



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 22<sup>st</sup> August, 2024

Time of Issue: 1400 hours IST

**Subject: (i) Low Pressure Area over north Bangladesh likely to cause very heavy to extremely heavy rainfall over Assam & Meghalaya and Tripura during next 2 days.**  
**(ii) Enhanced rainfall activity with very heavy to extremely heavy rainfall over Gujarat and Maharashtra during 24<sup>th</sup> to 27<sup>th</sup> August.**

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

- ✓ **Exceptionally heavy rainfall (in cm) occurred** at isolated places over south Tripura.
- ✓ **Heavy to very heavy rainfall** at isolated places over Arunachal Pradesh, Uttarakhand, Bihar, East Madhya Pradesh, Chhattisgarh, Konkan & Goa, Lakshadweep; **Heavy rainfall** at isolated places over Assam & Meghalaya, East Uttar Pradesh, East Rajasthan, Jharkhand, Odisha, West Madhya Pradesh, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana

**Weather Systems:**

- ✓ The **low pressure area** over north Bangladesh persisted over the same region. It is likely to move nearly westwards across West Bengal during next 48 hours.
- ✓ Another **low pressure area** formed over eastcentral Arabian sea off Karnataka-Goa coasts. It is likely to move gradually northwards during next 24 hours.
- ✓ The western end of **monsoon trough** lies near its normal position and its eastern end to the north of its normal position at mean sea level.
- ✓ A **cyclonic circulation** likely to form over North Bay of Bengal & neighbourhood around 24<sup>th</sup> August.

**Forecast & Warnings (upto 7 days):**

❖ **Northwest India**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Uttarakhand, East Rajasthan; scattered to fairly widespread rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttar Pradesh; isolated to scattered rainfall over Punjab, Haryana-Chandigarh-Delhi, West Rajasthan during the week.
- ✓ Isolated **heavy rainfall** very likely over Uttarakhand during next 7 days, East Uttar Pradesh during 22<sup>nd</sup> – 26<sup>th</sup>; East Rajasthan during 22<sup>nd</sup> – 27<sup>th</sup> August; West Uttar Pradesh, West Rajasthan during 23<sup>rd</sup> – 25<sup>th</sup> and over Jammu Division during 26<sup>th</sup> – 28<sup>th</sup>.

- ✓ Isolated **very heavy rainfall** also very likely over Uttarakhand on 22<sup>nd</sup> & 23<sup>rd</sup>; East Rajasthan on 25<sup>th</sup> August.

#### ❖ **West & Central India**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over central India, Konkan & Goa, Madhya Maharashtra, Gujarat State; scattered to fairly widespread rainfall over Marathwada, during the week.
- ✓ Isolated Heavy rainfall very likely over Konkan & Goa during next 7 days; Madhya Pradesh during 22<sup>nd</sup> – 26<sup>th</sup>; Chhattisgarh during 22<sup>nd</sup> – 25<sup>th</sup>; Madhya Maharashtra during 23<sup>rd</sup> – 26<sup>th</sup>; Gujarat State during 24<sup>th</sup> – 28<sup>th</sup> August and over Vidarbha and Marathwada on 24<sup>th</sup> & 25<sup>th</sup>.
- ✓ Isolated **very heavy rainfall** also very likely over East Madhya Pradesh on 24<sup>th</sup> & 25<sup>th</sup>; Konkan & Goa during 23<sup>rd</sup> – 26<sup>th</sup>; Chhattisgarh on 24<sup>th</sup>; West Madhya Pradesh on 24<sup>th</sup> & 26<sup>th</sup>; Madhya Maharashtra during 24<sup>th</sup> – 26<sup>th</sup>; Gujarat Region on 27<sup>th</sup> August.
- ✓ Isolated **extremely heavy rainfall very likely** over Gujarat Region during 24<sup>th</sup> - 26<sup>th</sup>; West Madhya Pradesh on 25<sup>th</sup> & 26<sup>th</sup>; Saurashtra & Kutch on 26<sup>th</sup> & 27<sup>th</sup> August.

