REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICALCYCLONES, NEWDELHI

TROPICAL WEATHER OUTLOOK

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 20.03.2022

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 20.03.2022 BASED ON 1200 UTC OF 20.03.2022.

SUB: DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL

THE DEPRESSION OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA, MOVED NORTH-NORTHEASTWARDS AT A SPEED OF 12 KMPH AND LAY CENTERED AT 1200 UTC OF TODAY, THE 20TH MARCH, OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL, NEAR LATITUDE 10.9°N AND LONGITUDE 93.2°E, ABOUT 200 KM NORTH-NORTHEAST OF CAR NICOBAR (43367) (NICOBAR ISLANDS), 100 KM SOUTH-SOUTHEAST OF PORT BLAIR (43333) (ANDAMAN ISLANDS) AND 730 KM SOUTH-SOUTHWEST OF YANGON (48097 (MYANMAR). IT IS LIKELY TO MOVE NEARLY NORTHWARDS ALONG & OFF ANDAMAN & NICOBAR ISLANDS, INTENSIFY INTO A DEEP DEPRESSION BY 0000UTC OF 21ST MARCH AND INTO A CYCLONIC STORM BY 1200UTC OF 21ST MARCH.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	AXIMUM SUSTAINED SURFAC WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
20.03.22/1200	10.9/93.2	45-55 GUSTING TO 65	DEPRESSION
21.03.22/0000	12.1/93.5	55-65 GUSTING TO 75	DEEP DEPRESSION
21.03.22/1200	13.6/93.7	65-75 GUSTING TO 85	CYCLONIC STORM
22.03.22/0000	15.2/93.8	60-70 GUSTING TO 80	CYCLONIC STORM
22.03.22/1200	16.8/93.9	55-65 GUSTING TO 75	DEEP DEPRESSION
23.03.22/0000	18.4/94.0	40-50 GUSTING TO 60	DEPRESSION

AS PER INSAT 3D IMAGERY, INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 1.5. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL BETWEEN LATITUDE 6.0N & 14.5N AND LONGITUDE 90.5E & 97.5E AND ANDAMAN & NICOBAR ISLANDS. MINIMUM CLOUD TOP TEMPERATURE HAS DECREASED DURING PAST 3 HOURS AND IS AROUND MINUS 82 DEG C. MULTISAT WINDS INDICATE 20-25 KTS WINDS IN THE EASTERN SECTOR.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH OVER ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA.

REMARKS:

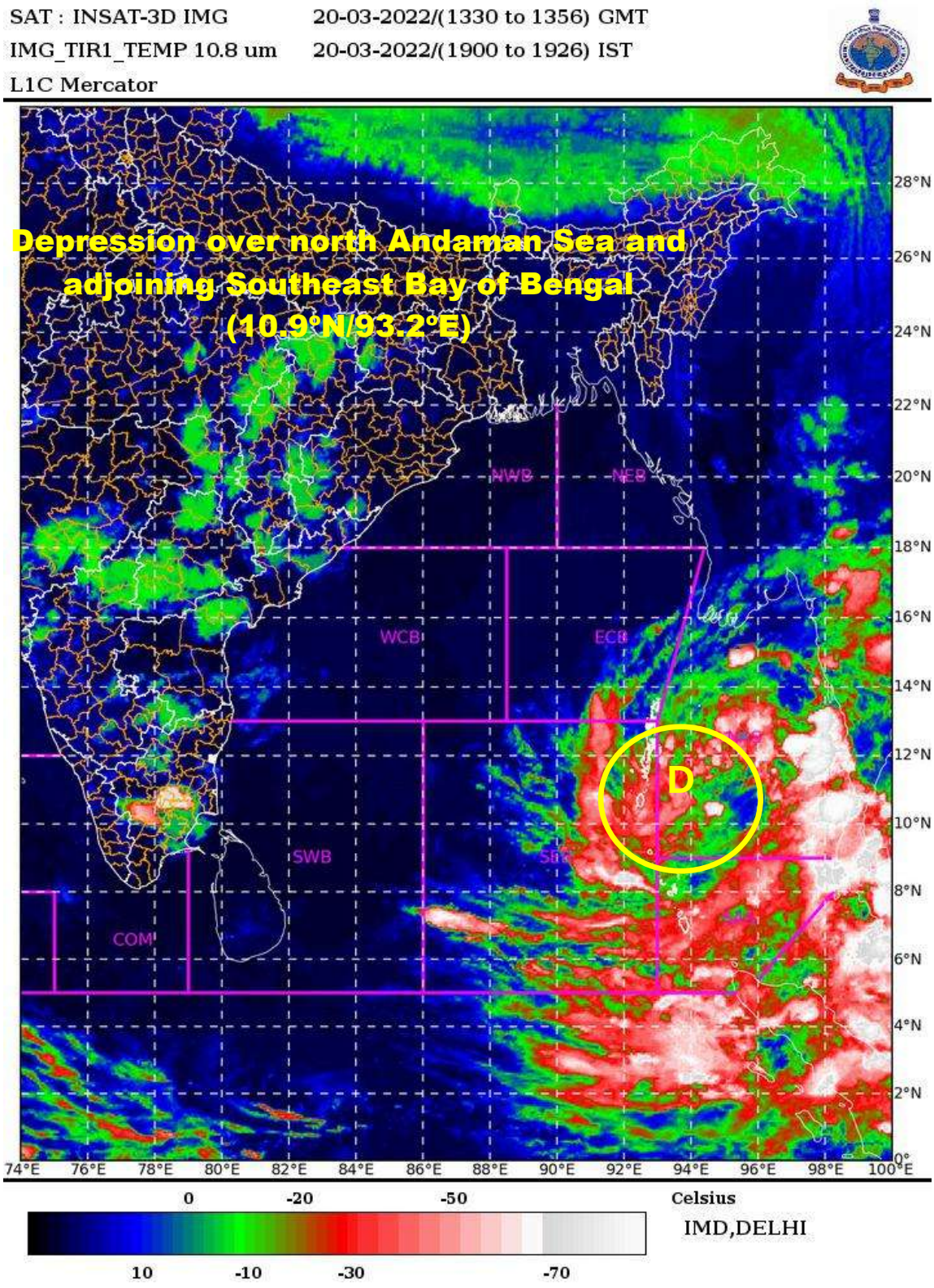
SEA SURFACE TEMPERATURE IS AROUND 29-30^{0}C OVER ANDAMAN SEA, SOUTHEAST AND ADJOINING EASTCENTRAL BAY OF BENGAL (BOB). TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 60-80 KJ/CM^2 OVER THE SAME REGION BECOMING LESS THAN 50 KJ/CM^2 OVER NORTH BOB. THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 2 DAYS AND MOVE TO PHASE 4 WITH AMPLITUDE REMAINING MORE THAN 1. THE PHASE AND AMPLITUDE OF MJO IS CONDUCIVE FOR ENHANCED CONVECTION AND HENCE CYCLOGENESIS OVER THE BOB DURING NEXT 2 DAYS. STRONG WESTERLIES, KELVIN WAVES AND EQUATORIAL ROSSBY WAVES ARE LIKELY TO PREVAIL OVER THE REGION DURING NEXT 3 DAYS WHICH WOULD FAVOUR INTENSIFICATION.

LOW LEVEL VORTICITY IS ABOUT 50 X10^{-6} S^{-1} AROUND THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE HAS SLIGHTLY DECREASED AND IS 10X10^{-5} S^{-1} AROUND SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND 20 X10^{-5} S^{-1} AROUND THE SYSTEM CENTRE WITH STRONG EQUATORWARD OUTFLOW. VERTICAL WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND THE SYSTEM CENTRE WITH DECREASING TREND (BECOMING 10-15 KNOTS) ALONG THE EXPECTED TRACK OF THE SYSTEM. CURRENT CONDITIONS INDICATE THAT THE SYSTEM IS LYING IN FAVOURABLE ENVIRONMENT.

