



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY BULLETIN NO. 09

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. 09 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2200 UTC OF 15.05.2021 BASED ON 1800 UTC OF 15.05.2021.

SUB: SEVERE CYCLONIC STORM “TAUKTAE” (PRONOUNCED AS TAU’TE) OVER EASTCENTRAL ARABIAN SEA

THE **SEVERE CYCLONIC STORM “TAUKTAE” (PRONOUNCED AS TAU’TE)** OVER EASTCENTRAL ARABIAN SEA MOVED NEARLY NORTHWARDS WITH A SPEED OF ABOUT 11 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1800 UTC OF 15TH MAY, 2021 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.4°N AND LONGITUDE 72.7°E, ABOUT 170 KM SOUTHWEST OF PANJIM-GOIA, 520 KM SOUTH OF MUMBAI, 760 KM SOUTH-SOUTHEAST OF VERAVAL (42909) AND 890 KM SOUTH-SOUTHEAST OF KARACHI (41780).

IT IS VERY LIKELY TO INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 03 HOURS AND INTENSIFY FURTHER. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH GUJARAT COAST DURING 1800-2200 UTC OF 17TH & CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) & MAHUVA (BHAVNAGAR DISTRICT; 42838) AROUND 0000 UTC OF 18TH MAY.

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
15.05.21/1800	14.4/72.7	110-120 gusting to 130	Severe Cyclonic Storm
16.05.21/0000	15.0/72.7	120-130 gusting to 145	Very Severe Cyclonic Storm
16.05.21/0600	15.8/72.4	130-140 gusting to 155	Very Severe Cyclonic Storm
16.05.21/1200	16.5/72.0	140-150 gusting to 165	Very Severe Cyclonic Storm
16.05.21/1800	17.3/71.5	145-155 gusting to 170	Very Severe Cyclonic Storm
17.05.21/0600	18.9/70.8	150-160 gusting to 175	Very Severe Cyclonic Storm
17.05.21/1800	20.2/70.5	150-160 gusting to 175	Very Severe Cyclonic Storm
18.05.21/0600	21.7/70.6	90-100 gusting to 110	Severe Cyclonic Storm
18.05.21/1800	23.4/71.3	50-60 gusting to 70	Deep Depression
19.05.21/0600	25.1/72.0	30-40 gusting to 50	Depression

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REMARKS:

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, THE INTENSITY OF THE SYSTEM IS CATEGORISED AS T 3.5 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 12.0°N & 19°N AND EAST OF LONG 67.0E .

THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 60 KNOTS GUSTING TO 70 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 982 HPA. SEA CONDITION IS VERY 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.

THE LOW LEVEL CYCLONIC VORTICITY IS ABOUT $250 \times 10^{-6} \text{ S}^{-1}$ AROUND SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS ($50 \times 10^{-5} \text{ S}^{-1}$) TO THE SOUTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE IS ($30 \times 10^{-5} \text{ S}^{-1}$) TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 12.5°N . THE SYSTEM IS ENTERING TO THE REGION OF LOW TO MODERATE VERTICAL WIND SHEAR (VWS) (10-15 KTS).

