



Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release
Date: 10th December, 2022
Time of Issue: 1300 hrs IST

Subject:

1. **Deep Depression (remnant of the cyclonic storm “Mandous” pronounced as “Man-Dous”) over north Tamil Nadu.**
2. **Heavy to very heavy rainfall spell over north Tamil Nadu, South Interior Karnataka, south Coastal Andhra Pradesh and Rayalaseema today & decrease thereafter.**
3. **Heavy rainfall over Kerala & Mahe during 11th-13th December, 2022.**

Weather observed during past 24 hours ending at 0830 hrs IST of today:

- ❖ **Minimum temperatures** are in the range of 8-10° C over many parts of plains of Northwest and adjoining central India. These are near normal over northern parts of the country; below normal over many parts of Central and West India.
- ❖ **Extremely heavy rainfall** occurred at isolated places over Tamil Nadu, Puducherry & Karaikal and Rayalaseema and **heavy to very rainfall** at isolated places over Coastal Andhra Pradesh.
- ❖ **Significant amount of rainfall (in cm): Tamil Nadu:** Vembakkam (dist Tiruvannamalai) 25, Minnal (dist Ranipet), Panapakkam (dist Ranipet) 20 each, Kancheepuram (dist Kancheepuram) 19, Cheyyar (dist Tiruvannamalai) 18, Avadi (dist Tiruvallur) 17, Tiruttani (dist Tiruvallur), KVK Kattukuppam Agro (dist Kancheepuram) 16 each, Ayanavaram Taluk Office (dist Chennai), Kundrathur (dist Kancheepuram) 15 each, Arakonam (dist Ranipet), Uthiramerur (dist Kancheepuram) , Perambur (dist Chennai) 14 each, Gummidipoondi (dist Tiruvallur), Tambaram (dist Chengalpattu), Sriperumbudur (dist Kancheepuram), Mahabalipuram (dist Chengalpattu), Cholavaram (dist Tiruvallur), Pallipattu (dist Tiruvallur), Mgr Nagar (dist Chennai), Alandur (dist Chennai), Uthukottai (dist Tiruvallur) 13 each, Ambathur (dist Tiruvallur), Red Hills (dist Tiruvallur), Chengalpattu (dist Chengalpattu), Koratur (dist Tiruvallur), Chennai Ap (dist Chennai) 12 each; **Rayalaseema:** Srikalahasti (dist Chittoor) 23, Thottambedu (dist Chittoor) 22, Kodur (dist Ysr District) 20, Nagari (dist Chittoor) 18, Satyavedu (dist Chittoor) 13, Tirupati Aero (dist Chittoor) 13, Palasamudram (dist Chittoor) 8, Rajampet (dist Ysr District) 8, Pullampeta (dist Ysr District) 7; **Coastal Andhra Pradesh:** Gudur (dist Spsr Nellore) 20, Venkatagiri (dist Spsr Nellore) 17, Sullurpeta (dist Spsr Nellore) 16, Nellore (dist Spsr Nellore) 13, Tada (dist Spsr Nellore) 12, Rapur (dist Spsr Nellore) 12, Atmakur (dist Spsr Nellore) 7, Kavali (dist Spsr Nellore) 7.

Cyclonic Storm “Mandous” Forecast & Warnings (refer Annexure III for cyclone track & forecast):

Yesterday’s Cyclonic storm “**MANDOUS**”(pronounced as “Man-Dous”) over Southwest Bay of Bengal off north Tamilnadu and Puducherry coasts weakened into a Deep Depression at 0530 hours IST of today, the 10th December over north Tamil Nadu and moved nearly west-southwestwards with a speed of 09 kmph during past 06 hours and lay centred at 0830 hours IST of today, the 10th Dec, over north Tamil Nadu near latitude 12.8°N and longitude 79.5°E, about 40km west-southwest of Vellore and 140 km east-northeast of Krishnagiri. It is very likely to move nearly west-southwestwards and gradually weaken into a depression during next 6 hours.

Warnings:

(i) Rainfall (warning graphics enclosed)

❖ **10th December:-** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places likely over Rayalaseema, north Tamil Nadu and south interior Karnataka and **heavy rainfall** at isolated places over south Coastal Andhra Pradesh.