NUMERICAL MODELS INCLUDING IMD GFS, ECMWF AND ECMWF ENSEMBLE, NCUM (REGIONAL), NCUM (GLOBAL) AND IMD MULTIMODEL ENSEMBLE (MME) ARE INDICATING SYSTEM TO BECOME A DEEP DEEPRESSION ON 21ST MARCH AND INTO A MARGINAL CYCLONIC STORM AROUND 22ND MARCH. HOWEVER, THERE IS VARIATION AMONG THESE MODELS W.R.T. PEAK INTENSITY WITH IMD GFS INDICATING HIGHER INTENSITY AND ECMWF & NCUM INDICATING INTENSIFICATION UPTO DEEP DEPRESSION STAGE ONLY. HOWEVER, MOST OF THE MODELS ARE UNANIMOUS REGARDING MOVEMENT OF SYSTEM TOWARDS MYANMAR AND ADJOINING SOUTHEAST BANGLADESH COASTS.

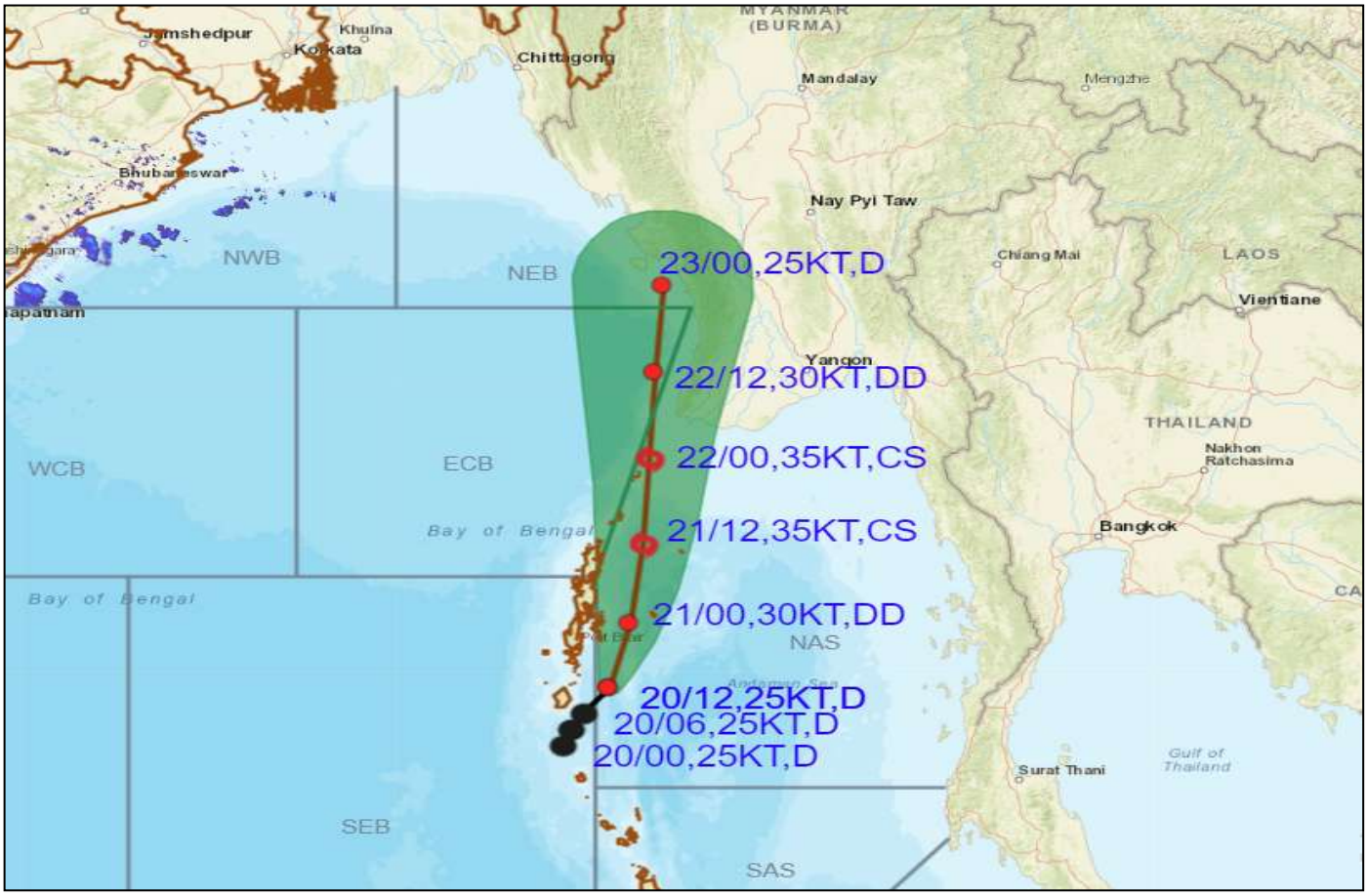
IN VIEW OF ABOVE, THE SYSTEM IS LIKELY TO MOVE NEARLY NORTHWARDS ALONG & OFF ANDAMAN & NICOBAR ISLANDS AND INTENSIFY GRADUALLY INTO A DEPRESSION DURING NEXT 12 HOURS & INTO A MARGINAL CYCLONIC STORM DURING SUBSEQUENT 12 HOURS.

