REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICALCYCLONES, NEWDELHI

TROPICAL WEATHER OUTLOOK

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 17.03.2022

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 17.03.2022 BASED ON 0300 UTC OF 17.03.2022.

BAY OF BENGAL:

THE LOW PRESSURE AREA OVER CENTRAL PARTS OF SOUTH BAY OF BENGAL MOVED EAST-NORTHEASTWARDS AND LAY CENTRED AT 0300 UTC OF TODAY THE 17TH MARCH OVER SOUTHEAST BAY OF BENGAL AND EAST EQUATORIAL INDIAN OCEAN. IT IS LIKELY CONTINUE TO MOVE EAST-NORTHEASTWARDS, BECOME A WELL MARKED LOW PRESSURE AREA AND LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA BY 0000 UTC OF 19TH MARCH. THEREAFTER, IT IS LIKELY TO MOVE NORTH-NORTHWESTWARDS ALONG & OFF ANDAMAN & NICOBAR ISLANDS, INTENSIFY INTO A DEPRESSION BY 0000 UTC OF 20TH MARCH AND INTO A CYCLONIC STORM BY 0000 UTC OF 21ST MARCH. THEREAFTER, IT IS LIKELY TO MOVE NEARLY NORTHWARDS AND REACH NEAR BANGLADESH-NORTH MYANMAR COASTS AROUND 0000 UTC OF 22ND MARCH, 2022.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST BAY OF BENGAL AND ADJOINING EQUATORIAL INDIAN OCEAN BETWEEN LATITUDE 2.0N & 8.0N AND LONGITUDE 86.0E & 93.0E IN ASSOCIATION WITH LOW PRESSURE AREA OVER THE REGION. MINIMUM CLOUD TOP TEMPERATURE IS - 93°C. THE SATELLITE IMAGERY AT 0300 UTC INDICATES INCREASE IN CONVECTION OVER THE REGION.

ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 10-20 KNOTS GUSTING TO 30 KNOTS AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS AROUND 1004 HPA. SEA CONDITION IS MODERATE TO ROUGH AND IS VERY LIKELY TO BECOME ROUGH TO VERY ROUGH FROM 18TH MARCH ONWARDS OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA AND EAST EQUATORIAL INDIAN OCEAN.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	LOW	HIGH	HIGH	HIGH

ARABIAN SEA:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED WEAK TO MODERATE CONVECTION OVER NORTH AND WESTCENTRAL ARABIAN SEA, SOUTHEAST ARABIAN SEA OFF KERALA COAST AND COMORIN AREA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	NIL	NIL	NIL	NIL

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 INDEX (MJO) CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 3 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 3 DAYS. STRONG WESTERLIES AND EQUATORIAL ROSSBY WAVES ARE LIKELY TO PREVAIL OVER THE REGION DURING NEXT 1 WEEK WHICH WOULD FAVOUR THE GENESIS.

LOW LEVEL VORTICITY HAS NOT CHANGED DURING PAST 24 HOURS AND IS ABOUT 50 X10^{-6} S^{-1} AROUND SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS 20 X10^{-5} S^{-1} TO THE SOUTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS SAME AND IS AROUND 30 X10^{-5} S^{-1} TO THE SOUTH OF SYSTEM CENTRE. WIND SHEAR IS MODERATE (20-25 KNOTS) AROUND THE SYSTEM CENTRE WITH DECREASING TREND (BECOMING 10-15 KNOTS) ALONG THE EXPECTED TRACK OF THE SYSTEM.

NUMERICAL MODELS INCLUDING IMD GFS, ECMWF AND ECMWF ENSEMBLE, NCUM (REGIONAL), NCUM (GLOBAL) AND IMD MULTIMODEL ENSEMBLE(MME) ARE INDICATING LIKELIHOOD OF FORMATION OF DEPRESSION OVER SOUTHEAST BOB & ADJOINING SOUTH ANDAMAN SEA ON 19TH MARCH WITH SUBSEQUENT INTENSIFICATION INTO A CYCLONIC STORM AROUND 21ST 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 MARGINAL CYCLONIC STORM ONLY. THERE IS GOOD CONSENSUS AMONG THESE MODELS W.R.T. MOVEMENT OF SYSTEM TOWARDS THE BANGLADESH & NORTH MYANMAR COASTS.

IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT THE LOW PRESSURE AREA OVER SOUTHEAST BOB IS LIKELY TO MOVE EAST-NORTHEASTWARDS, BECOME A WELL MARKED LOW PRESSURE AREA AND LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA ON 19TH. THEREAFTER, IT IS LIKELY TO MOVE NORTH-NORTHWESTWARDS INITIALLY ALONG & OFF ANDAMAN & NICOBAR ISLANDS AND INTENSIFY INTO A DEPRESSION BY 0000 UTC OF 20TH & INTO A CYCLONIC STORM BY 21ST MARCH MORNING. IT WOULD THEN CONTINUE TO MOVE NEARLY NORTHWARDS AND REACH NEAR BANGLADESH AND ADJOINING NORTH MYANMAR COAST ON 22ND MARCH.

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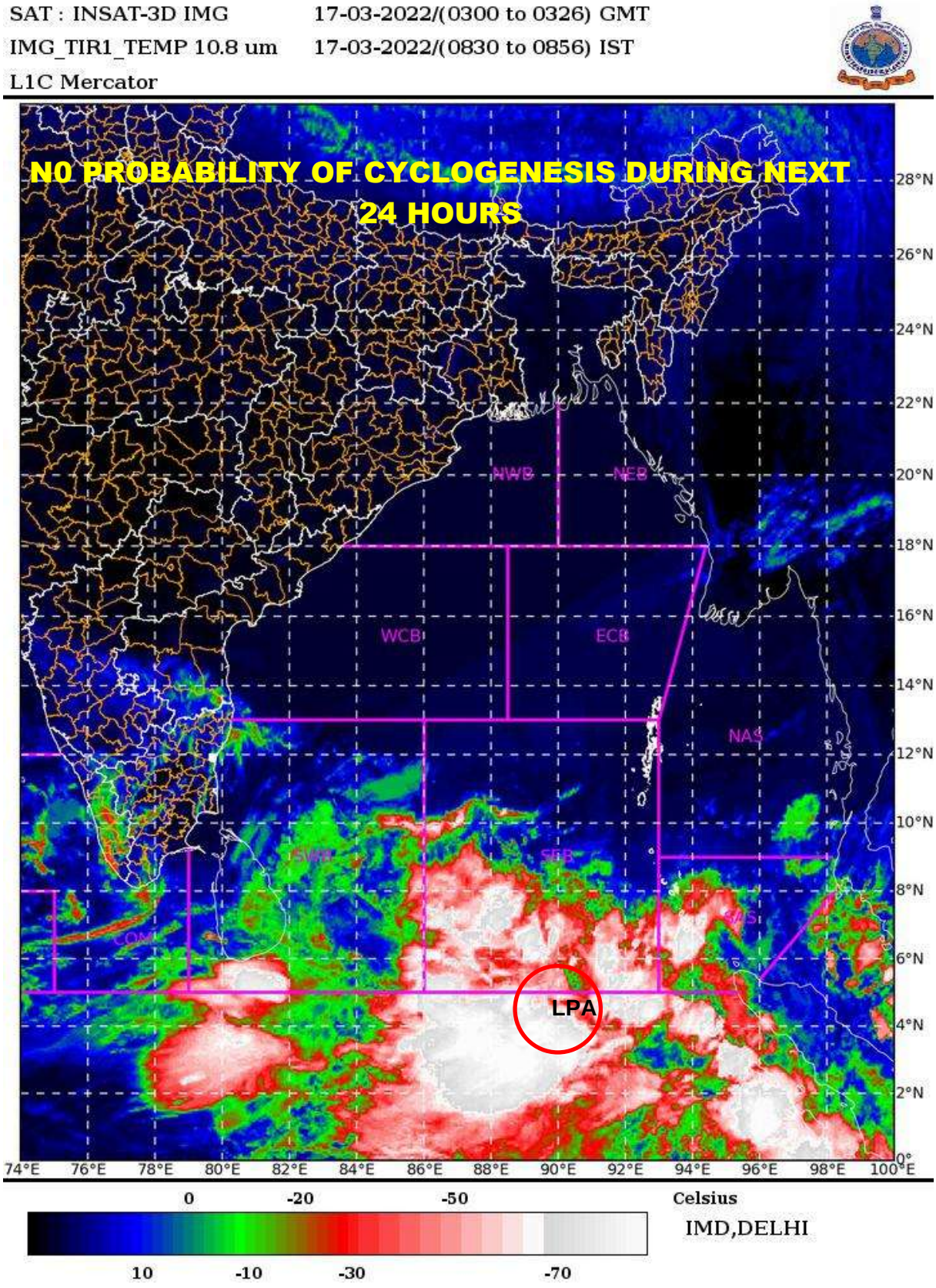
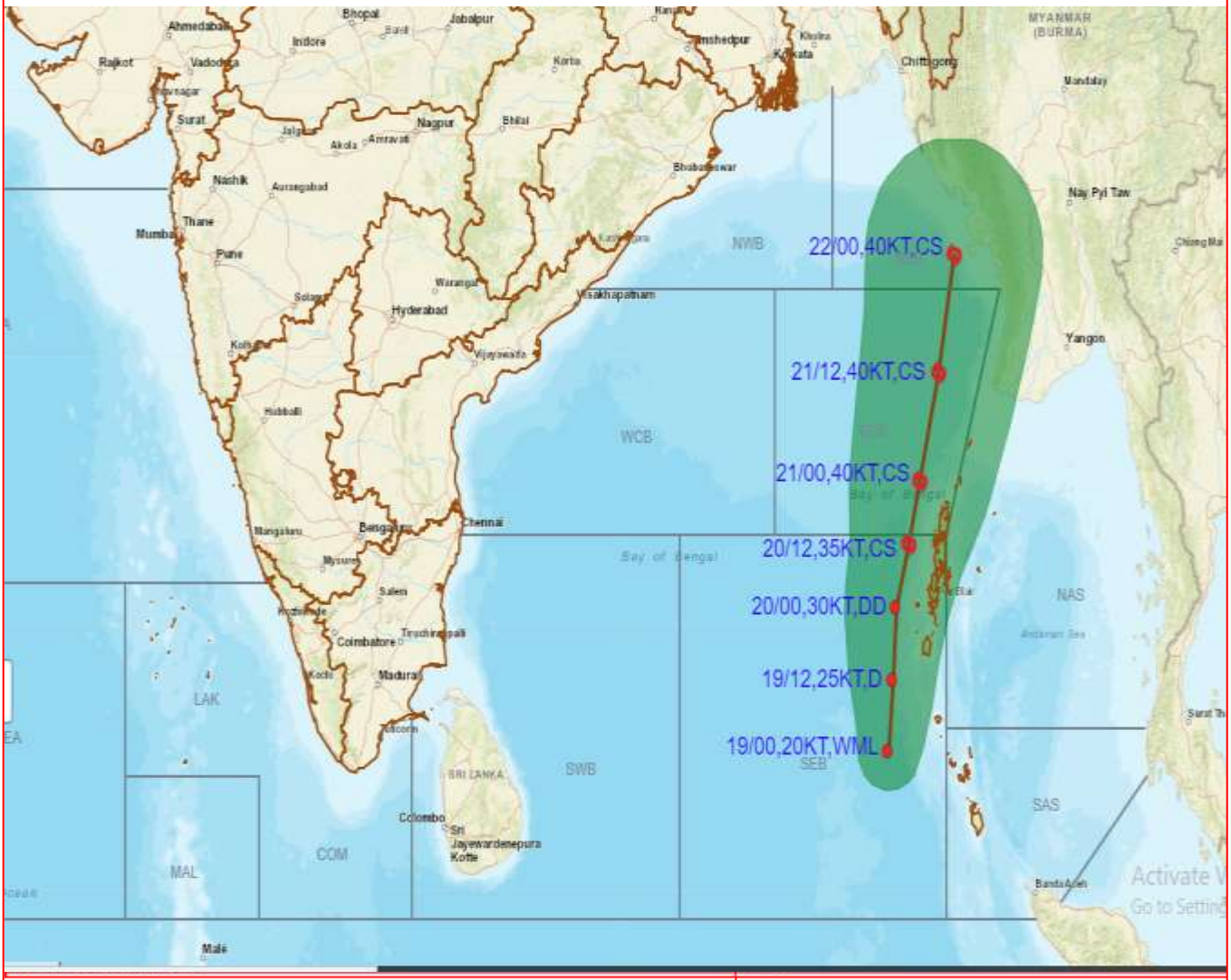


LPA: LOW PRESSURE AREA

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100% This is a guidance Bulletin for the WMO/ESCAP Panel Member countries,. Please visit respective National websites for Country specific Bulletins

EXPERIMENTAL PRE-GENESIS TRACK FORECAST ALONGWITH CONE OF UNCERTAINTY ISSUED AT THE STAGE OF LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL ON 0300 UTC OF 17TH MARCH 2022

