



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 23rd August, 2024

Time of Issue: 1335 hours IST

Subject: (i) Low Pressure area over East Central Arabian Sea off Maharashtra Coast persists and likely to weaken by the evening hours.
(ii) Another Low pressure area lies over northern parts of West Bengal and adjoining northeast Jharkhand and is likely to move nearly westwards during next 24 hours.
(ii) Very heavy to extremely heavy rainfall over Gujarat state, Maharashtra, Madhya Pradesh during 23rd -26th, Eastcentral India and Gangetic west Bengal during 23rd -25th and Tripura, Mizoram, Assam and Meghalaya during 24th-26th August.

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

Heavy to very heavy rainfall at isolated places over Uttarakhand, Punjab, West Rajasthan, Jharkhand, Madhya Pradesh; **Heavy rainfall** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Gangetic West Bengal, Odisha, Bihar, West Uttar Pradesh, East Rajasthan, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat Region, North Interior Karnataka, Coastal Andhra Pradesh & Yanam, Telangana

Weather Systems:

- ✓ The low pressure area persisted over eastcentral Arabian sea off Maharashtra coast at 0830 hrs IST of today, 23rd August 2024 with associated cyclonic circulation extending upto lower tropospheric level tilting southwestwards with height. It is likely to weaken during next 12 hours.
- ✓ The other low pressure area over northern parts of West Bengal & neighbourhood now lies over northern parts of West Bengal and adjoining areas of northeast Jharkhand at 0830 hrs IST of today, 23rd August 2024 with associated cyclonic circulation extending upto middle tropospheric levels. It is likely to move nearly westwards towards Jharkhand during next 24 hours.
- ✓ A cyclonic circulation lies over north Bay of Bengal at 5.8 km above mean sea level.
- ✓ The western end of **monsoon trough** lies south of its normal position and its eastern end to the north of its normal position at mean sea level.
- ✓ An offshore trough runs from the low pressure area over eastcentral Arabian sea off Maharashtra coast to north Kerala coast.

Forecast & Warnings (upto 7 days):

❖ Northwest India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Uttarakhand, East Rajasthan; isolated to scattered rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Uttar Pradesh Haryana-Chandigarh-Delhi, West Rajasthan during the week.
- ✓ Isolated **heavy rainfall** very likely over Uttarakhand during next 7 days, Uttar Pradesh during 23rd-26th; West Rajasthan during 24th – 26th; East Rajasthan during 23rd – 27th; Himachal Pradesh on 27th & 28th August.
- ✓ Isolated **very heavy rainfall** also very likely over East Rajasthan on 25th & 26th August.

❖ West & Central India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over West & Central India during the week.
- ✓ Isolated Heavy rainfall very likely over Konkan & Goa, Madhya Maharashtra, Gujarat State during next 7 days; Marathwada, Vidarbha during 23rd – 25th; Madhya Pradesh, Chhattisgarh during 23rd – 26th August.
- ✓ Isolated **very heavy rainfall** also very likely over Chhattisgarh on 23rd , 24th; Konkan & Goa during 23rd – 26th; Gujarat State during 23rd – 28th; Madhya Maharashtra , Madhya Pradesh during 24th – 26th; Vidarbha on 24th; August.
- ✓ Isolated **extremely heavy rainfall also very likely** over Gujarat Region during 24th – 26th; Saurashtra & Kutch during 26th & 27th; West Madhya Pradesh on 25th 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 Arunachal Pradesh on 23rd, 28th & 29th; Assam & Meghalaya during 23rd – 26th and 29th; Nagaland, Manipur, Mizoram & Tripura during 23rd – 28th; West Bengal & Sikkim, Bihar, Jharkhand, Odisha during 23rd – 26th and Andaman & Nicobar Islands on 28th August.
- ✓ Isolated **very heavy rainfall** also very likely over Bihar on 23rd; Jharkhand on 23rd, 25th; Odisha on 23rd & 24th; Gangetic West Bengal during 23rd-25th; Meghalaya, Mizoram during 24th – 26th August.
- ✓ Isolated **extremely heavy rainfall also very likely** over Tripura, Mizoram on 25th August.

