



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 27th November, 2024

Time of Issue: 1300 hours IST

Subject: (i) The Deep Depression over Southwest Bay of Bengal is very likely to intensify into a cyclonic storm by tonight.

(ii) Heavy to very heavy rainfall at a few places with isolated extremely heavy rainfall likely over Coastal Tamil Nadu & Puducherry on 27th, heavy to very heavy rainfall over Coastal Tamil Nadu & Puducherry and Coastal Andhra Pradesh & Yanam during 28th -30th November, 2024.

i. Rainfall Forecast and warning over the country:

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

- ❖ **Heavy to very rainfall** observed at isolated places over Tamil Nadu & Puducherry.
- ❖ **Fog conditions observed** (at 0830 hours IST of today): **Dense fog (visibility 50-200 m)** reported at isolated pockets of Uttar Pradesh and Odisha.
- ❖ **Visibility reported** (in m): **East Uttar Pradesh:** Kushinagar 50, **West Uttar Pradesh:** Moradabad 50; **Odisha:** Sambalpur 100.

Weather Systems:

- ❖ The Deep Depression over Southwest Bay of Bengal moved north-northwestwards and lay centred at 0830 hours IST of today, the 27th November 2024 over the same region near latitude 8.5°N and longitude 82.3°E, about 120 km east-southeast of Trincomalee, 370 km southeast of Nagapattinam, 470 km southeast of Puducherry and 550 km south-southeast of Chennai. It is very likely to continue to move north-northwestwards and intensify further into a cyclonic storm during next 12 hours. Thereafter, it will continue to move north-northwestwards towards Tamil Nadu coast skirting Sri Lanka coast during subsequent 2 days.
- ❖ A fresh Western disturbance is seen as a cyclonic circulation over northeast Iran and neighbourhood in lower tropospheric levels.

Forecast & Warnings (upto 7 days) (Annexure II & III):

- ✓ Light to moderate rainfall at a few places accompanied with isolated thunderstorm & lightning very likely over coastal Tamil Nadu & Puducherry Coastal Andhra Pradesh & Yanam & Rayalaseema on 27th & 28th November.
- ✓ Isolated **heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over coastal Tamil Nadu & Puducherry on 27th, **heavy to very heavy rainfall** at isolated places over coastal Tamil Nadu & Puducherry during 28th-30th November and **heavy rainfall** at isolated places over coastal Tamil Nadu & Puducherry on 01st & 02nd December.
- ✓ **Heavy to very heavy rainfall** at isolated places very likely over Coastal Andhra Pradesh & Yanam during 28th-30th November and Isolated heavy rainfall on 27th November.
- ✓ **Heavy rainfall** at isolated places very likely over Andaman & Nicobar Islands on 30th, Rayalaseema during 28th -30th and Kerala & Mahe during 30th November- 02nd December.

- ✓ **Dense fog conditions** very likely to prevail during late night/early morning hours in isolated pockets of Himachal Pradesh till 29th; Punjab & Haryana-Chandigarh till 30th and Uttar Pradesh till 01st December morning hours.

ii. Temperature conditions and Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today

No significant change in minimum temperature observed over most parts of the country during past 24 hours. Minimum temperatures are **appreciably above normal (3°C to 5°C)** at isolated places over West Rajasthan and Bihar; **above normal (2°C to 3°C)** at a few places over East Rajasthan; at isolated places over Uttar Pradesh, Gujarat State, West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal. These are **appreciably below normal (-5°C to -3°C)** at a few places over Konkan & Goa & Madhya Maharashtra; **below normal (-3°C to -1°C)** at most places over Marathwada, Vidarbha; at isolated places over Madhya Pradesh, Odisha, Telangana, Chhattisgarh and near normal over rest parts of the country. Today, **the lowest minimum temperature of 6.6°C** is reported at **Adampur_IAF (Punjab)** over the plains of the country.

Forecast of temperature:

- ❖ No large Change in minimum temperatures very likely over East India during next 2 days and fall by 2-3°C during subsequent 2-3 days and No large Change in minimum temperatures very likely over northwest & central India during next 5 days.

iii. Fishermen & Wind Warnings (Annexure IV):

- ❖ Fishermen are advised not venture into
 - ✓ southwest Bay of Bengal and along & off Sri Lanka & Tamil Nadu coasts till 30th November, 2024.
 - ✓ Adjoining areas of Westcentral Bay of Bengal and along & off south Andhra Pradesh coast during 27th to 30th November 2024.
- ❖ Fishermen out at sea are advised to return to coasts immediately.

