

Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 29th August, 2024

Time of Issue: 1400 hours IST

- Subject: (i) Deep Depression over Saurashtra & Kutch likely to intensify into a Cyclonic Storm over northeast Arabian Sea on 30th August.**
- (ii) Extremely heavy rainfall very likely to continue at isolated places of Saurashtra and Kutch on 29th August and decrease thereafter.**
- (iii) Low-pressure over Central and adjoining north Bay of Bengal.**
- (iv) Very heavy to extremely heavy rainfall likely over Odisha, Coastal Karnataka, Kerala & Mahe and Heavy to very heavy rainfall over North Coastal Andhra Pradesh, Chhattisgarh, Vidarbha and Telangana during next 2-3 days.**

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

Heavy to very heavy rainfall with isolated extremely heavy falls at a few places over Saurashtra & Kutch and **Heavy rainfall** at isolated places over Odisha, Delhi, Uttarakhand, Punjab, Haryana, Madhya Maharashtra, Gujarat Region, Coastal Karnataka, Kerala, South Interior Karnataka.

Weather Systems:

(a) Deep Depression over Saurashtra & Kutch

The **deep depression** over Saurashtra & Kutch moved slowly westwards with a speed of 3 Km/h during past 6 hours and lay centered at 0830 hours IST of today, the 29th August, 2024 over the same region near latitude 23.7°N and longitude 69.4 °E, 60 km northwest of Bhuj (Gujarat), 80 km northeast of Naliya (Gujarat) and 270 km east-southeast of Karachi (Pakistan). It is likely to move west-southwestwards, emerge into northeast Arabian Sea off Kachchh and adjoining Saurashtra & Pakistan coasts and intensify into a **Cyclonic Storm** on 30th August. Thereafter, it would continue to move nearly west-southwestwards over northeast Arabian Sea away from Indian coast during subsequent 2 days.

(b) A **low pressure area** formed over central and adjoining north Bay of Bengal at 0830 hours IST of today, the 29th August, 2024. It is likely to move west-northwestwards and become more marked over westcentral and adjoining northwest Bay of Bengal by 30th August. Thereafter, while moving towards north Andhra Pradesh and adjoining south Odisha coasts, it is likely to intensify into a **depression** over westcentral and adjoining northwest Bay of Bengal during subsequent 2 days.

(c) Monsoon trough at mean sea level lies to the south of its normal position

Forecast & Warnings (upto 7 days):

- ❖ **West & Central India (For District wise Extremely heavy rainfall warning maps of Gujarat State for 29th August to 02nd September, Annexure IV)**
 - ✓ Fairly widespread to widespread light/moderate rainfall very likely over West & Central India during the week.
 - ✓ Isolated **extremely heavy rainfall also very likely** over Saurashtra & Kutch on 29th August.
 - ✓ Isolated **very heavy rainfall** also very likely over Saurashtra & Kutch on 30th August; Chhattisgarh on 31st August; Vidarbha on 31st August & 01st September; Gujarat Region on 02nd & 03rd September; ghat areas of Madhya Maharashtra and Konkan & Goa during 02nd-04th September.
 - ✓ Isolated **Heavy rainfall** very likely over Konkan & Goa during 29th August- 01st September; Chhattisgarh on 29th, 30th, August & 01st September; Vidarbha on 30th August & 02nd September; East Madhya Pradesh during 31st August-04th September; Madhya Maharashtra on 31st August & 01st September; Gujarat Region on 31st August, 01st & 04th September West Madhya Pradesh during 01st-04th September; Marathwada during 01st-03rd September; Saurashtra & Kutch on 02nd & 03rd September.

- ❖ **East & Northeast India**
 - ✓ Fairly widespread to widespread light/moderate rainfall very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Andaman & Nicobar Islands, Odisha and Scattered to Fairly widespread light/moderate rainfall very likely over Arunachal Pradesh, West Bengal & Sikkim, Bihar and Jharkhand during the week.
 - ✓ Isolated **extremely heavy rainfall also very likely** over Odisha on 30th August.
 - ✓ Isolated **very heavy rainfall** also very likely over Odisha on 29th & 31st August.
 - ✓ Isolated **heavy rainfall** very likely over Assam & Meghalaya on 29th August & during 01st-04th September; Nagaland, Manipur, Mizoram & Tripura during next 7 days; Arunachal Pradesh during 02nd-04th September; Andaman & Nicobar Islands on 29th & 30th August; Odisha on 01st September.

- ❖ **South Peninsular India:**
 - ✓ Fairly widespread to widespread light/moderate rainfall very likely over Coastal Karnataka, Coastal Andhra Pradesh & Yanam, Lakshadweep, Kerala & Mahe; Scattered to Fairly widespread light/moderate rainfall very likely Telangana and Interior Karnataka; isolated to scattered rainfall over Rayalaseema and Tamil Nadu, Puducherry & Karaikal during the week.
 - ✓ Isolated **extremely heavy rainfall also very likely** over Coastal Karnataka on 30th August.
 - ✓ Isolated **very heavy rainfall** also very likely over Kerala & Mahe and South Interior Karnataka on 29th & 30th August; Coastal Karnataka on 29th & 31st August; Coastal Andhra Pradesh & Yanam on 30th & 31st August; North Interior Karnataka on 31st August; Telangana during 30th August-01st September.
 - ✓ Isolated **heavy rainfall** very likely over North Interior Karnataka on 29th, 30th August & 01st September; Coastal Andhra Pradesh & Yanam on 29th August & 01st September; Telangana on 29th August & 02nd September; Kerala & Mahe during 31st August-02nd September; South Interior Karnataka on 31st August & 01st September; Coastal Karnataka during 01st-04th September.