#### ❖ **East & Northeast India**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over East & Northeast India, during the week.
- ✓ Isolated **heavy rainfall** very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 7 days; Arunachal Pradesh on 22<sup>nd</sup>, 23<sup>rd</sup> & 28<sup>th</sup>; Bihar during 22<sup>nd</sup> – 24<sup>th</sup>; Gangetic West Bengal, Odisha during 22<sup>nd</sup> – 25<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim, Jharkhand during 22<sup>nd</sup> – 26<sup>th</sup>; Andaman & Nicobar Islands on 24<sup>th</sup> August.
- ✓ Isolated **very heavy rainfall** also very likely over Meghalaya on 22<sup>nd</sup>, 24<sup>th</sup> & 25<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura on 23<sup>rd</sup> & 24<sup>th</sup>; Odisha during 23<sup>rd</sup> – 25<sup>th</sup>; Assam on 24<sup>th</sup> & 25<sup>th</sup> August.
- ✓ Isolated **extremely heavy rainfall very likely** over Mizoram, Tripura on 22<sup>nd</sup>; Nagaland, Manipur, Mizoram & Tripura on 25<sup>th</sup> August.

#### ❖ **South Peninsular India:**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Kerala & Mahe, Coastal Karnataka; scattered to fairly widespread rainfall likely over Lakshadweep, Coastal Andhra Pradesh & Yanam, Interior Karnataka; isolated to scattered rainfall over Tamil Nadu, Puducherry & Karaikal, Rayalaseema during the week.
- ✓ Isolated **heavy rainfall** very likely over cap on 22<sup>nd</sup>; Telangana during 22<sup>nd</sup> -24<sup>th</sup>; North Interior Karnataka during 22<sup>nd</sup> – 26<sup>th</sup>; Coastal Karnataka during 22<sup>nd</sup> – 27<sup>th</sup>; Kerala & Mahe during 24<sup>th</sup> – 26<sup>th</sup>; South Interior Karnataka on 25<sup>th</sup> & 26<sup>th</sup> August.
- ✓ Isolated **very heavy rainfall** also very likely over Coastal Karnataka on 25<sup>th</sup> & 26<sup>th</sup> August.
- ✓ **Strong surface winds** speed reaching 50-60 kmph gusting upto 70 kmph likely to prevail over Kerala and Lakshadweep Islands during next 24 hours.

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)

