



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 15<sup>th</sup> August, 2024

Time of Issue: 1400 hours IST

India Meteorological Department wishes you a very Happy 78<sup>th</sup> Independence Day

**Subject: (i) Under the influence of likely formation of Low pressure area over Gangetic West Bengal, Enhanced Rainfall likely over East and central India during next 3-4 days.**  
**(ii) Isolated heavy rainfall likely to continue over Western Himalayan Region, Uttar Pradesh & East India during next 6-7 days and over Rajasthan during next 3 days.**  
**(iii) Isolated heavy to very heavy rainfall very likely over Kerala, Lakshadweep, Tamil Nadu, South Interior Karnataka & Rayalaseema during next 5 days.**

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

**Heavy to very heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, East Rajasthan, West Uttar Pradesh, West Madhya Pradesh, Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana, Punjab, Saurashtra & Kutch, West Rajasthan, East Uttar Pradesh, Bihar, Chhattisgarh, Marathwada, East Madhya Pradesh, Odisha, Assam & Meghalaya, Kerala & Mahe & Arunachal Pradesh.

**Weather Systems**

- ✓ The **Monsoon trough** is near its normal position at mean sea level. It is likely to be near its normal position during most days of the week.
- ✓ A **cyclonic circulation** lies over South Bangladesh & adjoining Gangetic West Bengal extending upto mid tropospheric level. Under its influence, a low pressure area likely to form over Gangetic West Bengal during next 24 hours.
- ✓ A **cyclonic circulation** lies over northeast Rajasthan & neighbourhood extending upto mid tropospheric level.
- ✓ A **cyclonic circulation** lies over southeast Arabian sea & adjoining south Kerala coast extending upto mid tropospheric level. The **trough** runs from Konkan to above mentioned cyclonic circulation extending upto lower tropospheric level.

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

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

❖ **Northwest India**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh & Uttarakhand; scattered to fairly

widespread rainfall over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan during the next 4-5 days.

- ✓ Isolated **heavy rainfall** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & West Rajasthan during 15<sup>th</sup> -17<sup>th</sup>; Uttarakhand & Uttar Pradesh during 15<sup>th</sup> -21<sup>st</sup>; Himachal Pradesh during 15<sup>th</sup> -21<sup>st</sup>; Punjab on 15<sup>th</sup>; Haryana-Chandigarh-Delhi on 15<sup>th</sup> & 16<sup>th</sup> August.
- ✓ Isolated **very heavy rainfall** also very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 15<sup>th</sup>; Himachal Pradesh & West Rajasthan on 15<sup>th</sup> and East Rajasthan on 15<sup>th</sup> & 16<sup>th</sup> August.

#### ❖ West & Central India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Madhya Pradesh, Vidarbha & Chhattisgarh; scattered to fairly widespread rainfall over Konkan & Goa & Gujarat Region; isolated to scattered rainfall over Madhya Maharashtra, Marathwada and Saurashtra & Kutch during next 7 days.
- ✓ Isolated **Heavy rainfall** very likely over West Madhya Pradesh on 15<sup>th</sup>, 16<sup>th</sup> & during 19<sup>th</sup> -21<sup>st</sup>; East Madhya Pradesh on 15<sup>th</sup> & during 18<sup>th</sup> -21<sup>st</sup>; Vidarbha & Konkan & Goa during 18<sup>th</sup> -20<sup>th</sup>; Chhattisgarh during 15<sup>th</sup> -21<sup>st</sup> August.
- ✓ Isolated **very heavy rainfall** also very likely over Chhattisgarh on 15<sup>th</sup> & 16<sup>th</sup> August.

#### ❖ East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over east India and scattered to fairly widespread rainfall over northeast during the week.
- ✓ Isolated **heavy rainfall** very likely over Sub-Himalayan West Bengal & Sikkim on 15<sup>th</sup> & 16<sup>th</sup>; Gangetic West Bengal during 15<sup>th</sup>-18<sup>th</sup>; Bihar & Nagaland, Manipur, Mizoram & Tripura during 15<sup>th</sup> -21<sup>st</sup> ; Jharkhand during 15<sup>th</sup> - 20<sup>th</sup> , Odisha during 15<sup>th</sup> -19<sup>th</sup> , Arunachal Pradesh on 15<sup>th</sup> , Assam & Meghalaya on 15<sup>th</sup> & during 19<sup>th</sup> -21<sup>st</sup> August .
- ✓ Isolated **very heavy rainfall** also very likely over Gangetic West Bengal on 16<sup>th</sup> & 17<sup>th</sup> & Jharkhand on 17<sup>th</sup> & 18<sup>th</sup> August.