- ❖ **Northwest India**
 - ✓ Scattered to Fairly widespread light/moderate rainfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan; isolated to scattered rainfall over Uttar Pradesh, Haryana-Chandigarh-Delhi, Punjab, West Rajasthan during the week.
 - ✓ Isolated **very heavy rainfall** also very likely over East Rajasthan on 02nd September.
 - ✓ Isolated **heavy rainfall** very likely over Punjab on 29th August; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Haryana-Chandigarh-Delhi on 29th August & 02nd September; Uttarakhand during 29th August-02nd September; East Uttar Pradesh on 01st & 02nd September; West Uttar Pradesh on 02nd September; West Rajasthan on 02nd & 03rd September; East Rajasthan on 01st, 03rd & 04th September.

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

For District wise warnings refer: <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

Wind warning:

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely over the districts of South Gujarat Region and Saurashtra & Kutch on 29th & 30th August.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is very likely to prevail along & off Gujarat coasts & adjoining Pakistan coasts and over northeast & adjoining eastcentral Arabian Sea during 29th to 31st August.
- Gale wind speed reaching 65-75 kmph gusting to 85 kmph is likely to prevail over northeast Arabian Sea off Gujarat and Pakistan coasts from 30th August till 1st September.
- Gale wind speed reaching 65-75 kmph gusting to 85 kmph is likely to prevail over northwest and adjoining westcentral Arabian Sea off Pakistan and southeast Iran coasts from 31st August till 2nd September.
- Strong wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail along and off north Maharashtra coasts during 29th to 31st August.

Sea condition:

- Squally weather with Rough to very rough sea conditions is very likely to prevail along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 31st August.
- Very rough to high sea condition is likely to prevail over northeast & adjoining eastcentral and Arabian Sea off Gujarat and Pakistan coasts during 29th to 31st August.
Very rough to high Sea condition is likely to prevail over northwest and adjoining westcentral Arabian Sea off Pakistan and southeast Iran coasts from 31st August till 2nd September.

Fisherman warning:

Fishermen are advised not venture into

- Northeast & adjoining Eastcentral Arabian Sea and along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 31st August.
- Northwest & adjoining westcentral Arabian Sea and along & off Pakistan and southeast Iran coasts from 31st August till 2nd September.

