



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 31<sup>st</sup> August, 2024

Time of Issue: 1315 hours IST

- Subject: (i) The Cyclonic Storm “ASNA” has moved away from Indian coast and lies over Northeast and adjoining Northwest Arabian Sea.**  
**(ii) Depression over westcentral & adjoining northwest Bay of Bengal off north Andhra Pradesh & South Odisha coasts and is likely to cross north Andhra Pradesh close to Kalingapatnam around midnight of today.**  
**(iii) Heavy to very heavy rainfall with isolated extremely heavy rainfall very likely over Coastal Andhra Pradesh on 31<sup>st</sup>; Telangana on 31<sup>st</sup> & 1<sup>st</sup> and Vidarbha on 1<sup>st</sup> September.**

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

**Heavy to very heavy rainfall** at isolated places Assam, Coastal Andhra Pradesh & Yanam, Kerala & Mahe, Telangana; **Heavy rainfall** at isolated places over East Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha, Arunachal Pradesh, Meghalaya, Himachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Rayalaseema.

**Weather Systems:**

**(a) Cyclonic Storm “Asna” (Pronounced As As-Na) Over Northeast Arabian Sea Off Pakistan Coast**

The Cyclonic Storm “ASNA” (pronounced as As-Na) over northeast Arabian Sea off Pakistan coast moved westwards with a speed of 15 kmph during past 6 hours and lay centered at 0830 hours IST of 31<sup>st</sup> August, 2024 over northeast and adjoining northwest Arabian Sea near latitude 23.6°N and longitude 65.3°E, 360 km west of Naliya (Gujarat), 260 km southwest of Karachi (Pakistan), 300 km southeast of Pasni (Pakistan) and 720 km east of Muscat (Oman). It is likely to continue to move nearly west-northwestwards over northeast & northwest Arabian Sea and maintain its intensity till morning of 1<sup>st</sup> September. Thereafter, it is likely to move west-southwestwards for subsequent 24 hours and weaken gradually into a depression over northwest Arabian Sea by morning of 2<sup>nd</sup> September 2024.

**(b) Depression Over Westcentral & Adjoining Northwest Bay Of Bengal (Annexure II)**

The depression over westcentral & adjoining northwest Bay of Bengal off north Andhra Pradesh & South Odisha coasts moved northwestwards with a speed of 10 kmph during past 3 hours and lay centered at 0830 hours IST of today, the 31<sup>st</sup> August, 2024 over the same region near latitude 17.7°N and longitude 84.4°E, about 80 km south-southeast of Kalingapatnam (Andhra Pradesh), 120 km east of Visakhapatnam (Andhra Pradesh) and 180 km south-southwest of Gopalpur (Odisha). It is likely to move further west-northwestwards and cross north Andhra Pradesh and adjoining south Odisha coasts between Visakhapatnam and Gopalpur close to Kalingapatnam around midnight of today, the 31<sup>st</sup> August 2024

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

**Forecast & Warnings (upto 7 days) (Annexure III & IV):**

❖ **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.

- ✓ Scattered **heavy to very heavy with isolated extremely heavy rainfall** very likely over Coastal Andhra Pradesh & Yanam on 31<sup>st</sup> August; Telangana on 31<sup>st</sup> August & 01<sup>st</sup> September.
  - ✓ Isolated **heavy to very heavy rainfall** also very likely over Rayalaseema, Interior Karnataka on 31<sup>st</sup> August to 02<sup>nd</sup> September; Coastal Karnataka during 31<sup>st</sup> August & 02<sup>nd</sup> September.
  - ✓ Isolated **heavy rainfall** very likely over Coastal Karnataka during next 7 days; Kerala & Mahe during 31<sup>st</sup> August - 04<sup>th</sup> September.
- ❖ **West & Central India** Fairly widespread to widespread light/moderate rainfall very likely over West & Central India during the week.
- ✓ Isolated **heavy to very heavy with isolated extremely heavy rainfall** very likely over Vidarbha on 01<sup>st</sup> September.
  - ✓ Isolated **very heavy rainfall** also very likely over West Madhya Pradesh, Marathwada on 01<sup>st</sup> & 02<sup>nd</sup>; Vidarbha during 31<sup>st</sup> August- 02<sup>nd</sup> September; Chhattisgarh on 31<sup>st</sup>; Gujarat Region during 02<sup>nd</sup> – 04<sup>th</sup> September.
  - ✓ Isolated **Heavy rainfall** very likely over Madhya Pradesh during 31<sup>st</sup> August- 04<sup>th</sup> September; Vidarbha, Marathwada during 31<sup>st</sup> August- 03<sup>rd</sup> September; Chhattisgarh on 31<sup>st</sup> August, 01<sup>st</sup> September and during 04<sup>th</sup> – 06<sup>th</sup> September; Konkan & Goa, Madhya Maharashtra during 01<sup>st</sup> – 06<sup>th</sup> September; Gujarat State during 01<sup>st</sup> – 05<sup>th</sup> September.
- ❖ **East & Northeast India**
- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Andaman & Nicobar Islands, Odisha and Scattered to Fairly widespread light/moderate rainfall very likely over Northeast India, West Bengal & Sikkim, Bihar and Jharkhand during the week.
  - ✓ Isolated **very heavy rainfall** also very likely over Odisha on 31<sup>st</sup> August.
  - ✓ Isolated **heavy rainfall** very likely over Northeast India during 31<sup>st</sup> August – 04<sup>th</sup> September; Sub-Himalayan West Bengal & Sikkim on 31<sup>st</sup> August, 03<sup>rd</sup> & 04<sup>th</sup> September; Odisha on 31<sup>st</sup> August, 01<sup>st</sup> & 04<sup>th</sup> September, Andaman & Nicobar Islands on 03<sup>rd</sup> & 04<sup>th</sup> 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 **heavy rainfall** very likely over East Rajasthan during next 7 days. Himachal Pradesh, Haryana-Chandigarh on 02<sup>nd</sup>; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Punjab on 02<sup>nd</sup> & 03<sup>rd</sup>; West Rajasthan on 03<sup>rd</sup> & 04<sup>th</sup> September.