(R K JENAMANI)
SCIENTIST-F
RSMC NEW DELHI



D: Depression

OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL ON 1200 UTC OF 20TH MARCH 2022



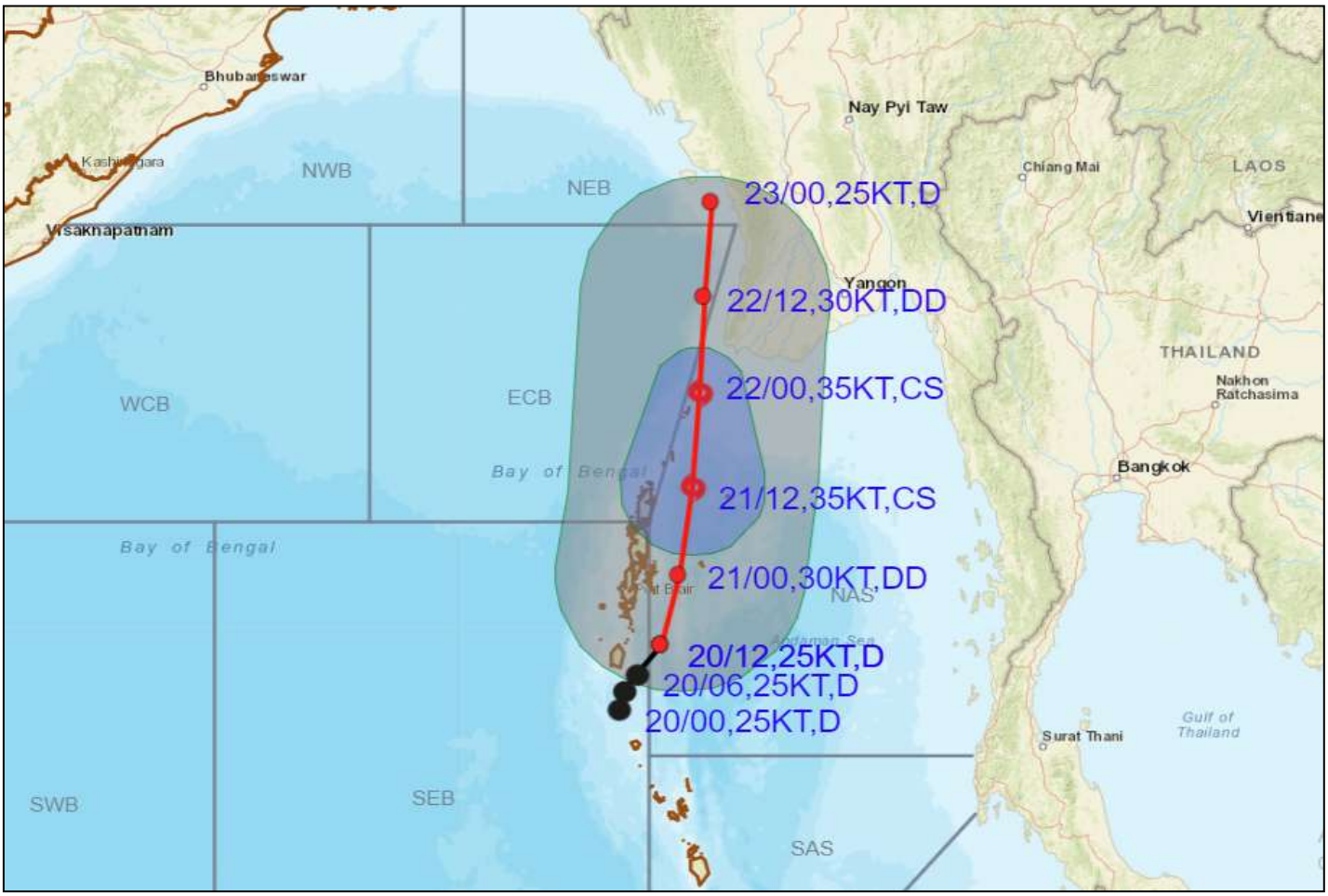
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