❖ South Peninsular India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Kerala & Mahe, Coastal & South Interior Karnataka, Lakshadweep, Coastal Andhra Pradesh & Yanam; isolated to scattered rainfall over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, South Interior Karnataka and Telangana during the week.
- ✓ Isolated **heavy rainfall** very likely over Rayalaseema on 23rd; Telangana on 23rd & 24th; Coastal Karnataka during 23rd – 26th; Kerala & Mahe during 24th – 29th; North Interior Karnataka on 24th August.

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

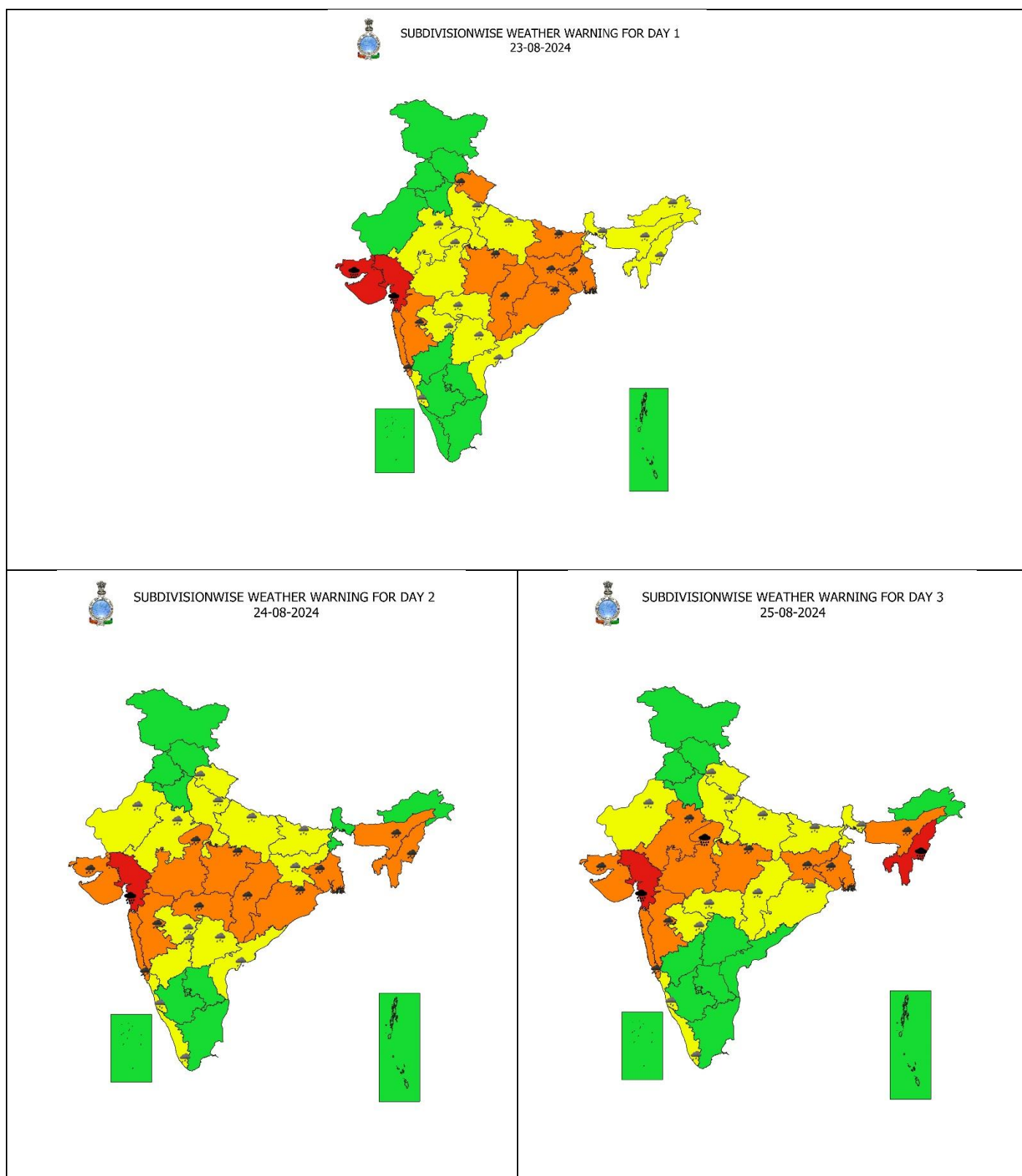
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 23.08.2024 (in cm):