**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)

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

**(i) Wind warning:**

- ✓ Squally Weather With Wind Speed Reaching 45-55 Kmph Gusting To 65 Kmph Likely Over Westcentral And Adjoining Northwest Bay Of Bengal On 31<sup>st</sup> August.
- ✓ Squally Wind Speed Reaching 45-55 Kmph Gusting To 65 Kmph Is Likely To Prevail Along & Off North Andhra Pradesh & South Odisha Coasts On 31<sup>st</sup> August.
- ✓ Squally Weather With Wind Speed Reaching 35-45 Kmph Gusting To 55 Kmph Is Likely To Prevail Along And Off North Odisha And South Andhra Pradesh Coasts On 31<sup>st</sup> August.

**(i) Sea condition:**

- ✓ Rough To Very Rough Sea Condition Is Very Likely To Prevail Over Westcentral And Adjoining Northwest Bay Of Bengal On 31<sup>st</sup> August And 1<sup>st</sup> September.

- ✓ Rough To Very Rough Sea Condition Is Very Likely To Prevail Along & Off North Andhra Pradesh & South Odisha Coasts On 31<sup>st</sup> August And 1<sup>st</sup> September

**(ii) Fishermen warning: (Annexure V)**

Fishermen are advised not venture into

- ✓ Northeast & Adjoining Eastcentral Arabian Sea And Along & Off Gujarat & Adjoining North Maharashtra Coasts Till 31<sup>st</sup> August.
- ✓ Northeast & Adjoining Eastcentral Arabian Sea Off Gujarat Coast And Along & Off Pakistan Coasts During 31<sup>st</sup> August To 1<sup>st</sup> September.
- ✓ Northwest & Adjoining Westcentral Arabian Sea And Along & Off Pakistan Coast From 31<sup>st</sup> August Till 2<sup>nd</sup> September.
- ✓ Fishermen Are Advised Not Venture Into Westcentral & Adjoining Northwest Bay Of Bengal Till 1<sup>st</sup> September And Along & Off South Odisha And North Andhra Pradesh Coasts Till 1<sup>st</sup> September.

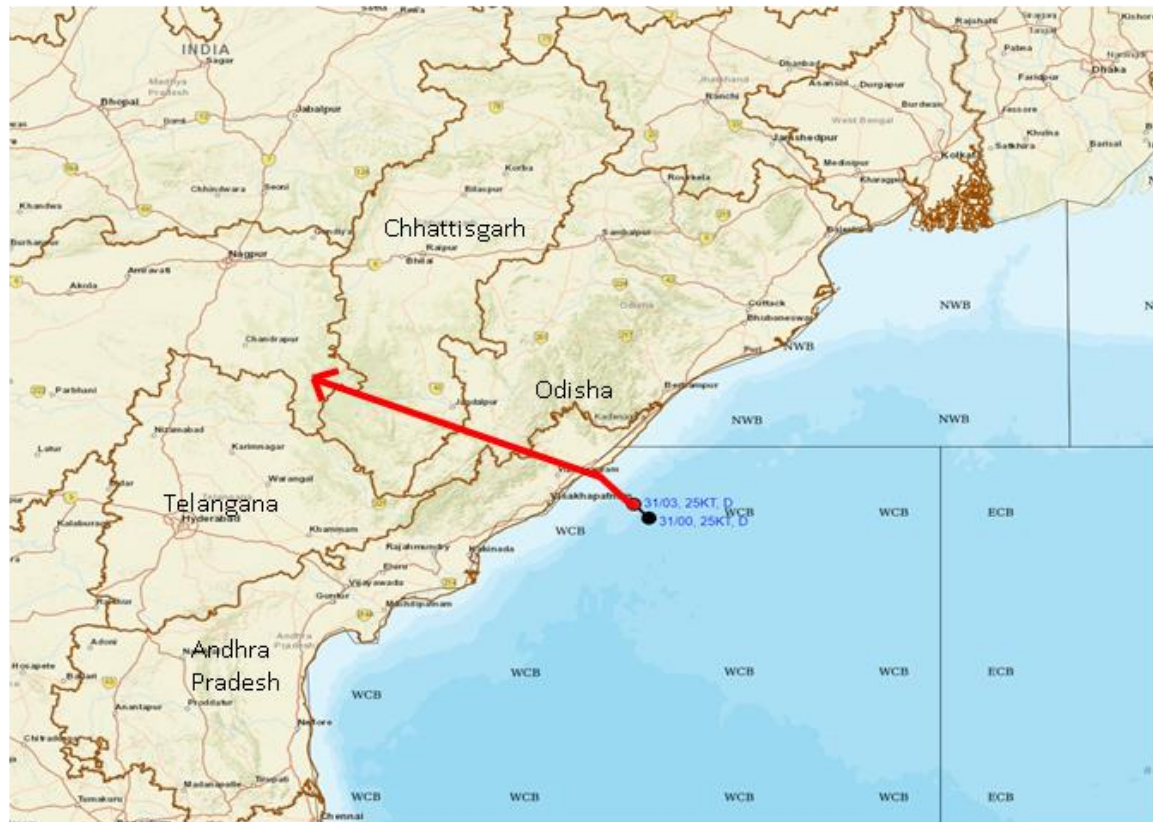
**For more details, kindly refer to National bulletin on: <https://rsmcnewdelhi.imd.gov.in/>**