#### ❖ South Peninsular India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Kerala & Mahe, Lakshadweep & Karnataka state; scattered to fairly widespread rainfall over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema and Telangana during the week.
- ✓ Isolated **heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal on 15<sup>th</sup> - 18<sup>th</sup> & 19<sup>th</sup>; Kerala & Mahe during 15<sup>th</sup> & 19<sup>th</sup>; Lakshadweep on 15<sup>th</sup> -19<sup>th</sup> ; Rayalaseema during 15<sup>th</sup> - 17<sup>th</sup> ; Coastal Karnataka on 15<sup>th</sup> & 16<sup>th</sup>; North Interior Karnataka on 15<sup>th</sup> & 16<sup>th</sup> ; South Interior Karnataka during 15<sup>th</sup> - 17<sup>th</sup> August.
- ✓ Isolated **very heavy rainfall** also very likely over Tamil Nadu, Puducherry & Karaikal on 16<sup>th</sup> & 17<sup>th</sup>; Kerala & Mahe during 15<sup>th</sup> -17<sup>th</sup>; Lakshadweep on 15<sup>th</sup>; Rayalaseema on 16<sup>th</sup>; Coastal Karnataka on 15<sup>th</sup> & South Interior Karnataka on 15<sup>th</sup> & 16<sup>th</sup> August.

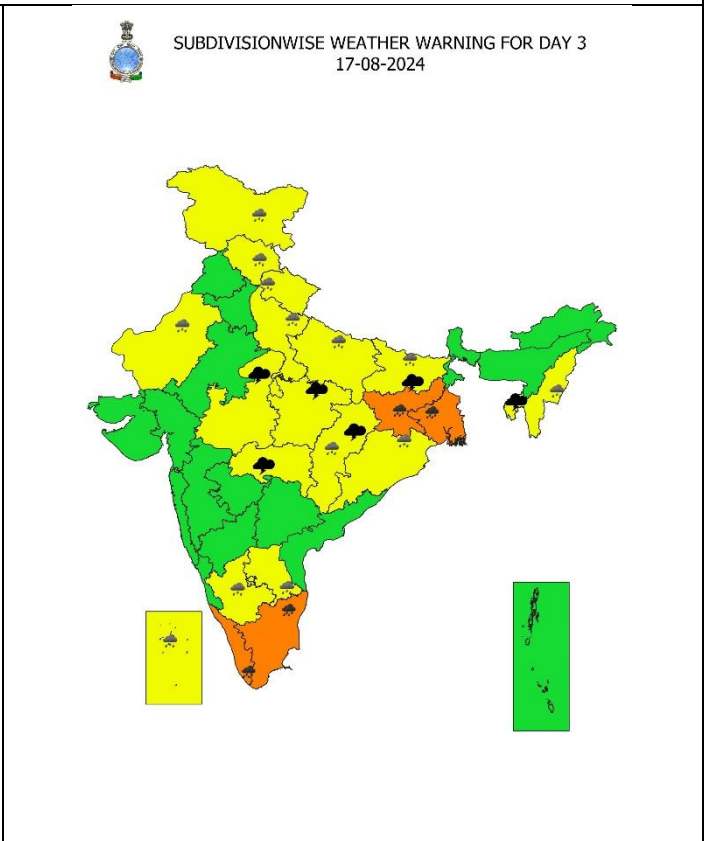
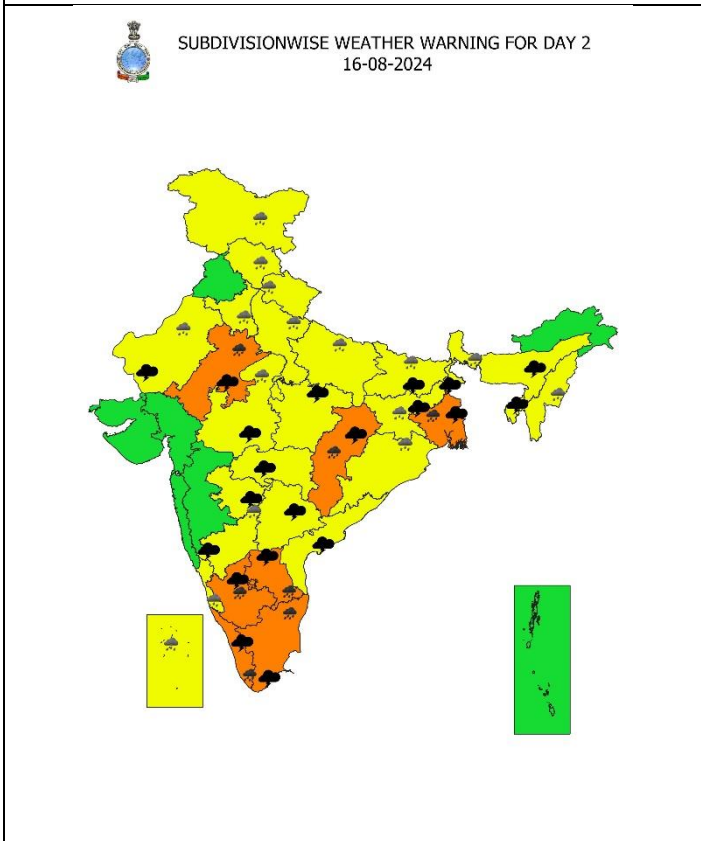
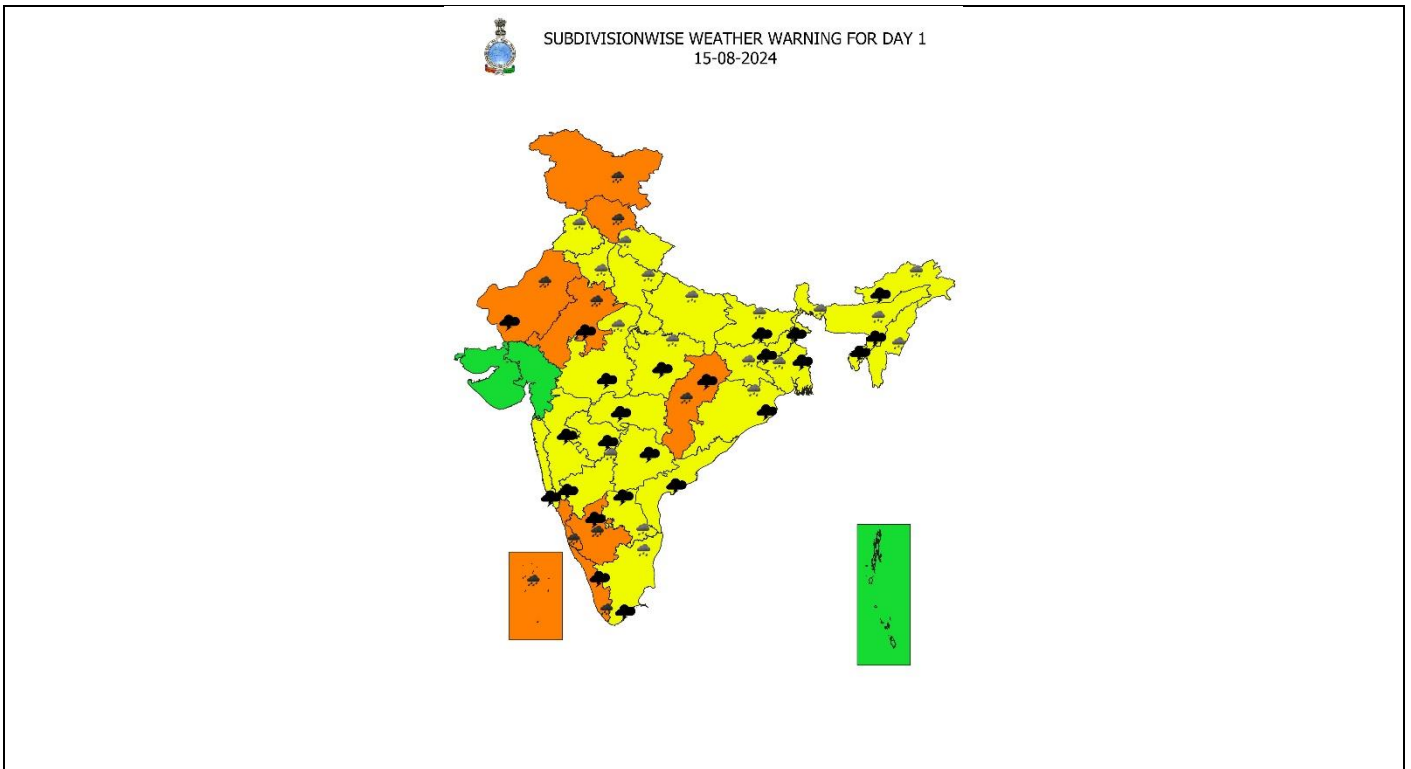
For more details, kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 15.08.2024 (in cm):**

