



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY BULLETIN NO. 12

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. 12 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0630 UTC OF 16.05.2021 BASED ON 0300 UTC OF 16.05.2021.

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

THE VERY 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 0300 UTC OF 16th MAY, 2021 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 15.3°N AND LONGITUDE 72.7°E, ABOUT 120 KM WEST-SOUTHWEST OF PANJIM-GOA(43192), 420 KM SOUTH OF MUMBAI(43003),, 660 KM SOUTH-SOUTHEAST OF VERAVAL (42909) AND 810 KM SOUTHEAST OF KARACHI (41780).

IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. 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 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
16.05.21/0300	15.3/72.7	130-140 gusting to 155	Very Severe Cyclonic Storm
16.05.21/0600	15.8/72.6	135-145 gusting to 155	Very Severe Cyclonic Storm
16.05.21/1200	16.5/72.2	140-150 gusting to 165	Very Severe Cyclonic Storm
16.05.21/1800	17.3/71.6	145-155 gusting to 170	Very Severe Cyclonic Storm
17.05.21/0000	18.1/71.2	150-160 gusting to 175	Very Severe Cyclonic Storm
17.05.21/1200	19.5/70.7	150-160 gusting to 175	Very Severe Cyclonic Storm
18.05.21/0000	21.0/70.6	150-160 gusting to 175	Very Severe Cyclonic Storm
18.05.21/1200	22.6/71.0	70-80 gusting to 90	Cyclonic Storm
19.05.21/0000	24.2/71.7	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 0300 UTC OF TODAY THE 16th MAY 2021, THE INTENSITY OF THE SYSTEM IS CATEGORISED AS T 4.0 WITH CDO PATTERN. ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93^oC. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL ARABIAN SEA (AS) BETWEEN LATITUDE 12.0^oN & 20^oN AND EAST OF LONG 67.0E, OVER SOUTH KONKAN GOA & COASTAL KARNATAKA AND SOUTH MAHARASHTRA.

THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 70 KNOTS GUSTING TO 80 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 980 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 DURING SUBSEQUENT TWO DAYS. 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 KJ/CM² OVER SOUTHEAST AS AND IS DECREASING OVER CENTRAL PARTS OF CENTRAL AS & NORTH AS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30^oC OVER ENTIRE AS.

THE LOW LEVEL CYCLONIC VORTICITY IS ABOUT $300 \times 10^{-6} \text{ S}^{-1}$ 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 ($20 \times 10^{-5} \text{ S}^{-1}$) AROUND THE SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 20^oN. THE SYSTEM IS IN THE REGION OF LOW VERTICAL WIND SHEAR (VWS) (10-15 KTS).

