



**Government of India
Ministry of Earth Sciences
India Meteorological Department**

**Press Release
Date: 08th December, 2022
Time of Issue: 1230 hrs IST**

**Subject: 1. Cyclonic Storm “Mandous” over Southwest Bay of Bengal.
2. Heavy to very heavy rainfall spell over north Tamil Nadu, south Coastal Andhra Pradesh and Rayalaseema during 08th-10th and isolated extremely heavy rainfall over north Tamil Nadu on 09th December, 2022.**

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

- ❖ **Minimum temperatures** are in the range of 7-10° C over many parts of plains of Northwest and adjoining centre India. These are near normal over northern parts of the country.
- ❖ **Light to moderate rainfall** at most places over Andaman & Nicobar Islands and **Very light rainfall** at isolated places over Tamilnadu and Kerala.

Cyclonic Storm “Mandous” Forecast & Warnings:

Yesterday’s Deep Depression over Southwest & adjoining Southeast Bay of Bengal moved west-northwestwards and intensified into cyclonic storm “Mandous”(pronounced as “Man-Dous”) over Southwest Bay of Bengal at 1130 PM of yesterday. It lay centered at 0830 hours IST of today, the 08th December, 2022 over Southwest Bay of Bengal, near latitude 9.5°N and longitude 83.8°E, about 300 km east-northeast of Trincomalee (Sri Lanka), 420 km east-southeast of Jaffna (Sri Lanka), 460 km east-southeast of Karaikal and about 550 km southeast of Chennai.

It is very likely to move west-northwestwards and cross north Tamil Nadu, Puducherry and adjoining south Andhra Pradesh coasts between Puducherry and Sriharikota with a maximum sustained wind speed of 65-75 kmph gusting to 85 kmph around mid night of 09th December.

Warnings:

(i) Rainfall (Annexure- I)

- ❖ **08th December:-** Light to moderate rainfall at most places with **heavy to very heavy falls** at isolated places very likely over coastal Tamil Nadu, Puducherry & Karaikal and isolated **heavy rainfall** over adjoining areas of south coastal Andhra Pradesh and Rayalaseema.
- ❖ **09th December:-** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall at isolated places** very likely over north coastal Tamil Nadu, Puducherry and isolated **heavy to very heavy rainfall** over adjoining south Coastal Andhra Pradesh, north interior Tamilnadu and Rayalaseema; **heavy rainfall** at isolated places over South Interior Karnataka and Kerala & Mahe.
- ❖ **10th December:-** It is likely to reduce to Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places likely over north Tamil Nadu and Rayalaseema and **heavy rainfall** at isolated places over South Interior Karnataka, Kerala & Mahe and South Coastal Andhra Pradesh.
- ❖ **11th December:-** Light to moderate rainfall at most places with **heavy rainfall** at isolated places very likely over South Interior Karnataka.

(ii) Wind warning:

- ❖ **Southwest Bay of Bengal:-** Gale wind, speed reaching 75-85 kmph gusting to 95 kmph prevailing over southwest Bay of Bengal. It would further increase becoming 80-90 kmph gusting to 100 kmph, over the same region during 08th noon to 08th night. It would decrease thereafter gradually becoming 75-85 kmph gusting to 95 kmph, over the same region from 9th morning and 70-80 kmph gusting to 90 kmph from 9th December evening.
- ❖ **Along & off Tamil Nadu, Puducherry, south Andhra Pradesh and north Sri Lanka coasts:-** Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, likely to commence along & off Tamil

Nadu, Puducherry, south Andhra Pradesh and north Sri Lanka coasts from 08th December afternoon, becoming 50-60 kmph gusting to 70 kmph from 9th December morning and 65-75 kmph gusting to 85 kmph from 09th December evening to early hours of 10th December.. It is likely to reduce gradually thereafter becoming 55-65 kmph gusting to 75 kmph by morning of 10th December and then to 30-40 kmph gusting to 50 kmph by 10th December night.

- ❖ **Gulf of Mannar** :- Squally wind, speed reaching 40-50 kmph gusting to 60 kmph, likely over Gulf of Mannar from 08th December evening becoming 50-60 kmph gusting to 70 kmph from 09th December evening to early hours of 10th December and 40-50 kmph gusting to 60 kmph by 10th December morning.
- ❖ **Southeast Bay of Bengal**:- Squally wind, speed reaching 40-45 kmph gusting to 55 kmph, is likely to prevail over Southeast Bay of Bengal on 8th Dec.