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 31.08.2024 (in cm):**

- ❖ **Coastal Andhra Pradesh:** Masulipatnam Cdr (dist Krishna) 18, Vijayawada(arg) (dist Ntr District) 18, Gudivada (dist Krishna) 17, Kaikalur (dist Eluru) 15, Narsapuram (dist West Godavari) 14, Amaravati (dist Guntur) 13, Vijayawada A.p. (dist Ntr District) 12, Mangalagiri (dist Guntur) 11, Nandigama (dist Ntr District) 11, Bheemavaram (dist West Godavari) 11, Palakoderu (dist West Godavari) 9, Tenali (dist Guntur) 9, Tiruvuru (dist Ntr District) 9, Guntur (dist Guntur) 9, Eluru (dist Eluru) 8, Nuzvid (dist Eluru) 8, Atchampet (dist Palnadu) 8, Tadepalligudem (dist West Godavari) 7, Repalle (dist Bapatla) 7, Kunavaram (dist Alluri Sitharamaraju) 7, Karamchedu (dist Bapatla) 7,
- ❖ **Assam & Meghalaya:** Diphu AGRI (dist Karbi Anglong) 14, Matijuri Arg (dist Hailakandi) 13, Naharkatia Arg (dist Dibrugarh) 10, Matijuri (dist Hailakandi) 10, Tura DAO (dist West Garo Hills) 10, Lala Arg (dist Hailakandi) 9, Margherita (dist Tinsukia) 8, Nahar Katia (dist Dibrugarh) 8, Moranhat (dist Dibrugarh) 8, Numaligarh (dist Golaghat) 7, Golaghat\_pto (dist Golaghat) 7, Dhemaji (dist Dhemaji) 7,
- ❖ **Kerala:** Vaikom (dist Kottayam) 13, Anakayam (dist Malappuram) 9, Kayamkulam (dist Alapuzha) 8, Padannakkad (dist Kasod) 8, Ayyankunnu (dist Cannur) 7, Aryankavu (dist Kollam) 7, Cherthala (dist Alapuzha) 7, Manjeri (dist Malappuram) 7, Kayamkulam\_ (dist Alapuzha) 7,
- ❖ **Telangana:** Damaragidda (dist Narayanpet) 13, Madhira (dist Khammam) 9, Dornakal (distMahabubabad) 9, Kothaguda (dist Mahabubabad) 9, Thimmajipeta (dist Nagarkurnool) 9, Bonakal (dist Khammam) 9,
- ❖ **Odisha:** Malkangiri (dist Malkangiri) 11, Nandapur (dist Koraput) 8,
- ❖ **Arunachal Pradesh:** Pasighat\_ Aero (dist East Siang) 10, Oyan Arg (dist East Siang) 8,
- ❖ **Himachal Pradesh:** Ghamroor (dist Kangra) 9,
- ❖ **Tamil Nadu:** Kozhiporvilai (dist Kanniyakumari), Sholayar (dist Coimbatore) 9 each, Mylaudy (dist Kanniyakumari), Mambzhathuraiyaru (dist Kanniyakumari), Anaikedanku (distKanniyakumari) 7 each,
- ❖ **Chhattisgarh:** Sukma (dist Sukma) 9, Barsur (dist Dantewada) 8, Dantewara (dist Dantewada) 7, Usoor (dist Bijapur) 7,
- ❖ **Meghalaya:** Tura DL (dist. West Garo Hills) 9,
- ❖ **East Madhya Pradesh:** Chauri (dist Chindwara) 9, Umreth (dist Chindwara) 8, Deori (dist Sagar) 8, Amarwara (dist Chindwara) 7
- ❖ **East Rajasthan:** Dug (dist Jhalawar) 8,
- ❖ **Rayalaseema:** Proddutur (dist Ysr District) 9, Chapad (dist Ysr District) 7, Jammalamadugu (dist Ysr District) 7,
- ❖ **West Madhya Pradesh:** Budhni (dist Sehore) 7,