- ❖ **East Madhya Pradesh :** Bichhua (Dist Chindwara) 17, Ghansore (Dist Seoni) 17, Chand (Dist Chindwara) 13, Kurai (Dist Seoni) 9, Amarkantak (Dist Anuppur) 9, Sausar (Dist Chindwara) 9, Chauri (Dist Chindwara) 7, Rehli (Dist Sagar) 7, Raipura (Dist Panna) 7,
- ❖ **Uttarakhand:** Kotdwar (Pauri Garhwal) : 15, Khatima (Udham Singh Nagar) : 8,
- ❖ **Jharkhand:** Rajdhanwar (Dist Giridih) 13, Jamtara (Dist Jamtara) 11, Sahibganj Kvk Aws (Dist Sahibganj) 10, Maithon Dvc (Dist Dhanbad) 9, Maithon (Dist Dhanbad) 9, Parsabad (Dist Koderma) 9, Nawadih (Dist Bokaro) 9, Kolebira (Dist Simdega) 9, Dhanbad (Dist Dhanbad) 8, Herhanj (Dist Latehar) 7, Purvi Tundi (Dist Dhanbad) 7, Jamtara Fmo (Dist Jamtara) 7, Fatehpur (Dist Jamtara) 7, Dumri (Dist Giridih) 7, Kaliasole (Dist Dhanbad) 7,
- ❖ **West Madhya Pradesh :** Kannod (Dist Dewas) 12, Moman Badodiya (Dist Shajapur) 10, Mungaoli (Dist Ashoknagar) 9, Budhni (Dist Sehore) 8, Sironj (Dist Vidisha) 8, Dolariya (Dist Narmadapuram) 7, Satwas (Dist Dewas) 7, Sanwer (Dist Indore) 7, Chanderi (Dist Ashoknagar) 7, Seoni Malwa (Dist Narmadapuram) 7,
- ❖ **West Rajasthan:** Raipur Sr (Dist Pali) 12,
- ❖ **Punjab:** Nabha (Dist Patiala) 12, Nabha Arg (Dist Patiala) 10,
- ❖ **Gangetic West Bengal:** Burnpur (Dist Paschim Bardhaman) 11, Asansol(Cwc) (Dist Paschim Bardhaman) 7,
- ❖ **Chhattisgarh :** Katghora (Dist Korba) 11, Poudi Uparora (Dist Korba) 10, Sonakhan (Dist Baloda Bazar) 8, Pallari/Palari (Dist Baloda Bazar) 8, Pali (Dist Korba) 8, Pithora (Dist Mahasamund) 8, Sakola (Dist Gaurela Pendra Marwahi) 7,
- ❖ **Bihar:** Neem Chak Bathani (Dist Gaya) 11, Khizirsarai (Dist Gaya) 11, Wazirganj (Dist Gaya) 9, Colgaon (Dist Bhagalpur) 9, Belaganj (Dist Gaya) 9, Manpur (Dist Gaya) 8, Nagar (Dist Gaya) 8, Sonhaura (Dist Bhagalpur) 8, Kaler (Dist Arwal) 8, Bikramganj (Dist Rohtas) 8, Bhagalpur (Dist Bhagalpur) 8, Atri (Dist Gaya) 7, Mohra (Dist Gaya) 7, Sangrampur (Dist Monghyr) 7, Amdabad (Dist Katihar) 7, Masaurhi (Dist Patna) 7, Manihari (Dist Katihar) 7, Nardiganj (Dist Nawada) 7, Buxar (Dist Buxar) 7, Warisnagar (Dist Samastipur) 7, Hisua (Dist Nawada) 7, Islamnagar Aliganj (Dist Jamui) 7,
- ❖ **Assam & Meghalaya :** Diphu (Dist Karbi Anglong) 10,
- ❖ **Marathwada:** Gangapur (Dist Chh. Sambhajinagar) 10,
- ❖ **East Rajasthan:** Rashmi Sr (Dist Chittorgarh) 9, Udaipur-Wati (Dist Jhunjhunu) 7, Uniara / Aligarh (Dist Tonk) 7,
- ❖ **Madhya Maharashtra :** Girnadam - Fmo (Dist Nashik) 9, Chinchwad - Arg (Dist Pune) 7,
- ❖ **Coastal Andhra Pradesh:** Yelamanchili (Dist Anapalli) 8, Narsapuram (Dist West Godavari) 7,
- ❖ **Konkan & Goa :** Dodamarg (Dist Sindhudurg) 8,
- ❖ **Gujarat Region :** Modasa (Dist Aravalli) 8,
- ❖ **North Interior Karnataka:** Chincholi (Dist Kalaburgi) 7,
- ❖ **Telangana:** Addakal (Dist Mahabubnagar) 7, Bhoothpur (Dist Mahabubnagar) 7,
- ❖ **East Uttar Pradesh:** Mukhlispur (Dist Gorakhpur) 7, Kakrahi (Dist Siddharth Nagar) 7,
- ❖ **West Uttar Pradesh:** Milak (Dist Rampur) 7, Madawara (Dist Lalitpur) 7, Mainpuri (Dist Mainpuri) 7, Vrindavan (Dist Mathura) 7,
- ❖ **Arunachal Pradesh:** Tezu (Dist Lohit) 7,
- ❖ **Orissa :** Kantapada (Dist Cuttack) 7, Sainitala (Dist Bolangir) 7,
- ❖ **Vidarbha:** Daryapur (Dist Amraoti) 7,