(iii) Sea condition

- ❖ **Sea condition likely to be high** over Southwest bay of Bengal and rough to very rough over adjoining areas of Westcentral and Southeast Bay of Bengal till early hours of 10th December and improve gradually thereafter.
- ❖ **Sea condition likely to be rough to very rough** along & off South Andhra Pradesh, Tamil Nadu, Puducherry and Sri Lanka coasts on 08th and 10th and **high** on 9th December.

(iv) Storm Surge Warning

The storm surge of about 0.5 m height above the astronomical tide likely to inundate low lying areas of north coastal Tamilnadu and Puducherry during the time of landfall.

(v) Fishermen Warning (Annexure- II)

Fishermen are advised not to venture into:

- ❖ Southeast Bay of Bengal on 08th December.
- ❖ Southwest Bay of Bengal during 08th-10th December
- ❖ Along & off Sri Lanka coast during 08th-09th December.
- ❖ Along & off Tamilnadu, Puducherry and South Andhra Pradesh coasts and Gulf of Mannar during 08th-10th December.
- ❖ Fishermen out at sea should return to the coast or move to the safe area.

(vi) Adverse Weather Warning for onshore and off-shore operations

Regulate on-shore and off-shore operations over Southwest Bay of Bengal; along & off Tamil Nadu-Puducherry-South Andhra Pradesh coasts and Gulf of Mannar during 08th-10th December.

Other Weather systems and its associated rainfall/thunderstorm Forecast

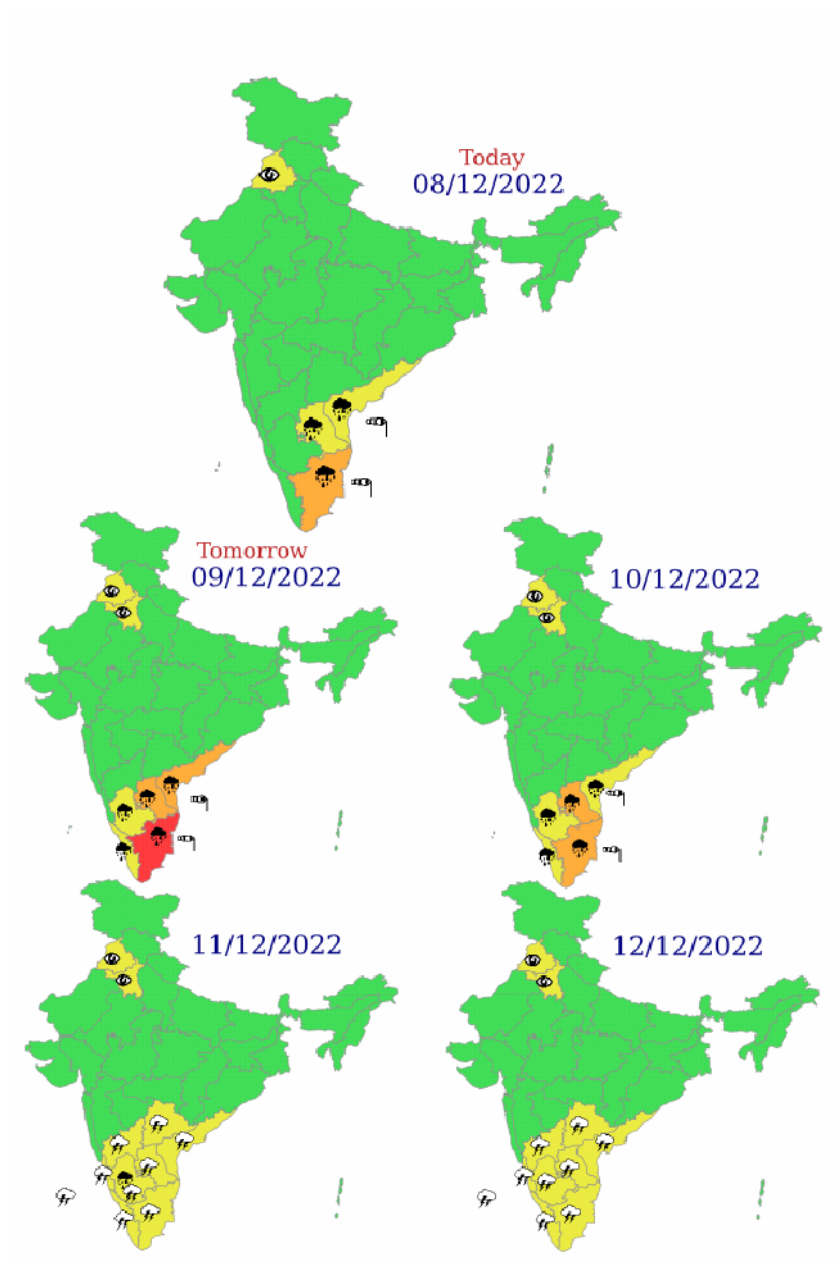
Under the influence of Western Disturbance as trough in middle tropospheric levels along Long.65°E to the North of Lat.30°N, light to moderate isolated to scattered rainfall/snowfall is very likely over Jammu & Kashmir and Himachal Pradesh during 08th-10th December.

