



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 05th August, 2024

Time of Issue: 1245 hours IST

Subject: (i) Under the influence of Depression, isolated extremely heavy rainfall likely over West Rajasthan and very heavy rainfall over East Rajasthan, Gujarat & Maharashtra on 05th August.

(ii) Fairly widespread to widespread rainfall with isolated heavy falls likely over northwest & east India during next 3-4 days.

Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)

Heavy to very heavy rainfall at some places with **extremely heavy rainfall** occurred at isolated places over East Rajasthan; **Heavy to very heavy rainfall** with **extremely heavy rainfall** at isolated places over Gujarat Region, West Rajasthan; **Heavy to very heavy rainfall** at isolated places over Uttarakhand, Madhya Pradesh, Tamil Nadu, Coastal Karnataka, Konkan & Goa, Madhya Maharashtra, Andaman & Nicobar Islands, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim; **Heavy rainfall** at isolated places over Himachal Pradesh, Arunachal Pradesh, Bihar and Odisha.

Weather Systems

- ✓ The **deep depression** over northeast Madhya Pradesh & adjoining south Uttar Pradesh moved west-northwestwards and weakened into a **depression** at 0530 hours IST of 05th August. It moved west-northwestwards with a speed of 22 kmph during past 6 hours and laid centered at 0830 hours IST of today, the 05th August over **Northeast Rajasthan and neighbourhood** near latitude 26.5°N and longitude 75.6°E, about 40 km south-southwest of Jaipur (Rajasthan), 100 km east of Ajmer (Rajasthan), 130 km south-southeast of Sikar (Rajasthan) and 280 km southeast of Bikaner (Rajasthan).
It is likely to continue to move west-northwestwards across North Rajasthan and weaken further into a well marked low pressure area during next 12 hours. **(refer Fig 1 for track and forecast of depression)**
- ✓ An east-west trough runs from the depression over northeast Rajasthan & neighbourhood to north Odisha in lower & middle tropospheric levels tilting southwards with height.
- ✓ The **Monsoon trough** is active and south of the normal position at mean sea level.
- ✓ The **off-shore trough** at mean sea level runs along South Gujarat to north Kerala coast.

Forecast & Warnings: (upto 7 days):

(Rainfall distribution and Graphics for warning are given in Annexure II & III respectively)

❖ Forecast warning for Northwest India

- ✓ Fairly widespread to widespread light/moderate rainfall **accompanied with thunderstorm & lightning** very likely over Jammu-Kashmir, Himachal Pradesh, Uttarakhand & Rajasthan; scattered to fairly widespread rainfall over Uttar Pradesh, Punjab, Haryana-Chandigarh-Delhi during the week.
- ✓ Isolated **extremely heavy rainfall** very likely over West Rajasthan on 05th August.
- ✓ Isolated **very heavy rainfall** also likely over East Rajasthan on 05th, 08th & 09th; West Rajasthan on 06th, Himachal Pradesh on 07th and Uttarakhand on 06th, 07th & 09th August.

- ✓ Isolated **heavy rainfall** very likely over Jammu-Kashmir on 06th, 07th, 10th & 11th; Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Rajasthan during 05th -11th, Haryana-Chandigarh during 06th-08th, Punjab during 05th-07th; West Uttar Pradesh on 06th & 07th August.

❖ **West & Central India**

- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm & lightning** very likely over the region Konkan & Goa, Gujarat Region during the week; scattered to fairly widespread rainfall over Madhya Maharashtra, Marathwada & Saurashtra & Kutch during the week.
- ✓ **Very heavy rainfall** very likely at isolated places over Gujarat Region and Madhya Maharashtra on 05th August.
- ✓ **Heavy rainfall** very likely at isolated places over West Madhya Pradesh during 05th-09th, East Madhya Pradesh on 07th & 08th, Chhattisgarh during 05th-07th; Konkan & Goa during 05th -10th, Madhya Maharashtra, Gujarat Region on during 05th-09th, Saurashtra & Kutch on 05th August.