Wind Warnings:

- ❖ Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely to prevail over southwest Bay of Bengal and along & off Sri Lanka coast till 27th morning. It is likely to increase becoming Gale wind speed reaching 60-70 kmph gusting to 80 kmph over southwest Bay of Bengal and along & off Sri Lanka coasts from evening of 27th November. Thereafter, Gale wind speed reaching 65-75 kmph gusting to 85 kmph is likely to prevail over southwest Bay of Bengal till morning and decrease marginally becoming 60-70 kmph gusting to 80 kmph till night of 29th November, thereafter squally winds speed reaching 55-65 kmph gusting to 75 kmph by morning of 30th November.
- ❖ Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail over adjoining areas of westcentral Bay of Bengal till 27th morning. It would increase gradually becoming 55- 65 kmph gusting to 75 kmph over the same region till 29th November evening.
- ❖ Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail along & off Tamil Nadu-Puducherry and south Andhra Pradesh coasts till 27th morning. Thereafter, it is likely to increase becoming 55-65 kmph gusting to 75 kmph from 27th evening till 30th November morning.

iv. Weather conditions and forecast over Delhi/NCR during 27th Nov. to 30th Nov. 2024 (Annexure V)

For more details, kindly refer National Weather Bulletin:

https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

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

For Fishermen warnings & National bulletin for depression over Bay of Bengal, kindly refer:

https://rsmcnewdelhi.imd.gov.in/uploads/archive/51/51_bdf575_GRAPHIC.png

https://rsmcnewdelhi.imd.gov.in/uploads/archive/1/1_72e1e7_1.%20National%20Bulletin%20No%201-25Nov2024_0830IST.pdf

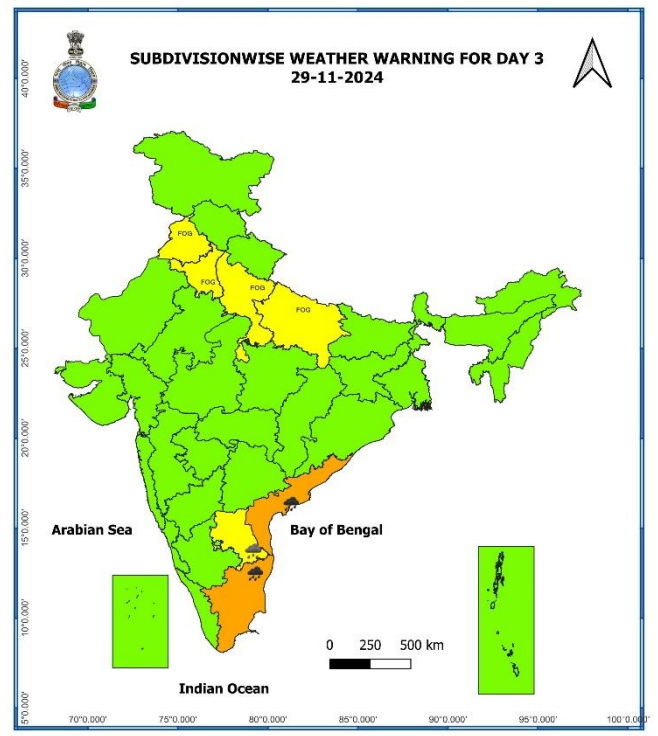
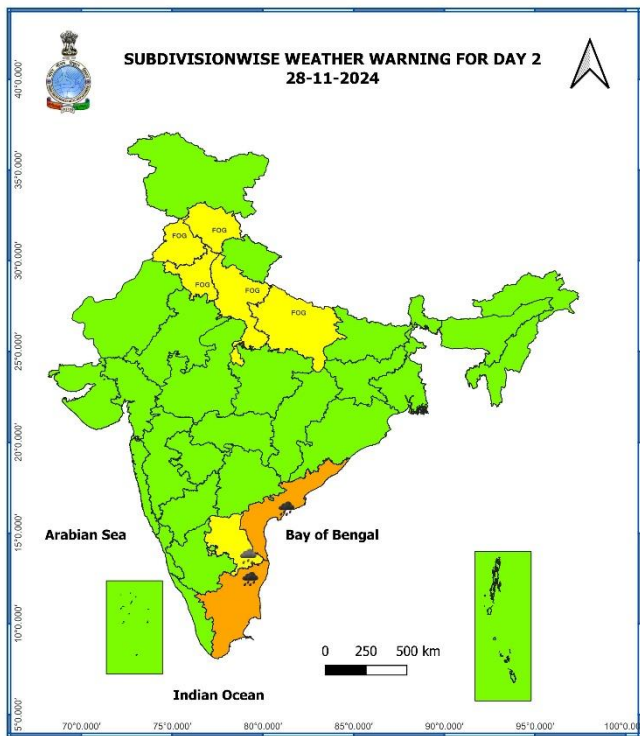
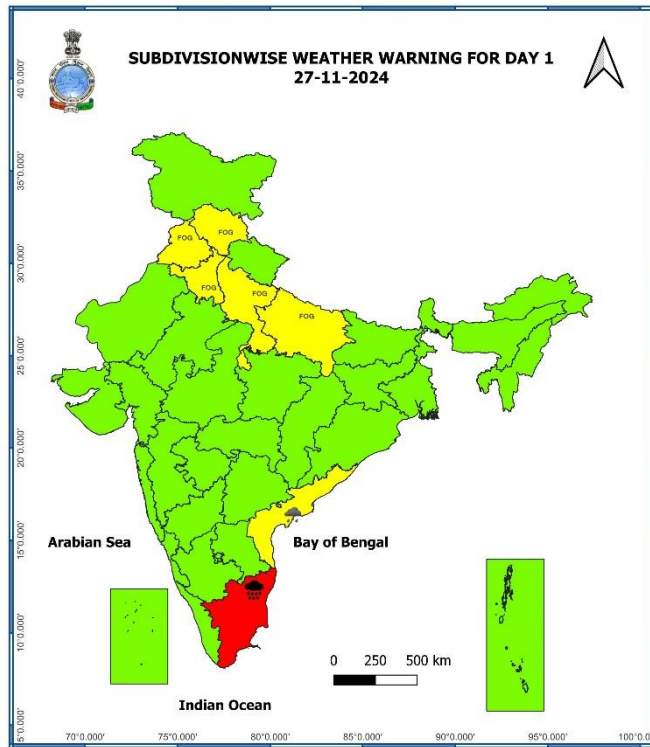
ANNEXURE I