Minimum Temperature and Fog Forecast

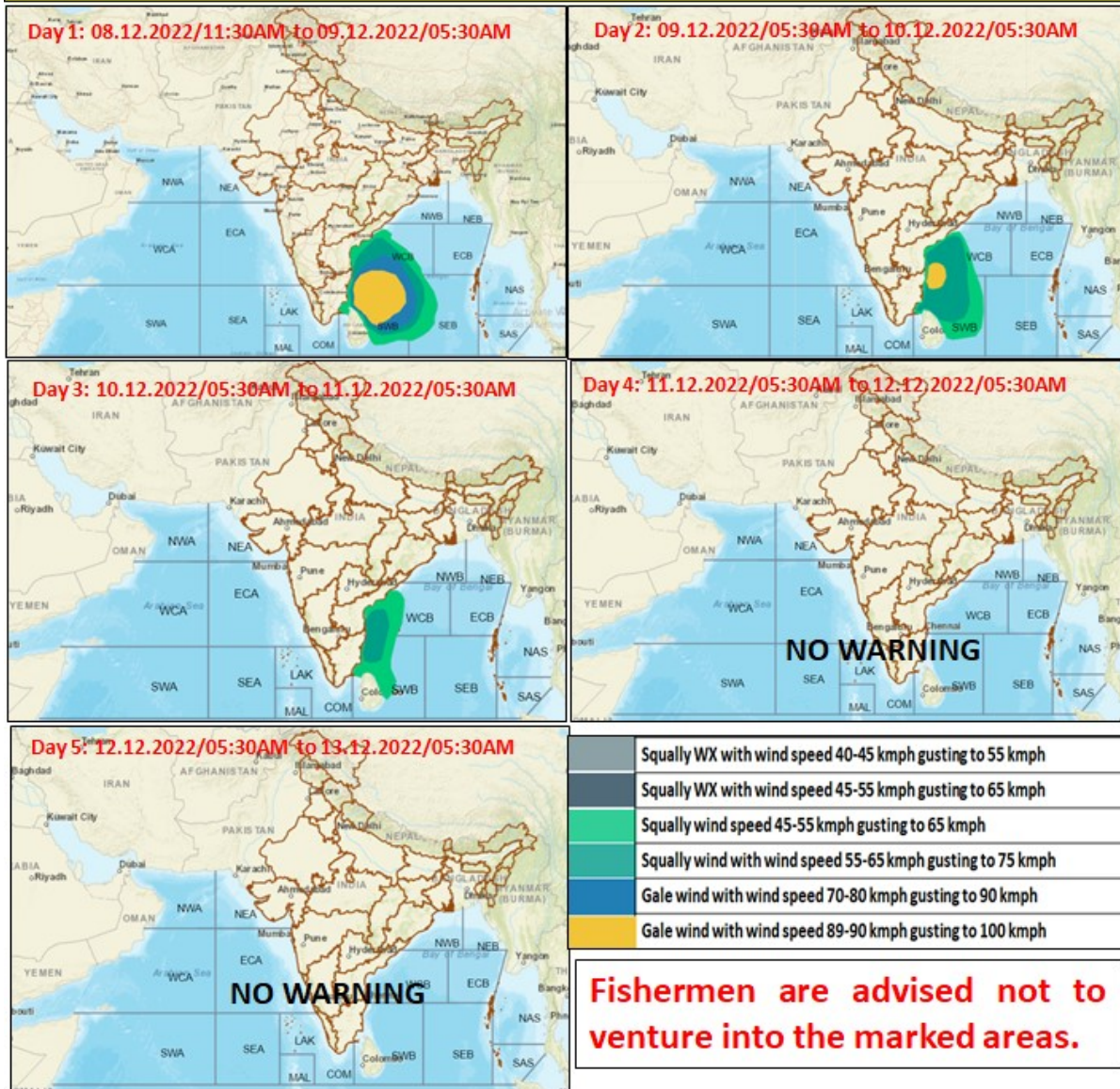
- ❖ No significant change in minimum temperatures very likely over East India during next 24 hours and rise by 2-4°C during subsequent 4 days. Minimum temperatures are likely to rise gradually by 2-4°C over Central India and Maharashtra during 4-5 days. No significant change in minimum temperatures likely over Gujarat state during next 3 days and rise by 2-3°C during subsequent 2 days. No significant change in minimum temperatures likely over rest parts of the country during next 4-5 days.
- ❖ Dense fog very likely in isolated pockets over Punjab during morning hours of 09th – 13th and over Haryana of 10th – 13th December. Shallow to moderate fog likely at isolated pockets over parts of Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 2 days.