❖ **East & Northeast India**

- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm, lightning** very likely over East & Northeast India during the week.
- ✓ **Heavy to very heavy rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 05th-10th; Sub-Himalayan West Bengal & Sikkim on 05th & 06th August and Odisha on 07th August.
- ✓ Isolated **heavy rainfall** very likely over Bihar, Odisha during 05th-08th; Jharkhand on 06th & 07th; Sub-Himalayan West Bengal & Sikkim 07th & 08th, Gangetic West Bengal on 06th August.

❖ **South Peninsular India:**

- ✓ Scattered to fairly widespread light to moderate rainfall over Kerala & Mahe, Lakshadweep, Karnataka and isolated to scattered rainfall over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Telangana and Rayalaseema during next 5 days.
- ✓ **Heavy rainfall** very likely at isolated places over Tamil Nadu on 05th & 06th; Kerala and Coastal Karnataka on 05th August.

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

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 05.08.2024(in cm):

- ❖ **East Rajasthan:** Nagrarfort (dist Tonk) 32, Hindoli (dist Bundi) 22, Jahazpur (dist Bhilwara) 21, Bundi (dist Bundi) 19, Sarwar (dist Ajmer) 18, Kekri (dist Ajmer) 18, Sawar (dist Ajmer) 17, Geola Sr (dist Ajmer) 17, Deoli (dist Tonk) 17, Kishanganj (dist Baran) 16, Mangliawas (dist Ajmer) 15, Mangrol (dist Baran) 15, Bakani (dist Jhalawar) 13, Pisagan (dist Ajmer) 13, Uniara / Aligarh (dist Tonk) 12, Deogarh (dist Rajsamand) 12, Bhinay (dist Ajmer) 11, Badesar Sr (dist Chittorgarh) 11, Shahpura (dist Bhilwara) 11, Baran (dist Baran) 11, Malpura (dist Tonk) 11, Patan (dist Bundi) 11, Mandalgarh (dist Bhilwara) 11, Nayanagar/beawar (dist Ajmer) 11, Todaraisingh (dist Tonk) 11, Talera (dist Bundi) 11, Bhainsroadgarh (dist Chittorgarh) 10, Nainwa (dist Bundi) 10, Tatgarh (dist Ajmer) 10, Pratapgarh (dist Pratapgarh) 10, Tonk Tehsil (dist Tonk) 10, Atru (dist Baran) 10, Nimbahera (dist Chittorgarh) 10, Masuda (dist Ajmer) 9, Pachpahar (dist Jhalawar) 9, Pushkar (dist Ajmer) 9, Jhalarapatan (dist Jhalawar) 9, Piplu (dist Tonk) 9, Nasirabad (dist Ajmer) 9, Bijoliya (dist Bhilwara) 8, Kotri (dist Bhilwara) 8, Pirawa (dist Jhalawar) 8, Shahabad (dist Baran) 8, Ladpura (dist Kota) 8, Indergarh (dist Bundi) 8, Gangdhar (dist Jhalawar) 8, Aklera (dist Jhalawar) 8, Chothkabarwara (dist Sawai Madhopur) 7, Degod (dist Kota) 7, Kota-aero (dist Kota) 7, Mavli (dist Udaipur) 7, Anta (dist Baran) 7, Ramganjmandi (dist Kota) 7, Arai (dist Ajmer) 7, Railmagra (dist Rajsamand) 7, Chittorgarh (dist Chittorgarh) 7, Begu Sr (dist Chittorgarh) 7, Jhalawar (dist Jhalawar) 7, Rashmi (dist Chittorgarh) 7, Dug (dist Jhalawar) 7,
- ❖ **West Rajasthan:** Sojat (Pali) 26, Degana (dist Nagaur) 10, Raipur (dist Pali) 9, Bilara (dist Jodhpur) 9, Jaitran (dist Pali) 6,
- ❖ **Gujarat Region:** Khergam (dist Navsari) 23, Dharampur (dist Valsad) 18, Kaprada (dist Valsad) 17, Dangs (ahwa) (dist Dangs) 16, Chikhli (dist Navsari) 15, Vansda (dist Navsari) 14, Waghai (dist Dangs) 14, Valsad (dist Valsad) 14, Dang (dist Dangs) 13, Pardi (dist Valsad) 13, Daman (dist Daman) 13, Subir (dist Dangs) 11, Dolvan (dist Tapi) 11, Valsad_ Kvk Aws (dist Valsad) 11,