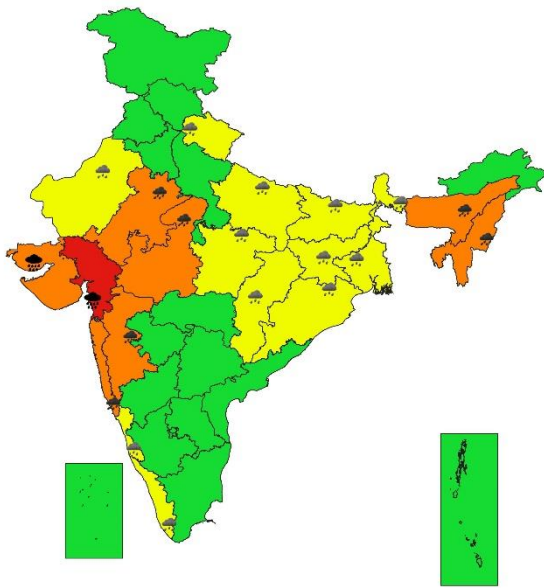
7 Days Rainfall Forecast								
S. No.	Subdivision	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	WS	WS	WS	FWS	FWS
2	ARUNACHAL PRADESH	WS	WS	WS	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	WS	WS	WS	FWS	FWS	FWS	WS
4	NAGALAND, MANIPUR,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

- As the lead period increases forecast accuracy decreases.

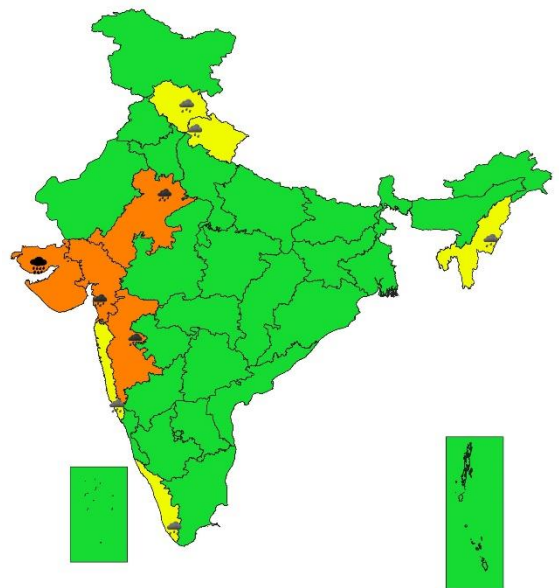




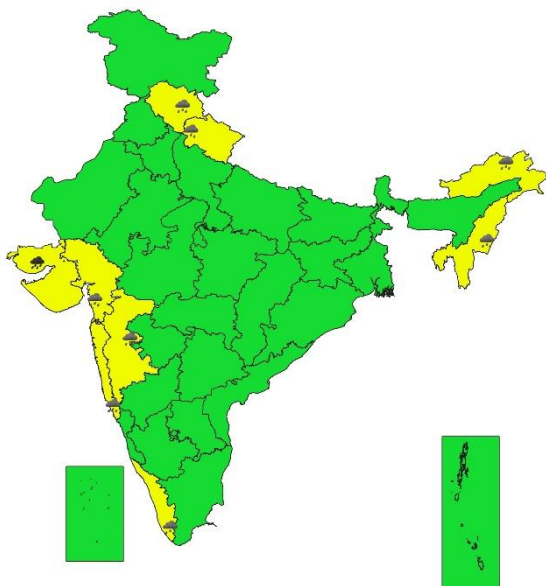
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
26-08-2024