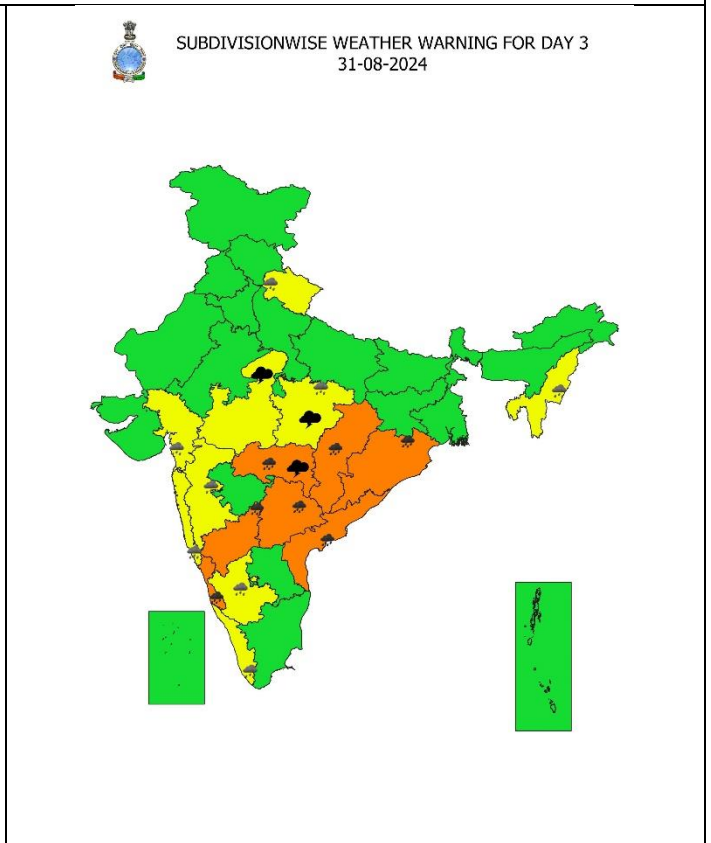
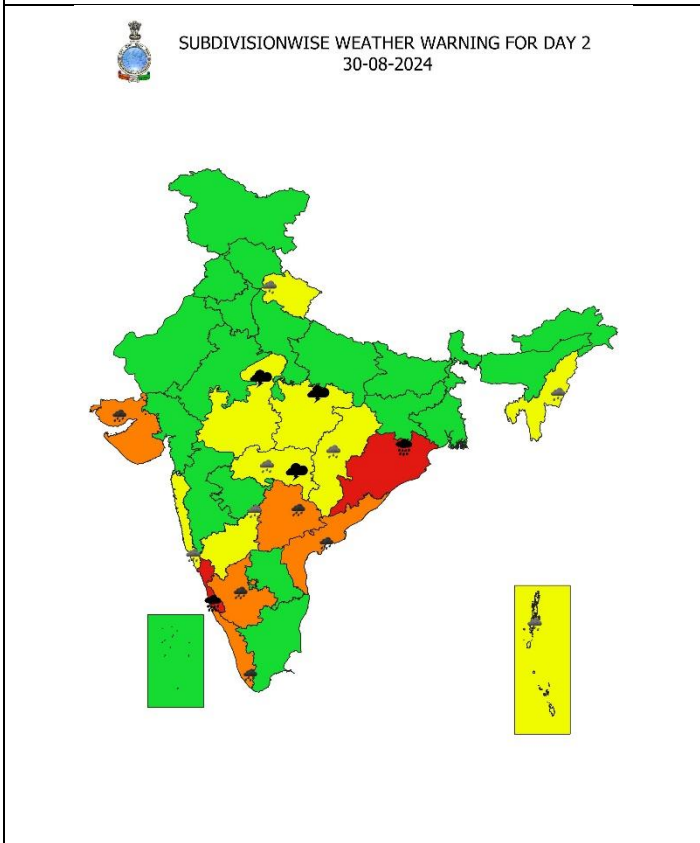
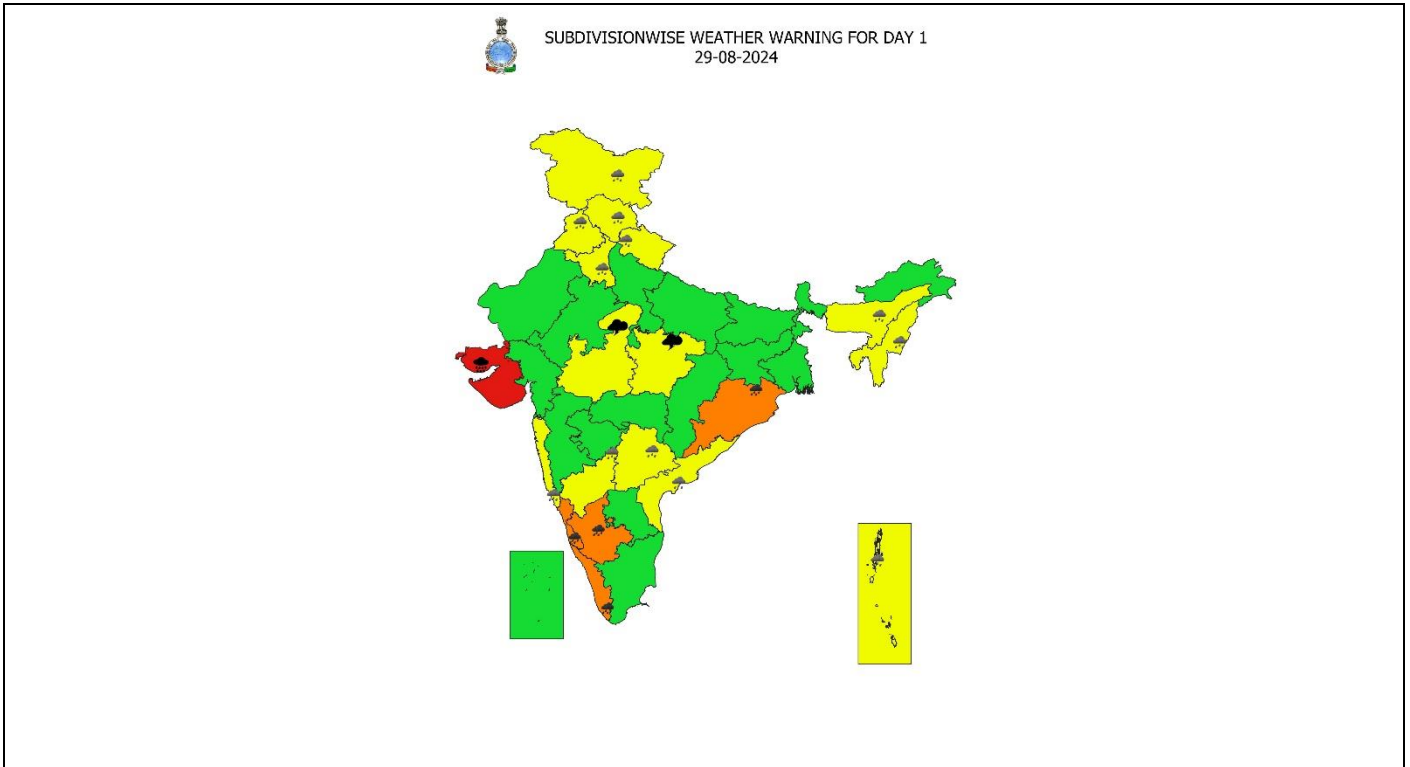
For more details, kindly refer to National bulletin on: <https://rsmcnewdelhi.imd.gov.in/>