❖ **11th December:-** Light to moderate rainfall at many places with **heavy rainfall** at isolated places likely over north Tamil Nadu and south interior Karnataka and Kerala & Mahe.

❖ **12th & 13th December:-** Light to moderate rainfall at many places with **heavy rainfall** at isolated places likely over Kerala & Mahe.

(ii) Wind warning:

❖ **10th December:- Southwest Bay of Bengal and along & off Tamil Nadu, Puducherry and south Andhra Pradesh coasts:-** Squally wind speed reaching 50-60 kmph gusting to 70 kmph likely to prevail till noon and to reduce thereafter becoming 30-40 kmph gusting to 50 kmph by 10th December evening.

❖ **12th & 13th December:-** Squally Weather with wind speed reaching 40-45 kmph gusting to 55 kmph likely to prevail over Lakshadweep area, Kerala-Karnataka coasts.

❖ **14th December:-** Squally Weather with wind speed reaching 40-45 kmph gusting to 55 kmph likely to prevail over Southeast & adjoining Eastcentral Arabian Sea including Lakshadweep area.

(iii) Sea condition

❖ **Sea condition** likely to be **rough to very rough** over **Southwest Bay of Bengal and adjoining areas of Westcentral Bay of Bengal, along & off Tamil Nadu, Puducherry and south Andhra Pradesh coasts** till evening of 10th December.

(iv) Fishermen Warning (warning graphics enclosed)

Fishermen are advised not to venture into:

❖ Southwest Bay of Bengal and adjoining areas of Westcentral Bay of Bengal, along & off Tamil Nadu, Puducherry and south Andhra Pradesh coasts till 10th December evening.

(vi) Damage expected over north Tamil Nadu, Rayalaseema and South Interior Karnataka during next 3 hours.

- ❖ Damage to banana, papaya trees and near coastal agriculture due to salt spray.
- ❖ Damage to paddy, other standing crops and horticulture crops.
- ❖ Inundation/localized flooding in low lying areas due to heavy rains
- ❖ Traffic may be disrupted due to poor visibility in association with heavy rain

(vii) Action suggested over north Tamil Nadu, Rayalaseema and South Interior Karnataka

- ❖ Fisherman are advised not to venture into Southwest Bay of Bengal and adjoining areas of westcentral Bay of Bengal, along & off Tamil Nadu, Puducherry and south Andhra Pradesh coasts till 10th December evening.
- ❖ People are advised to be cautious while going outside.
- ❖ Regulate traffic.
- ❖ People should not move nearby to vulnerable structures.

Other Weather systems and its associated rainfall/thunderstorm Forecast

❖ Under the influence of Western Disturbance as trough in middle tropospheric levels along Long.70°E to the North of Lat.32°N, isolated to scattered light rainfall/snowfall is very likely over Jammu & Kashmir during 10th-12th and Himachal Pradesh on 10th December.

❖ A cyclonic circulation likely to emerge into south Andaman Sea around 13th December, 2022. Under its influence, fairly widespread rainfall with isolated heavy falls likely over Andaman & Nicobar on 13th & 14th December.

Minimum Temperature and Fog Forecast

- ❖ No significant change in minimum temperatures likely over Northwest India during next 2 days and fall by 2-4°C thereafter. Minimum temperatures likely to rise by 2-3°C over West and Central India during next 3 days and no significant change thereafter. No significant change in minimum temperatures likely over remaining parts of the country during next 4-5 days.
- ❖ Dense fog very likely in isolated pockets over Himachal Pradesh in the morning hours of 11th-15th and Punjab and Haryana in the morning hours of 11th & 12th December. Shallow to moderate fog likely at isolated pockets over parts of Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 2 days and East Uttar Pradesh during next 24 hours.