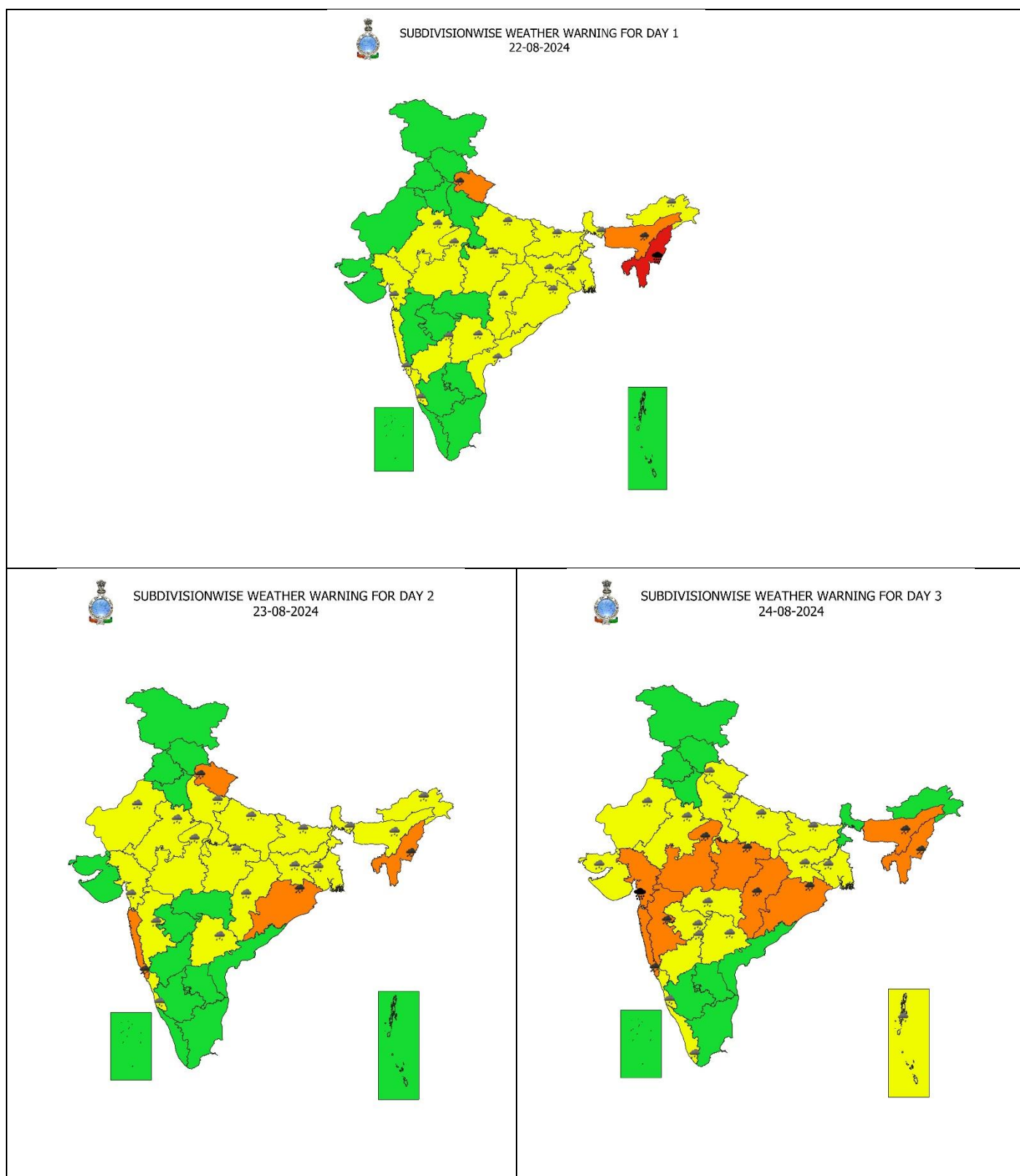
✓

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 22.08.2024 (in cm):**

- ❖ **Tripura:** Bagafa (dist South Tripura) 49, Kvk South (dist South Tripura) 31, Agartala Aero (dist West Tripura) 23, Teliamura\_arg (dist Khowai) 23, Lembuchhera (dist West Tripura) 22, Sonamura (dist Sipahijala) 20, Budhjongnagar Arg (dist West Tripura) 18, Gandachara Aws (dist Dhalai) 15, Belonia (dist South Tripura) 14, Arundhutinagar (dist West Tripura) 13, Kamalpur (dist Dhalai) 13, Kvk Dhalai (dist Dhalai) 11, Bishalgarh (dist Sipahijala) 10, Met Agartala Aws (dist West Tripura) 9, Chhamonu (dist Dhalai) 7,
- ❖ **Lakshadweep:** Agathi (dist Lakshadweep) 17,
- ❖ **Uttarakhand:** Kapkot (Bageshwar) 15, Roshnabad (Haridwar) 13, Loharkhet (Bageshwar) 12, Kotdwar (Pauri Garhwal ) 10, Jollygrant (Dehradun) 7, Haridwar (Haridwar) 7,
- ❖ **Odisha:** Biridi ( Jagatsinghpur) 15, Junagarh ( Kalahandi) 7, Kashinagar ( Gajapati) 7, Burla ( Sambalpur) 7,
- ❖ **East Madhya Pradesh:** Paraswada (dist Balaghat) 13, Hanumana (dist Rewa) 11, Baihar (dist Balaghat) 7,
- ❖ **Bihar:** Kutumba (dist Aurangabad) 13,
- ❖ **Arunachal Pradesh:** Miao (dist Changlang) 13,
- ❖ **East Madhya Pradesh:** Paraswada (dist Balaghat) 13, Hanumana (dist Rewa) 11, Baihar (dist Balaghat) 7,
- ❖ **Assam & Meghalaya:** Cherrapunji(rkm) (dist East Khasi Hills) 12, Nongstein (dist West Khasi Hills) 10, Cherrapunji (dist East Khasi Hills) 10, Mawsynram (dist East Khasi Hills) 9, Mawkyrwat (dist South West Khasi Hills) 8, Bhaghmara (dist South Garo Hills) 7,
- ❖ **Chhattisgarh:** Ambikapur (dist Surguja) 12, Bhaisma (dist Korba) 11, Chhal (dist Raigarh) 9, Kartala (dist Korba) 8, Pamgarh (dist Janjgir) 8, Lalpur Thana (dist Mungeli) 8, Balrampur (dist Balrampur) 8, Kashdol (dist Baloda Bazar) 7, Barpali (dist Korba) 7, Dhabhara (dist Sakti) 7,
- ❖ **West Madhya Pradesh:** Ghatigaon (dist Gwalior) 10, Sailana (dist Ratlam) 9, Bagh (dist Dhar) 9, Jaora (dist Ratlam) 7, Nagda (dist Ujjain) 7,
- ❖ **Coastal Andhra Pradesh & Yanam:** Parvathipuram (dist Parvathipuram Manyam) 9, Bobbili (dist Vizianagaram) 7,
- ❖ **East Rajasthan:** Nasirabad (dist Ajmer) 9, Nathdwara (dist Rajsamand) 7, Degod Sr (dist Kota) 7, Baran (dist Baran) 7,
- ❖ **East Uttar Pradesh:** Haidargarh (dist Barabanki) 9, Bhanpur (dist Basti) 7, Tanda (dist Ambedkar Nagar) 7,
- ❖ **Marathwada:** Jalkot (dist Latur) 9,
- ❖ **South Interior Karnataka:** Kottigehara (dist Chikkamagaluru) 8,
- ❖ **Konkan & Goa:** Chiplun (dist Ratnagiri) 7,
- ❖ **Jharkhand:** Chas (dist Bokaro) 7,
- ❖ **Tamil Nadu:** Yercaud AWS (dist Salem) 7,
- ❖ **Telangana:** Wyra Kvk(agro) (dist Khammam) 7,
- ❖ **Gujarat Region:** Khambhat (dist Anand) 7,
- ❖ **Royalaseema:** Orvakal (dist Kurnool) 7.

