REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 14

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. 14 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 16.05.2021 BASED ON 0900 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 NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 16 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0900UTC OF TODAY, THE 16TH MAY, 2021 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 16.2°N AND LONGITUDE 72.6°E, ABOUT 150 KM WEST-NORTHWEST OF PANJIM-GOA(43192), 320 KM SOUTH-SOUTHWEST OF MUMBAI(43003), 570 KM SOUTH-SOUTHEAST OF VERAVAL (42909) AND 530 KM SOUTH-SOUTHEAST OF DIU (42914) AND 740 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.

THE SYSTEM IS BEING MONITORED BY DOPPLER WEATHER RADAR GOA.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
16.05.21/0900	16.2/72.6	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
16.05.21/1200	16.5/72.4	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
16.05.21/1800	17.4/71.8	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
17.05.21/0000	18.2/71.3	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
17.05.21/0600	19.0/71.0	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
17.05.21/1800	20.2/70.8	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
18.05.21/0600	21.7/71.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
18.05.21/1800	23.4/71.6	50-60 GUSTING TO 70	DEEP DEPRESSION
19.05.21/0600	24.9/72.2	35-45 GUSTING TO 55	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 0900 UTC OF TODAY THE 16th MAY 2021, THE INTENSITY OF THE SYSTEM IS **CATEGORISED AS T 4.5 WITH EYE PATTERN. HOWEVER, EYE HAS BECOME RAGGED.** BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL ARABIAN SEA (AS) BETWEEN LATITUDE 12.0°N & 20°N AND EAST OF LONG 67.0E, OVER SOUTH KONKAN GOA & COASTAL KARNATAKA AND SOUTH MAHARASHTRA.

THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 972 HPA. 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 3 DAYS. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 140 KJ/CM^2 OVER SOUTHEAST AS AND IS DECREASING OVER CENTRAL PARTS OF CENTRAL AS & NORTH AS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30^{0}C OVER ENTIRE AS.

THE LOW LEVEL CYCLONIC VORTICITY IS ABOUT 300 X10^{-6} S^{-1} AROUND SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS (30 X10^{-5} S^{-1}) TO THE SOUTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE IS (20 X 10^{-5} S^{-1}) AROUND THE SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 21^{0}N. 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.

(SUNITHA DEVI)
SCIENTIST-F
RSMC, NEW DELHI

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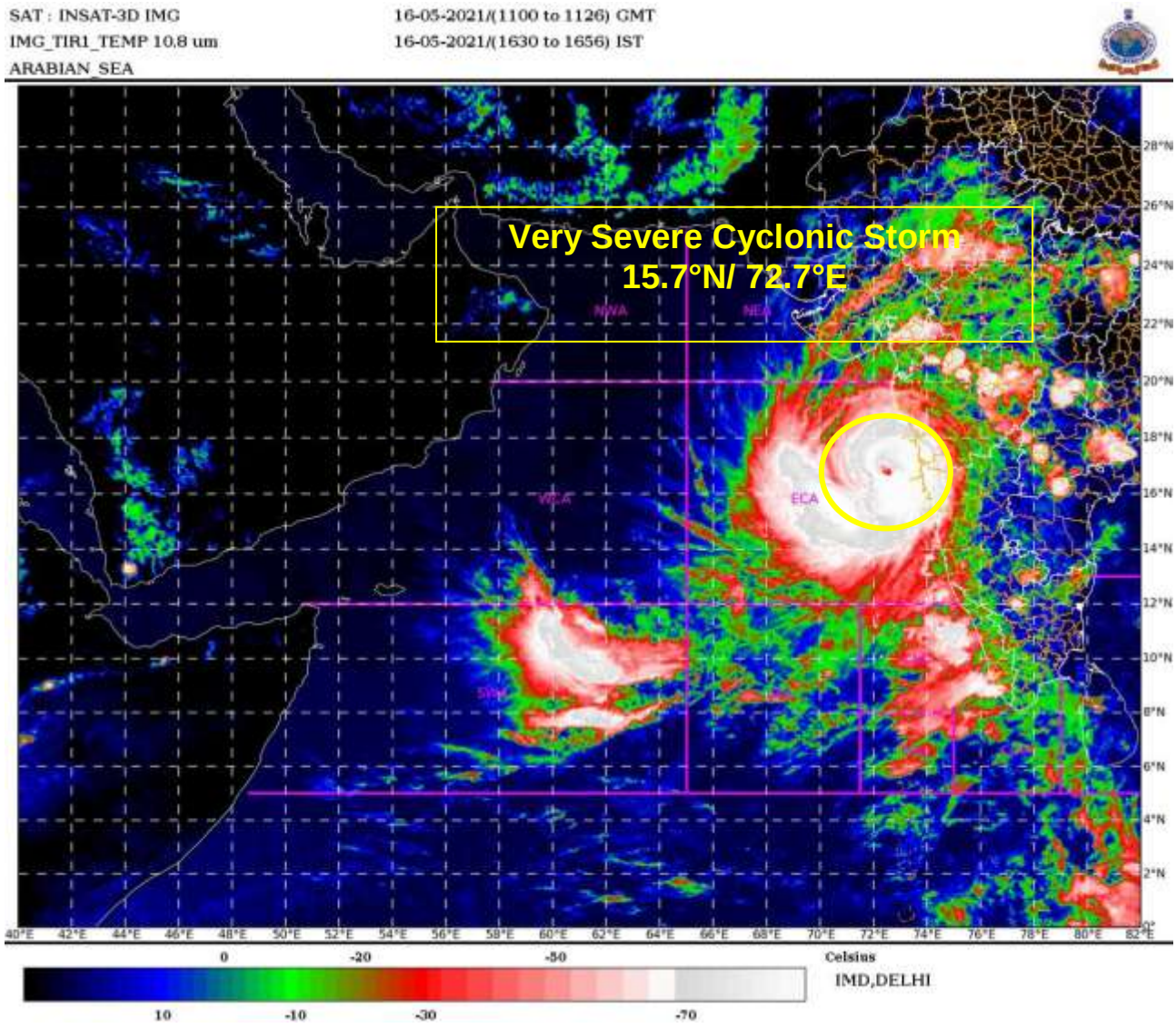

