REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY NO. 8

FROM: RSMC TROPICAL CYCLONES NEW DELHI DATED 08.12.2022

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 8 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1730 UTC OF 08.12.2022 BASED ON 1500 UTC OF 08.12.2022

SUBJECT: THE CYCLONIC STORM "MANDOUS" PRONOUNCED AS "MAN-DOUS" OVER SOUTHWEST BAY OF BENGAL INTENSIFIED INTO A SEVERE CYCLONIC STORM (CYCLONE WARNING: NORTH TAMILNADU, PUDUCHERRY AND SOUTH ANDHRA PRADESH COASTS)

THE SEVERE CYCLONIC STORM "MANDOUS" PRONOUNCED AS "MAN-DOUS" OVER SOUTHWEST BAY OF BENGAL MOVED NEARLY WEST-NORTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS, AND LAY CENTERED AT 1500 UTC OF TODAY, THE 08TH DECEMBER, 2022 OVER SOUTHWEST BAY OF BENGAL, NEAR LATITUDE 10.4°N AND LONGITUDE 82.6°E, ABOUT 250 KM NORTH NORTHEAST OF TRINCOMALEE (43418), ABOUT 300 KM EAST-NORTHEAST OF JAFFNA (43404), ABOUT 310 KM EAST-SOUTHEAST OF KARAIKAL (43346) AND ABOUT 390 KM SOUTH-SOUTHEAST OF CHENNAI (43279).

IT IS VERY LIKELY TO MAINTAIN THE INTENSIFY OF A SEVERE CYCLONIC STORM TILL EARLY MORNING OF 09TH DECEMBER AND THEN WEAKEN GRADUALLY INTO A CYCLONIC STORM THEREAFTER. IT WOULD CONTINUE TO MOVE WEST NORTHWESTWARDS AND CROSS NORTH TAMIL NADU-PUDUCHERRY & ADJOINING SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY AND SRIHARIKOTA AROUND MAHABALIPURAM AS A CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 65-75 KMPH GUSTING TO 85 KMPH AROUND MIDNIGHT OF 09TH DECEMBER.

FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
08.12.22/1500	10.4/82.6	85-95 gusting to 105	SEVERE CYCLONIC STORM
08.12.22/1800	10.6/82.3	85-95 gusting to 105	SEVERE CYCLONIC STORM
09.12.22/0000	11.1/81.7	80-90 gusting to 100	CYCLONIC STORM
09.12.22/0600	11.5/81.2	75-85 gusting to 95	CYCLONIC STORM
09.12.22/1200	11.9/80.7	70-80 gusting to 90	CYCLONIC STORM
10.12.22/0000	12.6/80.0	55-65 gusting to 65	DEEP DEPRESSION
10.12.22/1200	13.0/79.4	30-40 gusting to 50	DEPRESSION

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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AS PER INSAT 3D IMAGERY, CONVECTION SHOWS CURVED BAND PATTERN WITH INTENSITY T3.0. THE ASSOCIATED BROKEN LOW MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER SOUTHWEST BAY OF BENGAL BETWEEN AREA LATITITUDE 7.0°N TO 11.0°N LONGITITUTE 80.0°E TO 85.0°E. THE CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA. SEA CONDITION IS VERY HIGH TO HIGH OVER SOUTHWEST BAY OF BENGAL AND NEIGHOURHOOD.

REMARKS:
THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 AND WILL REMAIN THERE TILL 9TH DECEMBER. SEA SURFACE TEMPERATURE (SST) IS AROUND 27°C-28°C OVER SOUTHWEST AND CENTRAL BOB AND ALONG AND OFF NORTH TAMILNADU AND ADJOINING ANDHRA PRADESH COASTS. ALSO THE OCEAN HEAT CONTENT (OHC) IS 80-100 KJ/CM^2 OVER SOUTHWEST BOB AND LESS THAN 50 KJ/CM^2 OVER WESTCENTRAL AND SOUTHWEST BOB ALONG EAST COAST OF INDIA. THERE IS WARM AIR ADVECTION TO THE SYSTEM FROM THE SOUTHERN SECTOR. IT WOULD CONTINUE SO TILL 9TH DECEMBER MORNING.