- ❖ **Madhya Maharashtra:** Surgana (dist Nashik) 20, Lonavala_agri (dist Pune) 15, Igatpuri (dist Nashik) 14, Peth (dist Nashik) 12, Mahabaleshwar- Imd Obsy (dist Satara) 12, Ozharkheda - Fmo (dist Nashik) 11, Yaval (dist Jalgaon) 11, Trimbakshwar (dist Nashik) 10, Harsul - Fmo (dist Nashik) 9, Paud Mulshi (dist Pune) 7, Velhe (dist Pune) 6, Dindori (dist Nashik) 6;
- ❖ **East Madhya Pradesh:** Buxwaha (dist Chhatarpur) 15, Orchha (dist Niwari) 15, Hatta (dist Damoh) 14, Patera (dist Damoh) 12, Bina (dist Sagar) 12, Shahgarh (dist Sagar) 11, Malthone (dist Sagar) 11, Mohangarh (dist Tikamgarh) 9, Amarkantak (dist Anuppur) 9, Panagar (dist Jabalpur) 9, Khargapur (dist Tikamgarh) 8, Junnardeo (dist Chindwara) 8, Prithvipur (dist Niwari) 7, Badagaon Dhasan (dist Tikamgarh) 7, Palera (dist Tikamgarh) 7, Niwari (dist Niwari) 7,
- ❖ **West Madhya Pradesh:** Malhargarh (dist Mandsaur) 15, Karhal (dist Sheopur) 14, Jawad (dist Neemuch) 13, Pohri (dist Shivpuri) 13, Kolaras (dist Shivpuri) 12, Sheopur-aws (dist Sheopur) 11, Karera (dist Shivpuri) 11, Pichhore (dist Shivpuri) 10, Bamori (dist Guna) 10, Zirapur (dist Rajgarh) 9, Narwar (dist Shivpuri) 9, Badoda (dist Sheopur) 9, Manasa (dist Neemuch) 9, Shivpuri (dist Shivpuri) 9, Kayampur (dist Mandsaur) 9, Raghogarh (dist Guna) 8, Dhundhadaka (dist Mandsaur) 8, Biaora (dist Rajgarh) 8, Khirkiya-arg (dist Harda) 8, Barod (dist Agar-malwa) 8, Bhanpura (dist Mandsaur) 7, Bhimpur (dist Betul) 7, Nepanagar (dist Burhanpur) 7, Susner (dist Agar-malwa) 7, Bairad (dist Shivpuri) 7, Neemuch-aws (dist Neemuch) 7, Shamgarh (dist Mandsaur) 7, Badarwas (dist Shivpuri) 7, Sitamau (dist Mandsaur) 7, Pachore (dist Rajgarh) 7,
- ❖ **Tamil Nadu:** Vadakuthu (dist Cuddalore) 13; Zone 15 Sholinganallur (dist Chennai), Neyveli AWS (dist Cuddalore) 12 each; Hindustan_University (dist Kancheepuram), RSCL Vallam (dist Villupuram), Zone 13 Adyar (dist Chennai), Ennore AWS (dist Chennai), Zone 01 Thiruvottiyur (dist Chennai) 10 each; Cuddalore Collector Office (dist Cuddalore), Zone 01 Kathivakkam (dist Chennai), Mettupalayam (dist Coimbatore), Anna University ARG (dist Chennai), Anna University (dist Chennai), Zone 06 D65 Kolathur (dist Chennai), Chembarabakkam ARG (dist Kancheepuram) 9 each; Chembarabakkam (dist Kancheepuram), Sankarapuram (dist Kallakurichi), Tindivanam (dist Villupuram), Cuddalore (dist Cuddalore) 8 each;
- ❖ **Konkan & Goa:** Vikramgad (dist Palghar) 15, Jawhar (dist Palghar) 15, Mokheda - Fmo (dist Palghar) 9, Talasari (dist Palghar) 9, Khalapur (dist Raigad) 8, Pen (dist Raigad) 8, Palghar_agri (dist Palghar) 7, Matheran (dist Raigad) 7,
- ❖ **Assam & Meghalaya:** DC_OF_C_Dibrugarh (dist Dibrugarh) 14, WRD Arg (dist Dibrugarh) 11, Shella (dist EastKhasi Hills) 12, Mawsynram (dist East Khasi Hills) 7, Dhemaji (dist Dhemaji) 7,
- ❖ **Coastal Karnataka:** Manki (dist Uttara Kannada) 13, Kundapur (dist Udupi) 8, Honavar Obsy (dist Uttara Kannada) 7, Gersoppa (dist Uttara Kannada) 7, Shirali Pto (dist Uttara Kannada) 7,
- ❖ **Andaman & Nicobar Islands:** Hut Bay (dist South Andaman) 13;
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Buxaduar (dist Alipurduar) 13, Hasimara (dist Alipurduar) 8, Shipgyar (dist Mangan) 7, Domohani (dist Jalpaiguri) 7
- ❖ **Uttarakhand:** Koti_AWS(Dehradun) : 12, Sama(Bageshwar) : 7, Shama_aws(Bageshwar) : 6,
- ❖ **Arunachal Pradesh:** Longding AWS (dist Longding) 10, Huri AWS (dist Kurung Kumey) 7,