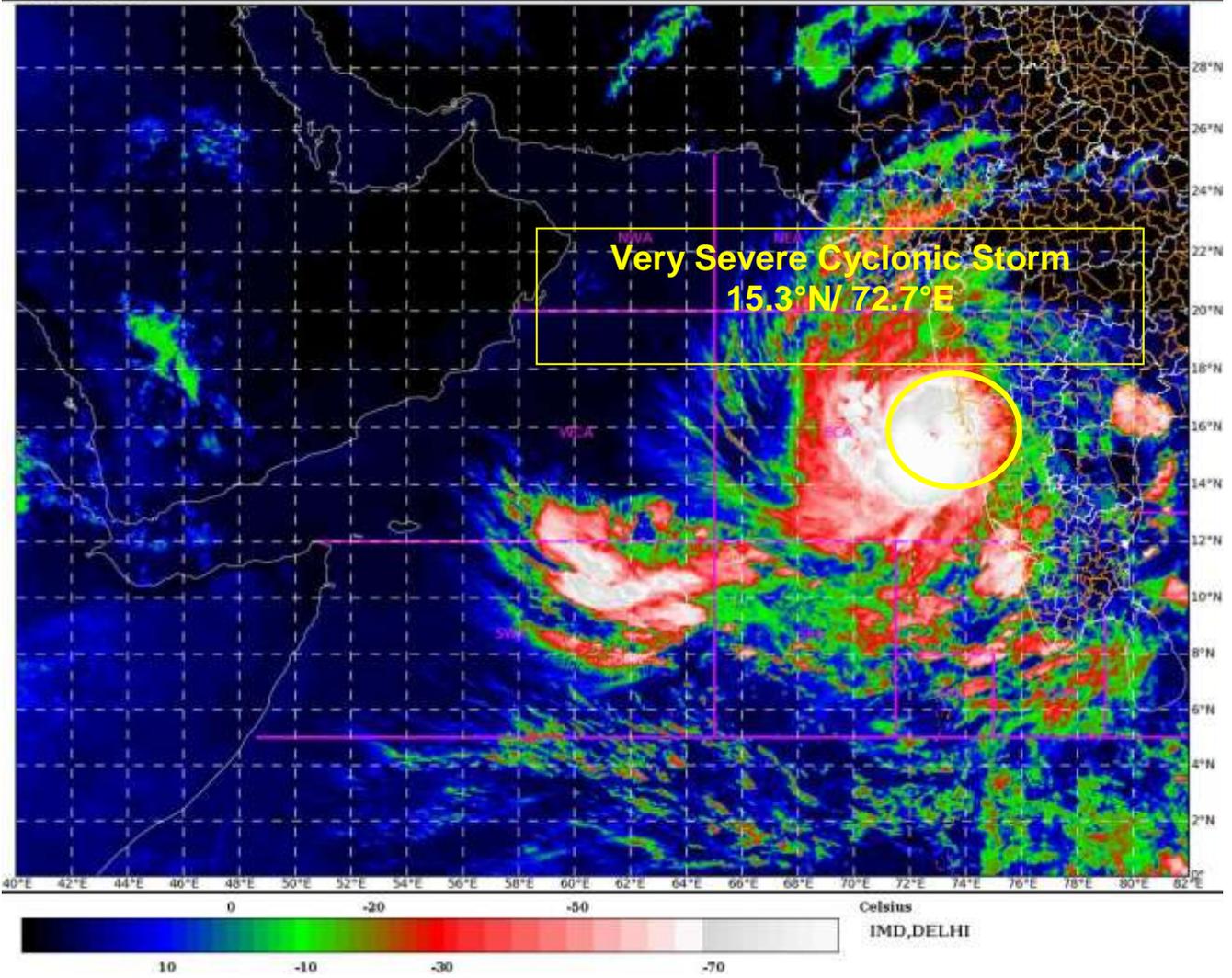
MOST OF THE MODELS ARE INDICATING THAT THE VERY SEVERE CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA WOULD INTENSIFY FURTHER. IT WOULD MOVE NORTH-NORTHWESTWARDS AND CROSS GUJARAT COAST BETWEEN PORBANDAR (42830) & MAHUVA (BHAVNAGAR DISTRICT; 42838) AROUND 0000 UTC OF 18th MAY.

THUS, UNDER FAVOURABLE ENVIRONMENT LIKE MJO, HIGH SST, HIGH TCHP, GOOD POLEWARD OUTFLOW, LOW VWS AND WESTERLY WIND BURST, THE VERY SEVERE CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA WOULD INTENSIFY FURTHER DURING NEXT 24 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.

(R.K. JENAMANI)
SCIENTIST-F
RSMC, NEW DELHI

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

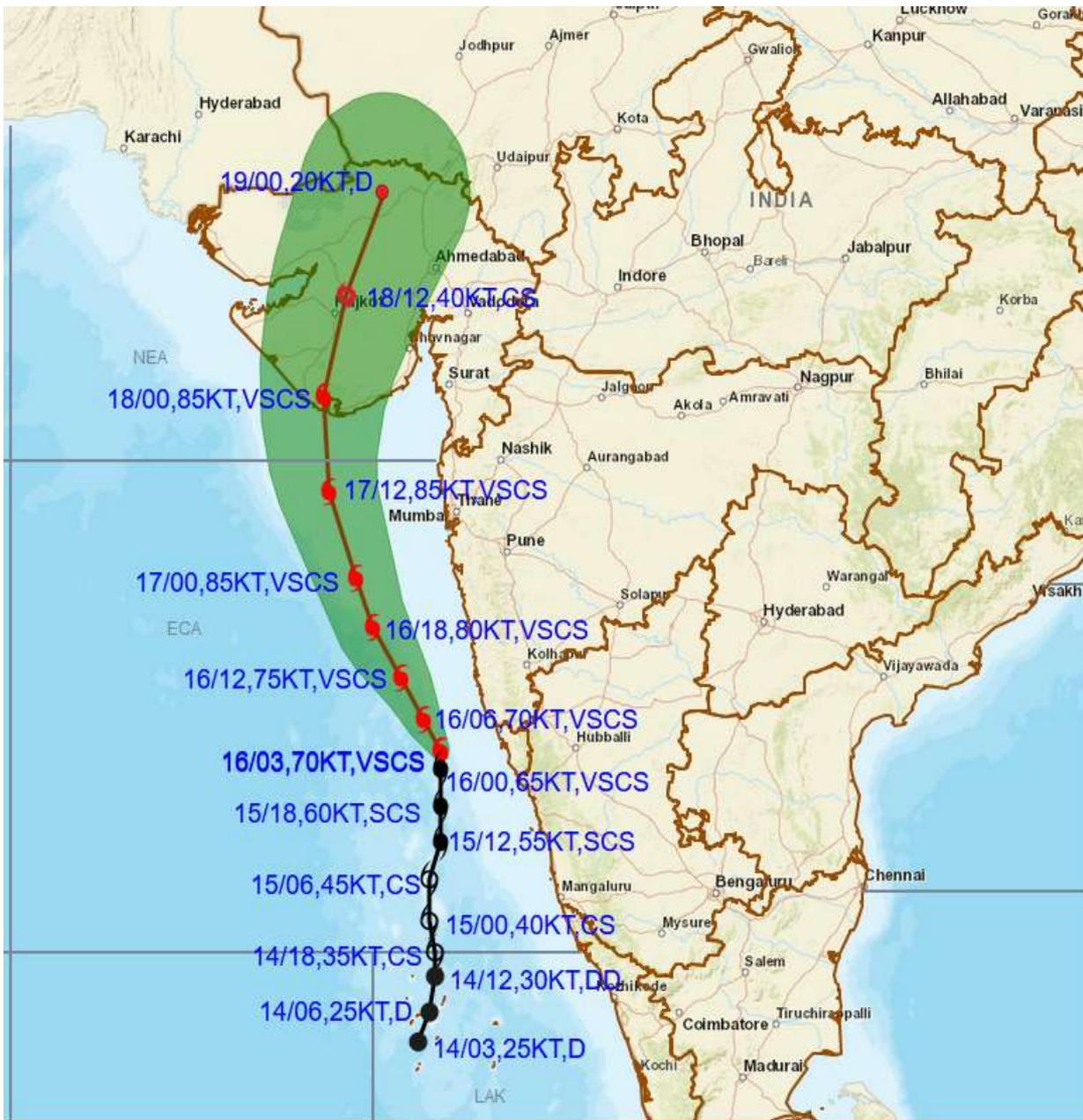
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NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 0300 UTC OF 16TH MAY, 2021