- ❖ **Tamil Nadu, Puducherry & Karaikal:** Perandurai 12, K. Paramathi ( dist Karur) 11, Chittampali 9, Iddayapalli 8, Madhurai 7, Pullipatti 9, Tallakulam 8, Paramathivelur 7, Vattamalai 7, Vellakaoil 8
- ❖ **Jammu-Kashmir:** Bakore Arg (dist Jammu) 14, Jammu (dist Jammu) 13, Jammu Aws (dist Jammu) 12, Katra (dist Reasi) 12, Samba Aws (dist Samba) 11, Kathua (dist Kathua) 7;
- ❖ **East Uttar Pradesh:** Kaiserganj (dist Bahraich) 9, Karwi (dist Chitrakoot) 7;
- ❖ **West Uttar Pradesh:** Pali (dist Lalitpur) 15, Orai (dist Jalaun) 14, Auraiya (cwc) (dist Auraiya) 11, Jasrana (dist Firozabad) 10, Kalpi Tehsil (dist Jalaun) 7, Kalpi Cwc (dist Jalaun) 7;
- ❖ **Haryana-Chandigarh-Delhi:** Sadhaura (dist Yamuna Nagar) 9, Naraingarh (dist Ambala) 8;
- ❖ **Punjab:** Ranjit Sagar Dam Site (dist Pathankot) 9, Malikpur (dist Pathankot) 7, Phangota (dist Pathankot) 7, Faridkot (dist Faridkot) 7, Shahpur Kandi (dist Pathankot) 7;
- ❖ **Saurashtra & Kutch:** Sayla (dist Surendranagar) 8;
- ❖ **Uttarakhand:** Kapkot(BAGESHWAR): 17, Someshwar(ALMORA): 9, Sama(BAGESHWAR) : 8, Karnprayag(CHAMOLI) : 7;
- ❖ **Arunachal Pradesh:** Tuting (dist Upper Siang) 7,
- ❖ **Assam & Meghalaya:** N.lakhimpur/lilabari (dist Lakhimpur) 8, Moranhat (dist Dibrugarh) 7,
- ❖ **Kerala & Mahe:** Mannarakkad 10, Mannarakkad AWS 7;
- ❖ **Odisha:** Kaptipada ( Mayurbhanj) 7;
- ❖ **Bihar:** Sasaram (dist Rohtas) 7;
- ❖ **Himachal Pradesh:** Kangra (dist Kangra) 16, Dharmsala (dist Kangra) 15, Palampur (dist Kangra) 14, Nahan (dist Sirmaur) 12, Baijnath (dist Kangra) 9, Naina Davi (dist Bilaspur) 8, Dehra Gopipur (dist Kangra) 7;
- ❖ **East Rajasthan:** Jaipur Tehsil (Jaipur) 15, Jobner (Jaipur) 13, Nirjharna (Dausa) 11, Lalsot (dist Dausa) 10, Sikrai (dist Dausa) 9, Lachmangarh (dist Sikar) 7;
- ❖ **West Rajasthan:** Saanju (Nagaur) 11; Bapini (Jodhpur) 9; Tivari (Jodhpur) 9;
- ❖ **Chhattisgarh:** Dhabhara (dist Sakti) 9, Bhaisma (dist Korba) 8, Ramanujganj (dist Balrampur) 7;
- ❖ **Marathwada:** Jalkot (dist Latur) 10;
- ❖ **East Madhya Pradesh:** Malthone (dist Sagar) 11, Narsinghpur-aws (dist Narsinghpur) 9, Garhakota (dist Sagar) 9, Chand (dist Chindwara) 9, Katni(mudwara) (dist Katni) 8, Sidhi (gopadbanas) (dist Sidhi) 7, Gadarwara (dist Narsinghpur) 7, Dindori-aws (dist Dindori) 7, Sihawal (dist Sidhi) 7, Deori (dist Sagar) 7;
- ❖ **West Madhya Pradesh:** Gohad (dist Bhind) 12, Mehgaon (dist Bhind) 11, Udaipura (dist Raisen) 10, Gormi (dist Bhind) 9, Dabra (dist Gwalior) 8, Mungaoli (dist Ashoknagar) 7;
- ❖ **North Interior Karnataka:** Koppal Gawathi ( dist Gangavathi) 7, Tavaragera ( dist Gangavathi) 8;