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 29.08.2024 (in cm):

- ❖ **Saurashtra & Kutch:** Naliya (dist Kutch) 30, Bhanvad (dist Devbhoomi Dwarka) 29, Abdasa (dist Kutch) 27, Kalyanpur (dist Devbhoomi Dwarka) 26, Dwarka (dist Devbhoomi Dwarka) 23, Lakhpat (dist Kutch) 23, Khambhalia (dist Devbhoomi Dwarka) 23, Jamjodhpur (dist Jamnagar) 22, Nakhatrana (dist Kutch) 20, Mandvi(k) (dist Kutch) 18, Kalavad (dist Jamnagar) 17, Lalpur (dist Jamnagar) 17, Kandla Airport (dist Kutch) 16, Dhoraji (dist Rajkot) 15, Lodhika (dist Rajkot) 15, Kutiana (dist Porbandar) 13, Jamkandorna (dist Rajkot) 13, Anjar (dist Kutch) 12, Ranavav (dist Porbandar) 12, Jamnagar (dist Jamnagar) 11, Jetpur (dist Rajkot) 10, Mundra (dist Kutch) 10, Bhuj (dist Kutch) 9, Porbandar (dist Porbandar) 9, Rajkot (dist Rajkot) 9, Manavadar (dist Junagadh) 9, Upleta (dist Rajkot) 9, Gondal (dist Rajkot) 9, Vanthali (dist Junagadh) 8, Wankaner (dist Morbi) 8, Jamnagar_kvK Aws (dist Jamnagar) 8, Gandhidham (dist Kutch) 7, Kandla New (dist Kutch) 7, Bhesan (dist Junagadh) 7, Kotdasangani (dist Rajkot) 7, Jodia (dist Jamnagar) 7;
- ❖ **Odisha:** Birmaharajpur (Sonepur) 10, Jeypore (Koraput) 10, Nandapur (Koraput) 8, Tangarpali (Sundargarh) 8, Hirakud (Sambalpur) 7;
- ❖ **Coastal Karnataka:** Panambur Obsy (dist Dakshina Kannada) 9, Mani (dist Dakshina Kannada) 9, ShiraliPto (dist Uttara Kannada) 9, Gersoppa (dist Uttara Kannada) 8, Puttur Hms (dist DakshinaKannada) 7, Kundapur (dist Udupi) 7, Manki (dist Uttara Kannada) 7, Siddapura (dist Udupi) 7;
- ❖ **Delhi:** Lodi Road (dist New Delhi) 9, Dhansa (dist SouthWest Delhi) 8, Safdarjung (dist New Delhi) 8;
- ❖ **Kerala:** AMS Kannur (dist Cannur) 8, Kannur (dist Cannur) 8, Ayyankunnu (dist Cannur) 7;
- ❖ **Haryana:** Samalkha (dist Panipat) 8;
- ❖ **Madhya Maharashtra:** Igatpuri (dist Nashik) 8;
- ❖ **Punjab:** Jagraon (dist Ludhiana) 8, Nawanshahr (dist Sbs Nagar) 7, Ludhiana (dist Ludhiana) 7;
- ❖ **Uttarakhand:** Dhoomakot (Pauri Garhwal) 8, Dehradun (Dehradun) 7, Bhagwanpur (Haridwar) 7, Pantnagar (Udham Singh Nagar) 7, Ghansali (Tehri Garhwal) 7;
- ❖ **Gujarat Region:** Umerpada (dist Surat) 7;
- ❖ **South Interior Karnataka:** Kottigehara (dist Chikkamagaluru) 7, Bhagamandala (dist Kodagu) 7.