For more details kindly refer:

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

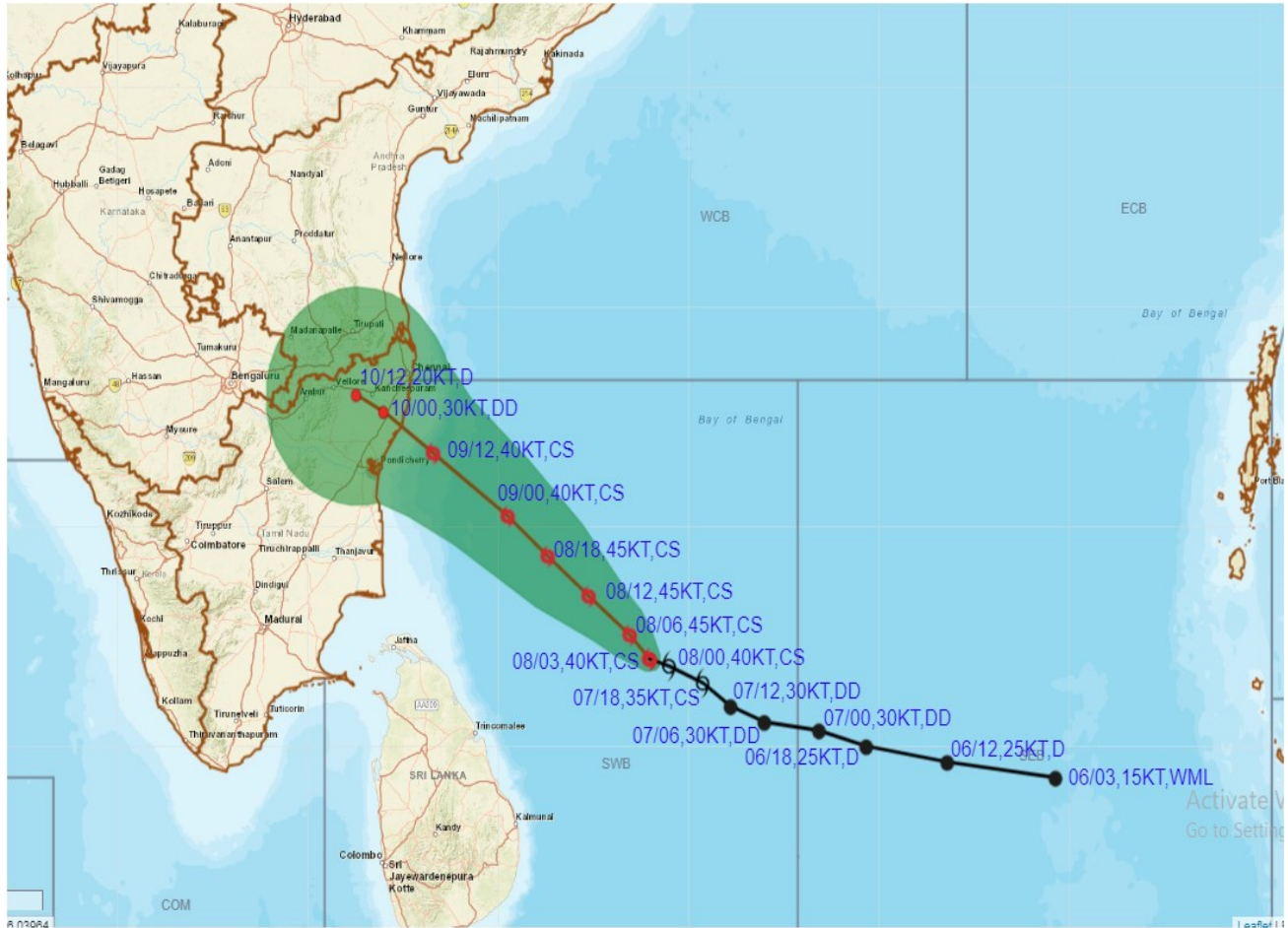


Fishermen warning graphics





OBSERVED AND FORECAST TRACK OF CYCLONIC STORM 'MANDOUS' OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC OF 08th DECEMBER, 2022.