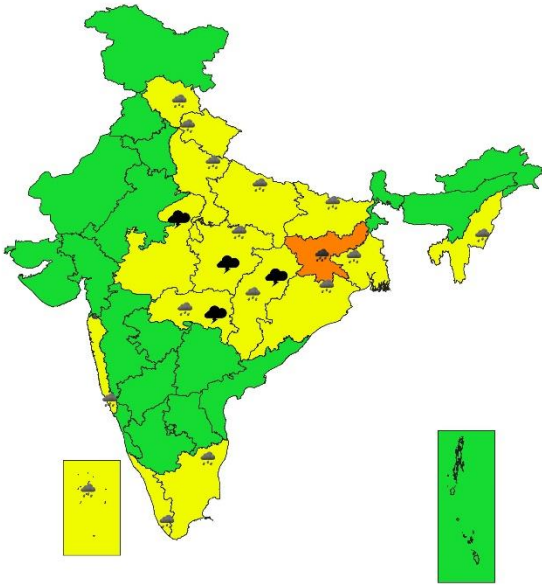
7 Days Rainfall Forecast								
S. No.	Subdivision	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	WS	WS	FWS	FWS	FWS	FWS
2	ARUNACHAL PRADESH	FWS	SCT	SCT	SCT	SCT	SCT	FWS
3	ASSAM & MEGHALAYA	FWS	SCT	SCT	SCT	FWS	FWS	FWS
4	NAGALAND,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

- As the lead period increases forecast accuracy decreases.

