



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY BULLETIN NO. 20

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. 20 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 17.05.2021 BASED ON 0300 UTC OF 17.05.2021.

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

THE **EXTREMELY SEVERE CYCLONIC STORM “TAUKTAE” (PRONOUNCED AS TAU’TE)** OVER EASTCENTRAL ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 15 KMPH DURING PAST 06 HOURS, AND LAY CENTRED AT, 0300UTC OF TODAY, THE 17TH MAY, 2021 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 18.8°N AND LONGITUDE 71.5°E, ABOUT 150 KM WEST OF MUMBAI (43003), 220 KM SOUTH-SOUTHEAST OF DIU (42914), 260 KM S-SOUTHEAST OF VERAVAL (42909) AND 490 KM EAST-SOUTHEAST OF KARACHI (41780).

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH GUJARAT COAST DURING 1200-1500 UTC OF 17TH & CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) & MAHUVA (BHAVNAGAR DISTRICT 42838) AROUND 1500-1800 UTC OF 17TH MAY WITH A MAXIMUM SUSTAINED WIND SPEED OF 155-165 KMPH GUSTING TO 185 KMPH.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SURFACE WIND SPEED (KMPH)	SUSTAINED WIND SPEED	CATEGORY OF CYCLONIC DISTURBANCE
17.05.21/0300	18.8/71.5	180-190 GUSTING TO 210		EXTREMELY SEVERE CYCLONIC STORM
17.05.21/0600	19.2/71.4	180-190 GUSTING TO 210		EXTREMELY SEVERE CYCLONIC STORM
17.05.21/1200	20.2/71.1	170-180 GUSTING TO 200		EXTREMELY SEVERE CYCLONIC STORM
17.05.21/1800	21.0/71.1	150-160 GUSTING TO 175		VERY SEVERE CYCLONIC STORM
18.05.21/0000	21.9/71.3	110-120 GUSTING TO 130		SEVERE CYCLONIC STORM
18.05.21/1200	23.5/71.9	70-80 GUSTING TO 90		CYCLONIC STORM
19.05.21/0000	25.2/72.8	40-50 GUSTING TO 60		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 0300 UTC OF TODAY THE 17th MAY 2021, THE INTENSITY OF THE SYSTEM IS **CATEGORISED AS T 5.5 WITH EYE PATTERN. HOWEVER, EYE CONTINUED TO REMAIN RAGGED.** EYE TEMPERATURE MINUS 16.0 DEG C. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL ARABIAN SEA (AS) BETWEEN LATITUDE 14.5°N & 22°N AND EAST OF LONG 67.0E, OVER ADJOINING GOA, SOUTH KONKAN GOA AND WEST OF MADHYA MAHARASHTRA AND SOUTH GUJARAT.

THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 105 KNOTS GUSTING TO 115 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 950HPA. SEA CONDITION IS PHENOMENAL.

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 DURING SUBSEQUENT TWO DAYS. THUS, MJO IS CONDUCIVE FOR ENHANCED CONVECTION OVER THE ARABIAN SEA (AS) DURING NEXT 2 DAYS. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS 80-110 KJ/CM² OVER EAST CETNRAL AS AND DECREASING TOWARDS NORTH AS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30⁰C EAST CETNRAL AS AND DECREASING TO 29⁰C TOWARDS NORTH AS.