**OBSERVED AND FORECAST TRACK OF DEPRESSION OVER WEST CENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 31<sup>ST</sup> AUGUST, 2024.**



DATE/TIME IN UTC  
 IST-UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)  
 SuCS: SUPER CYCLONIC STORM  $\geq$  120 KT

- LESS THAN 34 KT
- 34-47 KT
- $\geq$  48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY





**OBSERVED AND FORECAST TRACK OF CYCLONIC STORM ASNA OVER NORTHEAST AND ADJOINING NORTHWEST ARABIAN SEA BASED ON 0300 UTC (0830 IST) OF 31<sup>ST</sup> AUGUST, 2024.**

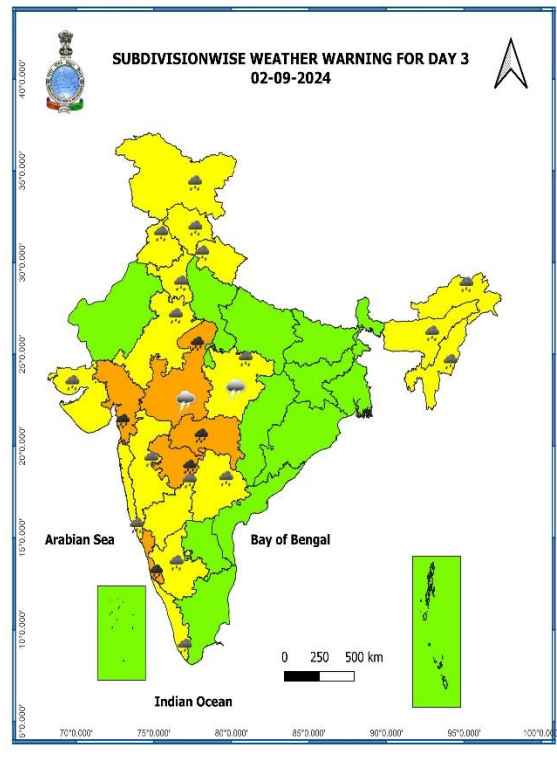
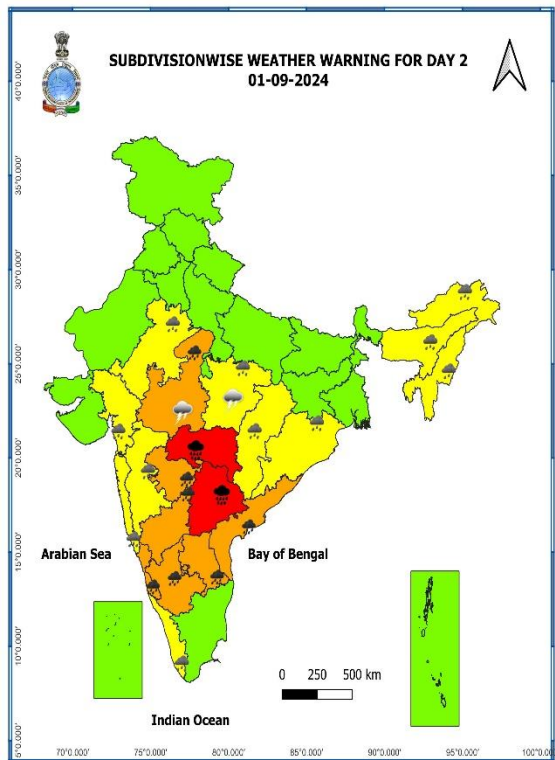
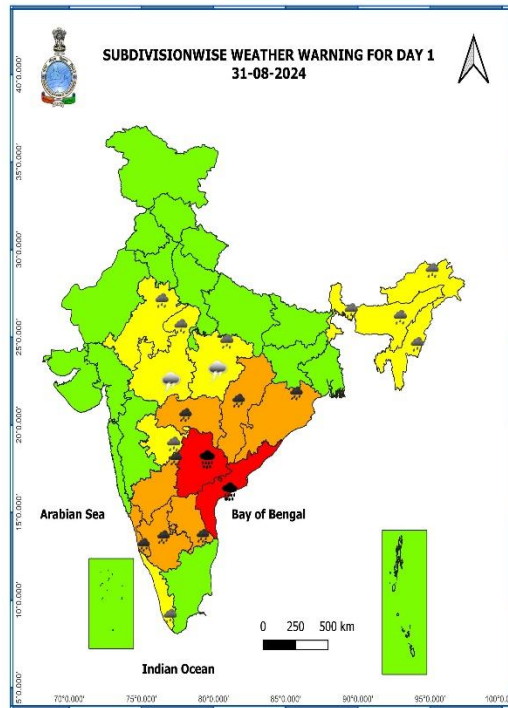


DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
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 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)  
 SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

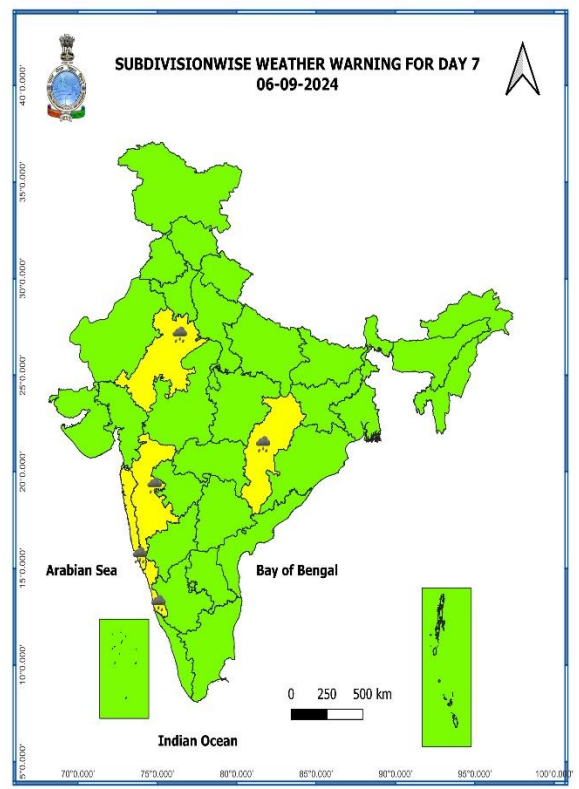
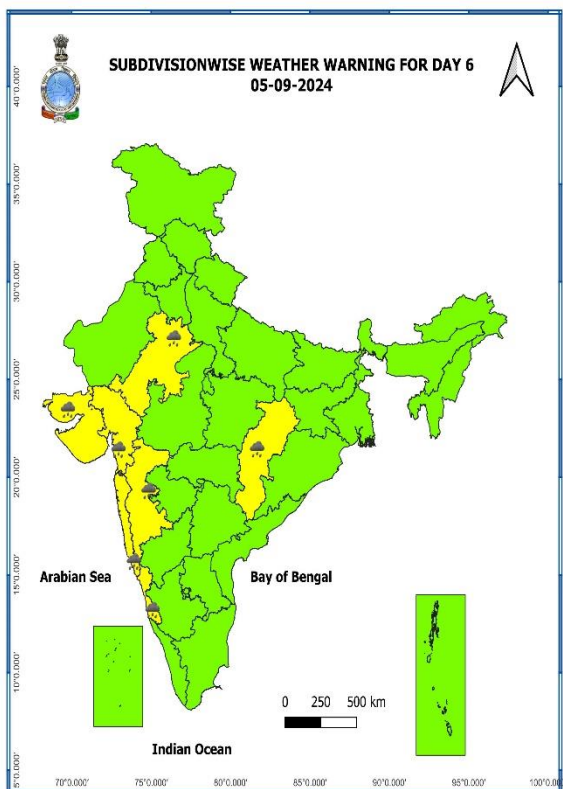
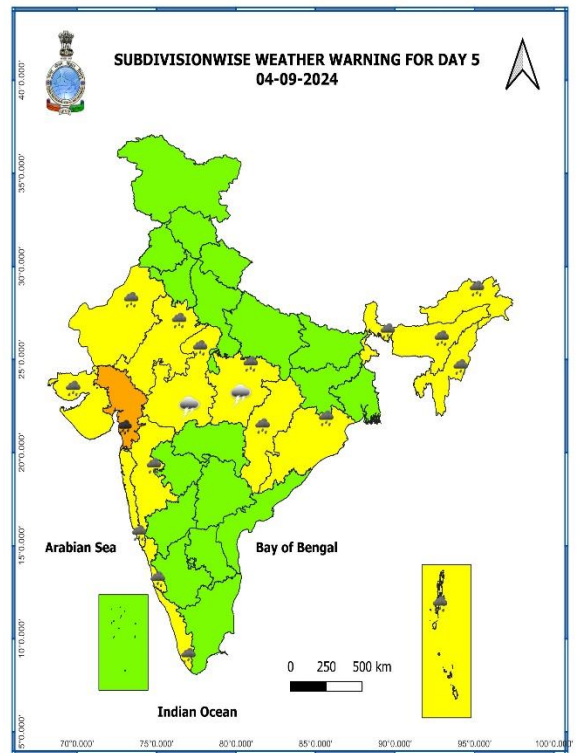
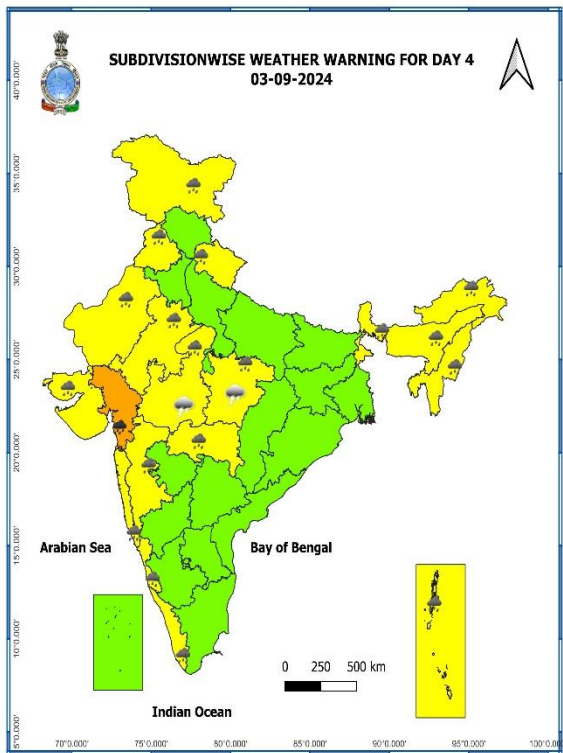
- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