LOW LEVEL VORTICITY IS 250 X10^{-6} S^{-1} AROUND SOUTH OF SYSTEM CENTER. LOW LEVEL CONVERGENCE IS 60 X10^{-5} S^{-1} TO THE WEST OF SYSTEM CENTER AND UPPER LEVEL DIVERGENCE IS 40 X10^{-5} S^{-1} TO THE WEST OF THE SYSTEM CENTER.

WIND SHEAR IS MODERATE TO HIGH (25-30 KNOTS) OVER & AROUND THE SYSTEM CENTER AND ALONG THE EXPECTED TRACK. THE UPPER TROPOSPHERIC RIDGE RUNS ROUGHLY ALONG 15.0°N OVER THE BOB. THE SYSTEM IS UNDER THE INFLUENCE OF EAST SOUTHEASTERLY STEERING WINDS AT MIDDLE TROPOSPHERIC LEVELS AND HENCE THE PRESENT SYSTEM IS LIKELY TO BE STEERED TOWARDS WEST-NORTHWEST TILL 8TH DECEMBER. THERAFTER, AS THE SYSTEM WILL COME CLOSER TOWARDS THE RIDGE, THE NORTHERLY COMPONENT IS LIKELY TO INCREASE. THE INTENSIFICATION PARAMETERS AS MENTIONED ABOVE WILL CONTINUE TO BE FAVOURABLE FOR MAINTAINING THE INTENSITY OF THE SYSTEM TILL THE MORNING OF 9TH DECEMBER. THEREAFTER, DUE TO SLOW MOVEMENT OF THE SYSTEM, COLD AND DRY AIR INTRUSION FROM SOUTH PENINSULAR INDIA, THE SYSTEM WOULD SHOW SLIGHT WEAKENING TREND WHILE MOVING TOWARDS COAST.

IN VIEW OF ALL THE ABOVE, THE SEVERE CYCLONIC STORM "MANDOUS" PRONOUNCED AS "MAN-DOUS" IS VERY LIKELY TO MAINTAIN THE INTENSIFY OF A SEVERE CYCLONIC STORM TILL EARLY MORNING OF 09TH DECEMBER AND THEN WEAKEN GRADUALLY INTO A CYCLONIC STORM BY FORENOON OF 9TH DECEMBER. IT WOULD CONTINUE TO MOVE WEST NORTHWESTWARDS AND CROSS NORTH TAMIL NADU-PUDUCHERRY & ADJOINING SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY AND SRIHARIKOTA AROUND MAHABALIPURAM AS A CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 65-75 KMPH GUSTING TO 85 KMPH AROUND 1800 UTC OF 09TH DECEMBER

TRISANU BANIK

SCIENTIST-C,RSMC,NEW DELHI

OBSERVED AND FORECAST TRACK OF SEVERE CYCLONIC STORM 'MANDOUS' OVER SOUTHWEST BAY OF BENGAL BASED ON 1200 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