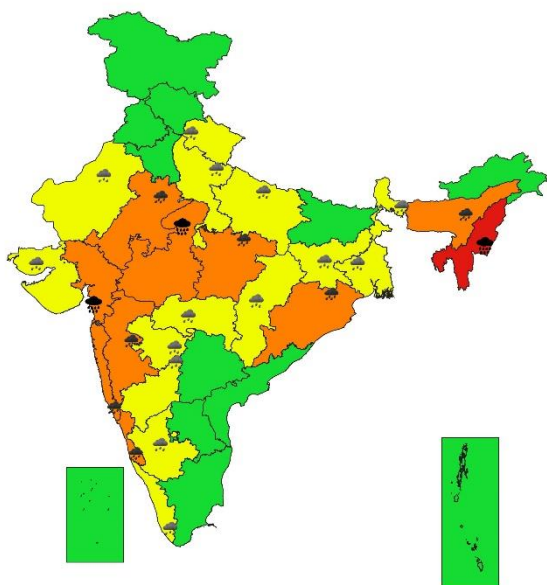
7 Days Rainfall Forecast								
S. No.	Subdivision	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	FWS	FWS	FWS	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	WS	WS	WS	WS	WS	FWS	FWS
4	NAGALAND, MANIPUR,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

- As the lead period increases forecast accuracy decreases.