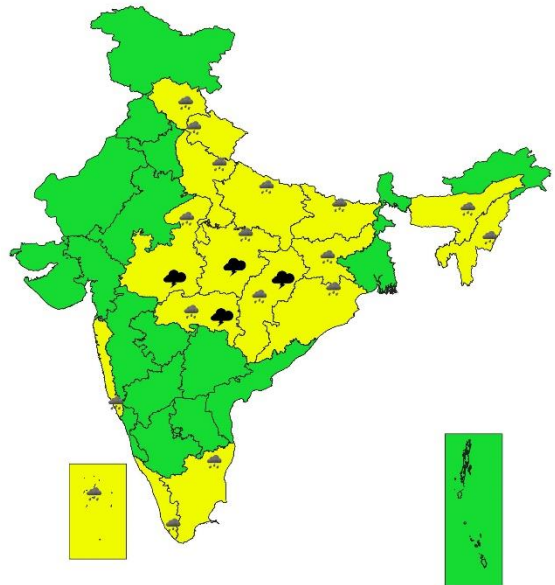




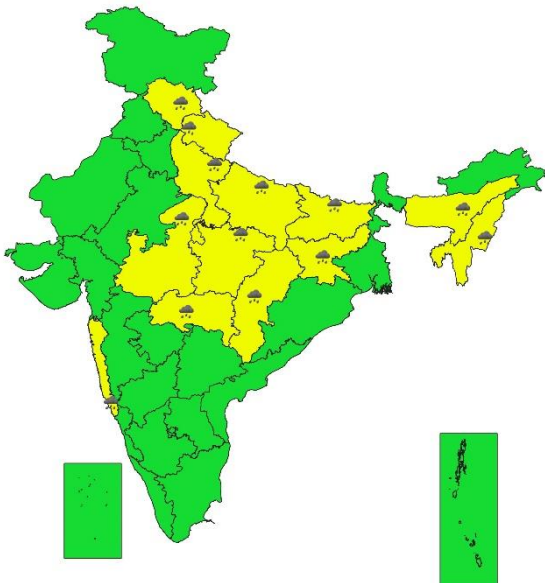
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
18-08-2024



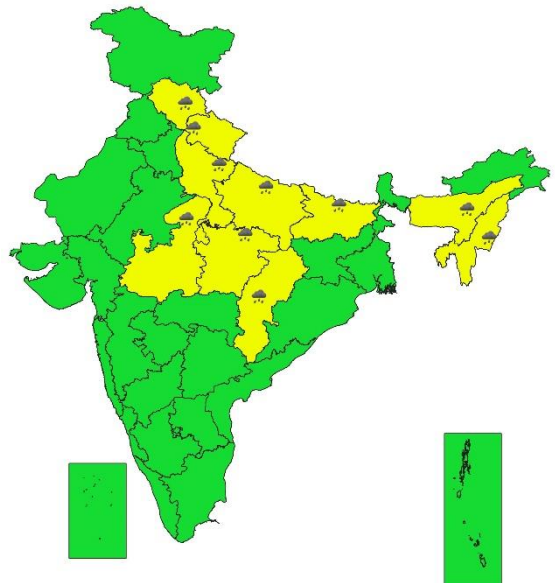
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5  
19-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 6  
20-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 7  
21-08-2024



- 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

- **Very heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh West Rajasthan, Coastal Karnataka & Lakshadweep on 15<sup>th</sup>; East Rajasthan & South Interior Karnataka on 15<sup>th</sup> & 16<sup>th</sup> ; Gangetic West Bengal on 16<sup>th</sup> & 17<sup>th</sup> ; Jharkhand on 17<sup>th</sup> & 18<sup>th</sup> ; Tamil Nadu, Puducherry & Karaikal on 16<sup>th</sup> & 17<sup>th</sup> ; Kerala & Mahe during 15-17<sup>th</sup> ; Rayalaseema on 16<sup>th</sup> August.
- **Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Odisha, Jharkhand, Chhattisgarh, East Rajasthan, West Madhya Pradesh, Kerala & Mahe, South Interior Karnataka & Coastal Karnataka on 15<sup>th</sup> & 16<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 Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh, West Bengal, Odisha, Jharkhand, Bihar, Punjab, Haryana, Tamil Nadu, Kerala, Lakshadweep, Karnataka and Rayalaseema.
- In **Himachal Pradesh** and **Uttarakhand**, harvest the matured apples and vegetable crops immediately during the clear weather and store them at safe places.
- 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 16-08-2024:**

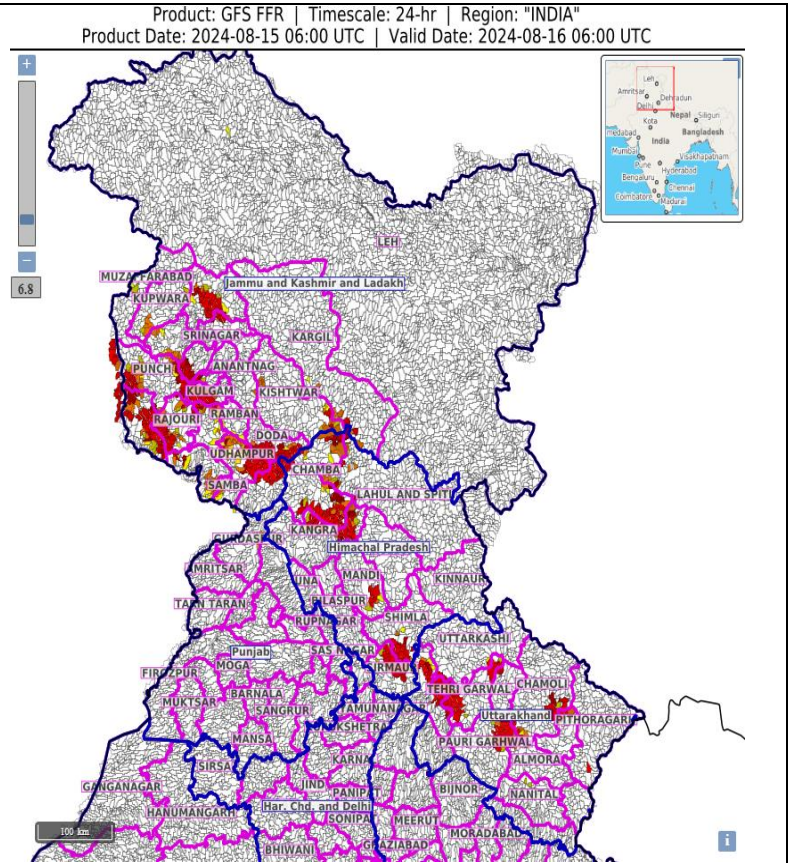
Low to Moderate Flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions/ Districts in next 06 hours.