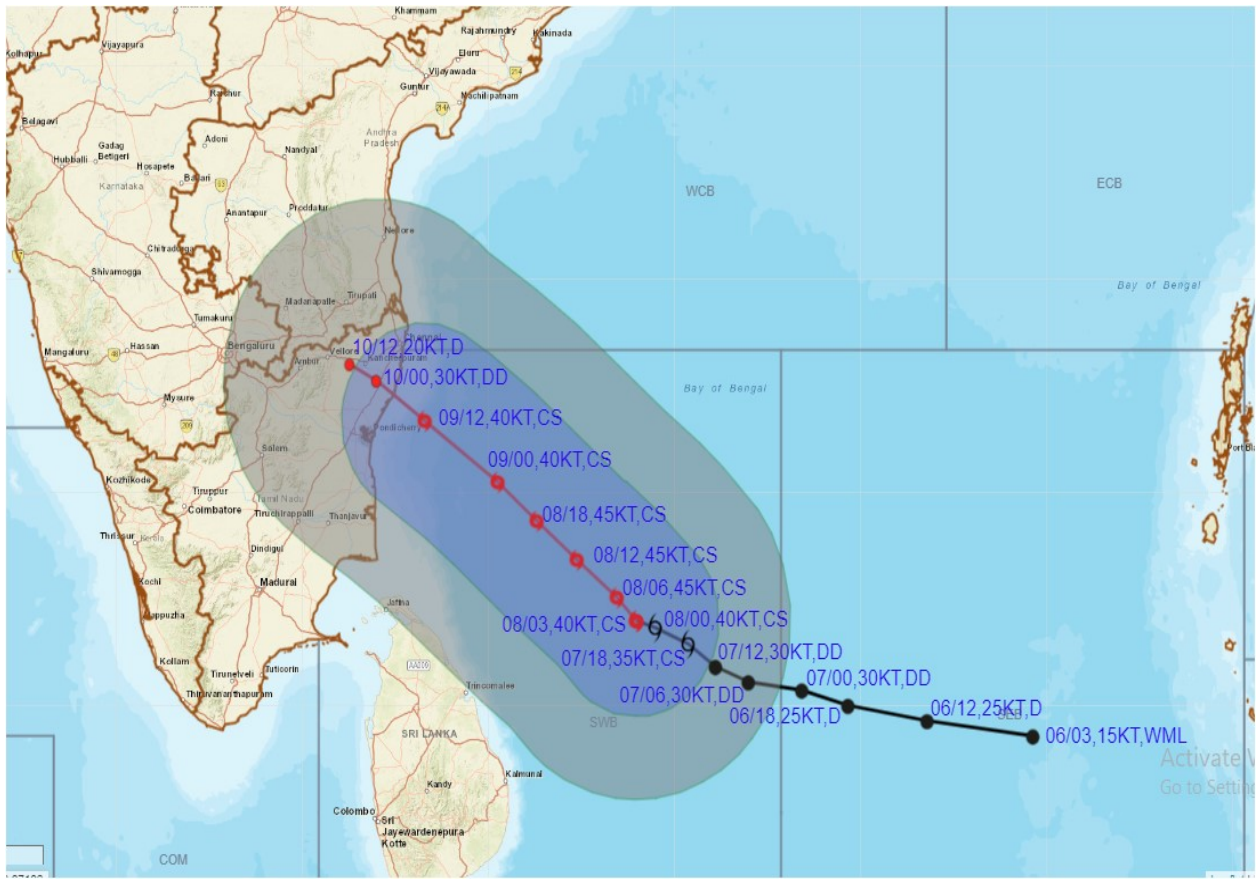


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (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 CYCLONIC STORM 'MANDOUS' OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC OF 08th 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 (≥ 120 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

Forecast distance (km) and direction of the centre from nearest 5 coastal stations

Forecast Date and Time	Lead Period	Lat	Lon	Station 1	Station 2	Station 3	Station 4	Station 5
08.12.22/0300	0	9.5	83.8	TRINCOMALEE (300,ENE)	BATTICALOA (305,NE)	MULLAITTIVU 1 (330,E)	POTTUVIL (365,NE)	VAVUNIYA (370,ENE)
08.12.22/0600	3	9.8	83.5	TRINCOMALEE (280,ENE)	MULLAITTIVU 1 (300,ENE)	BATTICALOA (305,NE)	VAVUNIYA (350,ENE)	POTTUVIL (370,NNE)
08.12.22/1200	9	10.3	82.9	MULLAITTIVU 1)	TRINCOMALEE	VAVUNIYA	KANKASANTURAI 1)	BATTICALOA

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