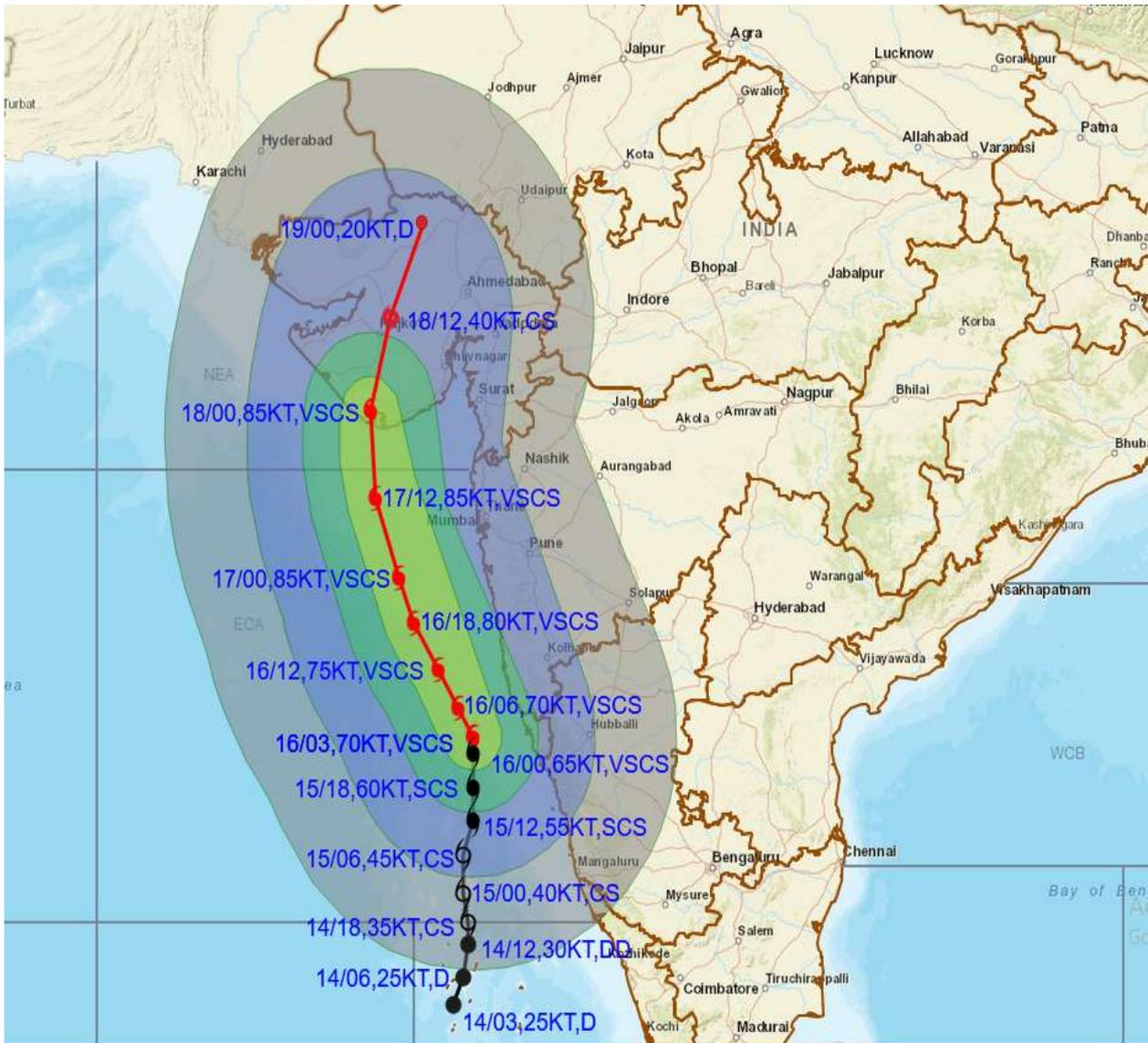
DATE/TIME IN UTC
 IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119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