Figure 1: Observed and forecast track of depression



OBSERVED AND FORECAST TRACK ALONGWITH WIND DISTRIBUTION IN ASSOCIATION WITH DEPRESSION OVER NORTHEAST RAJASTHAN AND NEIGHBOURHOOD BASED ON 0830 IST (0300 UTC) OF 05th AUGUST, 2024.



DATE/TIME IN UTC

IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

D: DEPRESSION (17-27 KT)

DD: DEEP DEPRESSION (28-33 KT)

CS: CYCLONIC STORM (34-47 KT)

SCS: SEVERE CYCLONIC STORM (48-63KT)

VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)

ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

● LESS THAN 34 KT

○ 34-47 KT

● ≥ 48 KT

— OBSERVED TRACK

— FORECAST TRACK

■ CONE OF UNCERTAINTY

■ AREA OF MAXIMUM SUSTAINED WIND SPEED:

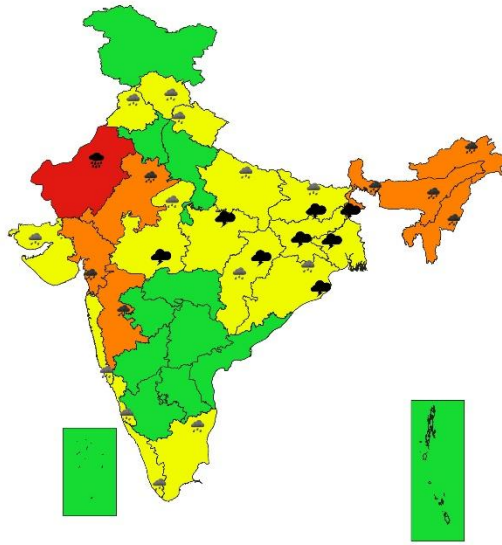
■ 30-40 KMPH GUSTING TO 50 KMPH

7 Days Rainfall Forecast								
S. No.	Subdivision	05-Aug	06-Aug	07-Aug	08-Aug	09-Aug	10-Aug	11-Aug
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	FWS	FWS	WS	WS
2	ARUNACHAL PRADESH	WS	FWS	FWS	WS	WS	FWS	FWS
3	ASSAM & MEGHALAYA	FWS	FWS	WS	WS	WS	WS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	WS	WS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	WS	WS	WS	WS	WS	WS
6	GANGETIC WEST BENGAL	WS	WS	FWS	FWS	FWS	WS	WS
7	ODISHA	FWS	WS	WS	FWS	SCT	SCT	FWS
8	JHARKHAND	FWS	WS	WS	FWS	FWS	FWS	FWS
9	BIHAR	FWS	WS	WS	FWS	FWS	FWS	FWS
10	EAST UTTAR PRADESH	SCT	FWS	WS	FWS	SCT	SCT	FWS