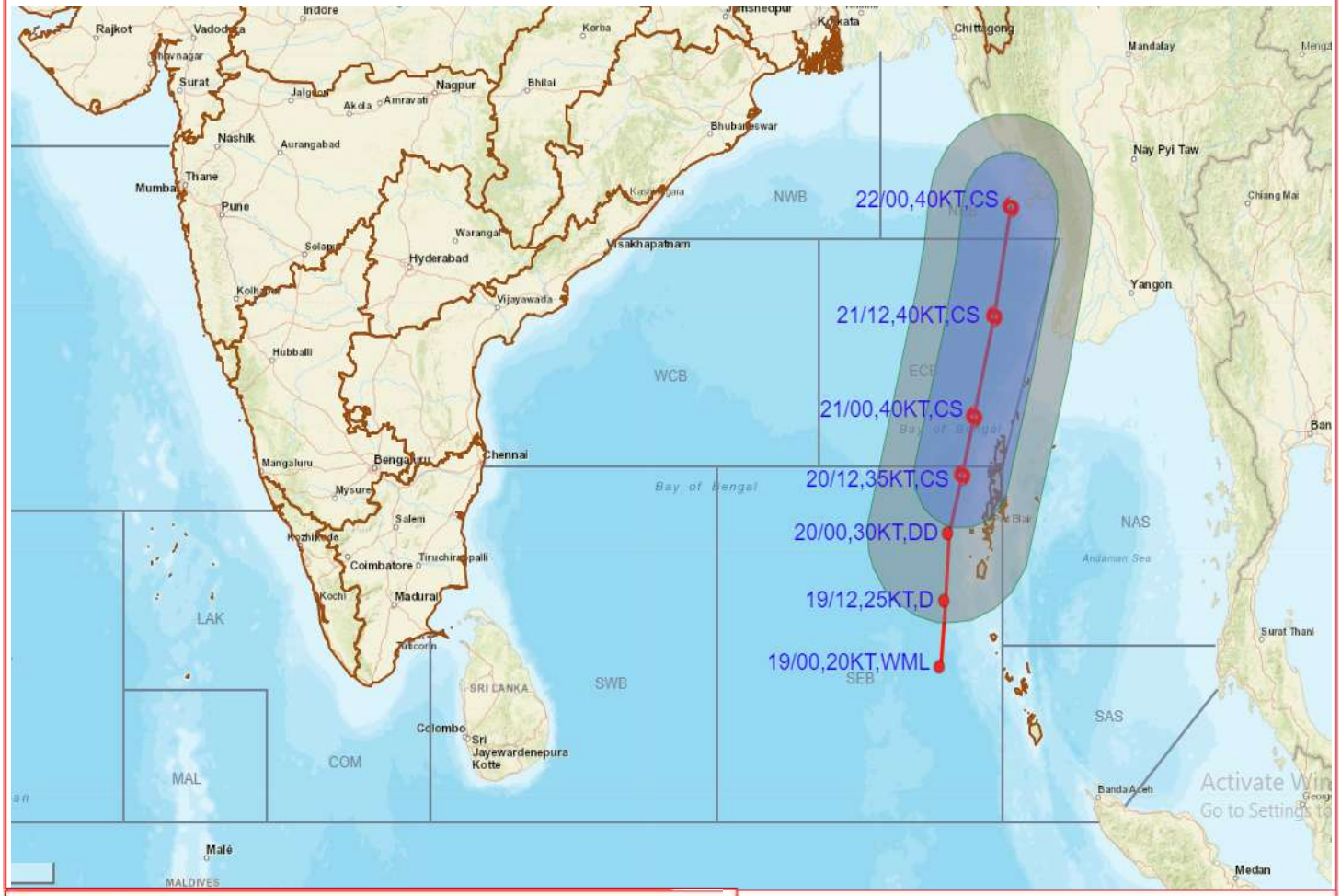


DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119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

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

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100% This is a guidance Bulletin for the WMO/ESCAP Panel Member countries,. Please visit respective National websites for Country specific Bulletins

EXPERIMENTAL PRE-GENESIS INTENSITY FORECAST ALONGWITH QUADRANT WIND DISTRIBUTION ISSUED AT THE STAGE OF LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL ON 0300 UTC OF 17TH 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
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