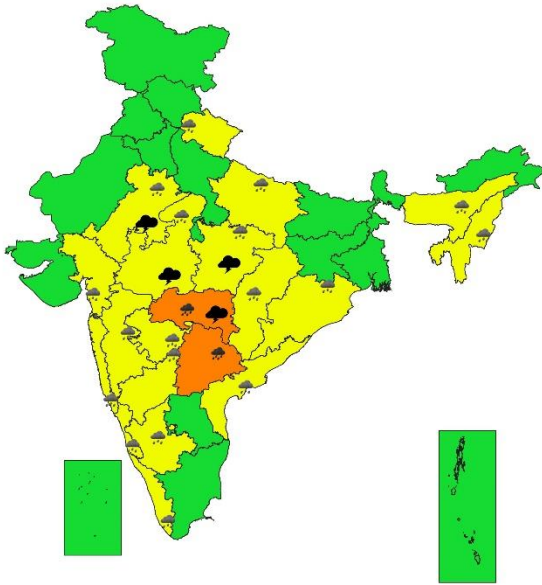
7 Days Rainfall Forecast								
S. No.	Subdivision	29-Aug	30-Aug	31-Aug	01-Sep	02-Sep	03-Sep	04-Sep
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	SCT	SCT	FWS	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	FWS	FWS	FWS	WS	WS	WS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	WS	WS	WS	WS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	SCT	SCT	FWS	FWS	FWS	FWS	FWS
6	GANGETIC WEST BENGAL	SCT	SCT	SCT	SCT	SCT	SCT	SCT
7	ODISHA	WS	WS	WS	FWS	SCT	SCT	SCT
8	JHARKHAND	SCT	SCT	SCT	SCT	SCT	SCT	SCT
9	BIHAR	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
10	EAST UTTAR PRADESH	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
11	WEST UTTAR PRADESH	SCT	SCT	ISOL	ISOL	SCT	SCT	SCT
12	UTTARAKHAND	FWS	SCT	SCT	SCT	FWS	WS	FWS
13	HARYANA CHANDIGARH & DELHI	FWS	ISOL	ISOL	ISOL	SCT	SCT	ISOL
14	PUNJAB	FWS	SCT	ISOL	ISOL	ISOL	SCT	SCT
15	HIMACHAL PRADESH	WS	FWS	SCT	SCT	FWS	FWS	SCT
16	JAMMU & KASHMIR AND LADAKH	WS	FWS	ISOL	ISOL	FWS	FWS	SCT
17	WEST RAJASTHAN	SCT	ISOL	ISOL	ISOL	ISOL	SCT	SCT
18	EAST RAJASTHAN	SCT	SCT	SCT	SCT	FWS	FWS	FWS
19	WEST MADHYA PRADESH	SCT	SCT	SCT	FWS	WS	WS	WS
20	EAST MADHYA PRADESH	SCT	FWS	FWS	WS	WS	WS	WS
21	GUJARAT REGION	WS	WS	WS	WS	WS	WS	WS
22	SAURASHTRA & KUTCH	WS	WS	WS	FWS	FWS	FWS	FWS
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	SCT	SCT	SCT	FWS	FWS	WS	WS
25	MARATHAWADA	ISOL	SCT	FWS	WS	WS	FWS	SCT
26	VIDARBHA	FWS	WS	WS	WS	WS	WS	FWS
27	CHHATTISGARH	FWS	WS	WS	WS	WS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	FWS	WS	WS	FWS	SCT	SCT	SCT
29	TELANGANA	SCT	FWS	WS	WS	WS	SCT	SCT
30	RAYALASEEMA	SCT	FWS	FWS	SCT	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	SCT	FWS	FWS	FWS	SCT	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	FWS	FWS	FWS	SCT	SCT	SCT	SCT
35	KERALA & MAHE	WS	WS	WS	WS	FWS	FWS	FWS
36	LAKSHADWEEP	FWS	FWS	FWS	FWS	FWS	FWS	FWS

- As the lead period increases forecast accuracy decreases.

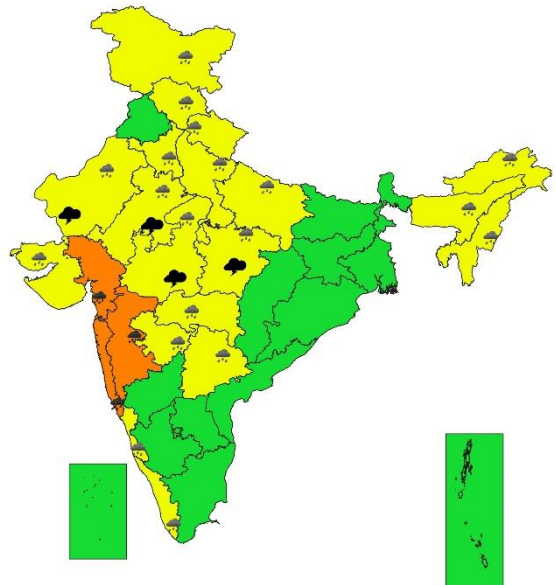




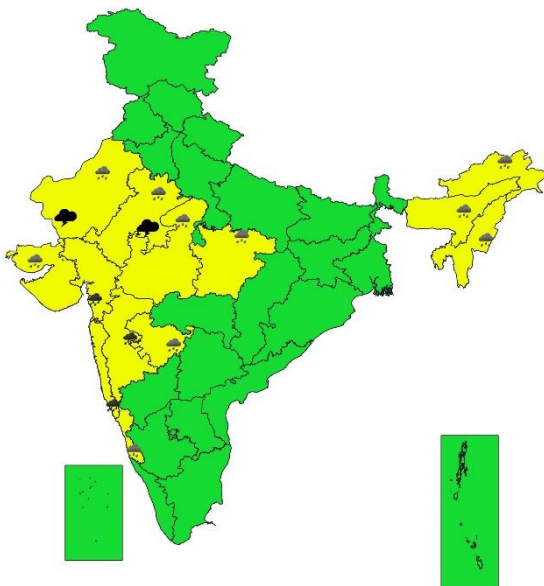
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
01-09-2024