7 Days Rainfall Forecast								
S. No.	Subdivision	31-Aug	01-Sep	02-Sep	03-Sep	04-Sep	05-Sep	06-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	WS	FWS	FWS	FWS	FWS	SCT	SCT
3	ASSAM & MEGHALAYA	FWS	FWS	FWS	FWS	FWS	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	FWS	FWS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	FWS	FWS	FWS	FWS	FWS	FWS	FWS
6	GANGETIC WEST BENGAL	FWS	SCT	SCT	SCT	SCT	FWS	FWS
7	ODISHA	WS	FWS	SCT	SCT	FWS	FWS	FWS
8	JHARKHAND	SCT	SCT	SCT	SCT	SCT	FWS	FWS
9	BIHAR	SCT	SCT	SCT	SCT	SCT	SCT	SCT
10	EAST UTTAR PRADESH	ISOL	SCT	SCT	SCT	FWS	FWS	FWS
11	WEST UTTAR PRADESH	ISOL	SCT	FWS	FWS	FWS	FWS	FWS
12	UTTARAKHAND	ISOL	SCT	FWS	FWS	FWS	SCT	SCT
13	HARYANA CHANDIGARH & DELHI	ISOL	ISOL	SCT	SCT	SCT	ISOL	ISOL
14	PUNJAB	ISOL	ISOL	SCT	SCT	SCT	ISOL	ISOL
15	HIMACHAL PRADESH	SCT	SCT	FWS	FWS	SCT	SCT	SCT
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	FWS	FWS	SCT	ISOL	SCT
17	WEST RAJASTHAN	ISOL	ISOL	SCT	FWS	FWS	SCT	SCT
18	EAST RAJASTHAN	SCT	FWS	FWS	FWS	FWS	FWS	FWS
19	WEST MADHYA PRADESH	FWS	WS	WS	WS	WS	FWS	FWS
20	EAST MADHYA PRADESH	FWS	FWS	FWS	FWS	FWS	FWS	FWS
21	GUJARAT REGION	FWS	WS	WS	WS	WS	WS	WS
22	SAURASHTRA & KUTCH	SCT	SCT	FWS	WS	WS	WS	FWS
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	SCT	FWS	FWS	WS	WS	WS	WS
25	MARATHAWADA	FWS	WS	WS	FWS	FWS	SCT	SCT
26	VIDARBHA	WS	WS	WS	WS	FWS	FWS	FWS
27	CHHATTISGARH	WS	FWS	FWS	FWS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	WS	WS	FWS	FWS	SCT	SCT	FWS
29	TELANGANA	WS	WS	WS	FWS	SCT	SCT	SCT
30	RAYALASEEMA	WS	FWS	FWS	SCT	ISOL	ISOL	SCT
31	TAMILNADU PUDUCHERRY & KARAICAL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	WS	WS	FWS	SCT	SCT	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	WS	FWS	SCT	SCT	SCT	SCT	SCT
35	KERALA & MAHE	WS	WS	WS	FWS	FWS	WS	WS
36	LAKSHADWEEP	WS	WS	FWS	FWS	SCT	SCT	SCT

- As the lead period increases forecast accuracy decreases.



