18, Sajjangarh (Banswara) 12, Kotkasim (Alwar) 11, Nainwa (Bundi) 10, Danpur (Banswara) 10, Ramgarh (Alwar) 10, Pipalda (Kota) 9, Govindgarh (Alwar) 9, Phagi (Jaipur) 8, Todaraisingh (Tonk) 8;
- ❖ **Coastal Karnataka:** Manki (dist Uttara Kannada) 15, Ankola (dist Uttara Kannada) 11, Karwar Obsy (dist Uttara Kannada) 11, Gokarna (dist Uttara Kannada) 9, Shirali Pto (dist Uttara Kannada) 8, Kumta (dist Uttara Kannada) 8, Kadra (dist Uttara Kannada) 7;
- ❖ **Arunachal Pradesh:** Kamba Aws (dist West Siang) 14, Itanagar (dist Papumpara) 12, Tuting (dist Upper Siang) 6;
- ❖ **Himachal Pradesh:** Palampur (dist Kangra) 13, Kataula (dist Mandi) 11, Baijnath (dist Kangra) 9;
- ❖ **Konkan & Goa:** Valpoi (dist North Goa) 13, Sanguem (dist South Goa) 12, Mapusa (dist North Goa) 11, Ponda (dist North Goa) 11, Margao (dist South Goa) 9, Karjat_agri (dist Raigad) 9, Roha (dist Raigad) 9, Sawantwadi (dist Sindhudurg) 8, Pen (dist Raigad) 8, Awalegaon - Arg (dist Sindhudurg) 7, Tala (dist Raigad) 7, Khalapur (dist Raigad) 7;
- ❖ **Uttarakhand:** Loharkhet (Bageshwar) 11, Dharchula (Pithoragarh) 10, Rudraprayag (Rudraprayag) 9, Sama (Bageshwar) 8, Kapkot (Bageshwar) 7;
- ❖ **West Madhya Pradesh:** Kumbhraj (dist Guna) 11, Neemuch-aws (dist Neemuch) 10, Karhal (dist Sheopur) 9, Bajna (dist Ratlam) 9, Mungaoli (dist Ashoknagar) 9, Sheopur-aws (dist Sheopur) 9, Biaora (dist Rajgarh) 8, Agar (dist Agar-malwa) 8, Raoti (dist Ratlam) 7, Pathari (dist Vidisha) 7;
- ❖ **Chhattisgarh:** Ramanujnagar (dist Surajpur) 10, Shankargarh (dist Balrampur) 6, Konta (dist Sukma) 6;
- ❖ **Bihar:** Barharia (dist Siwan) 9, Kishanganj (dist Kishanganj) 9, Gidhaur (dist Jamui) 8, Basantpur (dist Siwan) 7, Pakrivarma (dist Nawada) 7;
- ❖ **Haryana:** Narnaul (dist Mahendragarh) 8, Narnaul Rev (dist Mahendragarh) 7;
- ❖ **Madhya Maharashtra:** Mahabaleshwar- Imd Obsy (dist Satara) 7, Lonavala_agri (dist Pune) 6, Chandgad (dist Kolhapur) 6, Gaganbawada (dist Kolhapur) 6;
- ❖ **East Madhya Pradesh:** Shahpura (dist Dindori) 8, Ramnagar (dist Satna) 8, Hanumana (dist Rewa) 8, Niwas (dist Mandla) 7, Gohparu (dist Shahdol) 7, Kotma (dist Anuppur) 7, Rehli (dist Sagar) 7;
- ❖ **Telangana:** Sathupalle (dist Khammam) 7, Enkuru (dist Khammam) 5, Aswaraopeta (dist B. Kothagudem) 5;