**Jammu & Lashmir & Ladakh** – Bandipore, Badgam, Kupwara, Kulgam, Reasi, Samba, Kathua, Udhampur, Doda, Kistwar, Jammu and Rajouri, districts.

**Himachal Pradesh** –Chamba, Mandi, Shimla, Sirmour and Kangra districts.

**Uttarakhand** – Dehradun, Tehri Garhwal, Rudraprayag, Bageshwar, 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.



**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 16-08-2024 :**

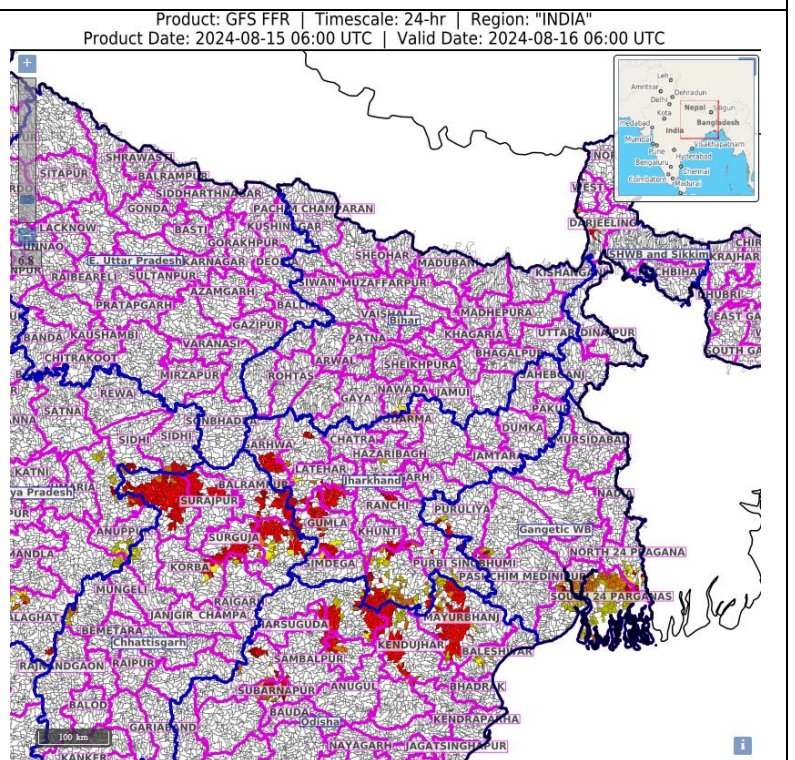
Low to Moderate Flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions/ Districts in next 06 hours.

**Odisha** –Mayurbhnaj, Kendujgar, Sundergarh and Deogarh districts.

**Chhattisgarh** –Korea, Surjapur, Balrampur and Surguja districts.

**Jharkhand** –Pacshim Singhbhum, Purvi Singhbhum, Khunti, Lohardaga, Garwa and Gumla 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.





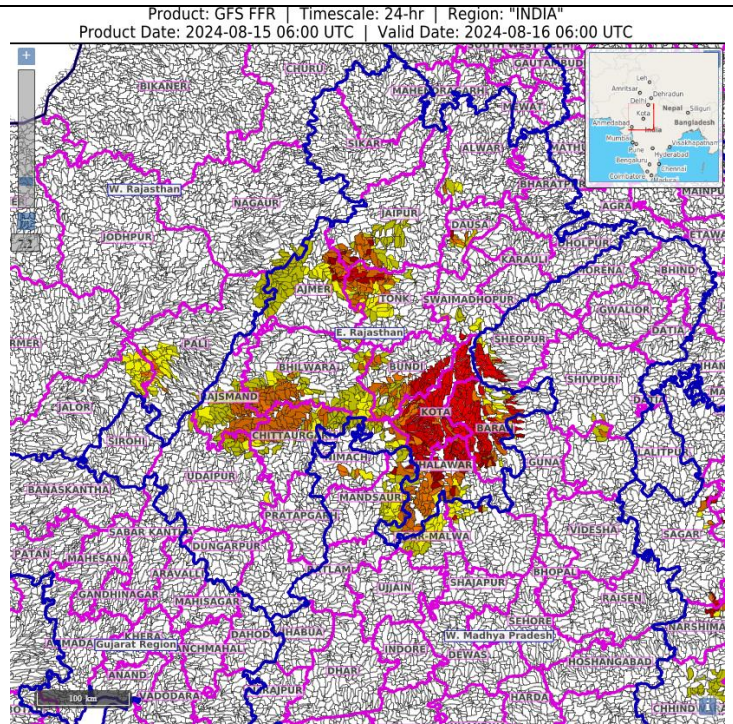
**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 16-08-2024 :**

Low to Moderate Flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions/ Districts in next 06 hours.