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF SEVERE CYCLONIC STORM 'MANDOUS' OVER SOUTHWEST BAY OF BENGAL BASED ON 1200 UTC OF 08th DECEMBER, 2022.
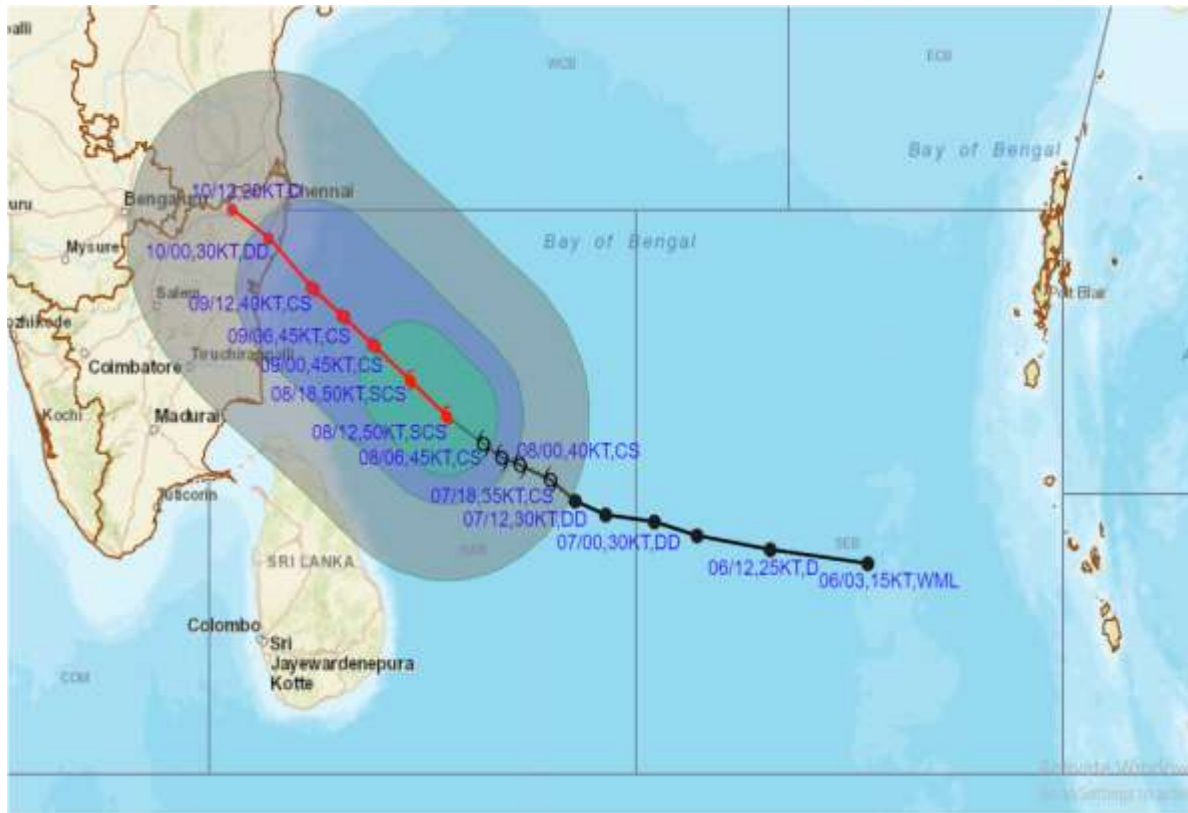

DATE/TIME IN UTC
IST=UTC + 0530
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WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY 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)
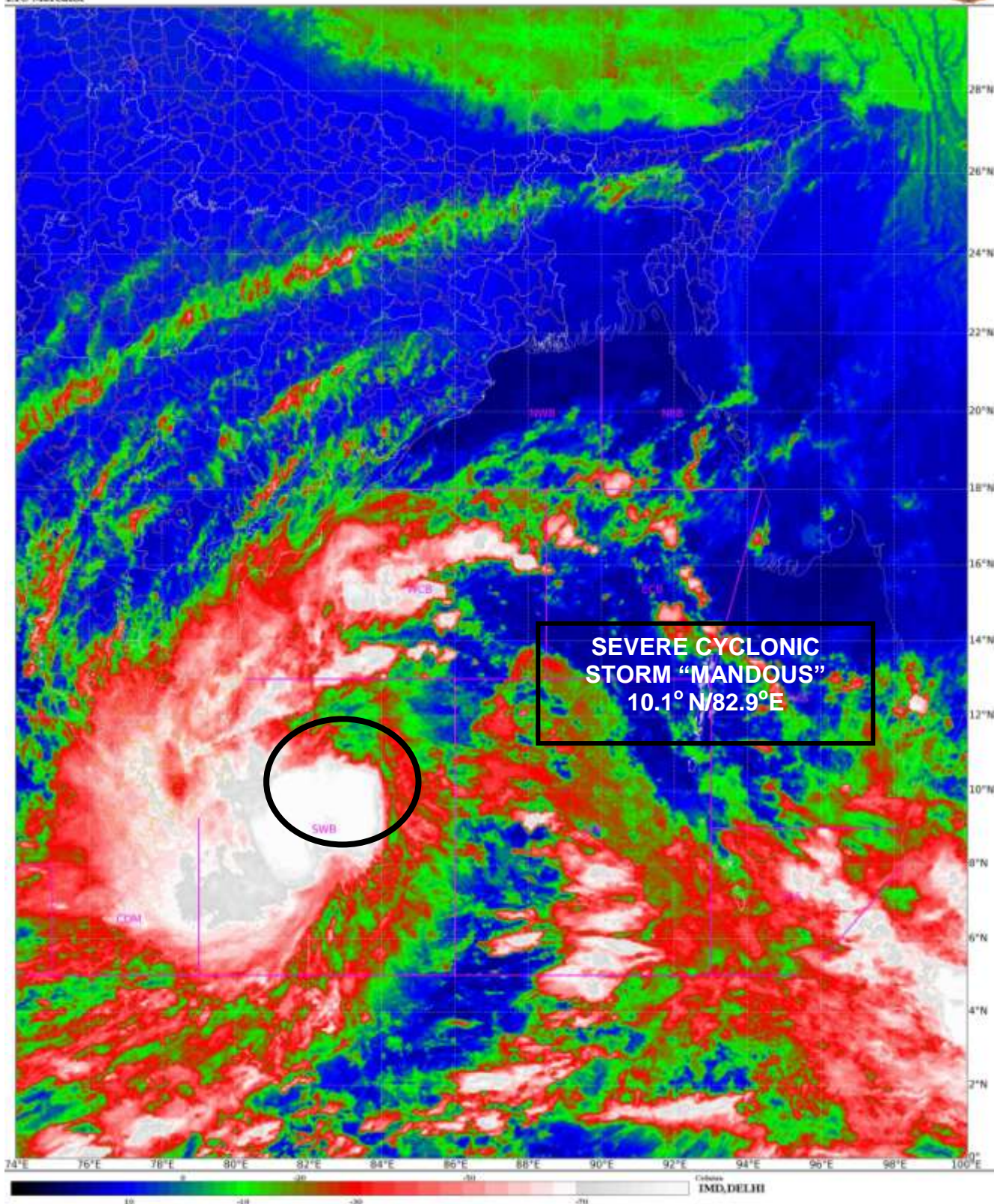▦ 50-63 KT (92-117 KMPH)
▦ ≥ 64 KT (≥118 KMPH)