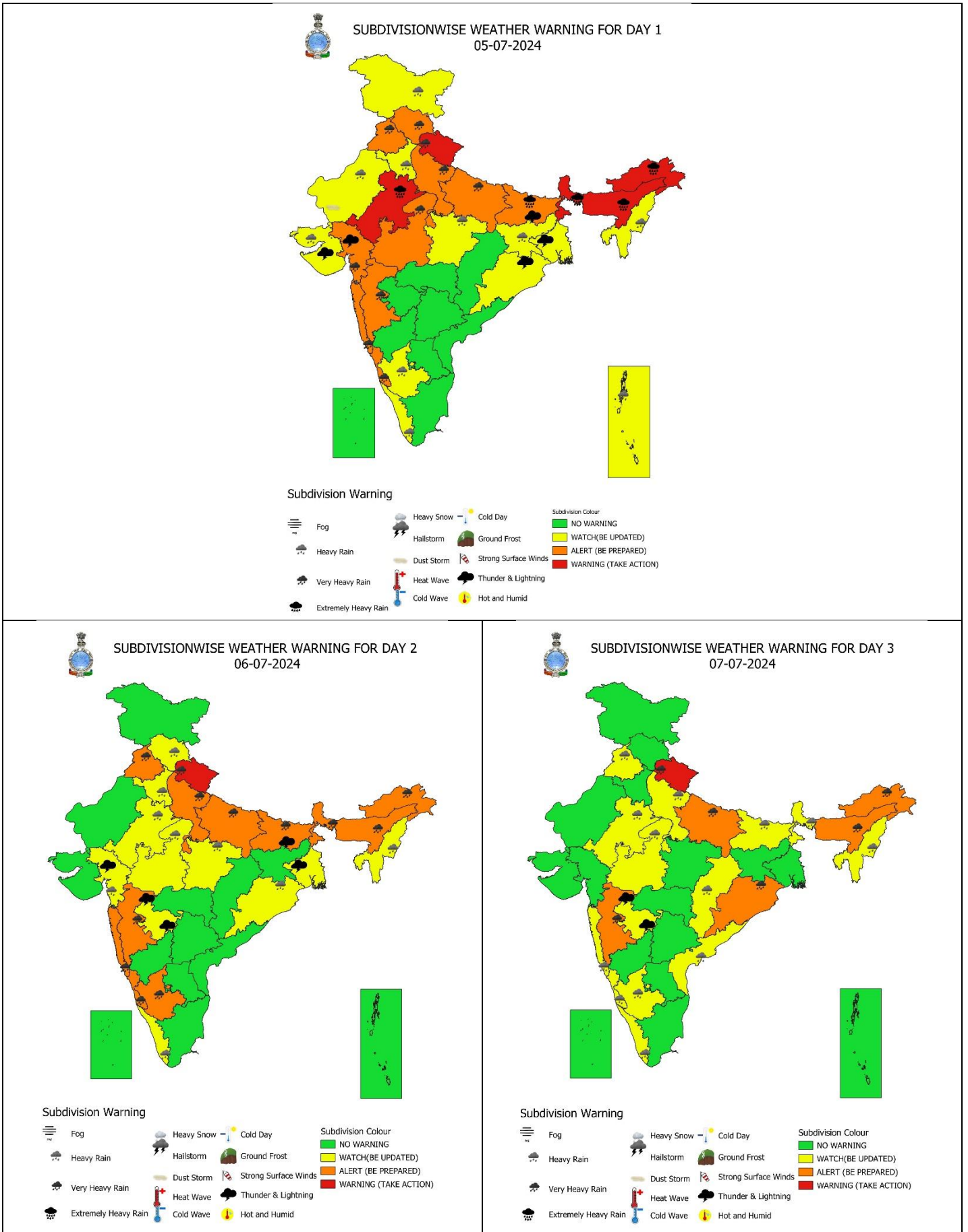
Reported maximum wind speed (in kmph) during past 24 hours till 0830 hours IST of today:

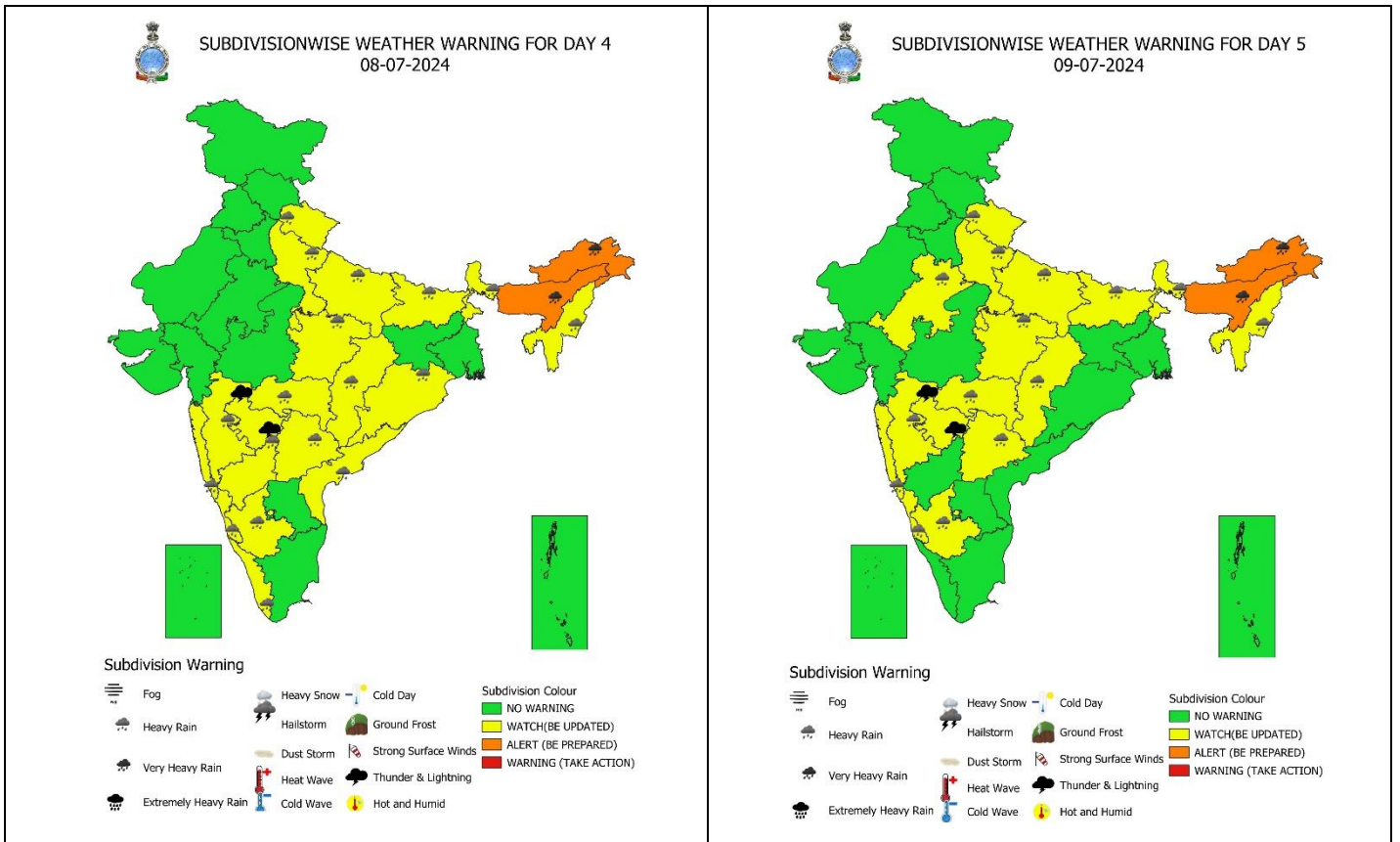
- ❖ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Kargil 61, Leh 57;
- ❖ **Himachal Pradesh:** Kinnaur 57;
- ❖ **Rajasthan:** Bikaner 76, Ajmer 46;
- ❖ **Gujarat:** Gir Somnath 46, Daman 44;
- ❖ **Odisha:** Puri 50, Khurdha 46;
- ❖ **Maharashtra:** Jalna 65, Raigad 57, Pune 54, Nashik 52, Beed, Yavatmal 50 each;
- ❖ **Telangana:** Siddipet 56, Vikarabad 46;
- ❖ **Karnataka:** Yadgir, Chamarajanagar 44 each;
- ❖ **Tamil Nadu:** Erode 52;

Fig.: Gusty winds reported over the country (in knots, 1 Knot = 1.85 kmph) from 0830 hrs IST of 04.07.2024 to 0830 hrs IST of 05.07.2024



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





IMPACT & ACTION SUGGESTED due to

- ✓ **Isolated extremely heavy rainfall very likely over East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh, Assam & Meghalaya on 05th July.**
- ✓ **Isolated very heavy rainfall very likely over Himachal Pradesh, West Madhya Pradesh, Madhya Maharashtra on 05th; Uttarakhand, East Uttar Pradesh during 05th – 07th; Punjab, West Uttar Pradesh, West Bengal & Sikkim, Konkan & Goa, Coastal Karnataka on 05th & 06th; Bihar, South Interior Karnataka on 06th; Odisha on 07th; Arunachal Pradesh, Assam & Meghalaya during 06th – 09th July.**

- 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.