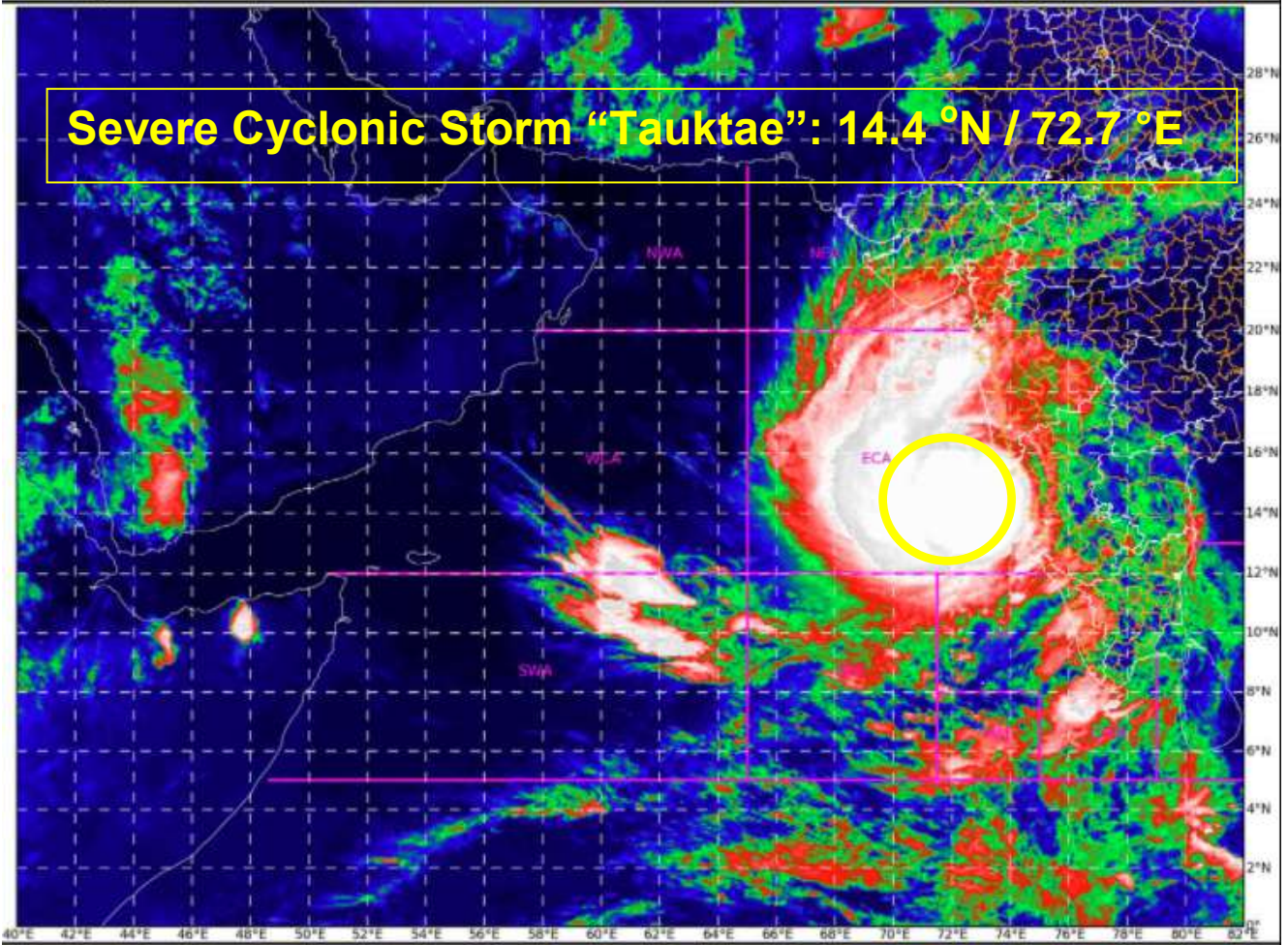
THE SEVERE CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA WOULD INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 06 HOURS. IT WOULD MOVE NORTH-NORTHWESTWARDS AND CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) & MAHUVA (BHAVNAGAR DISTRICT; 42838) AROUND 0000 UTC of 18th MAY.

THUS, UNDER FAVOURABLE ENVIRONMENT LIKE MJO, HIGH SST, HIGH TCHP, GOOD POLEWARD OUTFLOW, LOW TO MODERATE VWS AND WESTERLY WIND BURST, THE SEVERE CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA WOULD INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 06 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) & MAHUVA (BHAVNAGAR DISTRICT; 42838) AROUND 0000 UTC of 18th MAY.