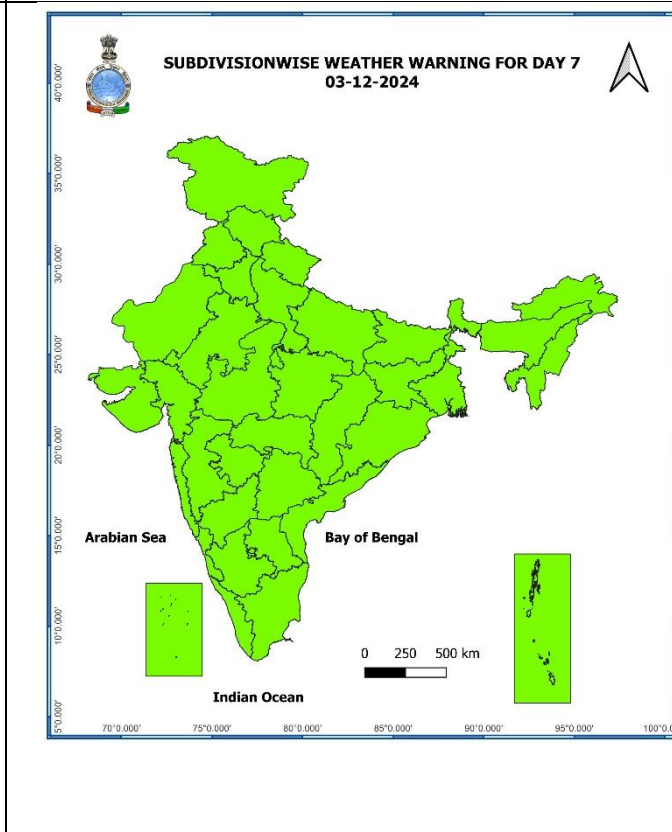
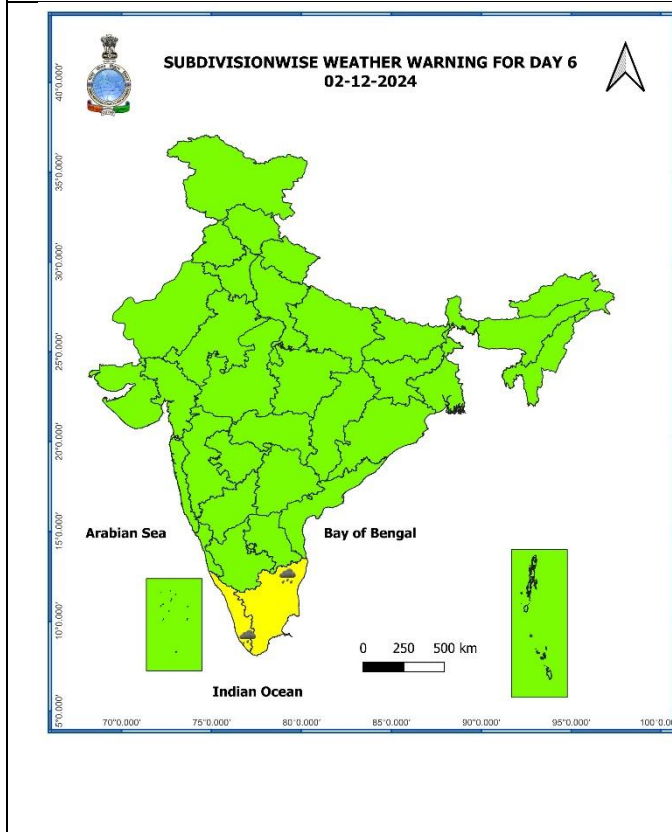
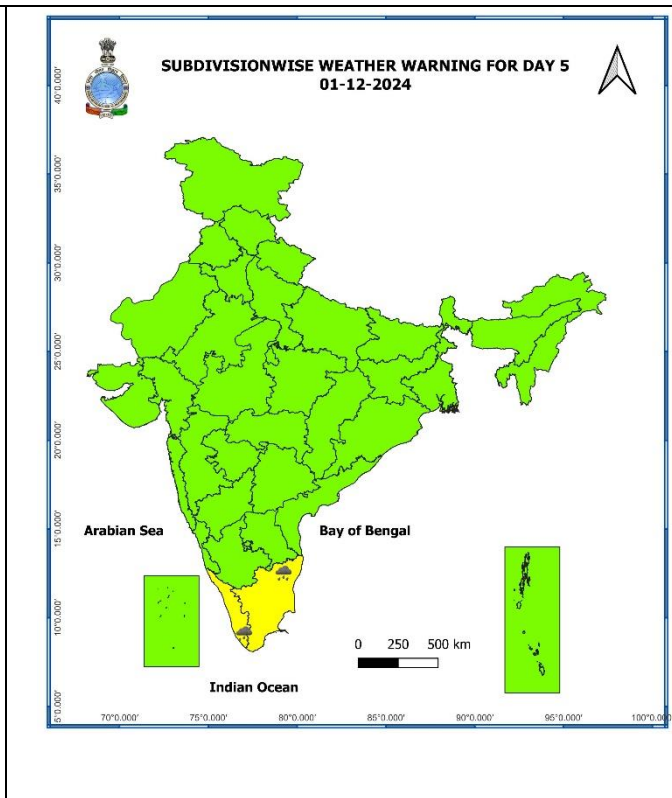