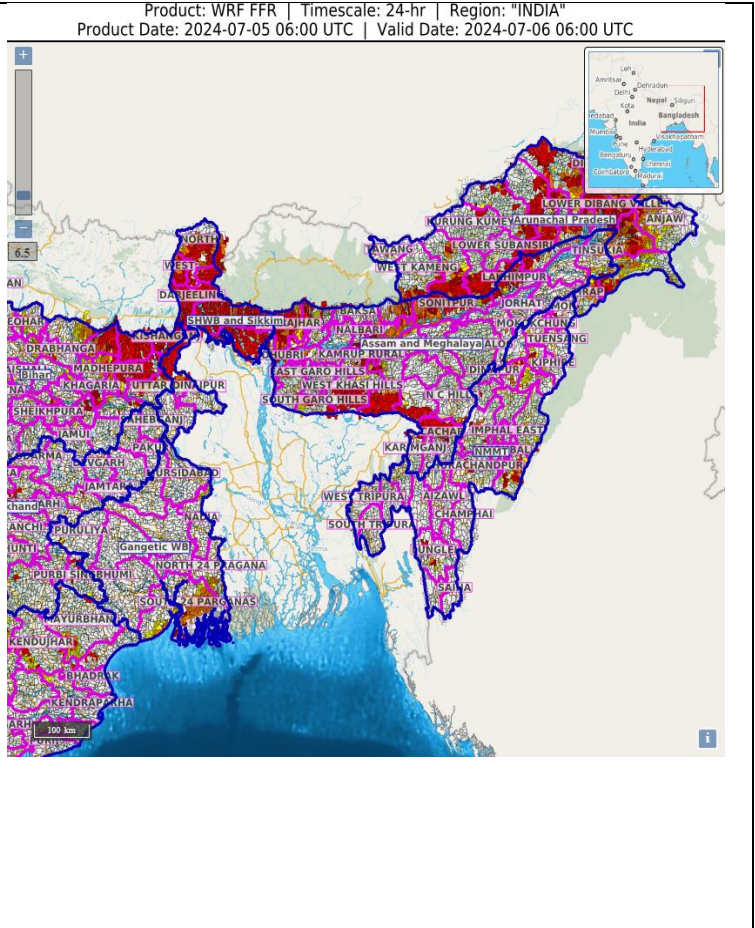
Agromet advisories for Heavy Rainfall, Gusty winds and Heat Wave likely over various parts of the country:

- Make provision for draining out excess water from crop fields to avoid water stagnation in North Eastern States, Sub-Himalayan West Bengal & Sikkim, Bihar, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Gujarat State, Coastal & South Interior Karnataka.
- Postpone nursery preparation and transplanting of WRC rice in Arunachal Pradesh; nursery sowing of *Sali* rice in Assam; sowing of millets and transplanting of *Sali* rice in Meghalaya and cover the rice nursery beds with polythene sheet in Sub-Himalayan West Bengal & Sikkim.
- Provide mechanical support to horticultural crops & staking to vegetables.

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 06-07-2024 :

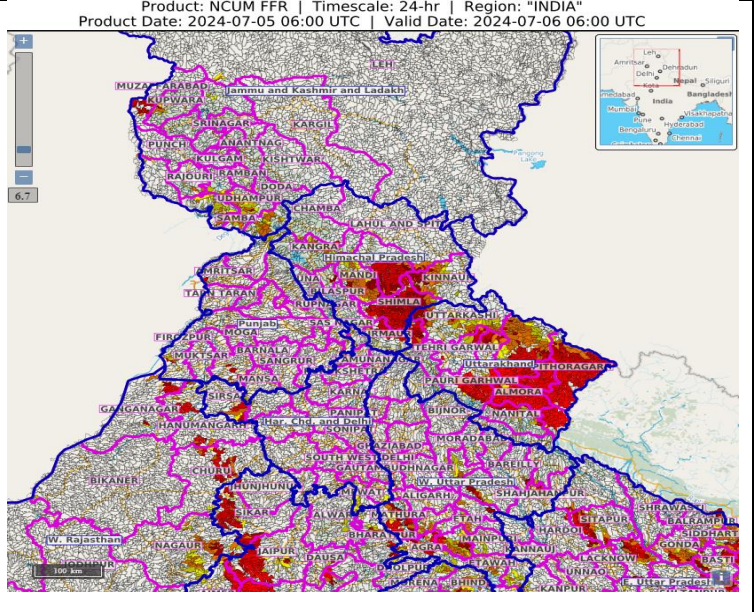
Moderate to High flash flood risk likely over few watersheds & neighbourhoods of SHWB & Sikkim Met Sub-divisions during next 24 hours. Moderate flash flood risk likely over few watersheds & neighbourhoods of Bihar, Assam and Meghalaya and Arunachal Pradesh Met Sub-divisions during next 24 hours.