(D. R. PATTANAİK)
SCIENTIST-F
RSMC, NEW DELHI

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

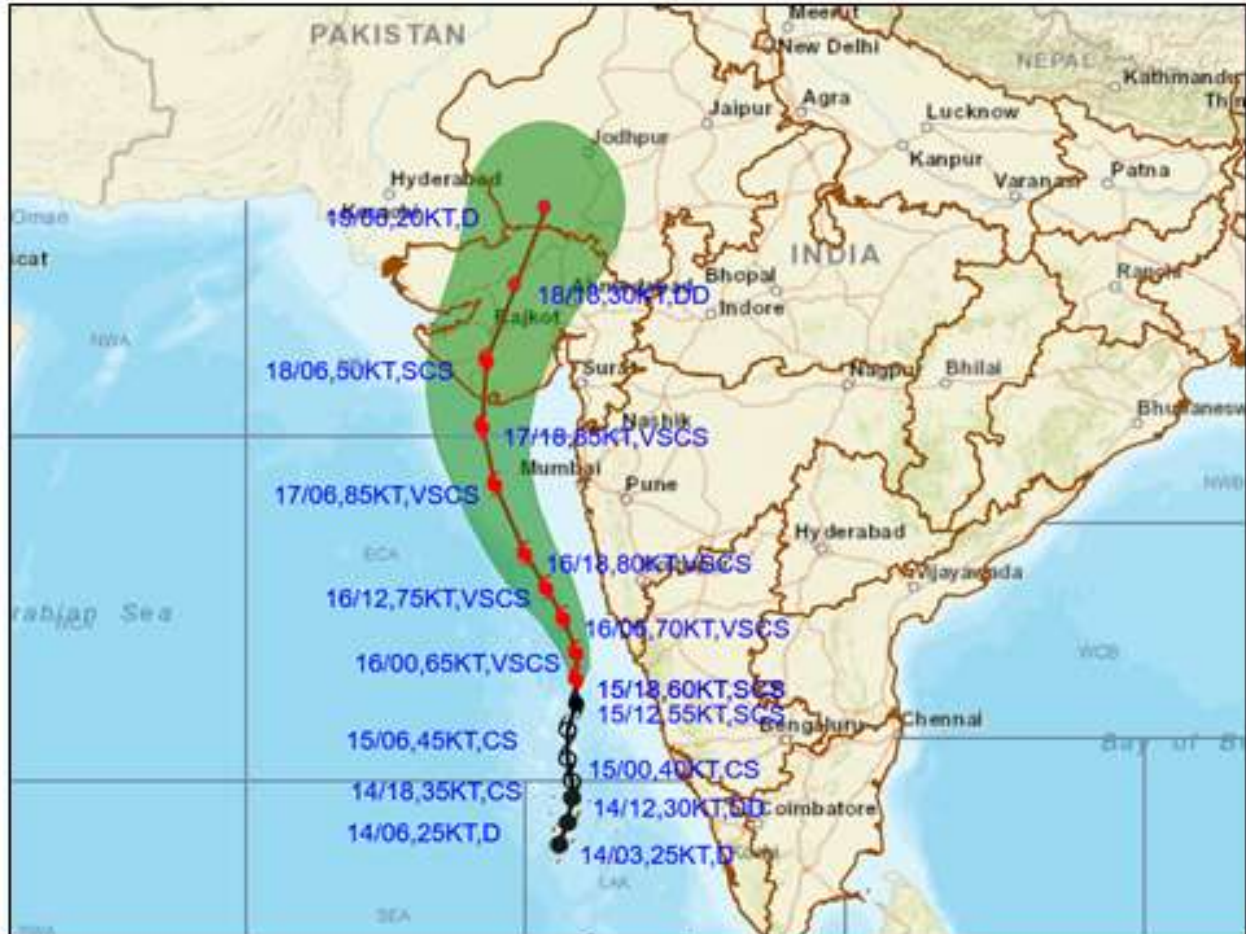
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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF SEVERE CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 1800 UTC OF 15TH MAY, 2021



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 (≥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

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