



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY BULLETIN NO. 05

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. 05 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 15.05.2021 BASED ON 0600 UTC OF 15.05.2021.

SUB: CYCLONIC STORM “TAUKTAE” (PRONOUNCED AS TAU’TE) OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA.

THE CYCLONIC STORM “TAUKTAE” (PRONOUNCED AS TAU’TE) OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED NEARLY NORTH-WARDS WITH A SPEED OF ABOUT 13 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0600 HOURS UTC OF 15TH MAY, 2021 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 13.2°N AND LONGITUDE 72.5°E, 290 KM SOUTHWEST OF PANJIM-GOA (43192), 650 KM SOUTH-SOUTHWEST OF MUMBAI(43003), 880 KM SOUTH-SOUTHEAST OF VERAVAL (42909) AND 980 KM SOUTH-SOUTHEAST OF KARACHI (41780).

IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 03 HOURS AND INTO A VERY SEVERE CYCLONIC STORM DURING THE SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH GUJARAT COAST DURING 0000-0400UTC OF 18TH & CROSS GUJARAT COAST BETWEEN PORBANDAR & NALIYA AROUND 0900-1200UTC OF 18TH MAY, 2021.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
15.05.21/0600	13.2/72.5	80-90 gusting to 100	Cyclonic Storm
15.05.21/1200	13.8/72.4	95-105 gusting to 115	Severe Cyclonic Storm
15.05.21/1800	14.5/72.3	110-120 gusting to 135	Severe Cyclonic Storm
16.05.21/0000	15.3/72.0	115-125 gusting to 140	Very Severe Cyclonic Storm
16.05.21/0600	15.7/71.7	125-135 gusting to 150	Very Severe Cyclonic Storm
16.05.21/1800	17.2/71.1	135-145 gusting to 160	Very Severe Cyclonic Storm
17.05.21/0600	18.7/70.3	145-155 gusting to 170	Very Severe Cyclonic Storm
17.05.21/1800	20.1/69.7	150-160 gusting to 175	Very Severe Cyclonic Storm
18.05.21/0600	21.4/69.2	150-160 gusting to 175	Very Severe Cyclonic Storm

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

18.05.21/1800	23.2/69.5	125-135 gusting to 150	Very Severe Cyclonic Storm
19.05.21/0600	25.0/70.0	60-70 gusting to 80	Cyclonic Storm

REMARKS:

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 0600 UTC OF TODAY, THE INTENSITY OF THE SYSTEM IS CATEGORISED AS T 3.0 WITH CDO PATTERN. ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93°C . BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER ARABIAN SEA (AS) BETWEEN LATITUDE 11.0°N & 19°N AND ND EAST OF LONG 65.0E .

THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 990 HPA. SEA CONDITION IS HIGH.

THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 2 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE TO BE IN SAME PHASE & SAME AMPLITUDE TILL 17TH. THEREAFTER, IT WILL MOVE TO PHASE 3 WITH AMPLITUDE NEAR 1. THUS, MJO IS CONDUCIVE FOR ENHANCED CONVECTION OVER THE ARABIAN SEA (AS) DURING NEXT 3 DAYS. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN $140 \text{ KJ}/\text{CM}^2$ OVER SOUTHEAST AS AND IS DECREASING OVER CENTRAL PARTS OF CENTRAL AS & NORTH AS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30°C OVER ENTIRE AS & $30-31^{\circ}\text{C}$ OVER SOUTHEAST AS. THE CROSS EQUATORIAL FLOW IN THE NEAR EQUATORIAL BELT IS ENHANCED DUE TO WESTERLY WIND BURST.

THE LOW LEVEL CYCLONIC VORTICITY HAS REMAINING SAME DURING PAST 6- HOURS AND IT IS ABOUT $200 \times 10^{-6} \text{ S}^{-1}$ AROUND SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS ($50 \times 10^{-5} \text{ S}^{-1}$) TO THE SOUTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE REMAINS SAME WITH VALUE OF ($40 \times 10^{-5} \text{ S}^{-1}$) TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 12.5°N . THE SYSTEM IS IN A REGION OF MODERATE TO HIGH VERTICAL WIND SHEAR (VWS) (25-30 KTS).