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<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>	<ul style="list-style-type: none"> ● 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)
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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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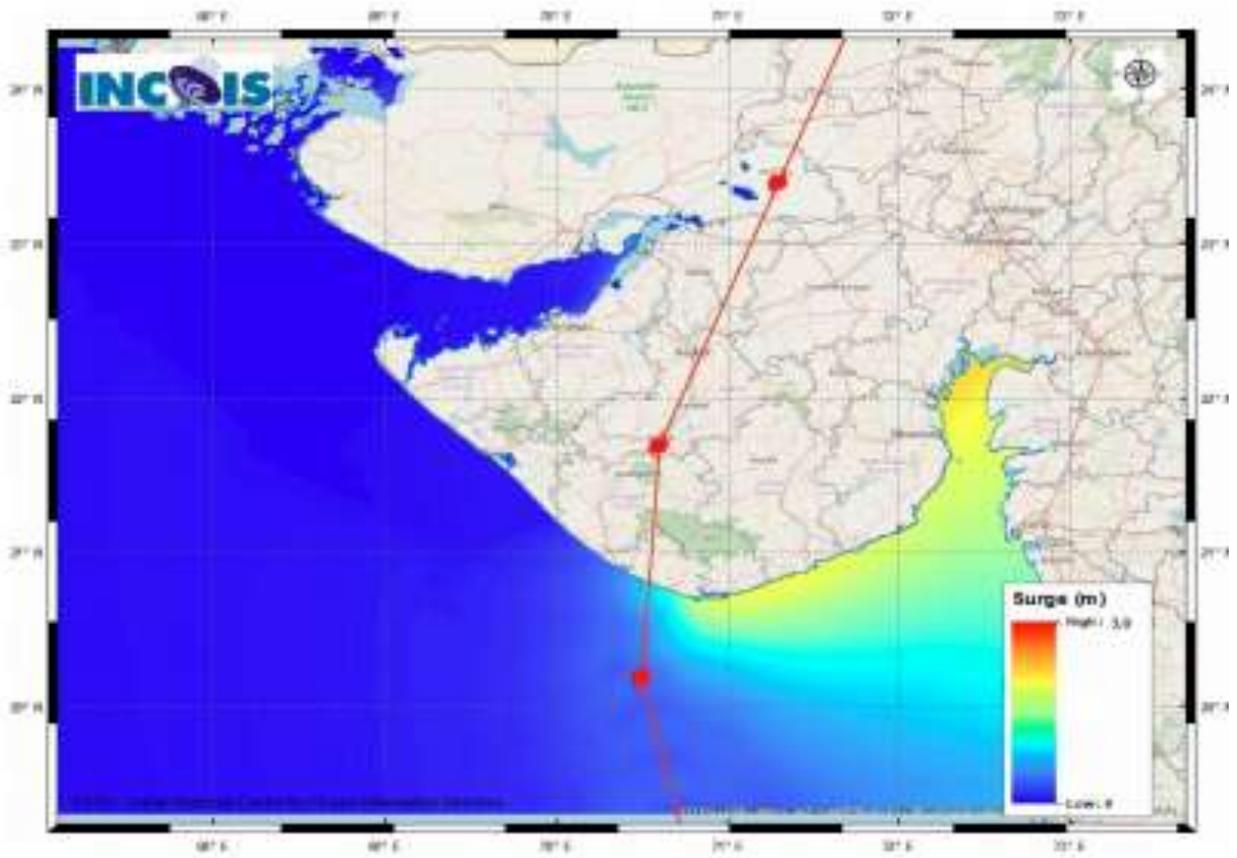


Figure:Storm Surge Map

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
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