11	WEST UTTAR PRADESH	ISOL	FWS	WS	FWS	SCT	SCT	FWS
12	UTTARAKHAND	FWS	WS	WS	WS	WS	WS	WS
13	HARYANA CHANDIGARH & DELHI	ISOL	SCT	FWS	FWS	SCT	SCT	FWS
14	PUNJAB	ISOL	SCT	FWS	SCT	SCT	SCT	SCT
15	HIMACHAL PRADESH	FWS	FWS	FWS	WS	WS	WS	WS
16	JAMMU & KASHMIR AND LADAKH	FWS	FWS	FWS	SCT	SCT	SCT	SCT
17	WEST RAJASTHAN	WS	FWS	FWS	FWS	FWS	FWS	FWS
18	EAST RAJASTHAN	WS	WS	FWS	FWS	WS	WS	FWS
19	WEST MADHYA PRADESH	FWS	FWS	WS	WS	WS	FWS	FWS
20	EAST MADHYA PRADESH	FWS	WS	WS	WS	WS	WS	WS
21	GUJARAT REGION	WS	FWS	FWS	WS	WS	WS	WS
22	SAURASHTRA & KUTCH	WS	FWS	SCT	FWS	FWS	FWS	FWS
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	FWS	SCT	SCT	SCT	SCT	SCT	SCT
25	MARATHAWADA	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL
26	VIDARBHA	WS	FWS	FWS	FWS	FWS	FWS	FWS
27	CHHATTISGARH	FWS	WS	WS	FWS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL
29	TELANGANA	SCT	SCT	SCT	SCT	SCT	ISOL	ISOL
30	RAYALASEEMA	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAİKAL	SCT	SCT	SCT	ISOL	ISOL	SCT	SCT
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	FWS	FWS
33	NORTH INTERIOR KARNATAKA	SCT	FWS	FWS	SCT	SCT	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	SCT	FWS	FWS	SCT	FWS	FWS	FWS
35	KERALA & MAHE	WS	FWS	FWS	SCT	SCT	FWS	FWS
36	LAKSHADWEEP	WS	FWS	SCT	SCT	SCT	SCT	SCT

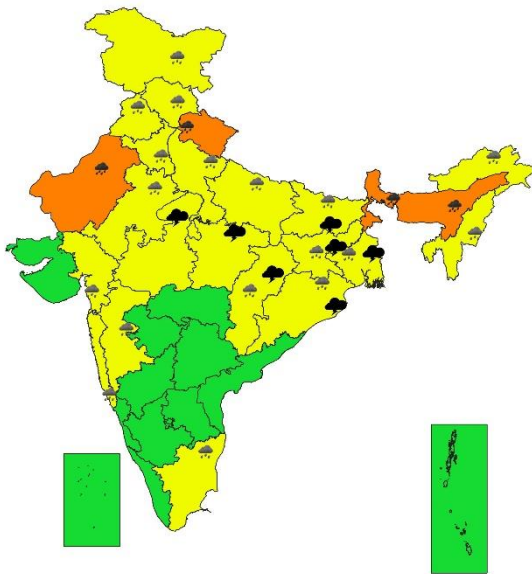
- As the lead period increases forecast accuracy decreases.