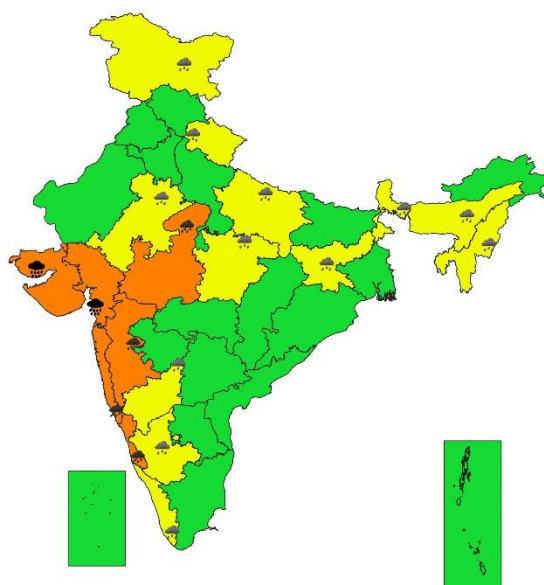




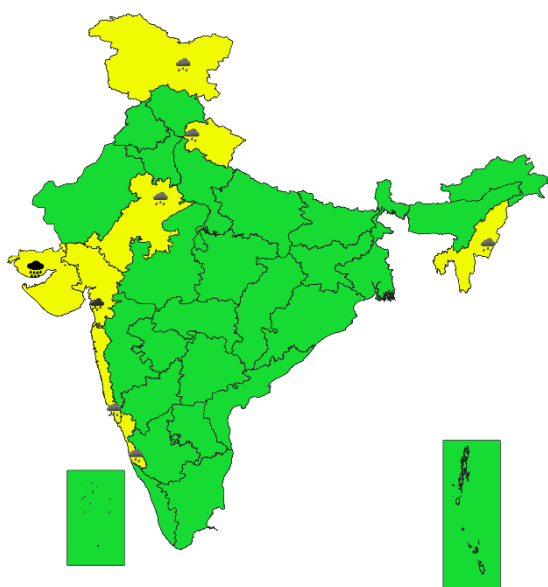
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
25-08-2024



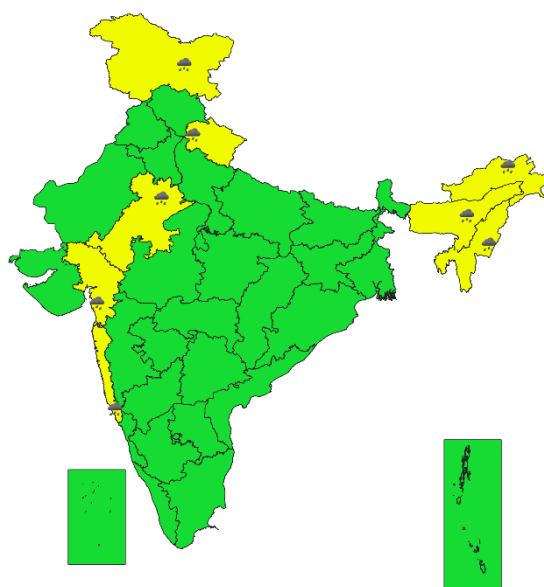
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5  
26-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 6  
27-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 7  
28-08-2024



- 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** Mizoram, Tripura on 22<sup>nd</sup>; Gujarat Region during 24<sup>th</sup>-26<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura on 25<sup>th</sup>; West Madhya Pradesh on 25<sup>th</sup> & 26<sup>th</sup>; Saurashtra & Kutch on 26<sup>th</sup> & 27<sup>th</sup> August.
- ✓ **Very heavy rainfall** at isolated over Uttarakhand on 22<sup>nd</sup> & 23<sup>rd</sup>; Meghalaya on 22<sup>nd</sup>, 24<sup>th</sup> & 25<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura on 23<sup>rd</sup> & 24<sup>th</sup>; East Rajasthan on 25<sup>th</sup>; Coastal Karnataka on 25<sup>th</sup> & 26<sup>th</sup>; Odisha during 23<sup>rd</sup> – 25<sup>th</sup>; Assam on 24<sup>th</sup> & 25<sup>th</sup>; East Madhya Pradesh on 24<sup>th</sup> & 25<sup>th</sup>; Konkan & Goa during 23<sup>rd</sup> – 26<sup>th</sup>; Chhattisgarh on 24<sup>th</sup>; West Madhya Pradesh on 24<sup>th</sup> & 26<sup>th</sup>; Madhya Maharashtra during 24<sup>th</sup> – 26<sup>th</sup>; East Rajasthan on 25<sup>th</sup>; Coastal Karnataka on 25<sup>th</sup> & 26<sup>th</sup>; Gujarat Region on 27<sup>th</sup> August.
- ✓ **Moderate flash flood risk** likely over few watersheds & neighbourhoods of Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **Low to Moderate flash flood risk** likely over Uttarakhand on 21<sup>th</sup> 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 kutcha 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 field crops and horticultural crops in Arunachal Pradesh, Assam & Meghalaya, NMMT, Uttarakhand, East Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Gujarat region, Odisha, Jharkhand, Bihar, Coastal Andhra Pradesh and Telangana.
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in West Bengal, Coastal and North Interior Karnataka, Konkan & Goa, Madhya Maharashtra, Saurashtra & Kutch.
- Postpone sowing of black gram and green gram in Assam.
- Due to continuous heavy rain transplanted rice and vegetables are submerged in low lying areas, recovery of young rice seedlings is unlikely, farmers are advised to collect short duration rice varieties after cessation of rain otherwise can wait a bit and prepare in advance for winter vegetables in Tripura.
- Drain out excess water from kharif rice, groundnut, sesame, soyabean, ginger, turmeric and vegetables to prevent the water logging in Mizoram.
- Provide mechanical support to horticultural crops & staking to vegetables