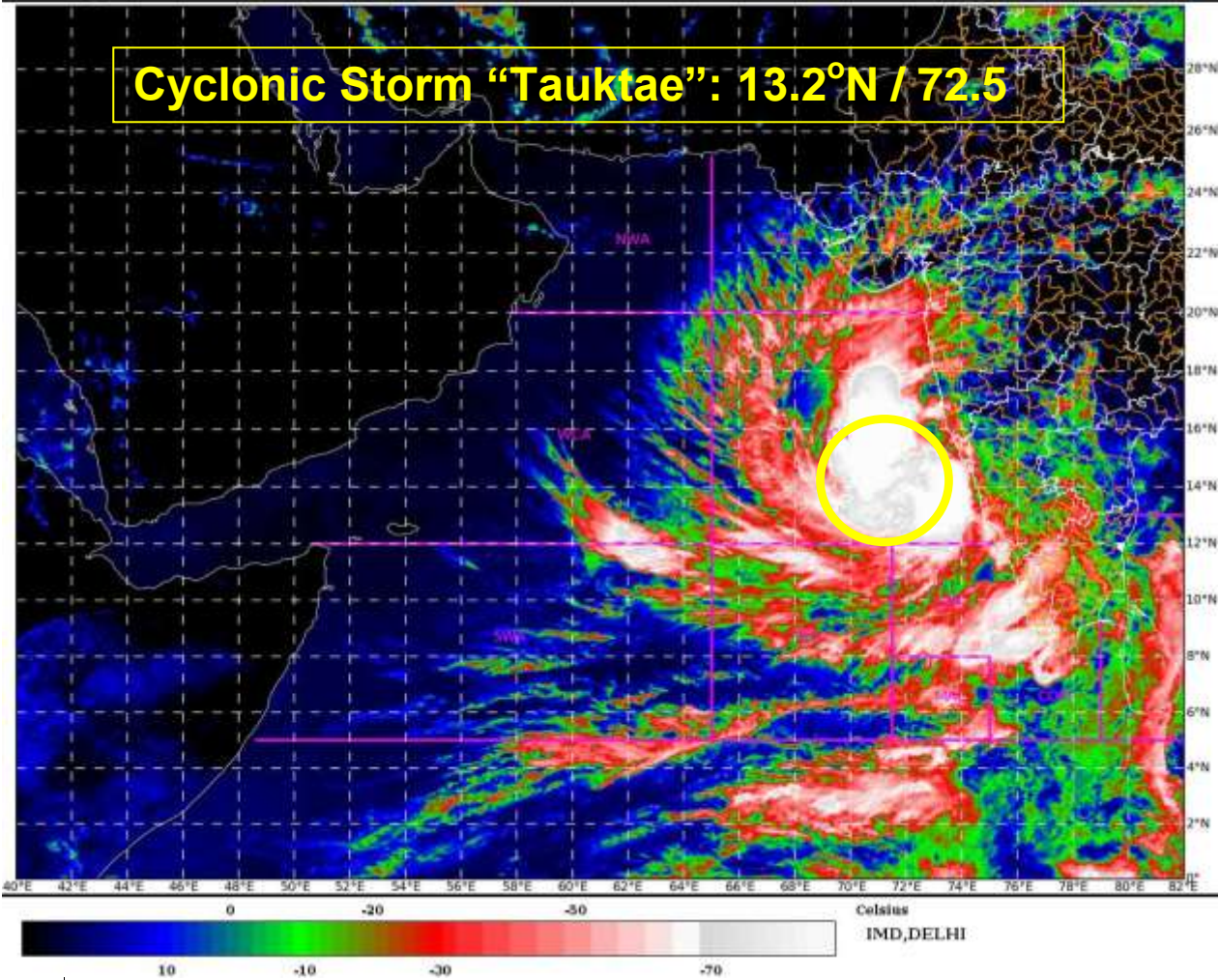
MOST OF THE NUMERICAL MODELS ARE INDICATING RAPID INTENSIFICATION OF THE SYSTEM. THE CYCLONIC STORM OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA WOULD INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 3 HOURS. IT WOULD MOVE NORTH-NORTHWESTWARDS AND CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) AND NALIYA (42631) DURING 0900-1200 UTC OF 18TH MAY.