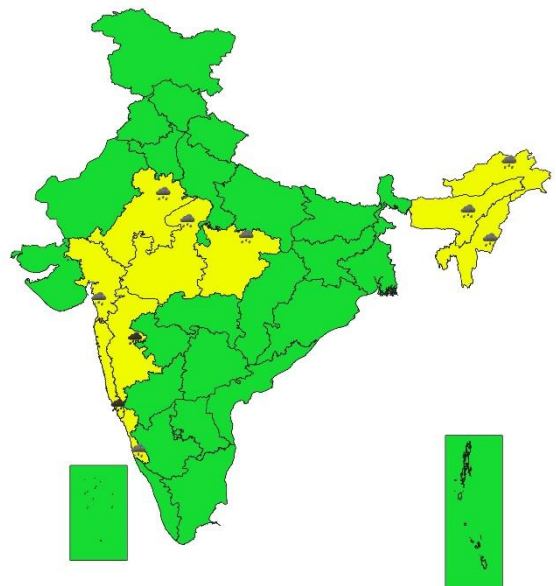
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
02-09-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 6
03-09-2024



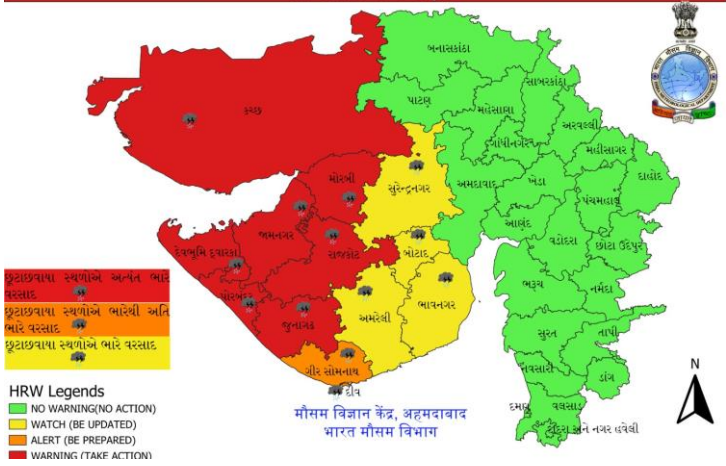
SUBDIVISIONWISE WEATHER WARNING FOR DAY 7
04-09-2024



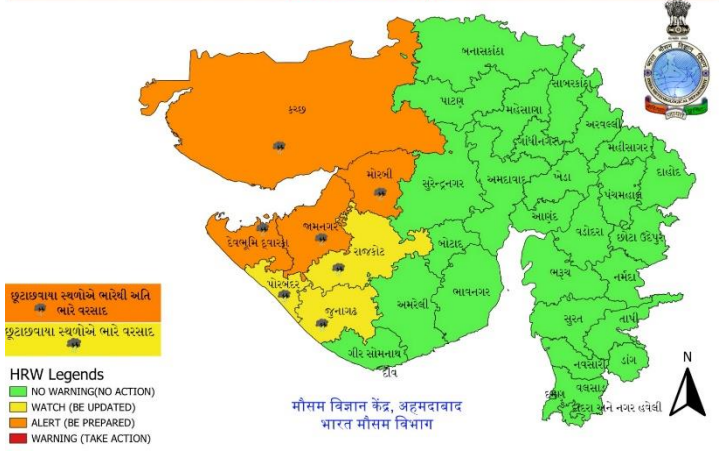
- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

District wise Warning Graphics

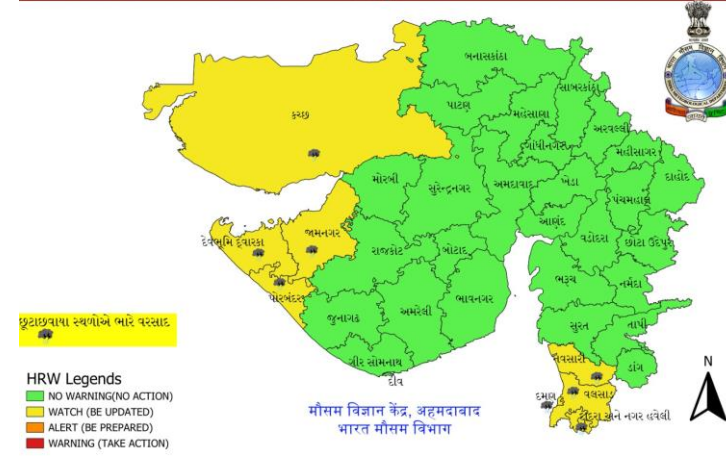
દિવસ - 1 ગુજરાત રાજ્ય અને દીવ, દમણ, દાદરા નગર હવેલી ની 29-08-2024 માટે 'ભારે વરસાદ ની ચેતવણી'



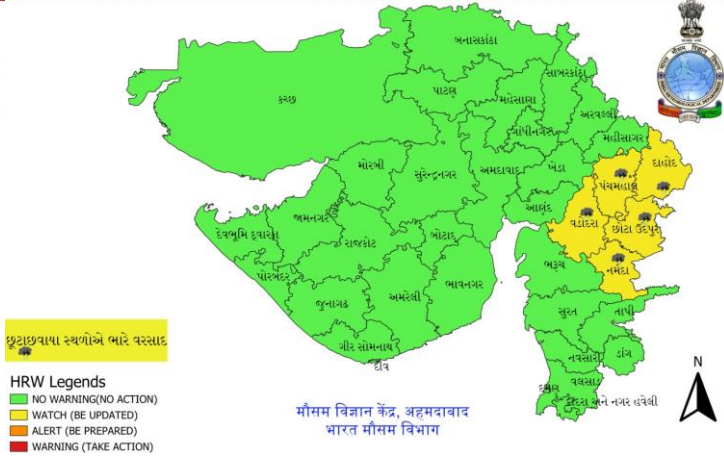
દિવસ - 2 ગુજરાત રાજ્ય અને દીવ, દમણ દાદરા નગર હવેલી ની 30-08-2024 માટે 'ભારે વરસાદ ની ચેતવણી'