LESS THAN 34 KT
34-47 KT
≥ 48 KT
OBSERVED TRACK
FORECAST TRACK
CONE OF UNCERTAINTY

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS		
	20.03.22/1200	21.03.22/1200	22.03.22/1200
Yangon	730,SSW	440,SW	240,W
Carnicobar	200,NNE	500,N	860,N
Hut bay	80,ENE	360,NNE	710,NNE
Portblair	100,SSE	240,NNE	590,NNE
Maya bundar	230,S	110,NE	450,NNE

N:NORTH, NNE:NORTH-NORTHEAST, NE:NORTHEAST, ENE:EAST-NORTHEAST, E:EAST, SE:SOUTHEAST, SSE:SOUTH-SOUTHEAST, S:SOUTH, SSW:SOUTH-SOUTHWEST, SW:SOUTHWEST, WSW:WEST-SOUTHWEST, W:WEST, WNW:WEST-NORTHWEST, NW:NORTHWEST, NNW:NORTH-NORTHWEST

OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL ON 1200 UTC OF 20TH MARCH 2022



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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)

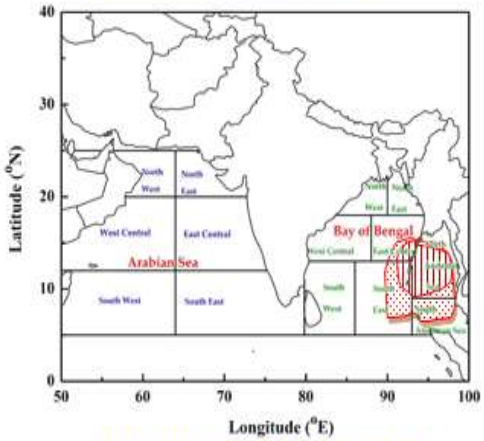