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.



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 06-07-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh and Uttarakhand Met Sub-divisions during next 24 hours. Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Jammu and Kashmir and Ladakh Met Sub-divisions during next 24 hours. Surface runoff/ Inundation may occur at

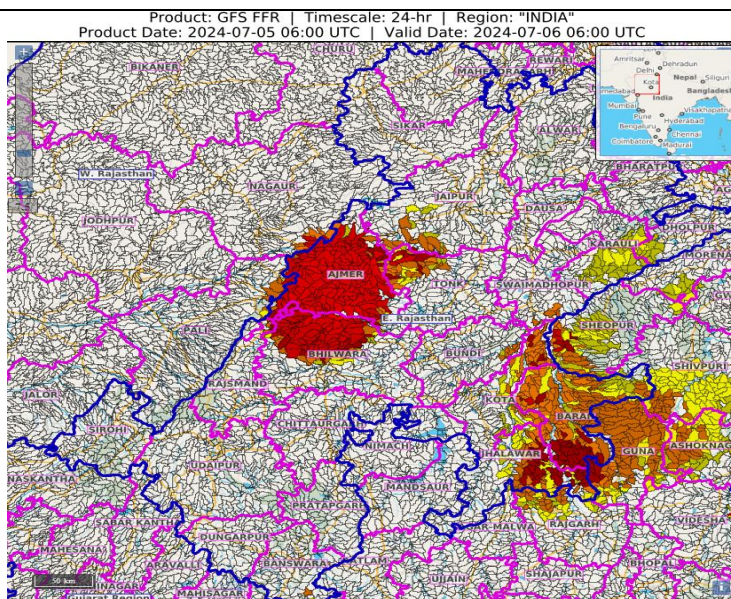


some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 06-07-2024 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of East Rajasthan and Eastern parts of West Rajasthan Met Sub-divisions during next 24 hours.

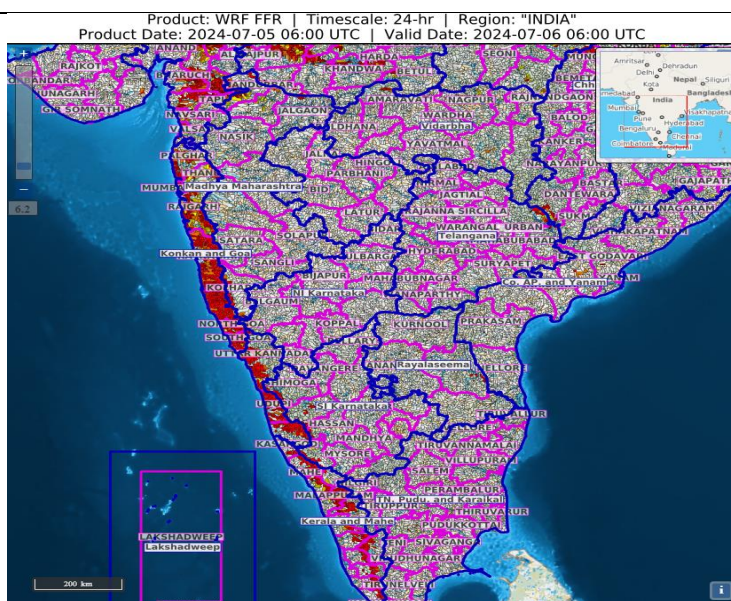
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 06-07-2024 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Coastal Karnataka, Konkan and Goa and Gujarat Region 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

Subdivision Colour

	NO WARNING
	WATCH (BE UPDATED)
	ALERT (BE PREPARED)
	WARNING (TAKE ACTION)

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

LEGENDS

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

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



Rain/ Snow *

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



Heat Wave

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

(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .	
Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$	

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.	
Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$	

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is $> 4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$



Warm Night

When maximum temperature remains 40°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°C .	
Severe Warm Night: When minimum temperature departure $> 6.4^\circ\text{C}$.	



Cold Wave

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.

(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C .	
Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$	

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$	
Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$	

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$



Cold Day

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions

Based on departure

Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C .	
Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$	



Fog

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres	
Dense Fog: when the visibility between 50- 200 metres	
Very Dense Fog: when the visibility < 50 metres	



Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



Frost

Ice deposits on ground

Air temperature $\leq 4^\circ\text{C}$ (over Plains)	
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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)	