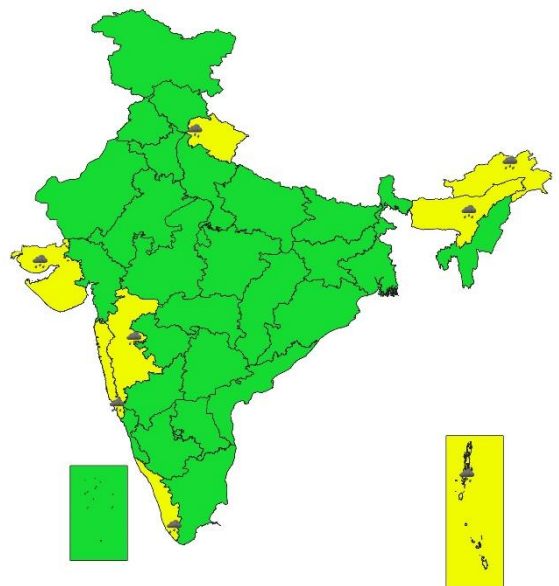
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
27-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 6
28-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 7
29-08-2024



- 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** Gujarat Region during 24th – 26th; Saurashtra & Kutch during 26th & 27th; Tripura, Mizoram, West Madhya Pradesh on 25th August.
 - ✓ **Very heavy rainfall** at isolated over Bihar on 23rd; Jharkhand on 23rd, 25th; Odisha, Chhattisgarh on 23rd & 24th; Gangetic West Bengal during 23rd-25th; Konkan & Goa during 23rd – 26th; Gujarat State during 23rd – 28th; Meghalaya, Mizoram, Madhya Maharashtra, Madhya Pradesh during 24th – 26th; Vidarbha on 24th; East Rajasthan on 25th & 26th August.
 - ✓ **Moderate flash flood risk** likely over few watersheds & neighbourhoods of Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Chhattisgarh, East Madhya Pradesh, Odisha, Gangetic West Bengal, Jharkhand, Gujarat Region, Madhya Maharashtra; **Low to Moderate flash flood risk** likely over Konkan & Goa on 23rd & 24th 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 Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Uttarakhand, Rajasthan, Madhya Pradesh, Chhattisgarh, Gujarat, Odisha, Jharkhand, Bihar, Gangetic West Bengal, Konkan & Goa, Madhya Maharashtra
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Arunachal Pradesh, Uttar Pradesh, Sub Himalayan West Bengal, Marathwada, Vidarbha, Coastal Karnataka and Telangana.
- 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:

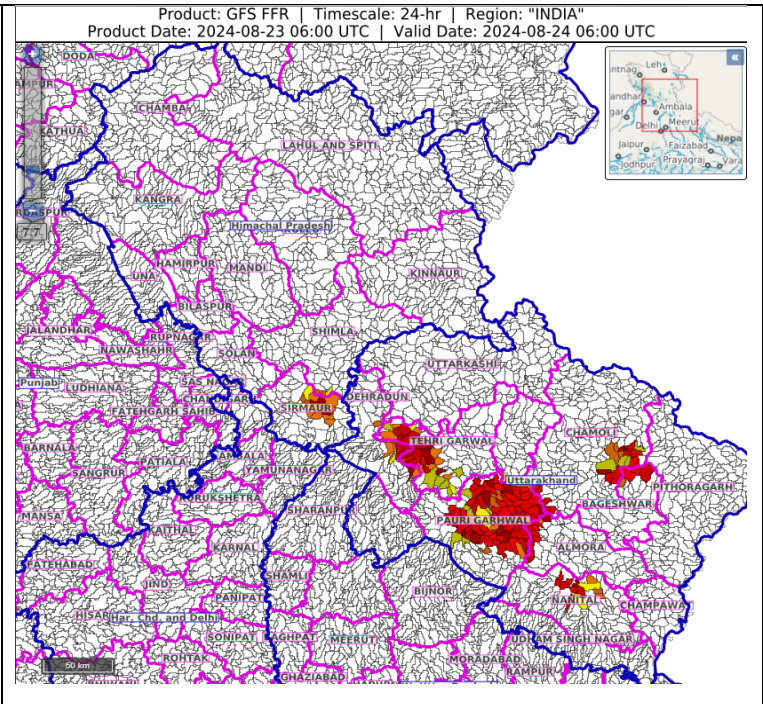
24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 24-08-2024 :

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

Himachal Pradesh - Shimla and Sirmaur districts.