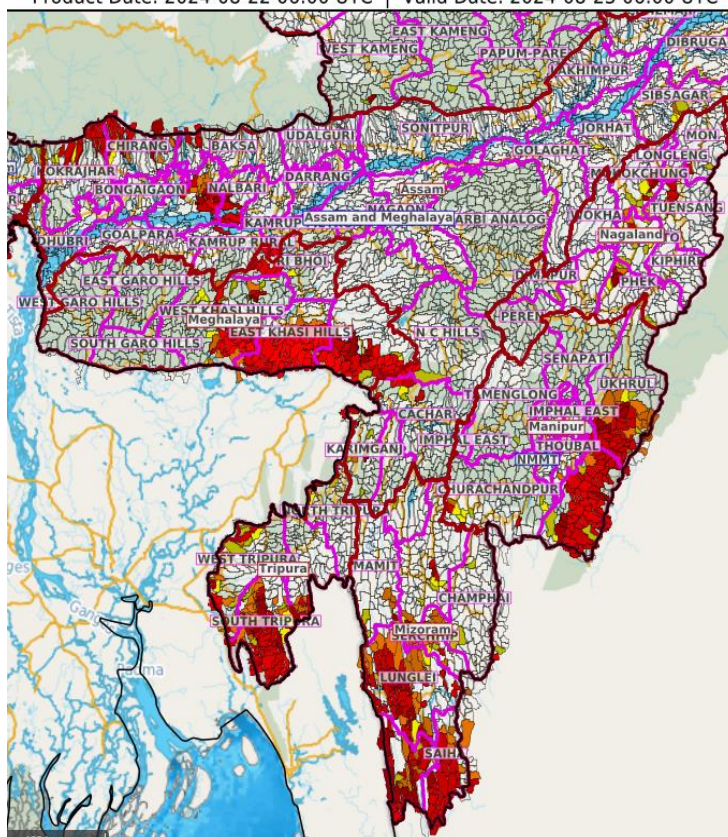
**Flash Flood Guidance:**

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 23-08-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours. Assam & Meghalaya - Barpeta, Chirang, Kamrup Rural, Kokrajhar, Nalbari, East Khasi Hills, Ri Bhoi, West Khasi Hills and Jaintia Hills districts. NMMT - Chandel, Thoubal, Ukhrul, Aizawl, Lawngtlai, Lunglei, Mamit, Saiha, Serchhip, Mokokchung, Phek, Zunheboto, Dhalai, North Tripura, South Tripura and West Tripura districts.

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.

Product: WRF FFR | Timescale: 24-hr | Region: "INDIA"  
Product Date: 2024-08-22 06:00 UTC | Valid Date: 2024-08-23 06:00 UTC



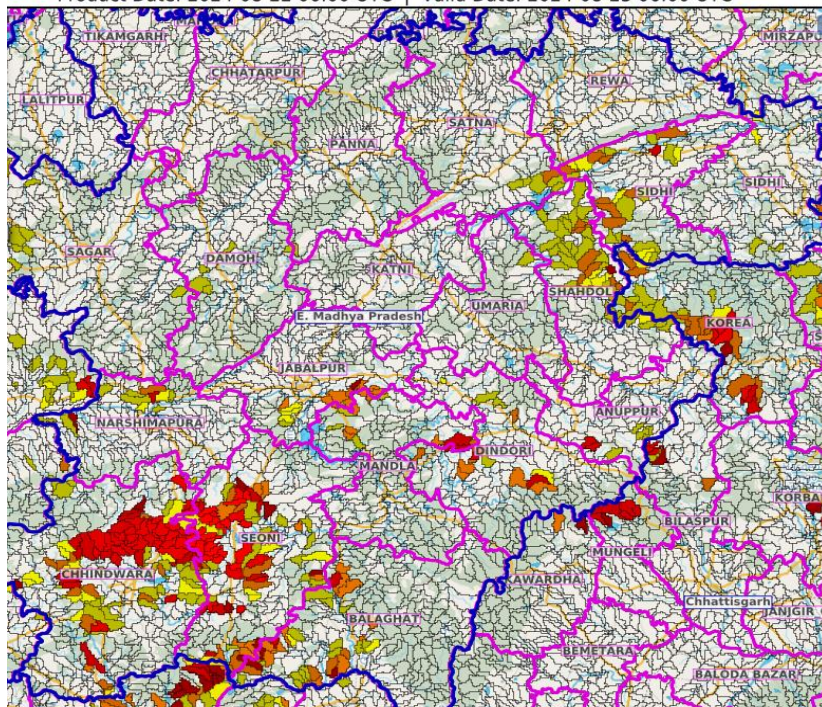
24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 23-08-2024 :