THUS UNDER FAVOURABLE ENVIRONMENT LIKE MJO, HIGH SST, HIGH TCHP, GOOD POLEWARD OUTFLOW, MODERATE VWS AND WESTERLY WIND BURST, THE CYCLONIC STORM OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA WOULD INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 03 HOURS. IT IS VERY LIKELY TO INTENSIFY FURTHER INTO VERY SEVERE CYCLONIC STORM DURING SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) AND NALIYA (42631) DURING 0900-1200 UTC OF 18TH MAY.

(R. K Jenamani)
SCIENTIST-F
RSMC NEW DELHI

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

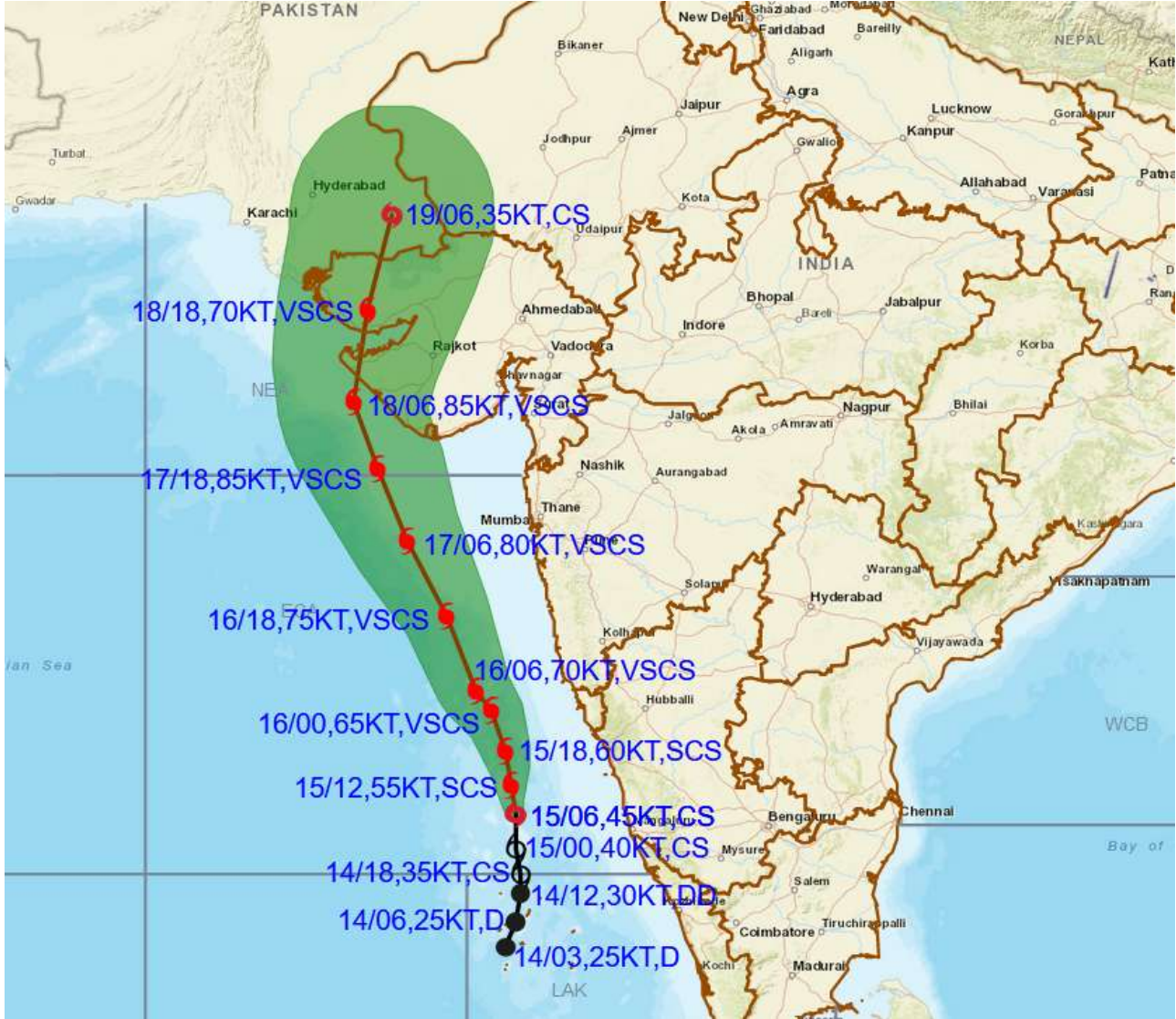
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 15TH MAY, 2021