Uttarakhand - Bageshwar, Chamoli, Nanital, Pauri Garhwal and Tehri Garwal 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.



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

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

East Uttar Pradesh - Chandauli, Gazipur, Jaunpur, Mirzapur, Prayagraj and Varanasi districts.

Chhattisgarh - Balarampur, Jashpur, Korba, Korea, Surajpur and Surguja districts.

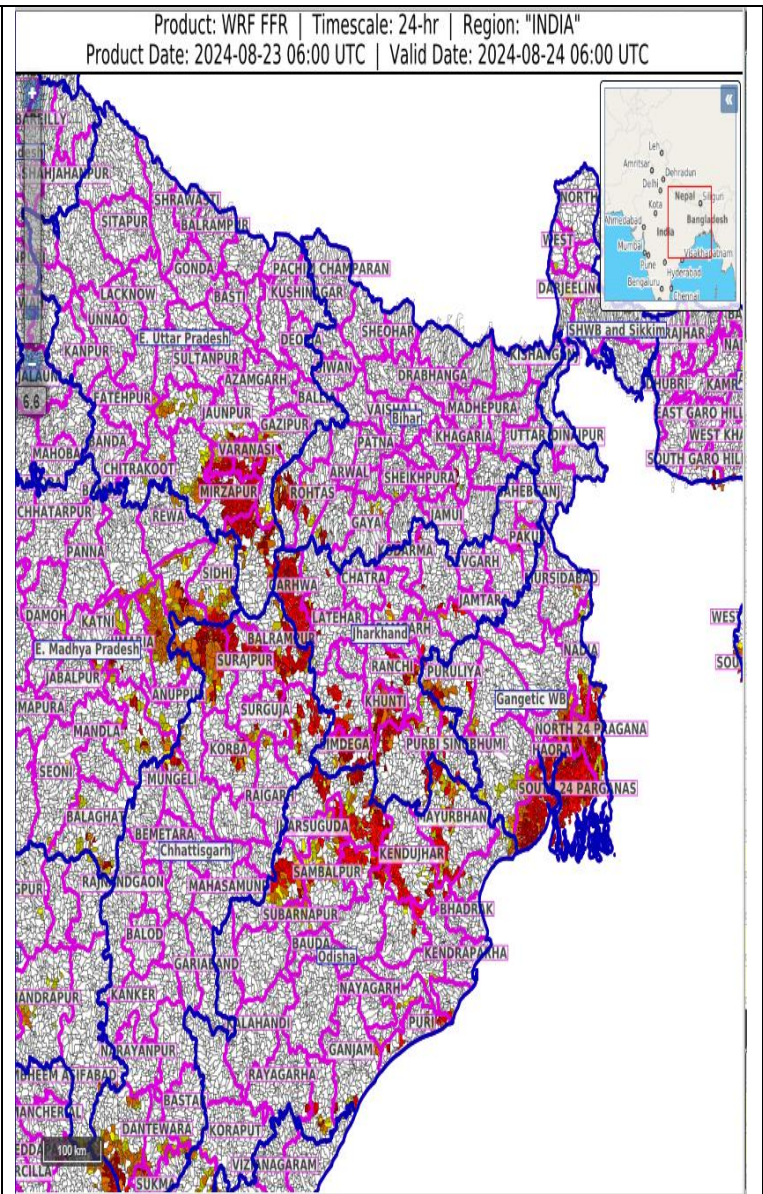
East Madhya Pradesh - Anuppur, Dindori, Satna, Shahdol, Sidhi and Umaria districts.

Odisha - Baragarh, Deogarh, Jharsuguda, Kendujhar, Mayurbhanj, Sambalpur, Subarnapur and Sundargarh districts.

Gangetic West Bengal - Eastmednipur, North 24 Pragana, Pashchim Medinipur, Puruliya and South 24 Parganas districts.

Jharkhand - Garhwa, Gumla, Khunti, Ranchi, Saraikela, Simdega and West Singhbhum 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.