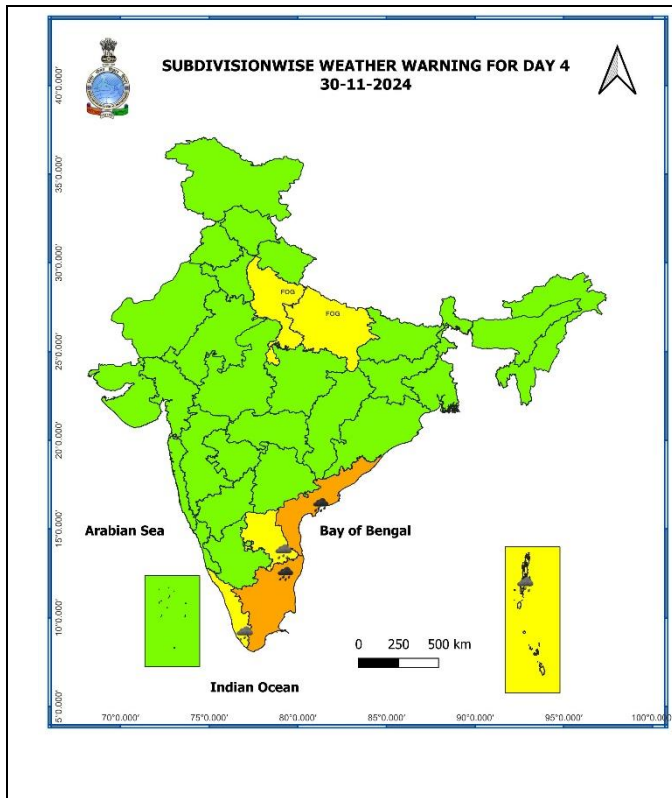
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 27.11.2024 (in cm):