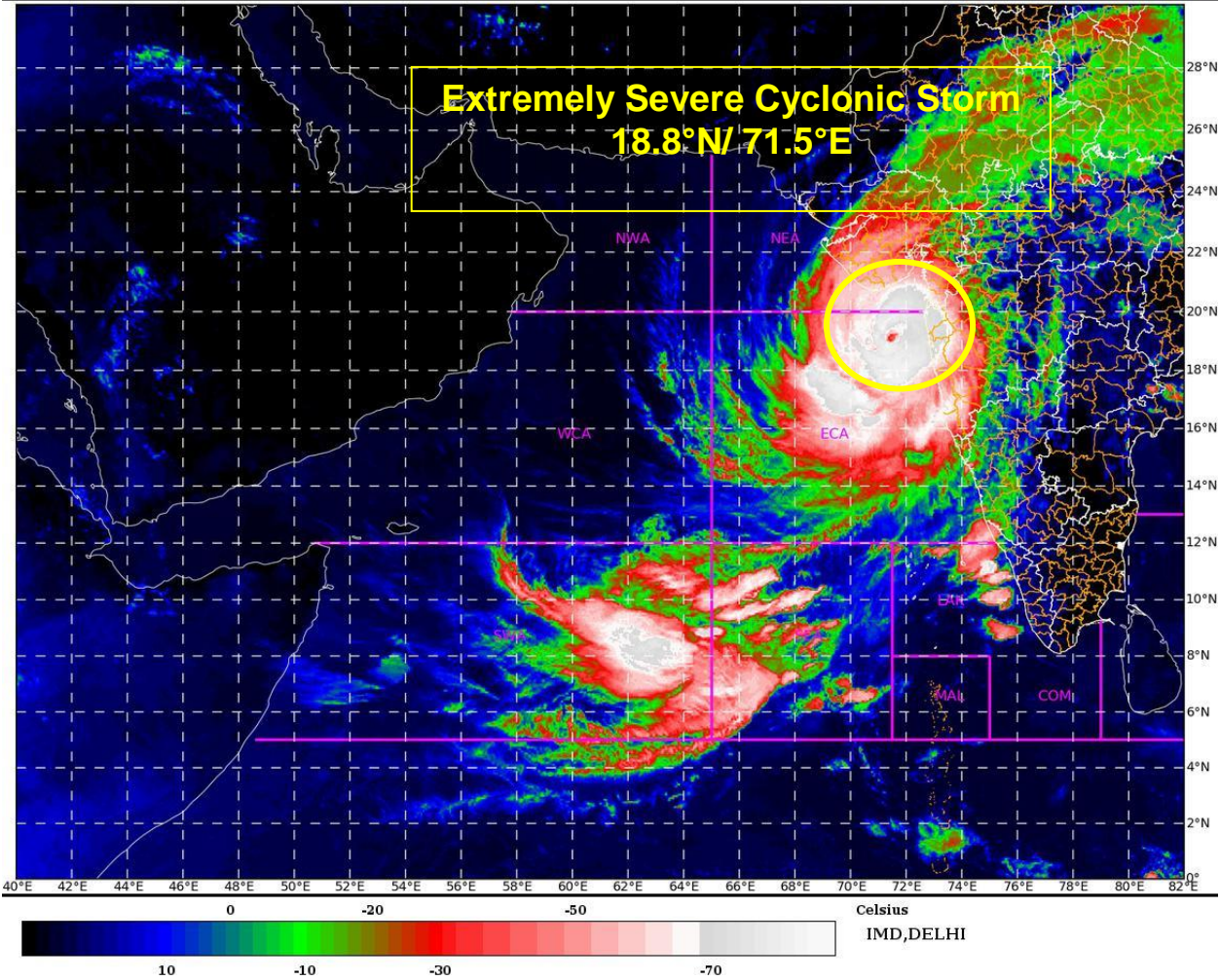
THE LOW LEVEL CYCLONIC VORTICITY IS ABOUT 250-300 X10⁻⁶ S⁻¹ AROUND SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS (40 X10⁻⁵ S⁻¹) TO THE SOUTHEAST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE IS (30 X 10⁻⁵ S⁻¹) NORTH OF THE SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 21⁰N. THE SYSTEM IS IN THE REGION OF LOW VERTICAL WIND SHEAR (VWS) (10-15 KTS) AND LIKELY TO COME UNDER INFLUENCE OF MODERATE WIND SHEAR DURING NEXT 18-HOURS.

THUS, UNDER FAVOURABLE ENVIRONMENT, THE EXTREMELY SEVERE CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS MAINTAINING ITS INTENSITY AND WEAKEN A LITTLE TO CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) & MAHUVA (BHAVNAGAR DISTRICT; 42838) BETWEEN 15 UTC AND 18 UTC OF 17th MAY AS A VERY SEVERE CYCLONIC STORM. DIFFERENT NWP MODELS WITH DETERMINISTIC AND ENSEMBLE FORECASTS ARE SUGGESTING THE SIMILAR SITUATION.

