

# Government of India Ministry of Earth Sciences India Meteorological Department



Press Release Date: 24<sup>th</sup> November, 2024 Time of Issue: 1330 hours IST

Subject: A Well Marked Low pressure area over southeast Bay of Bengal & adjoining east Equatorial Indian Ocean. It is very likely to cause heavy to very rainfall over Coastal Tamil Nadu & Puducherry during 25<sup>th</sup>-27<sup>th</sup> and isolated heavy rainfall on 28<sup>th</sup> & 29<sup>th</sup> November. It is also likely to cause isolated heavy rainfall over south Coastal Andhra Pradesh from 27<sup>th</sup> to 29<sup>th</sup> November, 2024.

- i. Rainfall Forecast and warning over the country:
   Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)
  - ❖ Fog conditions observed (at 0830 hours IST of today): Moderate fog (visibility 201-500 m) reported in isolated pockets of West Uttar Pradesh.
  - ❖ Visibility reported (in m): West Uttar Pradesh: Bareilly-500.

### **Weather Systems:**

- ❖ Yesterday's **low pressure area** over east Equatorial Indian Ocean and adjoining southeast Bay of Bengal has become well marked Low Pressure area at 0530 hours IST of today over Southeast Bay of Bengal & adjoining east Equatorial Indian Ocean. It persisted over the same area over southeast Bay of Bengal & adjoining East Equatorial Indian Ocean at 0830 hours IST of today, the 24th November 2024. It is likely to move west-northwestwards and intensify into a depression over central parts of south Bay of Bengal on 25th November. Thereafter, it is likely to move northwestwards towards Tamil Nadu-Sri Lanka coasts during subsequent 2 days.
- ❖ The **Western disturbance** now seen as a trough in middle tropospheric levels roughly along Longitude 68° E and north of Latitude 32°N.

### 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 & Karaikal during 25<sup>th</sup>-28<sup>th</sup>, south Coastal Andhra Pradesh & Yanam on 27<sup>th</sup> & 28<sup>th</sup> November.
- ✓ Light to moderate rainfall at many places over Andaman & Nicobar Islands during the week, Nagaland, Manipur, Mizoram & Tripura during 27<sup>th</sup> -29<sup>th</sup>; Light to moderate rainfall at isolated places over Assam & Meghalaya during 27<sup>th</sup> -30<sup>th</sup>, Sub-Himalayan West Bengal & Sikkim during 24<sup>th</sup> − 27<sup>th</sup>, Odisha during 27<sup>th</sup> -29<sup>th</sup>, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 24<sup>th</sup>, Himachal Pradesh & Gangetic West Bengal on 30<sup>th</sup> November.
- ✓ Isolated **heavy to very heavy rainfall** very likely over coastal Tamil Nadu, Puducherry & Karaikal during 25th- 27th November and isolated heavy rainfall on 28th & 29th November.
- ✓ Isolated **heavy rainfall** very likely over Kerala & Mahe during 27<sup>th</sup> 29<sup>th</sup> and south Coastal Andhra Pradesh & Yanam during 27<sup>th</sup> 30<sup>th</sup> November.

✓ **Dense fog conditions** very likely to prevail during early morning hours in isolated pockets of Punjab & Haryana-Chandigarh during 27<sup>th</sup> -29<sup>th</sup>, Himachal Pradesh during 24<sup>th</sup>-28<sup>th</sup> and Uttar Pradesh during 28<sup>th</sup> -30<sup>th</sup> November.

### 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 **above normal** (2°C to 3°C) at a few places over Punjab; at isolated places over Himachal Pradesh, Haryana-Chandigarh-Delhi, Uttar Pradesh, West Rajasthan, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Andaman & Nicobar Islands. These are **appreciably below normal** (3°C to 5°C) at isolated places over Chhattisgarh, Odisha; **below normal** (2°C to 3°C) at a few places over East Madhya Pradesh, Vidarbha, Telangana; at isolated places over East Rajasthan, Gujarat state, West Madhya Pradesh, Gangetic West Bengal, Marathwada, Madhya Maharashtra, Konkan & Goa, North Interior Karnataka and near normal over rest parts of the country. Today, **the lowest minimum temperature** of **8.2°C** is reported at **Hindon IAF** (West Uttar Pradesh) over the plains of the country.