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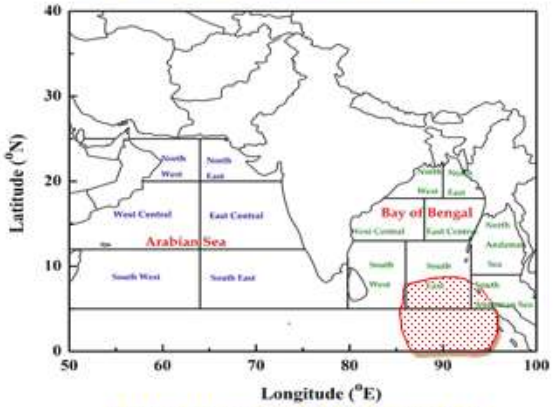
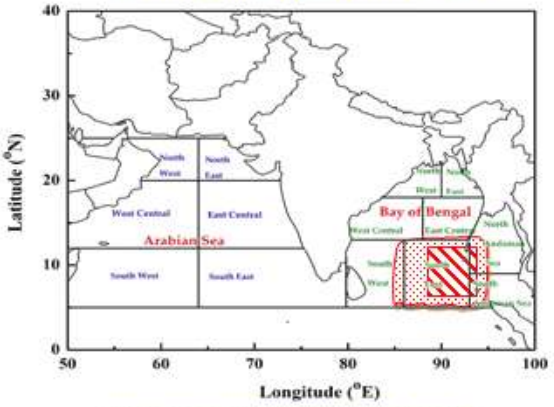
FISHERMEN WARNING GRAPHICS

INDIA METEOROLOGICAL DEPARTMENT
FISHERMAN WARNING FOR BAY OF BENGAL AND ARABIAN SEA

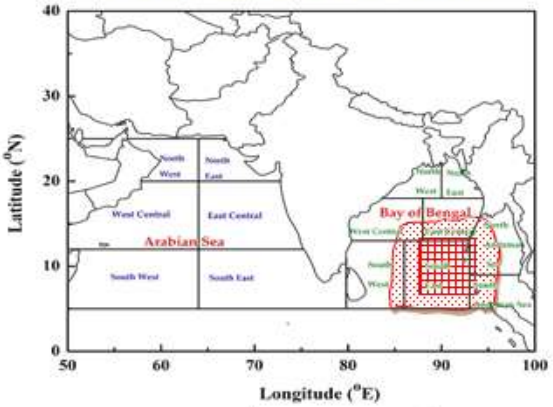
DAY-1: 17..03.2022/0600 UTC TO 18.03.2022/0600 UTC



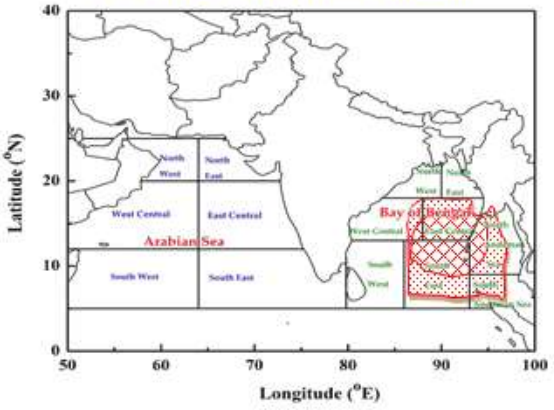
DAY-2: 18.03.2022/0600 UTC TO 19.03.2022`/0600 UTC



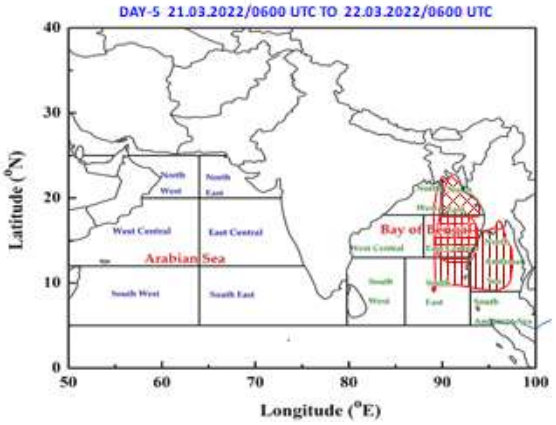
DAY-3-: 19.03.2022/0600 UTC TO 20.03.2022/0600 UTC



DAY-4 20.03.2022/0600 UTC TO 21.03.2022/0600 UTC



DAY-5 21.03.2022/0600 UTC TO 22.03.2022/0600 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
- 70-80 KMPH GUSTING TO 90 KMPH

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