For more details kindly refer:

https://mausam.imd.gov.in/imd_latest/contents/all_india_forecast_bulletin.php

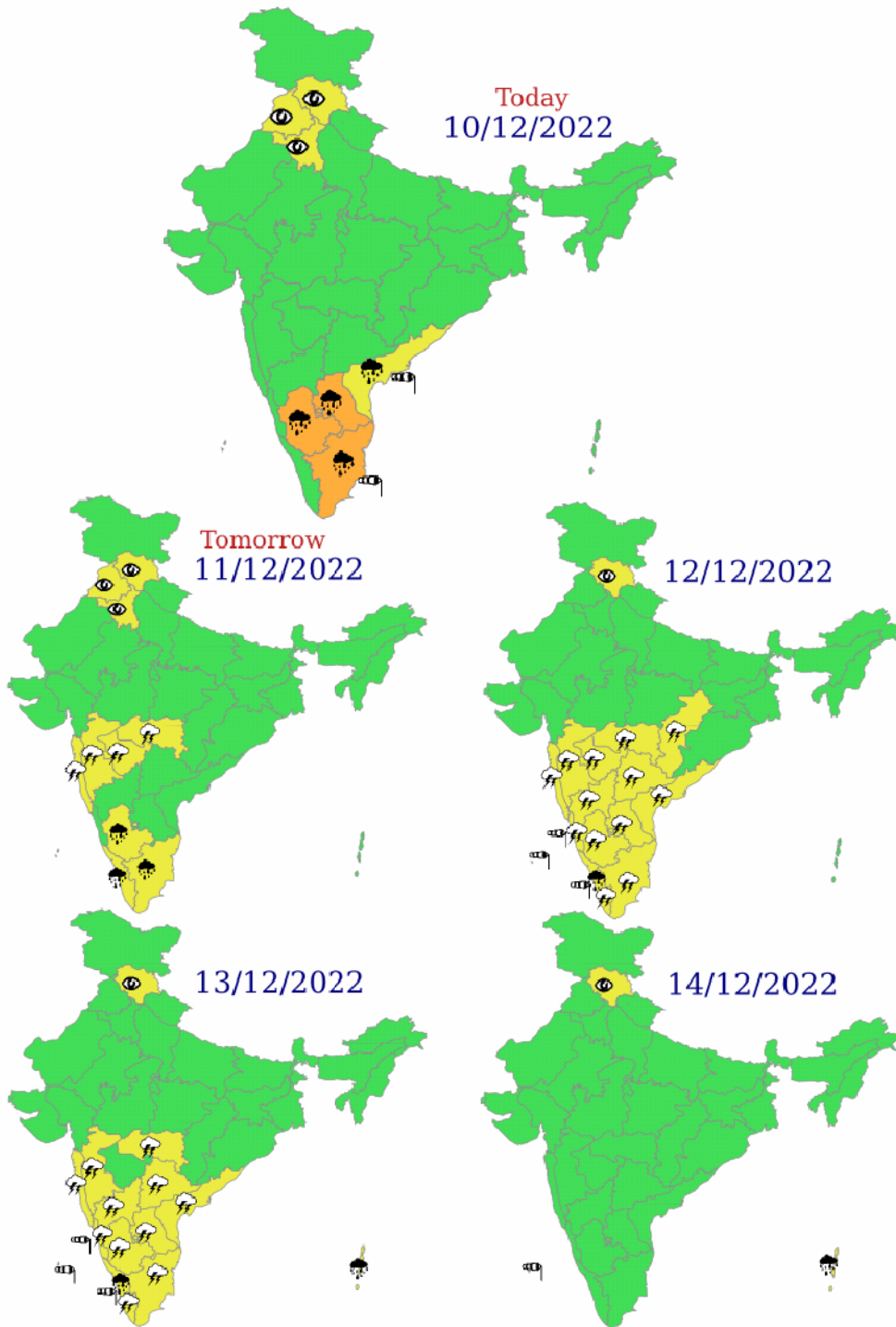
IMPACT EXPECTED & ACTION SUGGESTED DUE TO Very Heavy rainfall at isolated over Rayalaseema, north Tamil Nadu and south interior Karnataka on 10th December, 2022.

A. Impact Expected

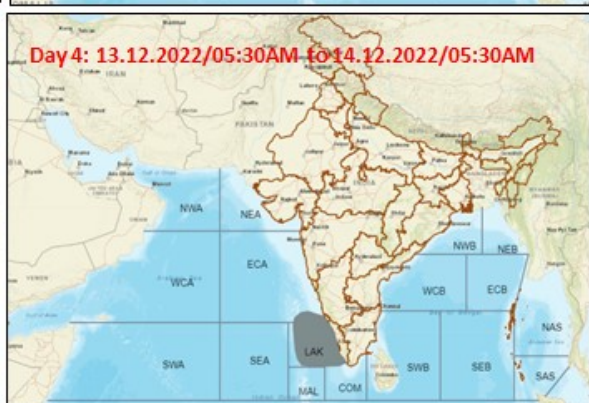
- Localized water logging in low lying areas in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutcha roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides.
- Tree uprooting in urban areas.
- Damage to horticulture and standing crops in some areas due to inundation.