### Forecast of temperature:

- ❖ No significant change in minimum temperatures over northwest India during 48 hours and gradual fall by 2-3°C thereafter except Rajasthan.
- ❖ No significant change in minimum temperatures over Maharashtra during 24 hours and gradual fall by 2-3°C thereafter for subsequent 3-4 days.
- ❖ No significant change in minimum temperatures over rest parts of the country during next 5 days.

### iii. Weather forecast over Delhi/NCR during 24<sup>rd</sup> Nov. to 27<sup>th</sup> Nov. 2024

### **Past Weather:**

There has been no significant change in minimum temperatures and rise upto 2°C in maximum temperatures over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 26 to 29°C and 10 to 14°C respectively. The maximum temperature was above normal by 01 to 03°C and the minimum temperature was above normal by 01 to 02°C most places over the region. Mainly smog/ shallow fog condition with predominant surface wind from variable direction with wind speed reaching 04 to 08 kmph prevailed during daytime and calm wind during night time on 23.11.2024. Shallow fog reported at Safdarjung airport during early morning today. Safdarjung airport recorded lowest visibility 800 m during at 0530 hours which improved thereafter becoming 1200m at 0730 hours IST. Mainly clear sky condition with wind speed less than 10 kmph west direction prevailed over the region in the forenoon today.

### **Weather Forecast:**

**24.11.2024**: Mainly clear sky. The predominant surface wind is likely to be northwest direction with wind speed upto 06-10 kmph till evening. It would decrease thereafter becoming less than 06 kmph from northwest direction during night. Smog/shallow fog is likely in the evening/night.

**25.11.2024**: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 08 kmph during morning hours. Smog/ shallow to moderate fog is likely in the morning. The wind speed will increase thereafter becoming less than 12 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 08 kmph from northwest direction during evening and night. Smog/ shallow fog is likely in the evening/night.

**26.11.2024**: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 08 kmph during morning hours. Smog/shallow to moderate fog is likely in the morning. The wind speed

will gradually increase becoming 08-10 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 04 kmph from variable direction during evening and night. Smog/ shallow fog is likely in the evening/night.

**27.11.2024**: 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/moderate fog in the morning. The wind speed will increase thereafter becoming 04-06 kmph from variable direction during afternoon. It will gradually decrease becoming less than 04 kmph from variable direction during evening and night. Smog/ shallow fog is likely in the evening/night.

### Fishermen & Wind Warnings (ANNEXURE IV):

- ❖ Fishermen are advised not venture into
  - ✓ southeast Bay of Bengal & east Equatorial Indian Ocean on 24th and 25th November, 2024.
  - ✓ southwest Bay of Bengal and along & off Sri Lanka coast till 28th November, 2024.
  - ✓ Westcentral Bay of Bengal during 26-28<sup>th</sup> November 2024
  - ✓ and along & off Tamil Nadu Puducherry and south Andhra Pradesh coasts during 26<sup>th</sup> to 28<sup>th</sup> November 2024.
- Fishermen out at sea are advised to return to coasts by morning of tomorrow, the 25<sup>th</sup> November, 2024.

### **Wind Warnings**

- ✓ Squally weather with wind speed reaching 35-45 kmph gusting to 55 kmph is very likely to prevail over southwest Bay of Bengal and adjoining southeast Bay of Bengal & East Equatorial Indian Ocean on 24 November.
- ✓ Squally wind speed reaching 45-55 kmph gusting to 65 kmph is very likely to prevail over southwest Bay of Bengal, adjoining southeast Bay of Bengal and along & off Sri Lanka coast on 25 November.
- ✓ Squally wind speed reaching 50-60 kmph gusting to 70 kmph is very likely to prevail over southwest Bay of Bengal and adjoining westcentral Bay of Bengal and along & off Tamil Nadu Puducherry and south Andhra Pradesh coasts on 26<sup>th</sup> and likely to increase becoming 55-65 kmph gusting to 75 kmph on 27<sup>th</sup> and 28<sup>th</sup> November over the same region.