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)

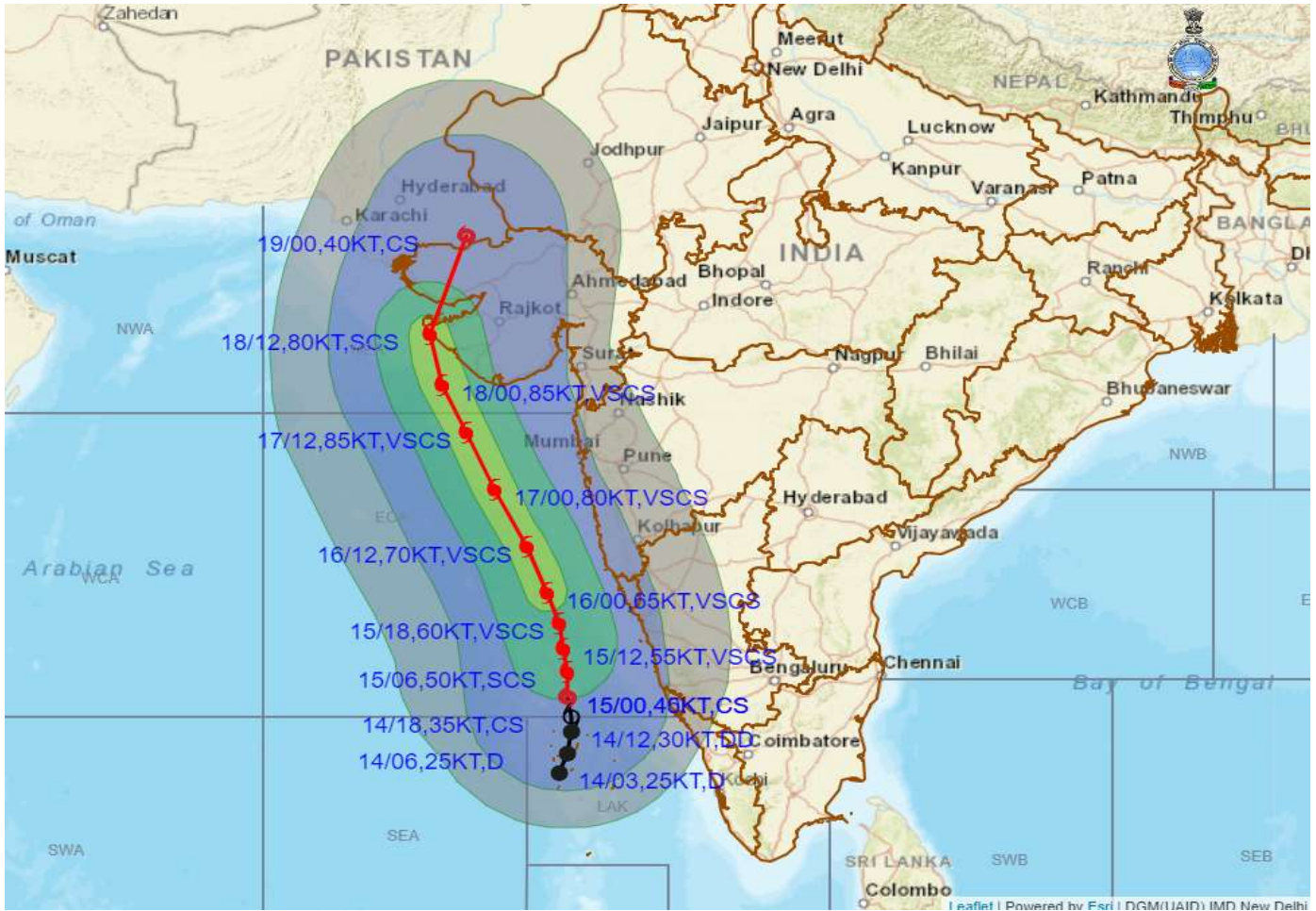
- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA BASED ON 0300 UTC OF 15TH MAY, 2021



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

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%