- ❖ **Tamil Nadu, Puducherry & Karaikal:** Nagapattinam AWS (dist Nagapattinam) 19, Kodiayakarai (dist Nagapattinam), Nagapattinam (dist Nagapattinam), Velankanni (dist Nagapattinam) 18 each, Tirupoondi (dist Nagapattinam) 14, Zone 02 D15 Manali (dist Chennai), Thirukuvalai (dist Nagapattinam) 13 each, Tiruvarur (dist Thiruvarur), Vedaranyam (dist Nagapattinam) 12 each, Mahabalipuram AWS (dist Chengalpattu), Cheyyur (dist Chengalpattu), Thalaignayer (dist Nagapattinam), Sirkali (dist Mayiladuthurai), Zone 01 Kathivakkam (dist Chennai), Marakkanam (dist Villupuram), Vadakuthu (dist Cuddalore), Mahabalipuram (dist Chengalpattu), Tarangambadi (dist Mayiladuthurai) 11 each, Mayiladuthurai (dist Mayiladuthurai), Thiruthuraiipoondi (dist Thiruvarur), Kollidam (dist Mayiladuthurai), Tiruvarur AWS (dist Thiruvarur), Cuddalore Collector Office (dist Cuddalore), Cuddalore (dist Cuddalore), Karaikal (dist Karaikal), Nannilam (dist Thiruvarur) 10 each, Muthupet (dist Thiruvarur), Mannargudi (dist Thiruvarur), Ayyampettai (dist Thanjavur), Needamangalam (dist Thiruvarur), Karaikal AWS (dist Karaikal), Madukkur (dist Thanjavur), NIOT_Pallikaranai ARG (dist Chennai) 9 each, Bahour (dist Puducherry), Manalmedu ARG (dist Mayiladuthurai), Nctpl Marg ECR AWS (dist Chengalpattu), Mayiladuthurai AWS (dist Mayiladuthurai), Manalmedu (dist Mayiladuthurai), Adiramapattinam (dist Thanjavur), Ayinkudi (dist Pudukkottai), Red Hills (dist Tiruvallur), Pattukottai (dist Thanjavur), Mylam AWS (dist Villupuram), Thirukalukundram (dist Chengalpattu), Puducherry AWS (dist Puducherry), Vettikadu (dist Thanjavur), Ennore AWS (dist Tiruvallur), Orthanad (dist Thanjavur), Annamalai Nagar (dist Cuddalore), Puducherry Town (dist Puducherry) 8 each, Chidambaram AWS (dist Cuddalore), Puducherry (dist Puducherry), Zone 03 Puzhal (dist Chennai), Kodavasal (dist Thiruvarur), Valangaiman (dist Thiruvarur), Neivasal Thenpathi (dist Thanjavur), Lower Anaicut (dist Thanjavur), Manjalaru (dist Thanjavur), Zone 14 Perungudi (dist Chennai), Taramani ARG (dist Chennai), Puzhal ARG (dist Tiruvallur), Nagudi (dist Pudukkottai), Madhavaram (dist Chennai), Thirukkanur (dist Puducherry), Zone 01 Thiruvottiyur (dist Chennai), Parangipettai (dist Cuddalore), Vanamadevi (dist Cuddalore), Zone 05 Royapuram (dist Chennai), Zone 13 Adyar Eco Park (dist Chennai), Zone 13 Adyar (dist Chennai), Vilupuram (dist Villupuram), Zone 15 Sholinganallur (dist Chennai), Peravurani (dist Thanjavur), Pandavaiyar Head (dist Thiruvarur), Avadi (dist Tiruvallur), Sembanarkoil PWD (dist Mayiladuthurai) 7 each;
- ❖ **Rayalaseema:** Tirupati Aero (dist Tirupati) 3, Thottambedu (dist Tirupati) 3, Srikalahasti (dist Tirupati) 2, Kodur (dist Ysr District) 2;
- ❖ **Kerala & Mahe:** Kovilkadavu (dist Idukki) 3, Vattavada (dist Idukki) 2, Anakayam (dist Malappuram) 2, Angadipuram (dist Malappuram)