### For more details, kindly refer National Weather Bulletin:

https://mausam.imd.gov.in/responsive/all\_india\_forcast\_bulletin.php

For District wise warnings refer: <a href="https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php">https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php</a>
For Fishermen warnings, kindly refer:

https://rsmcnewdelhi.imd.gov.in/uploads/archive/51/51 bdf575 GRAPHIC.png

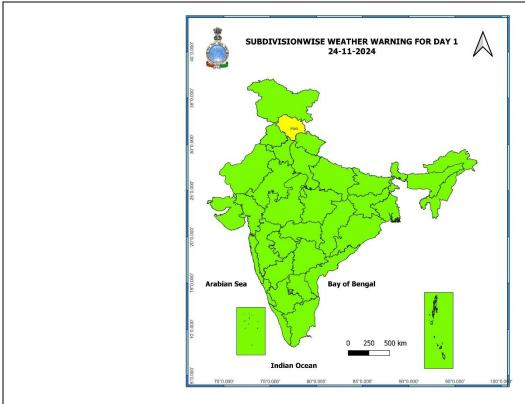
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 24.11.2024 (in cm):

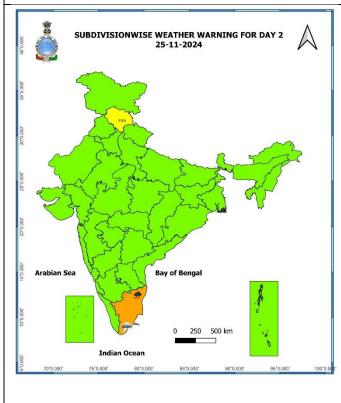
- ❖ Andaman & Nicobar Islands: Nancowry (dist Nicobar) 2, Car Nicobar (dist Nicobar) 1;
- ❖ Tamil Nadu, Puducherry & Karaikal: Nalumukku (dist Tirunelveli), Thalaignayer (dist Nagapattinam), Oothu (dist Tirunelveli) 2each; Nagapattinam AWS (dist Nagapattinam), Cheranmahadevi (dist Tirunelveli), Kakkachi (dist Tirunelveli), Manjolai (dist Tirunelveli) 1 each.

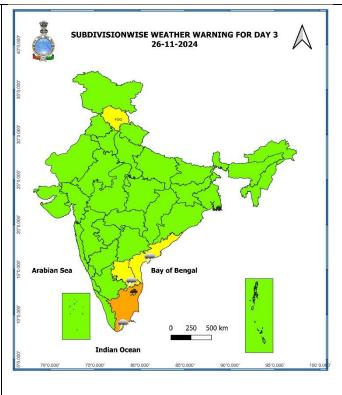
### **ANNEXURE II**

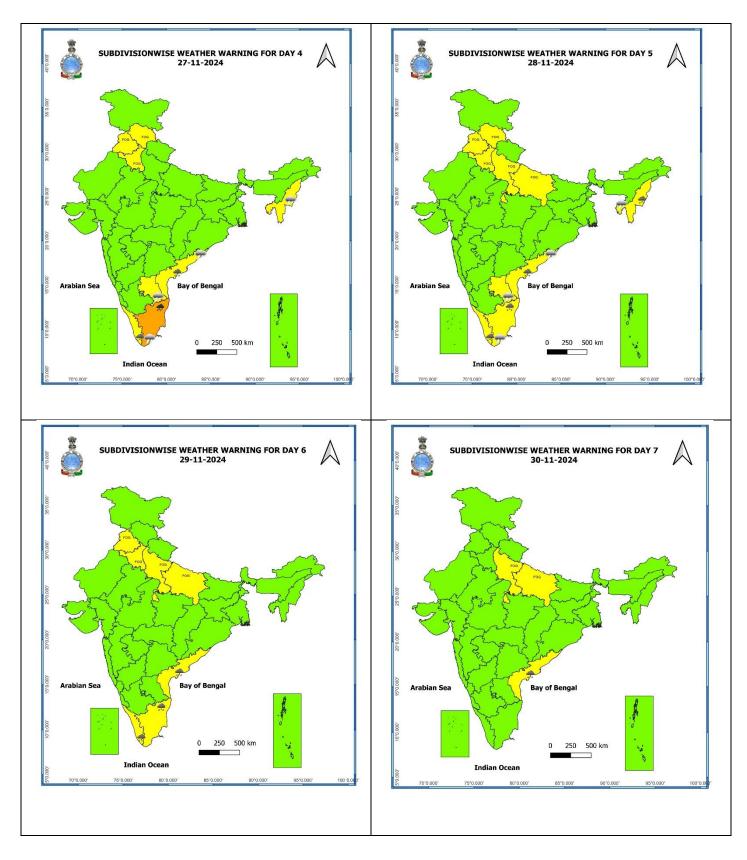
7 Days Rainfall Forecast									
S. No.	Subdivision	24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov	
3. NO.	Subdivision	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	FWS	FWS	FWS	FWS	
2	ARUNACHAL PRADESH	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY	
3	ASSAM & MEGHALAYA	ISOL	DRY	DRY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

• As the lead period increases forecast accuracy decreases.