IMPACT OVER THE SEA

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

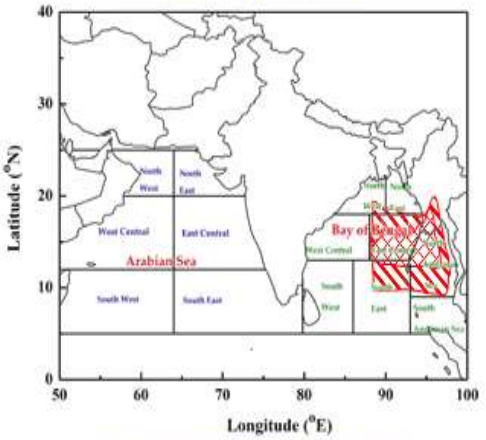
INDIA METEOROLOGICAL DEPARTMENT

FISHERMAN WARNING FOR BAY OF BENGAL AND ARABIAN SEA

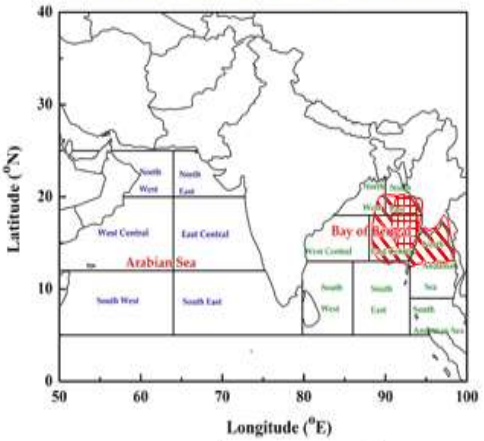
DAY-1: 20..03.2022/0600 UTC TO 21.03.2022/0600 UTC



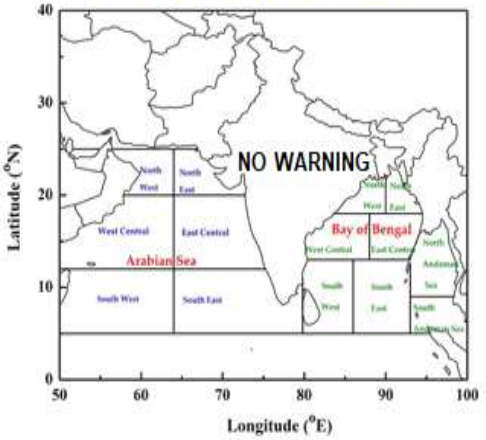
DAY-2: 21.03.2022/0600 UTC TO 22.03.2022`/0600 UTC



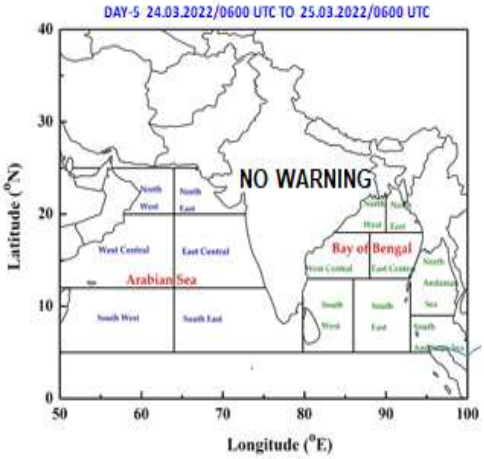
DAY-3-: 22.03.2022/0600 UTC TO 23.03.2022/0600 UTC



DAY-4 23.03.2022/0600 UTC TO 24.03.2022/0600 UTC



DAY-5 24.03.2022/0600 UTC TO 25.03.2022/0600 UTC



AREA UNDER FISHERMEN WARNING

- 40-50 KMPH GUSTING TO 55 KMPH (SQUALLY WEATHER)
- 45-55 KMPH GUSTING TO 65 KMPH
- 50-60 KMPH GUSTING TO 70 KMPH
- 60-70 KMPH GUSTING TO 80 KMPH
- 65-75 KMPH GUSTING TO 85 KMPH