(RK J ENAMANI)
SCIENTIST-F
RSMC, NEW DELHI

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

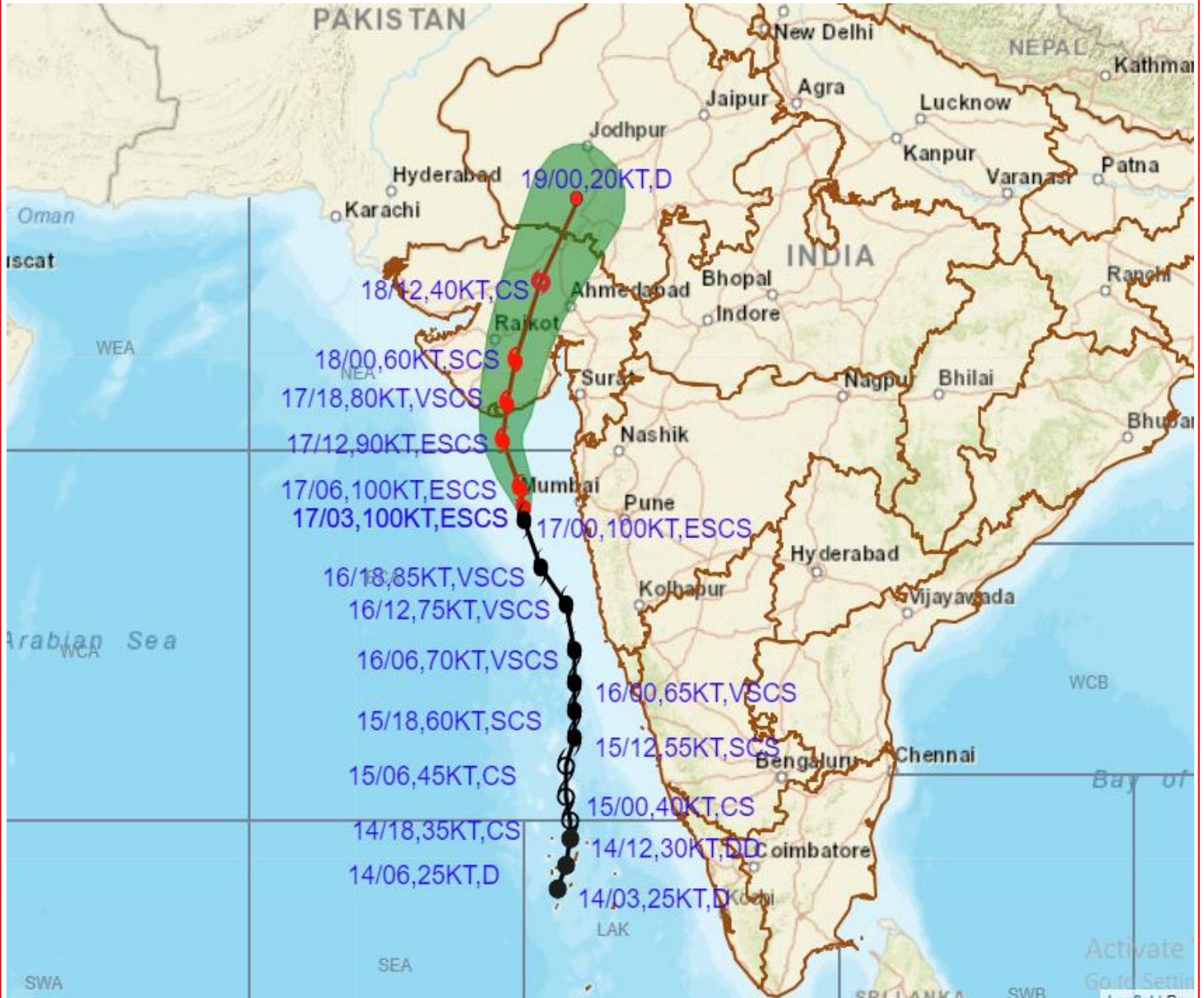
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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF EXTREMELY SEVERE CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 0300 UTC OF 17TH MAY, 2021