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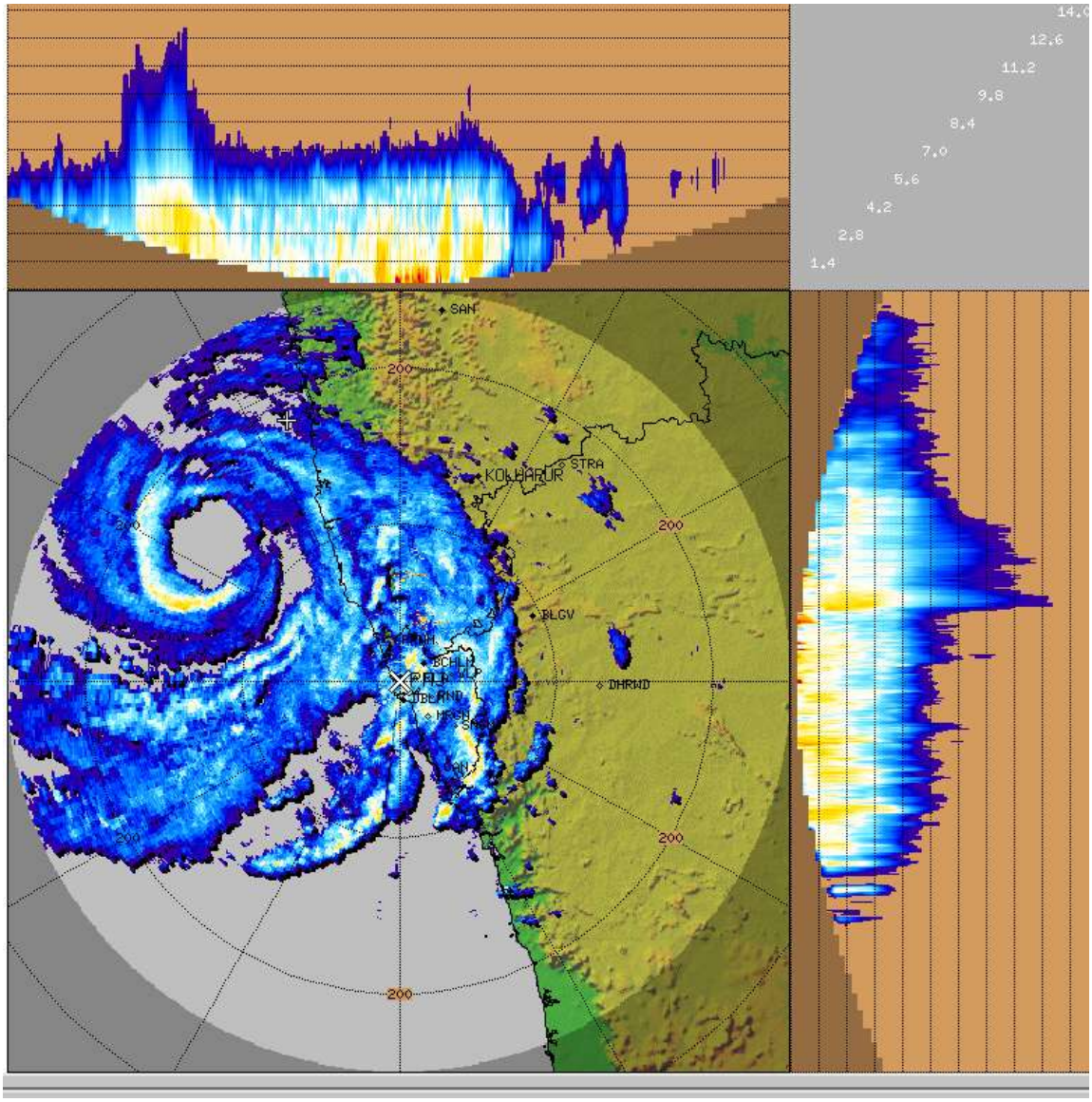