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

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
08.12.22/1200	0	10.1	82.9	MULLAITTIVU 1) (245,ENE)	TRINCOMALEE (250,NE)	BATTICALOA (295,NNE)	VAVUNIYA (305,ENE)	KANKASANTURAI 1) (310,E)
08.12.22/1800	6	10.6	82.3	MULLAITTIVU 1) (220,NE)	TRINCOMALEE (250,NNE)	KANKASANTURAI 1) (260,ENE)	NAGAPPATTINAM (270,E)	VEDARANNIYAM (270,E)
09.12.22/0000	12	11.1	81.7	KARAIKAL (205,E)	NAGAPPATTINAM (205,E)	PARANGIPETTAI (215,ESE)	VEDARANNIYAM (220,ENE)	CUDDALORE (225,ESE)
09.12.22/0600	18	11.5	81.2	PARANGIPETTAI (155,E)	CUDDALORE (160,E)	MO PONDICHERRY (160,ESE)	KARAIKAL (165,ENE)	NAGAPPATTINAM (170,ENE)
09.12.22/1200	24	11.9	80.7	MO PONDICHERRY (95,E)	CUDDALORE (105,E)	PARANGIPETTAI (110,ENE)	CHENNAI/MINAMBAKKAM (135,SSE)	NUMGAMBAKKAM (140,SSE)
10.12.22/0000	36	12.6	80.0	CHENNAI/MINAMBAKKAM (50,SSW)	NUMGAMBAKKAM (55,SSW)	MO PONDICHERRY (75,NNE)	TIRUTTANI (80,SE)	CUDDALORE (95,NNE)
				TIRUTTANI (90,W)	VELLORE (80,SSW)	TSUNATH (90,W)	CHENNAI/MINAMBAKKAM (185,W)	NUMGAMBAKKAM (85,W)

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SEVERE CYCLONIC
STORM "MANDOUS"
10.1° N/82.9°E