**East Rajasthan** –Jhalawar, Kota, Baran, Bundi, Mandsaur, Bhilwara, Tonk, Jaipur and Ajmer districts.

**West Madhya Pradesh** –Sheopur, Guna, Ashoknagar and Shivpuri 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 16-08-2024 :**

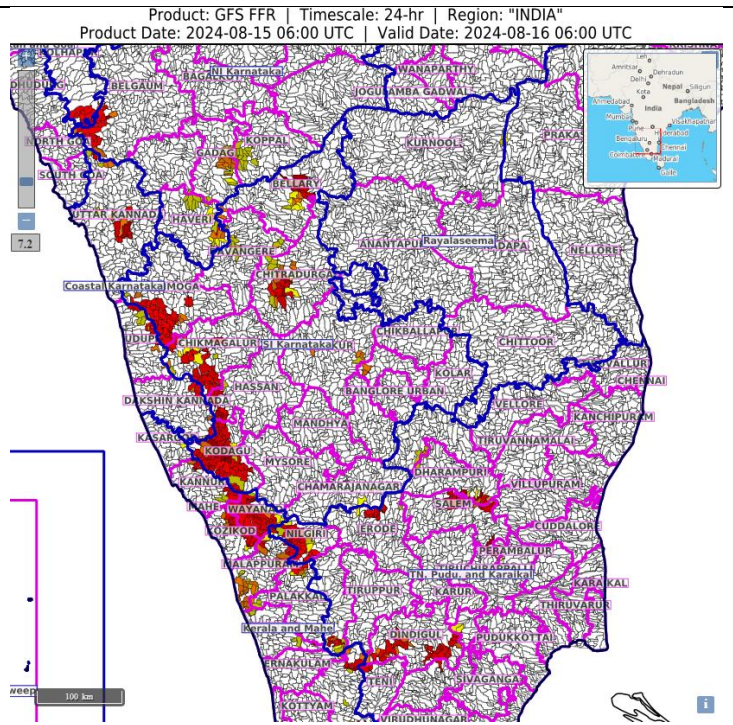
Low to Moderate Flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions/ Districts in next 06 hours.

**Kerala** –Wayanad. Kozhikode, Kasargod, Mallapuram, Kannur and Palakkad districts.

**South Interior Karnataka** –Kodagu, Shiv Moga, Chikmagalur, Hassan and Chitradurga districts.

**Coastal Karnataka** – Dakshim Kannada, Uttar Kanada and Udupi 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.

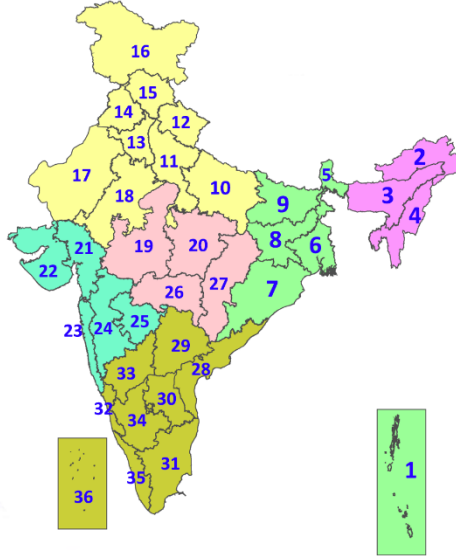


### **Legends & abbreviations:**

- ❖ **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.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

## 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  | Hot Day              |
| Thunder & Lightning  | Hot & Humid | Strong Surface Winds |
| Hailstorm            |             |                      |
| Dust Raising 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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### DEFINITION/CRITERIA