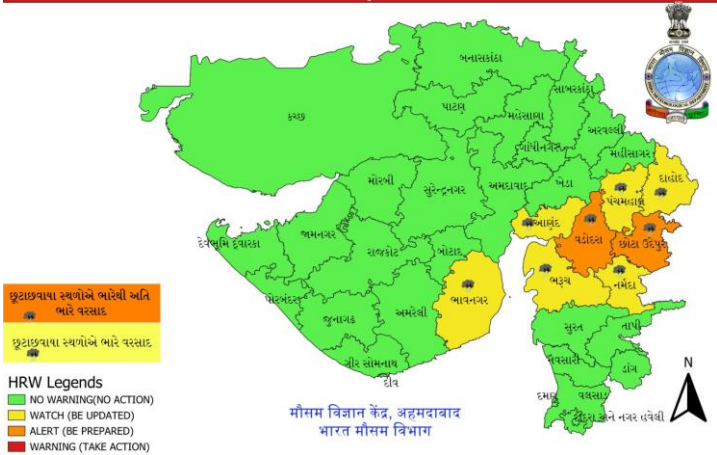
દિવસ - 3 ગુજરાત રાજ્ય અને દીવ, દમણ દાદરા નગર હવેલી ની 31-08-2024 માટે 'ભારે વરસાદ ની ચેતવણી'



દિવસ - 4 ગુજરાત રાજ્ય અને દીવ, દમણ દાદરા નગર હવેલી ની 01-09-2024 માટે 'ભારે વરસાદ ની ચેતવણી'



દિવસ - 5 ગુજરાત રાજ્ય અને દીવ, દમણ દાદરા નગર હવેલી ની 02-09-2024 માટે 'ભારે વરસાદ ની ચેતવણી'



Impact due to

- ✓ Isolated **extremely heavy rainfall also very likely** over Saurashtra & Kutch on 29th August and Odisha & Coastal Karnataka on 30th August.
- ✓ **Very heavy rainfall** at isolated over Odisha, Coastal Karnataka on 29th & 31st August; Kerala & Mahe and South Interior Karnataka on 29th & 30th August; Saurashtra & Kutch on 30th August; Chhattisgarh, North Interior Karnataka on 31st August; Vidarbha on 31st August & 01st September; Gujarat Region on 02nd & 03rd September; ghat areas of Madhya Maharashtra and Konkan & Goa during 02nd-04th September; Coastal Andhra Pradesh & Yanam on 30th & 31st August; Telangana during 30th August-01st September; East Rajasthan on 02nd September.
- ✓ **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Himachal Pradesh, Uttarakhand and **Moderate flash flood** risk very likely over few watersheds & neighbourhoods of Saurashtra & Kutch on 29th & 30th August. **(ANNEXURE V)**

Impact Expected

- ✓ 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.
- ✓ Reduction of visibility over sea area due to sea spray induced by strong wind and 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

- ✓ Fishermen are advised not to venture into Northeast & adjoining Eastcentral Arabian Sea and along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 30th August.
- ✓ Judicious regulation of offshore/onshore Operations
- ✓ Judicious regulation of surface transports including railways and roadways.
- ✓ 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 Gujarat, Konkan & Goa, ghat regions of Madhya Maharashtra, Mizoram, Uttarakhand, Andaman & Nicobar Islands, Odisha, Kerala and Karnataka.
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Coastal Andhra Pradesh, Telangana, Chhattisgarh and Vidarbha.
- Drain out excess water from pigeon pea, soybean, cotton and sesame crop fields in **Saurashtra & Kutch**; from rice, castor, cotton, pearl millet, groundnut, sesame and maize fields in **Gujarat**; from maize, groundnut, ragi, vegetables, niger and banana in South **Odisha**.
- Due to prolonged heavy rainfall, transplanted *Aman* rice and vegetable crops in low-lying areas of **Tripura** are submerged, with young rice seedlings unlikely to recover. It is recommended to procure short-duration rice varieties for re-sowing after the cessation of rains, or alternatively, prepare in advance for winter vegetable cultivation.
- Provide mechanical support to horticultural crops & staking to vegetables.