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

East Madhya Pradesh - Balaghat, Chhindwara, Dindori, Jabalpur, Mandla, Narshimpura, Sagar, Seoni, Shahdol and Sidhi districts.

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.

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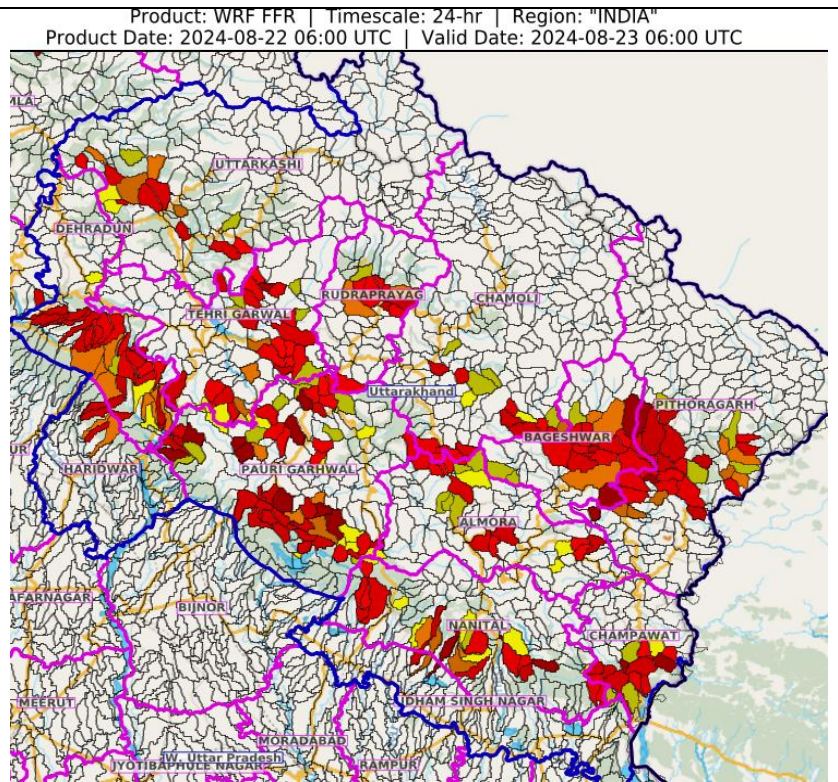




24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 23-08-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours. Uttarakhand - Almora, Bageshwar, Chamoli, Champawat, Dehradun, Haridwar, Nanital, Pauri Garhwal, Pithoragarh, Rudraprayag, Tehri Garwal and Uttarkashi districts.

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.

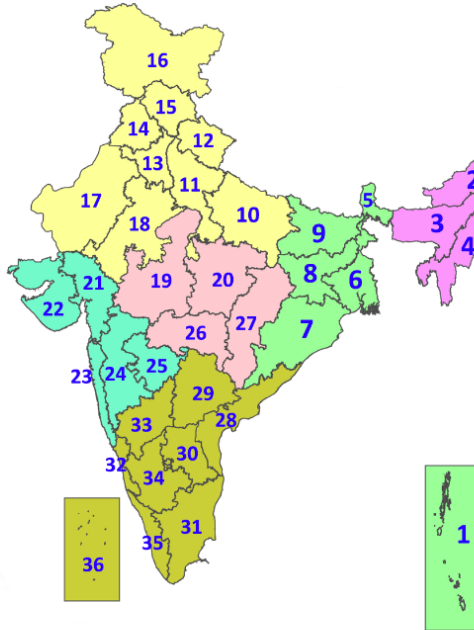


### **Legends & abbreviations:**

- ❖ **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.

## 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".

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(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 62-87 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 Strom: Wind speed  $> 220$  kmph ( $> 119$  knots)

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