<b>Rain/ Snow *</b>	<p><b>Heavy:</b> 64.5 to 115.5 mm/cm *</p> <p><b>Very Heavy:</b> 115.6 to 204.4 mm/cm *</p> <p><b>Extremely Heavy:</b> &gt; 204.4 mm/cm *</p>
<b>Heat Wave</b>	<p><b>When maximum temperature of a station reaches <math>\geq 40^\circ\text{C}</math> for plains and <math>\geq 30^\circ\text{C}</math> for hilly regions</b></p> <p><b>(a) Based on Departure from normal</b></p> <p><b>Heat Wave:</b> Maximum Temperature Departure from normal <math>4.5^\circ\text{C}</math> to <math>6.4^\circ\text{C}</math>.</p> <p><b>Severe Heat Wave:</b> Maximum Temperature Departure from normal <math>\geq 6.5^\circ\text{C}</math></p> <p><b>(b). Based on Actual maximum temperature</b></p> <p><b>Heat Wave:</b> When actual maximum temperature <math>\geq 45^\circ\text{C}</math>.</p> <p><b>Severe Heat Wave:</b> When actual maximum temperature <math>\geq 47^\circ\text{C}</math></p> <p><b>(c). Criteria for heat wave for coastal stations</b></p> <p>When maximum temperature departure is <math>&gt; 4.5^\circ\text{C}</math> from normal. Heat Wave may be described provided maximum temperature <math>\geq 37^\circ\text{C}</math></p>
<b>Warm Night</b>	<p><b>When maximum temperature remains <math>40^\circ\text{C}</math></b></p> <p><b>Warm Night:</b> When minimum temperature departure <math>4.5^\circ\text{C}</math> to <math>6.4^\circ\text{C}</math>.</p> <p><b>Severe Warm Night:</b> When minimum temperature departure <math>&gt; 6.4^\circ\text{C}</math>.</p>
<b>Cold Wave</b>	<p><b>When minimum temperature of a station <math>\leq 10^\circ\text{C}</math> for plains and <math>\leq 0^\circ\text{C}</math> for hilly regions.</b></p> <p><b>(a). Based on departure</b></p> <p><b>Cold Wave:</b> Minimum Temperature Departure from normal <math>-4.5^\circ\text{C}</math> to <math>-6.4^\circ\text{C}</math>.</p> <p><b>Severe Cold Wave:</b> Minimum Temperature Departure from normal <math>\leq -6.5^\circ\text{C}</math></p> <p><b>(b) Based on actual Minimum Temperature (for Plains only)</b></p> <p><b>Cold Wave :</b> When Minimum Temperature is <math>\leq 4.0^\circ\text{C}</math></p> <p><b>Severe Cold Wave:</b> When Minimum Temperature is <math>\leq 2.0^\circ\text{C}</math></p> <p><b>(c) For Coastal Stations</b></p> <p>When Minimum Temperature departure is <math>\leq -4.5^\circ\text{C}</math> &amp; actual Minimum Temperature is <math>\leq 15^\circ\text{C}</math></p>
<b>Cold Day</b>	<p><b>When minimum temperature of a station <math>\leq 10^\circ\text{C}</math> for plains and <math>\leq 0^\circ\text{C}</math> for hilly regions</b></p> <p><b>Based on departure</b></p> <p><b>Cold Day:</b> Maximum Temperature Departure from normal <math>-4.5^\circ\text{C}</math> to <math>-6.4^\circ\text{C}</math>.</p> <p><b>Severe Cold Day:</b> Maximum Temperature Departure from normal <math>\leq -6.5^\circ\text{C}</math></p>
<b>Fog</b>	<p><b>Phenomenon of small droplets suspended in air and the horizontal visibility <math>&lt; 1\text{km}</math></b></p> <p><b>Moderate Fog:</b> When the visibility between 500-200 metres</p> <p><b>Dense Fog:</b> when the visibility between 50- 200 metres</p> <p><b>Very Dense Fog:</b> when the visibility <math>&lt; 50</math> metres</p>
<b>Thunderstorm</b>	<p>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>
<b>Dust/Sand Storm</b>	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</p>
<b>Frost</b>	<p><b>Ice deposits on ground</b></p> <p>Air temperature <math>\leq 4^\circ\text{C}</math> ( over Plains)</p>
<b>Squall</b>	<p><b>A strong wind that rises suddenly, lasts for atleast 1 minute.</b></p> <p><b>Moderate:</b> Wind speed 52-61 kmph</p> <p><b>Severe:</b> Wind speed 62-87 kmph</p> <p><b>Very Severe:</b> Wind speed <math>&gt; 87</math> kmph</p>
<b>Sea State</b>	<p><b>Effect of various waves in the sea over specific area</b></p> <p><b>Rough to very rough:</b> Wind speed 41-62 kmph (22-33 knots) &amp; Wave height 2.5-6 metre</p> <p><b>High to very high:</b> Wind speed 63-117 kmph ( 34-63 knots) &amp; Wave height 6-14 metre</p> <p><b>Phenomenal:</b> Wind speed <math>&gt; 117</math> kmph (<math>&gt; 63</math> knots) &amp; Wave height <math>&gt; 14</math> metre</p>
<b>Cyclone</b>	<p><b>Cyclonic Storm:</b> Wind speed 62-87 kmph (34-47 knots)</p> <p><b>Severe Cyclonic Storm:</b> Wind speed 88-117 kmph (48-63 knots)</p> <p><b>Very Severe Cyclonic Storm:</b> Wind speed 118-165 kmph (64 - 89 knots)</p> <p><b>Extremely Severe Cyclonic Storm:</b> Wind speed 166-220 kmph (90 -119 knots)</p> <p><b>Super Cyclone Strom:</b> Wind speed <math>&gt; 220</math> kmph (<math>&gt; 119</math> knots)</p>

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