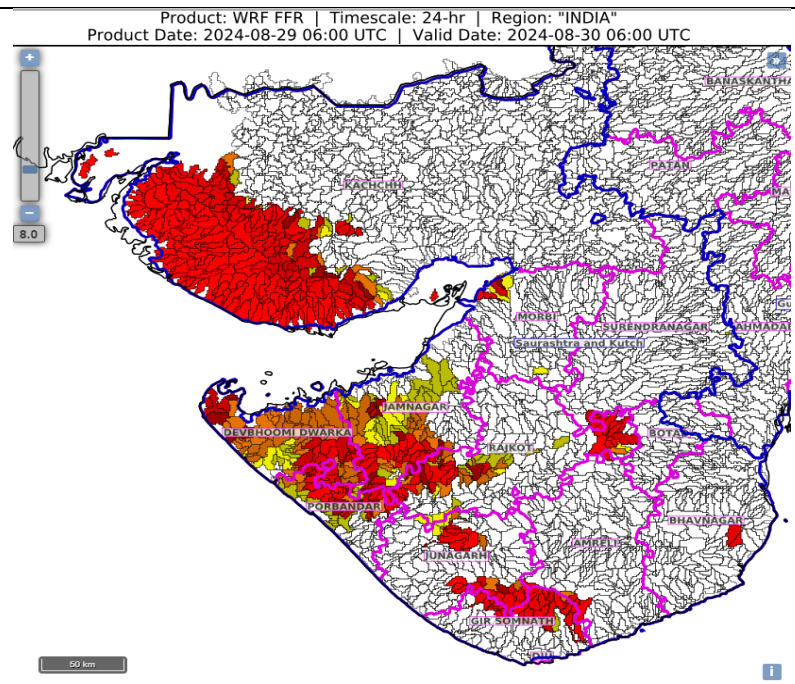
Flash Flood Guidance:

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 30-08-2024 :

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

Saurashtra & Kutch - Amreli, Bhavnagar, Devbhoomi Dwarka, Gir Somnath, Jamnagar, Junagarh, Porbandar, Rajkot, Morbi and Kachchh districts.

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



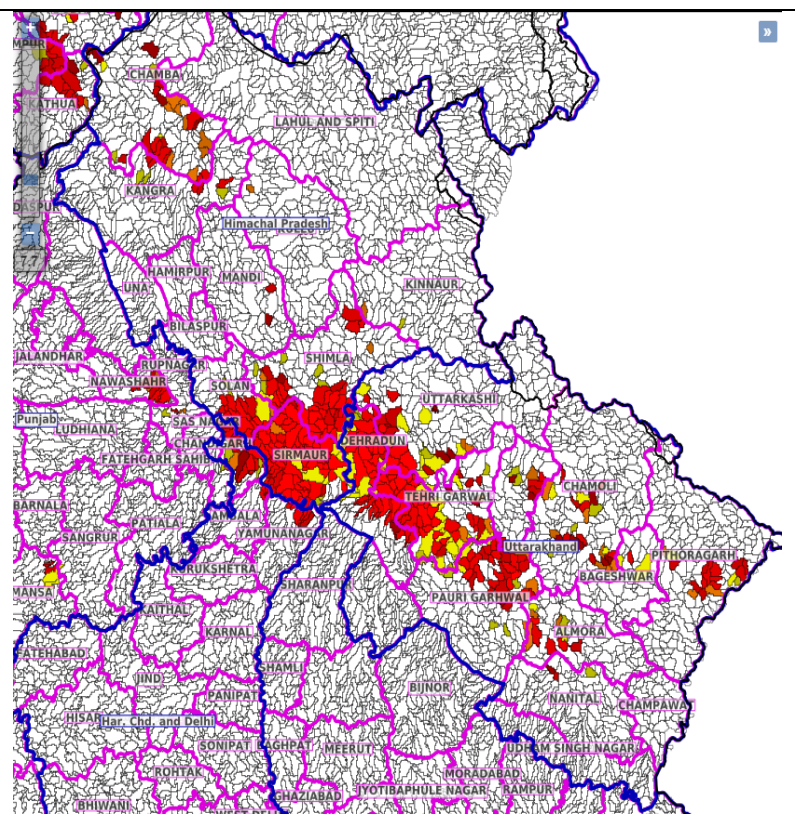
24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 30-08-2024 :

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

Himachal Pradesh - Chamba, Kangra, Shimla, Sirmaur and Solan districts.

Uttarakhand - Almora, Bageshwar, Chamoli, Dehradun, Pauri Garhwal, Pithoragarh, Rudraprayag, Tehri Garwal and Uttarkashi districts.

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

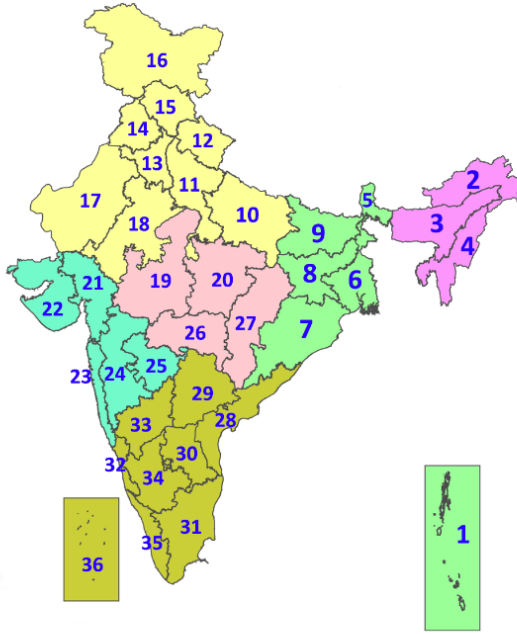


Legends & abbreviations:

- ❖ **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".
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(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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