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

- As the lead period increases forecast accuracy decreases.

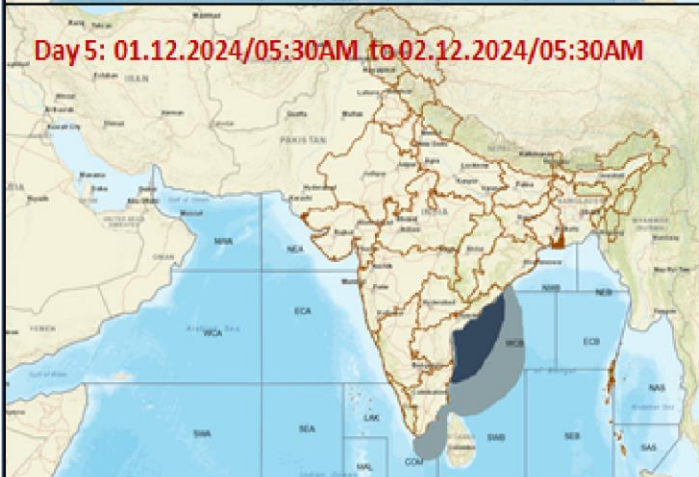
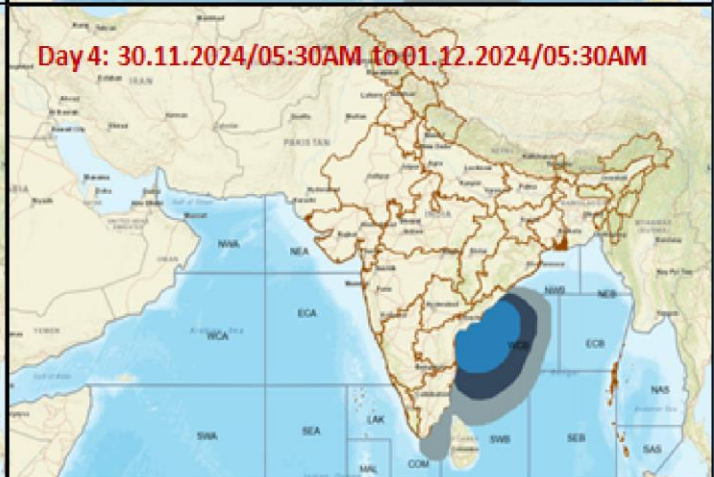
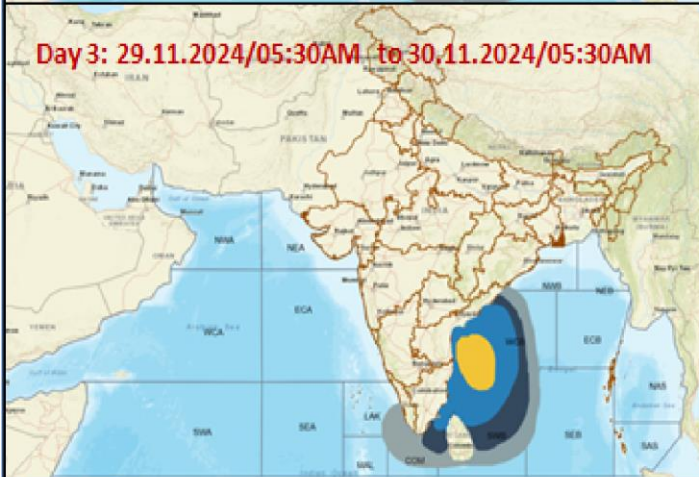
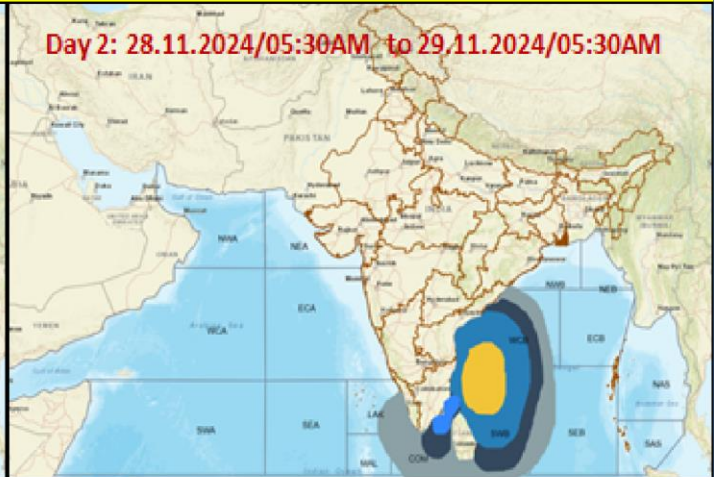
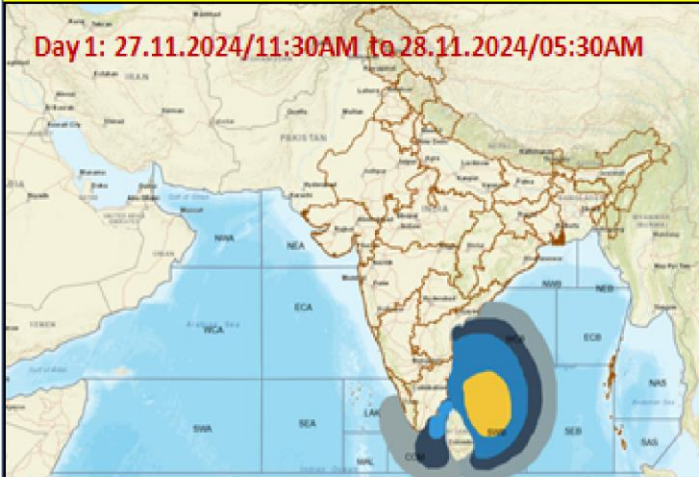