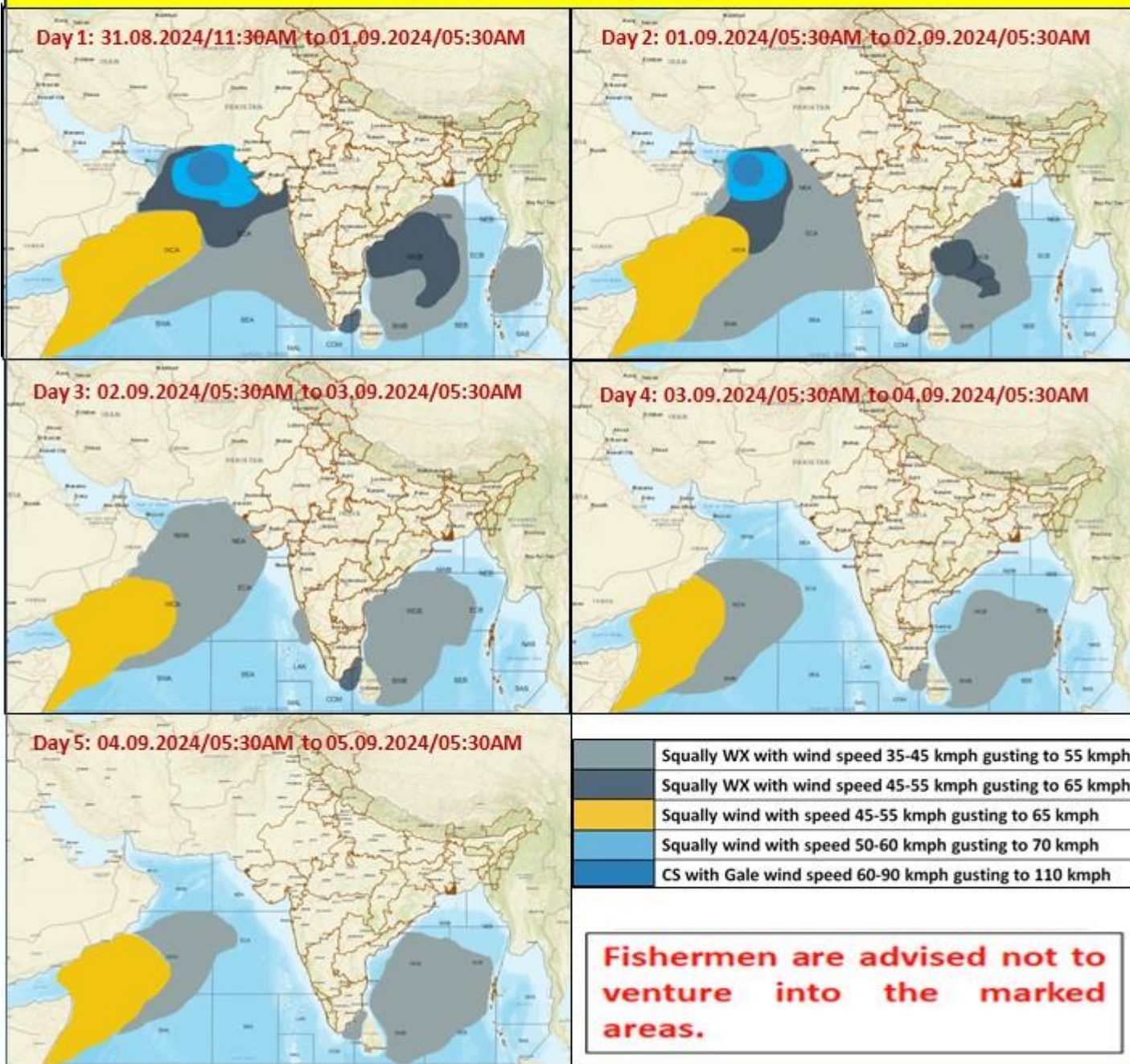




- Action may be taken based on **ORANGE AND RED COLOUR** warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.



### Fishermen Warning Graphics



## Impact due to

- ✓ Scattered **heavy to very heavy with isolated extremely heavy rainfall** very likely over Coastal Andhra Pradesh & Yanam on 31<sup>st</sup> August; Telangana on 31<sup>st</sup> August & 01<sup>st</sup> September.
- ✓ Isolated **heavy to very heavy with isolated extremely heavy rainfall** very likely over Vidarbha on 01<sup>st</sup> September.
- ✓ **Very heavy rainfall** at isolated over Rayalaseema, Interior Karnataka on 31<sup>st</sup> August to 02<sup>nd</sup> September; Coastal Karnataka, Vidarbha during 31<sup>st</sup> August & 02<sup>nd</sup> September. West Madhya Pradesh, Marathwada on 01<sup>st</sup> & 02<sup>nd</sup>; Chhattisgarh, Odisha on 31<sup>st</sup>; Gujarat Region during 02<sup>nd</sup> – 04<sup>th</sup> September.
- ✓ **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Chhattisgarh on 31<sup>st</sup> August & 01<sup>st</sup> September. (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 kutch roads.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ Damage to horticulture and standing crops in some areas due to inundation.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