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

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

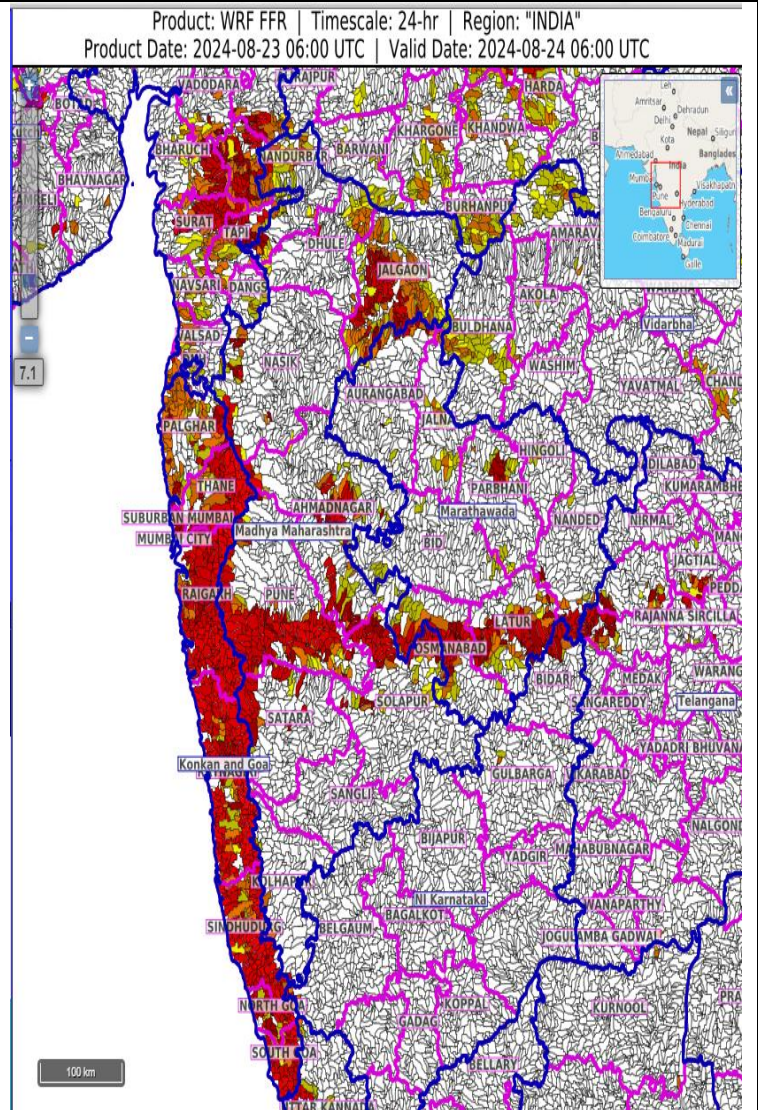
Gujarat Region - Bharuch, Chhota Udepur, Dangs, Narmada, Navsari, Surat, Vadodara and Valsad districts.

Madhya Maharashtra - Ahmadnagar, Jalgaon, Nandurbar, Nasik, Pune, Satara and Solapur districts.

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

Konkan & Goa - North Goa, South Goa, Mumbai City, Palghar, Raigarh, Ratnagiri, Sindhudurg, Suburban Mumbai and Thane district and

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.

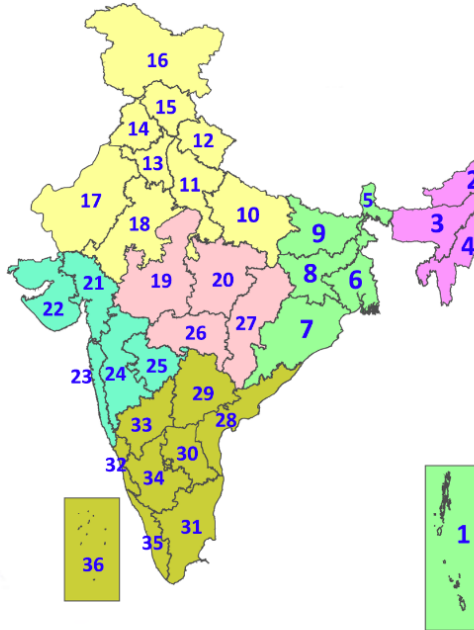


Legends & abbreviations:

- ❖ **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

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Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.

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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°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)

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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