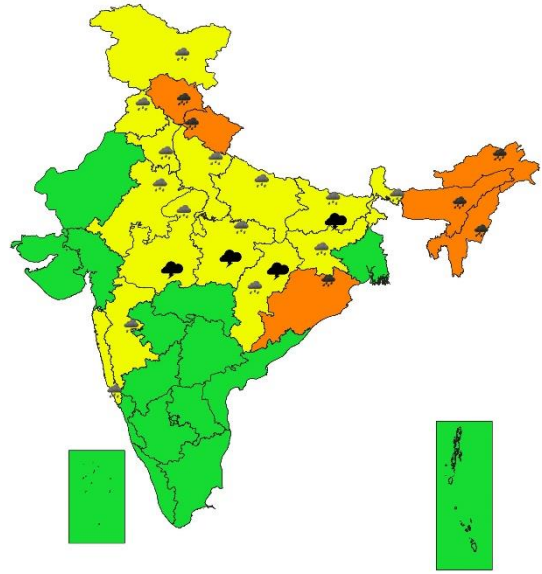
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
05-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
06-08-2024

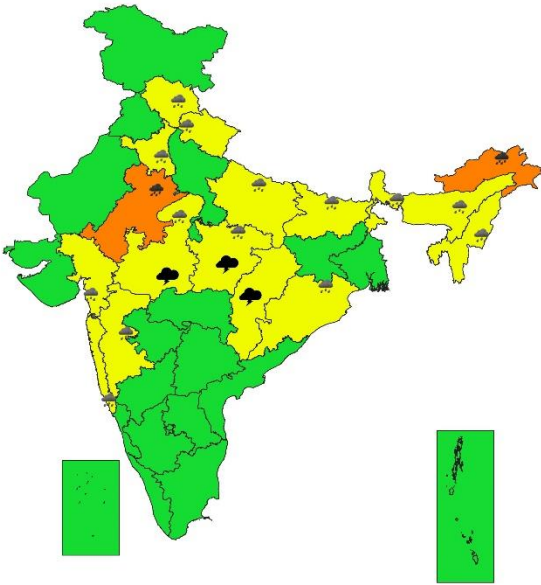


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
07-08-2024

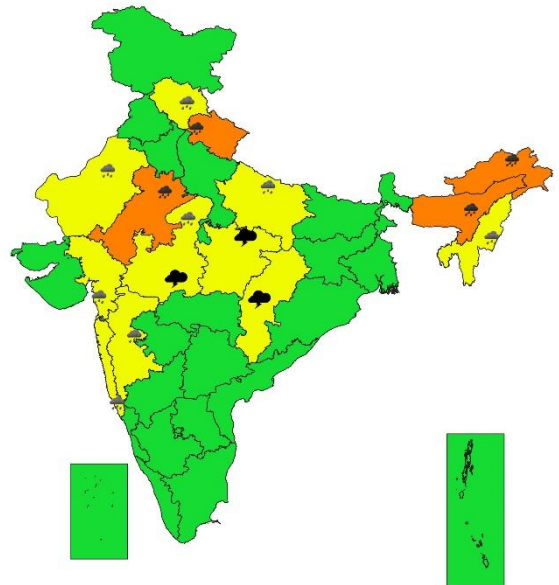




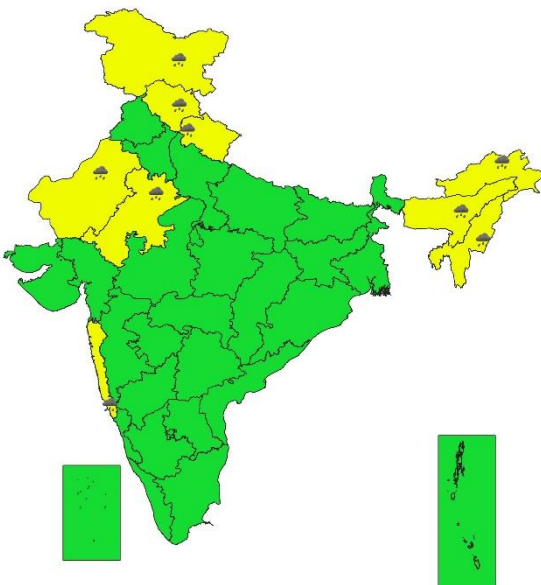
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
08-08-2024