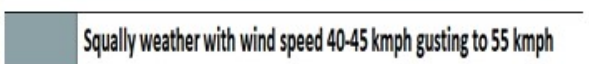
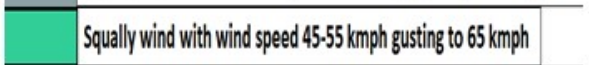

B. Action Suggested

- 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



Fishermen warning graphics

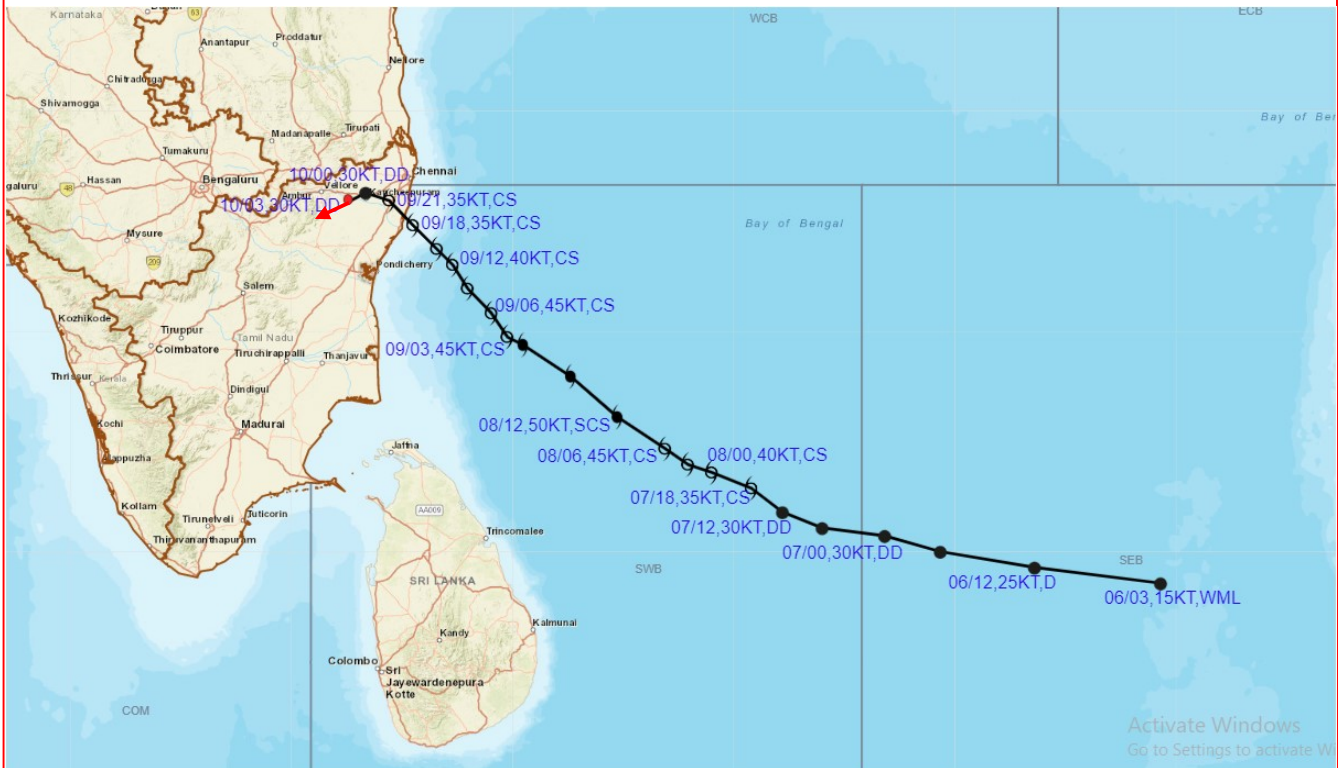


-  Squally weather with wind speed 40-45 kmph gusting to 55 kmph
-  Squally wind with wind speed 45-55 kmph gusting to 65 kmph
-  Squally wind speed with wind speed 50-60 kmph gusting to 70 kmph

Fishermen are advised not to venture into the marked areas.



OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION REMNANT OF CYCLONIC STORM 'MANDOUS' OVER NORTH TAMILNADU BASED ON 0300 UTC OF 10th DECEMBER, 2022.

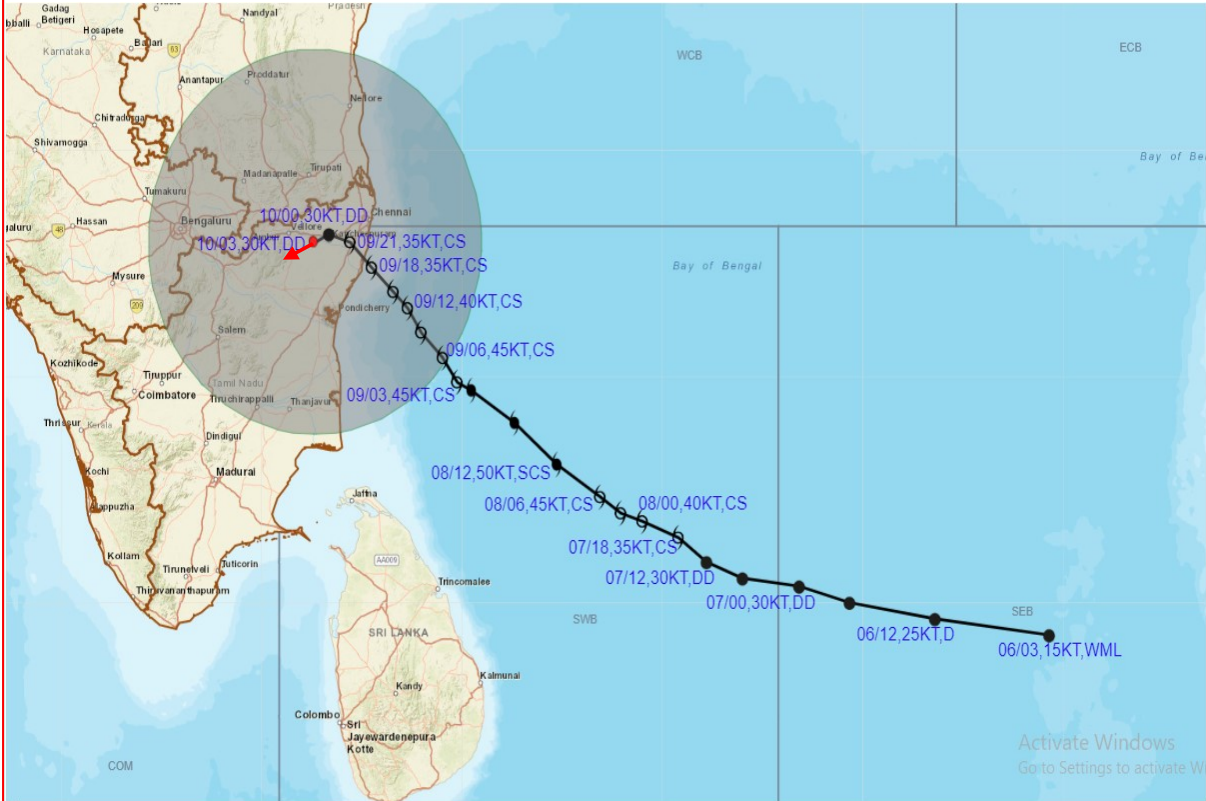


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (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 ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION REMNANT OF CYCLONIC STORM 'MANDOUS' OVER NORTH TAMILNADU BASED ON 0300 UTC OF 10th DECEMBER, 2022



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 (≥20 KT)

● LESS THAN 34 KT
 ○ 34-47 KT
 ● ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 — CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

Legends:

Heavy Rain: 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4 mm.

Region wise classification of meteorological Sub-Divisions:

- 1) **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.
- 2) **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
- 3) **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
- 4) **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 5) **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
- 6) **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and 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)

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

 Heavy Rain	 Heavy Snow	 Thunderstorm	 Dust Storm
 Strong Winds	 Visibility	 Cyclone	 Squall/ Hail
 Frost	 Cold Wave	 Heat Wave	 Sea State