- Action may be taken based on **ORANGE AND RED COLOUR** warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.



Fishermen Warning Graphics



	Squally Weather with wind speed 35-45 kmph gusting to 55 kmph
	Squally wind with speed 45-55 kmph gusting to 65 kmph
	Deep depression with wind speed 55-65 kmph gusting to 75 kmph
	CS with Gale winds with speed 60-80 kmph gusting to 90 kmph

Fishermen are advised not to venture into the marked areas.

Weather forecast over Delhi/NCR during 27th Nov. to 30th Nov. 2024**Past Weather:**

There has been a fall in minimum temperature upto 2°C and slight rise in maximum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 24 to 27°C and 09 to 13°C respectively. The maximum and the minimum temperature were near normal most places over the region. Mainly smog/ shallow fog condition with predominant surface wind from northwest direction with wind speed reaching 06 to 14 kmph prevailed on 26.11.2024. Shallow fog reported at Safdarjung airport during early morning today. Safdarjung airport recorded lowest visibility 900 m at 0730 hours IST which improved thereafter becoming 1200m at 0800 hours IST. Mainly clear sky condition with wind speed less than 08 kmph northwest direction prevailed over the region in the forenoon today.

Weather Forecast:

27.11.2024: Mainly clear sky. The predominant surface wind is likely to be northwest direction with wind speed upto 04-08 kmph till evening. It would decrease thereafter becoming less than 04 kmph from north direction during night. Smog/shallow fog is likely in the evening/night.

28.11.2024: Mainly clear sky. The predominant surface wind is likely to be from east direction with speed less than 04 kmph during morning hours. Smog/ moderate fog is likely in the morning. The wind speed will increase thereafter becoming less than 06 kmph from southeast direction during afternoon. It will decrease thereafter becoming less than 04 kmph from northeast direction during evening and night. Smog/ shallow fog is likely in the evening/night.

29.11.2024: Mainly clear sky. The predominant surface wind is likely to be from northeast direction with speed less than 04 kmph during morning hours. Smog/ moderate to dense fog is likely in the morning. The wind speed will gradually increase becoming 04-08 kmph from variable direction during afternoon. It will decrease thereafter becoming less than 04 kmph from north direction during evening and night. Smog/ shallow fog is likely in the evening/night.

30.11.2024: Mainly clear sky. The predominant surface wind is likely to be from variable direction with wind speed less than 04 kmph during morning hours. Smog/shallow to moderate fog in the morning. The wind speed will increase thereafter becoming 04-06 kmph from northeast direction during afternoon. It will gradually decrease becoming less than 04 kmph from north direction during evening and night. Smog/ shallow fog is likely in the evening/night.

- ✓ **Impact & Action Suggested due to isolated extremely heavy rainfall** very likely over coastal Tamil Nadu & Puducherry on 27th November and **isolated heavy to very heavy rainfall** over coastal Tamil Nadu & Puducherry and Coastal Andhra Pradesh & Yanam during 28th -30th November.

A. 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.
- ❖ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- ❖ Minor damage to kutchha roads.
- ❖ Damage to horticulture and standing crops in some areas due to inundation.