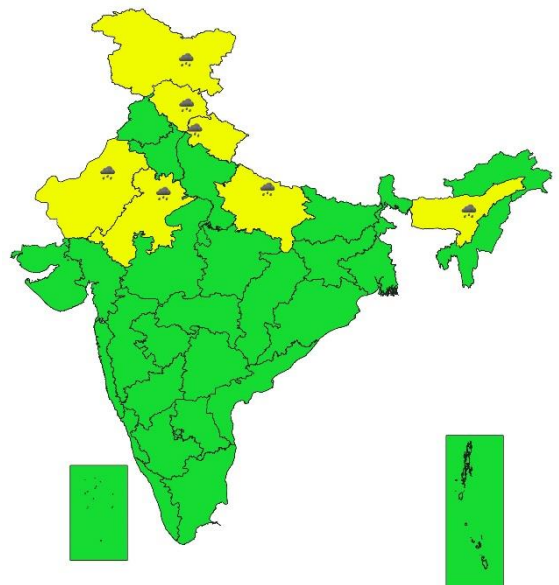
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
09-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 6
10-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 7
11-08-2024



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

Impact due to

- Isolated **extremely heavy rainfall** very likely over West Rajasthan on 05th August.
- Isolated **very heavy rainfall** also likely over Gujarat Region, Madhya Maharashtra on 05th; East Rajasthan on 05th, 08th & 09th; West Rajasthan on 06th, Himachal Pradesh on 07th and Uttarakhand on 06th, 07th & 09th August.
- **Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of West Rajasthan, South Gujarat Region and Konkan & Goa, Himachal Pradesh, Uttarakhand Met Sub-divisions on 05th & 06th August. (ANNEXURE IV)**

- ✓ 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 kutch roads.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ 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 likely over various parts of the country

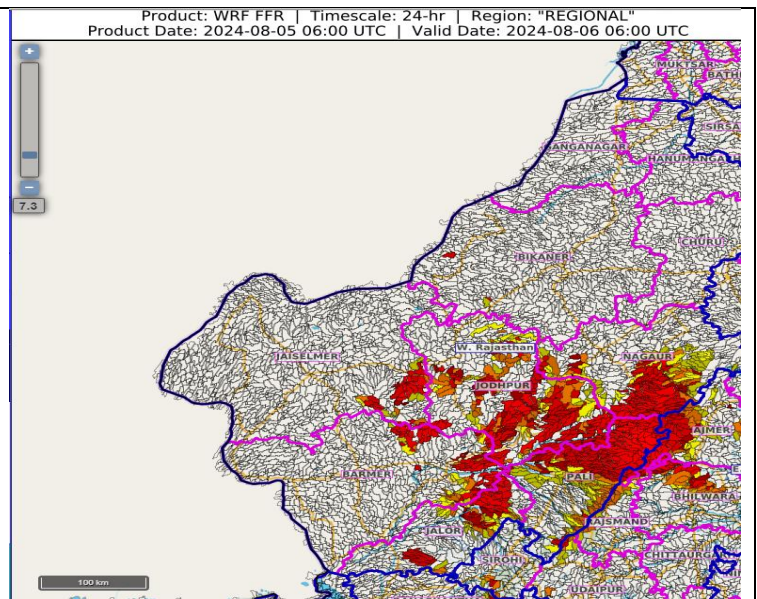
- Drain out excess water from rice, soybean, maize, cotton, sugarcane, pigeon pea, black gram, green gram, vegetables and orchards in **Madhya Pradesh**; rice, sugarcane, cowpea, cluster bean, vegetables and orchards in **South Gujarat**; pearl millet, groundnut, cotton, cluster bean, green gram, black gram, sesame, soybean, moth bean and orchards in **Rajasthan**; rice and finger millet in **Konkan** and *ghat* areas of **Madhya Maharashtra**.
- Make provision for draining out excess water from crop fields to avoid water stagnation in North Eastern states, Sub-Himalayan West Bengal, Odisha, Bihar, Himachal Pradesh, Uttarakhand, Gujarat region, Tamil Nadu and Coastal Karnataka.
- Provide mechanical support to horticultural crops & staking to vegetables.