## Action Suggested

- ✓ Fishermen are advised not to venture into Northeast & adjoining Eastcentral Arabian Sea and along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 30<sup>th</sup> 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 Arunachal Pradesh, Assam & Meghalaya, Odisha, East Rajasthan, Madhya Pradesh, Tamil nadu, Kerala, Karnataka, Andhra Pradesh and Telangana.
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Konkan & Goa, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Gujrat Region and NMMT.
- Drain out excess water from maize, groundnut, ragi, vegetables, niger and banana in South Odisha; from rice, maize, sugarcane, red gram, cotton, groundnut, vegetables and horticultural crops in Andhra Pradesh; from rice, soyabean, red gram, maize, cotton and Turmeric in Telangana to prevent water logging.
- Store the harvested produce of black gram and green gram at safer places in Vidarbha, Marathwada and Ghat areas of Madhya Maharashtra.
- 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 01-09-2024 :**

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

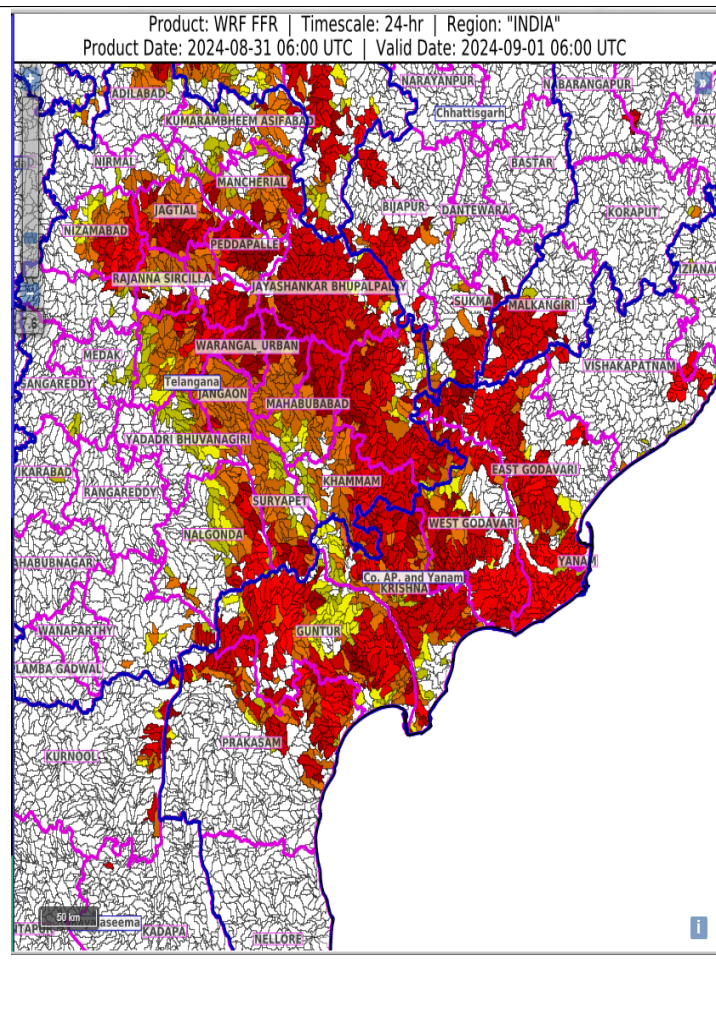
**Coastal AP & Yanam** - East Godavari, Guntur, Krishna, Prakasam, West Godavari, Visakhapatnam and Yanam districts.

**Royalaseema** - Kurnool district.

**Telangana** - Adilabad, B. Kothagudem, J. Bhupalpally, Jagtial, Jangaon, Khammam, Kumaram Bheem, Mahabubabad, Mancherial, Nalgonda, Nirmal, Nizamabad, Peddapalle, Rajanna Sircilla, Siddipet, Suryapet, Warangal\_Rural and Warangal\_Urban districts.

**Chhattisgarh** - Bijapur and Sukma districts.

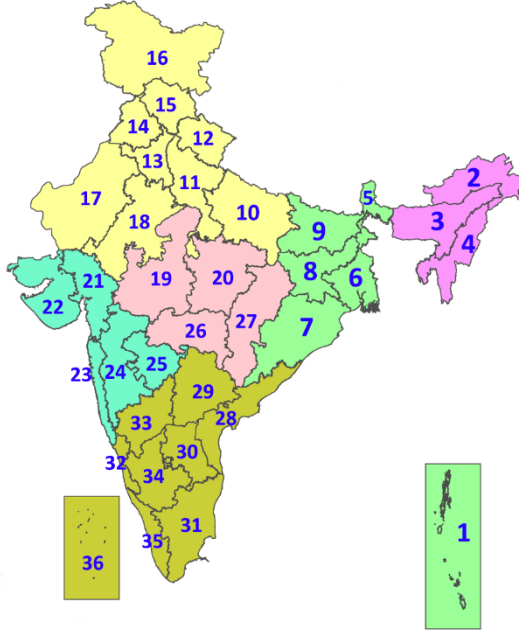
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.

**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".  
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  $4.5^\circ\text{C}$  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 Storm: Wind speed  $> 220$  kmph ( $> 119$  knots)

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