IMD,DELHI

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100% This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins
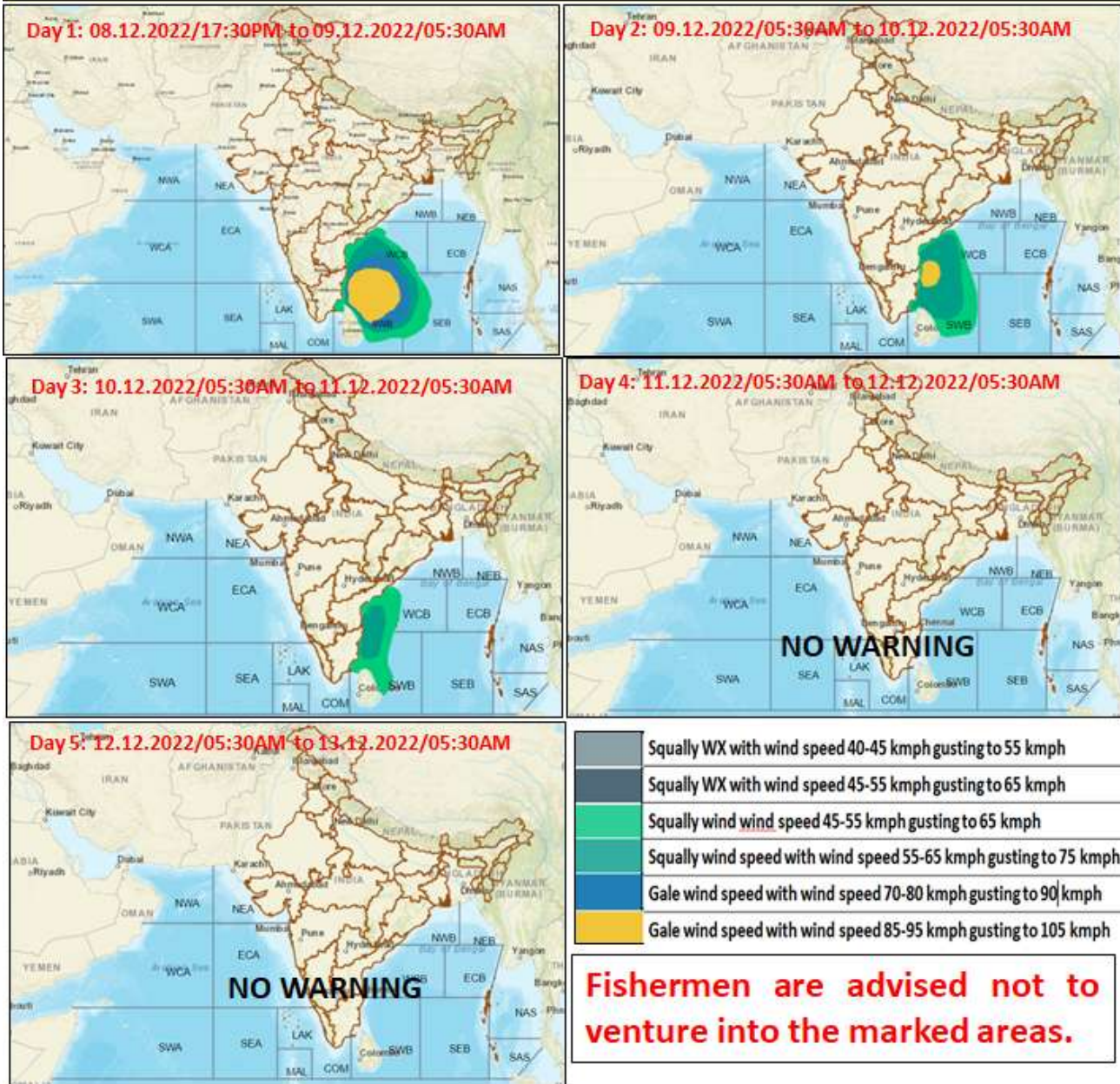
Fishermen warning graphics

Day 1: 08.12.2022/17:30PM to 09.12.2022/05:30AM

Day 2: 09.12.2022/05:30AM to 10.12.2022/05:30AM

Day 3: 10.12.2022/05:30AM to 11.12.2022/05:30AM

Day 4: 11.12.2022/05:30AM to 12.12.2022/05:30AM

NO WARNING

Day 5: 12.12.2022/05:30AM to 13.12.2022/05:30AM

NO WARNING

	Squally WX with wind speed 40-45 kmph gusting to 55 kmph
	Squally WX with wind speed 45-55 kmph gusting to 65 kmph
	Squally wind wind speed 45-55 kmph gusting to 65 kmph
	Squally wind speed with wind speed 55-65 kmph gusting to 75 kmph
	Gale wind speed with wind speed 70-80 kmph gusting to 90 kmph
	Gale wind speed with wind speed 85-95 kmph gusting to 105 kmph

Fishermen are advised not to venture into the marked areas.

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