Flash Flood Guidance:

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 06-08-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of West Rajasthan Met Sub-divisions during next 24 hours.

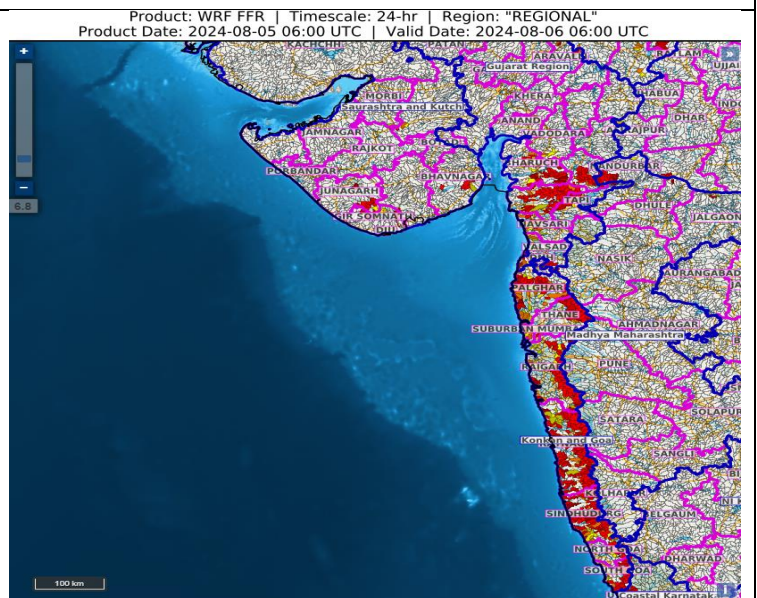
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 06-08-2024 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of South Gujarat Region and Konkan & Goa Met Sub-divisions during next 24 hours.

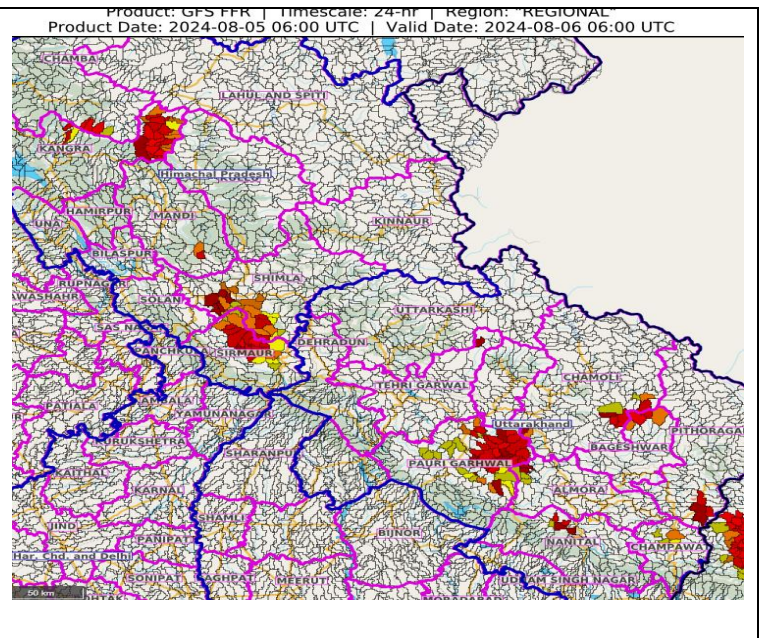
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 06-08-2024 :

Low flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh and Uttarakhand 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; **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.

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 Widespred (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)	