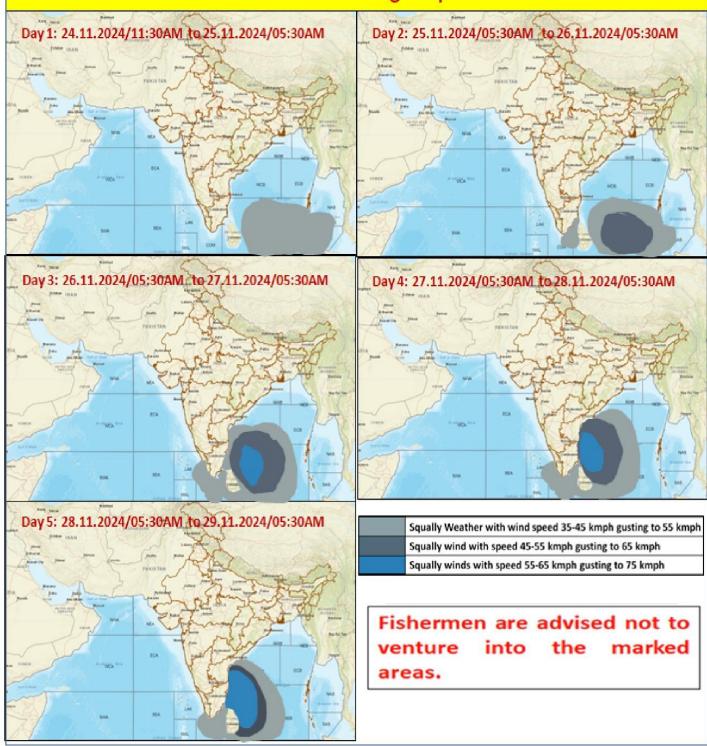


- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.





## Fishermen Warning Graphics



**Impact & Action Suggested due to very heavy rainfall over** Tamil Nadu, Puducherry & Karaikal during 25<sup>th</sup>-27<sup>th</sup> November, 2024.

### 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 kutcha roads.
- Possibilities of damage to vulnerable structure.
- ❖ Localized Landslides/Mudslides
- ❖ 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).

### **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.

### **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.



35. केरल और माहे

36. लक्षद्वीप

### राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय

### National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

35. Kerala & Mahe

36. Lakshadweep

### **LEGENDS**



### **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)





Sea State

Cyclone



### **DEFINITION/CRITERIA** Heavy: 64.5 to 115.5 mm/cm \* Very Heavy: 115.6 to 204.4 mm/cm Rain/ Snow \* Extremely Heavy: > 204.4 mm/cm When maximum temperature of a station reaches ≥40° C for plains and ≥30° 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 ≥6.5° C (b). Based on Actual maximum temperature **Heat Wave** Heat Wave: When actual maximum temperature ≥45°C Severe Heat Wave: When actual maximum temperature ≥47°C (c). Criteria for heat wave for coastal stations When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°C When maximum temperature remains 40°C Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C Warm Night Severe Warm Night: When minimum temperature departure >6.4 °C When minimum temperature of a station ≤10°C for plains and ≤0°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 °C **Cold Wave** (b) Based on actual Minimum Temperature (for Plains only) Cold Wave : When Minimum Temperature is ≤ 4.0 °C Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C (c) For Coastal Stations When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions Based on departure **Cold Day** 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 °C Phenomenon of small droplets suspended in air and the horizontal visibility < 1km Moderate Fog: When the visibility between 500-200 metres Fog when the visibility between 50- 200 metres Dense Fog: v Very Dense Fog: when the visibility < 50 metres Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) Thunderstorm Dust/Sand An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Frost Air temperature ≤4°C ( over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Squall Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph

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

Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

Super Cyclone Strom: Wind speed >220 kmph (>119 knots)