B. 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.

Impact expected due to dense fog in the night /morning hour:

- ❖ Transport and Aviation:
 - May affect some airports, highways and railway routes in the areas of met- sub-division.
 - Difficult driving conditions with slower journey times.
 - Unless taken precautionary measures, it may lead to some road traffic collisions.
- ❖ Power Sector:
 - Chances of Tripping of Power lines in the very dense fog routes.
- ❖ Human Health:
 - Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
 - Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
 - Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

- ❖ Transport and Aviation:
 - Be careful while driving or outing through any transport.
 - Use fog lights during driving.
 - Be in touch with airlines, railways and state transport for schedule of your journey.
- ❖ Power Sector:
 - To keep ready Maintenance Team
 - Human Health: To avoid outing until unless emergency and to cover the face.

Agromet advisories for Heavy Rainfall likely over various parts of the country

- In Tamil Nadu, drain out excess water from rice, sugarcane, cotton, turmeric, vegetables and other standing crop fields; coconut and banana orchards. Undertake propping in sugarcane. Provide mechanical support to banana plants to prevent lodging.
- In Andhra Pradesh, harvest the matured rice immediately and keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields. Provide adequate drainage facilities for removal of excess water from rice nurseries, vegetables, standing crop fields and fruit orchards. Provide mechanical support to horticultural crops and staking to vegetables.

Livestock and Fishery

- Keep the animals inside the shed during heavy rainfall and provide balanced feed.
- Store the feed and fodder at safer place to avoid spoilage from rainfall.
- Hang gunny bags all around poultry sheds.
- Construct an outlet with proper netting around the pond to drain out excess rain water, thereby preventing fishes/fingerlings from escaping in case of overflowing.
- Check and repair dykes around the ponds to avoid entry of runoff water from catchment area.

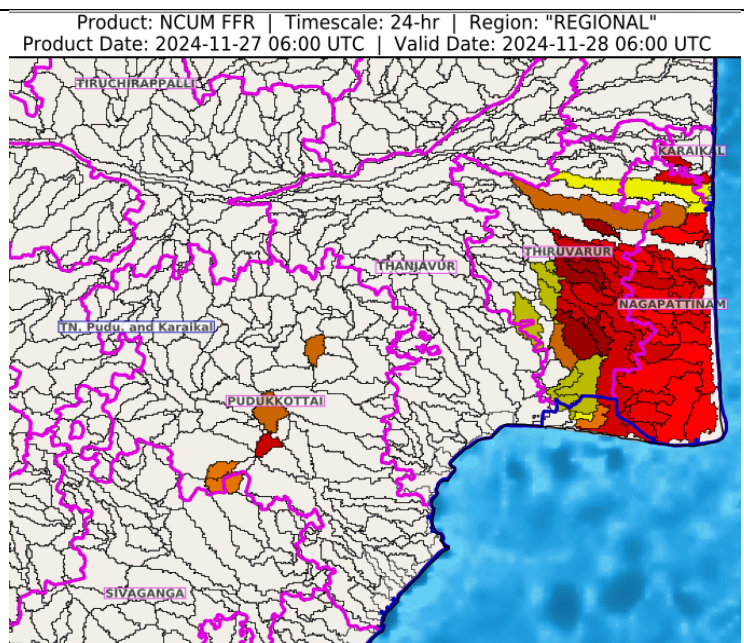
FLASH FLOOD GUIDANCE:

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 28-11-2024:

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

Tamil Nadu - Pudu & Karaikal - Karaikal, Nagapattinam, Pudukkottai and Thiruvarur 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.

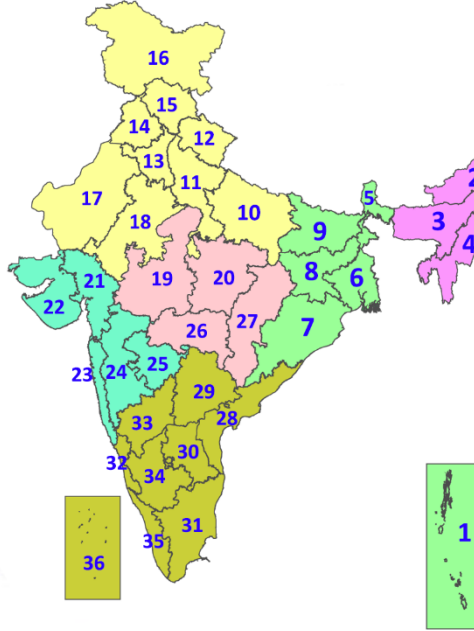


Legends & abbreviations:

- ❖ **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. रायलसेमा
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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(Service to the Nation since 1875)

DEFINITION/CRITERIA

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

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