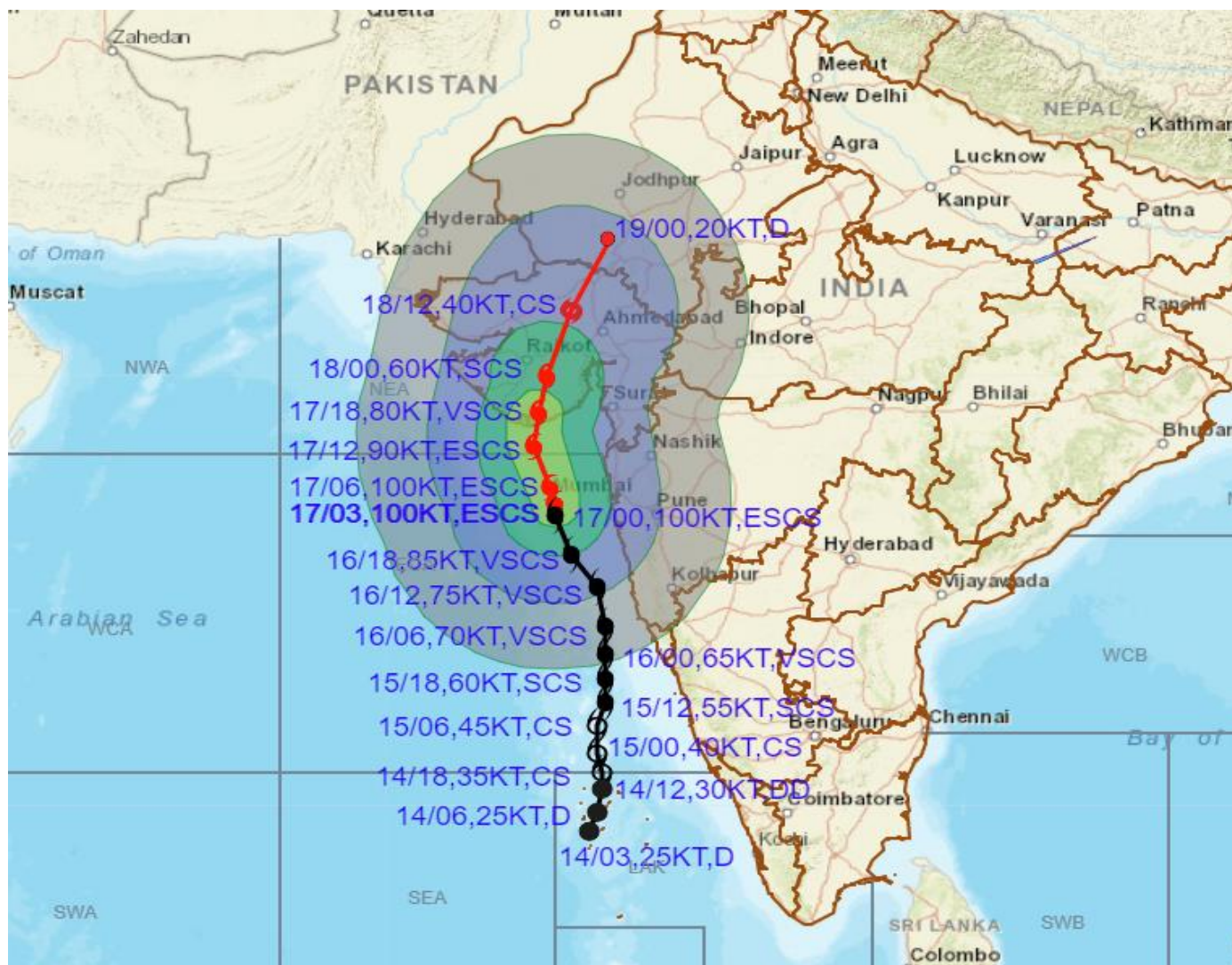


<p>DATE/TIME IN UTC IST=UTC + 0530 L: LOW PRESSURE AREA WML: WELL MARKED LOW PRESSURE AREA D: DEPRESSION (17-27 KT) DD: DEEP DEPRESSION (28-33 KT) CS: CYCLONIC STORM (34-47 KT) SCS: SEVERE CYCLONIC STORM (48-63KT) VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT) ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT) SuCS: SUPER CYCLONIC STORM (≥ 120 KT)</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">●</td> <td>LESS THAN 34 KT</td> </tr> <tr> <td style="text-align: center;">⊙</td> <td>34-47 KT</td> </tr> <tr> <td style="text-align: center;">⊕</td> <td>≥ 48 KT</td> </tr> <tr> <td style="text-align: center;">—</td> <td>OBSERVED TRACK</td> </tr> <tr> <td style="text-align: center;">—</td> <td>FORECAST TRACK</td> </tr> <tr> <td style="text-align: center;">▲</td> <td>CONE OF UNCERTAINTY</td> </tr> </table>	●	LESS THAN 34 KT	⊙	34-47 KT	⊕	≥ 48 KT	—	OBSERVED TRACK	—	FORECAST TRACK	▲	CONE OF UNCERTAINTY
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DATE/TIME IN UTC

IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

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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

AREA OF MAXIMUM SUSTAINED WIND SPEED:

■ 28-33 KT (52-61 KMPH)

■ 34-49 KT (62-91 KMPH)

■ 50-63 KT (92-117 KMPH)

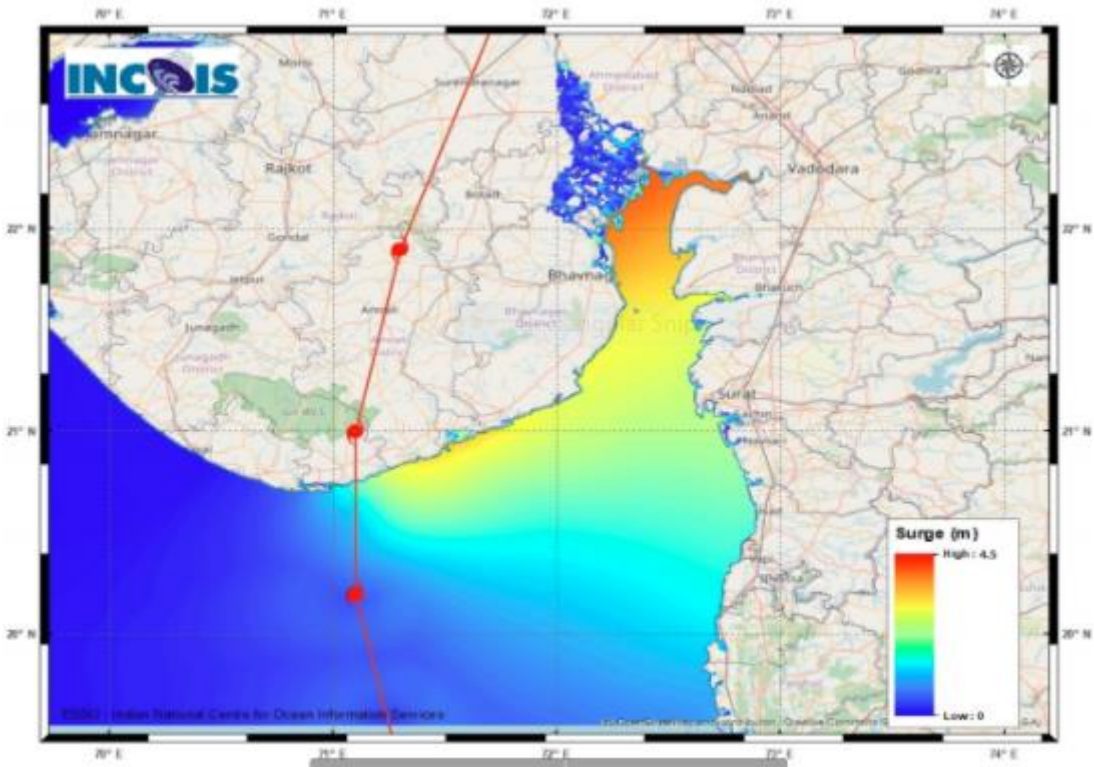
■ \geq 64 KT (\geq 118 KMPH)

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
\geq 64 (\geq 118)	Phenomenal	Total suspension of fishing operations

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Page 2 Figure: S6rm Surge Map

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