Reflectivity product from Doppler weather RADAR Goa

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
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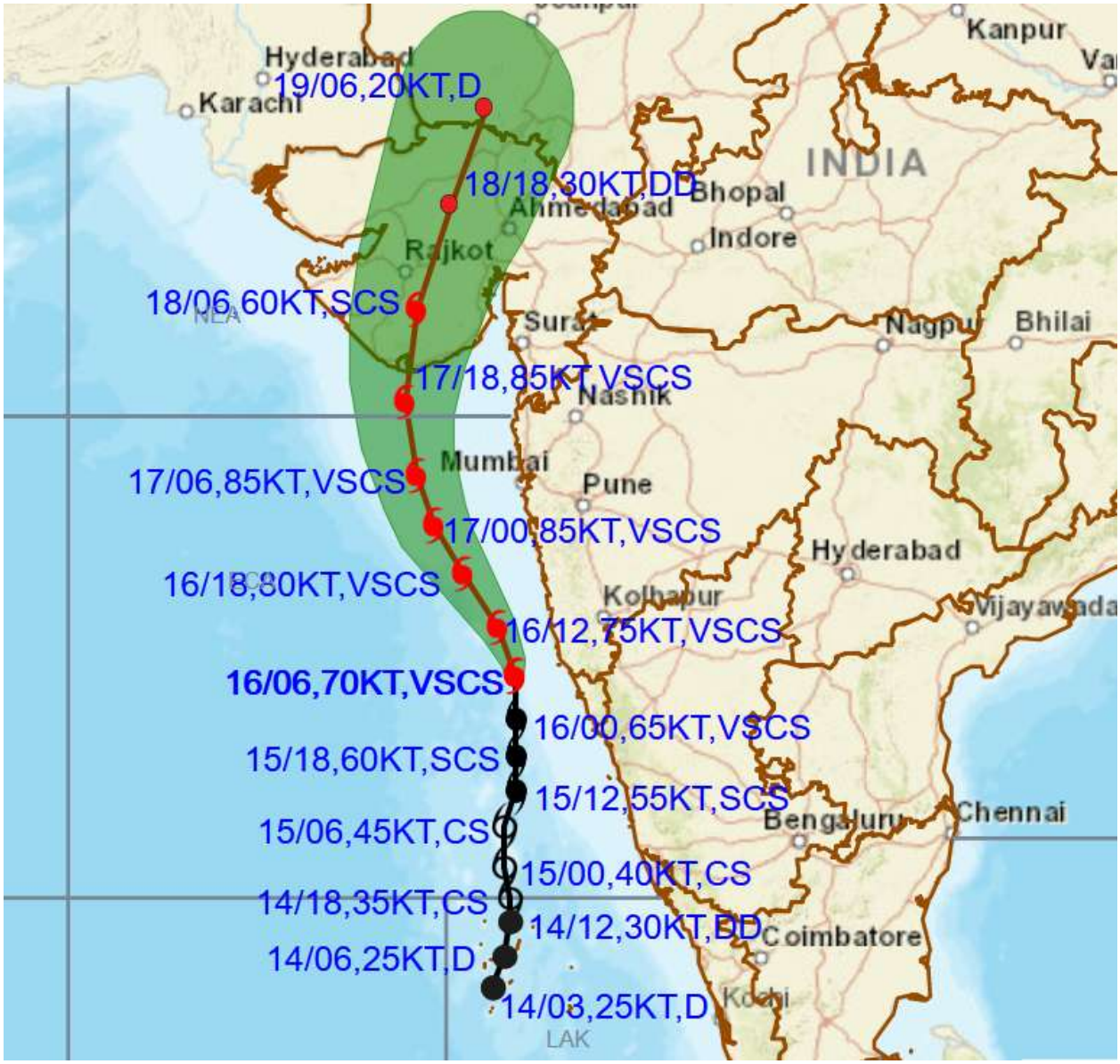
OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 16TH MAY, 2021



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 (≥ 120 KT)

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

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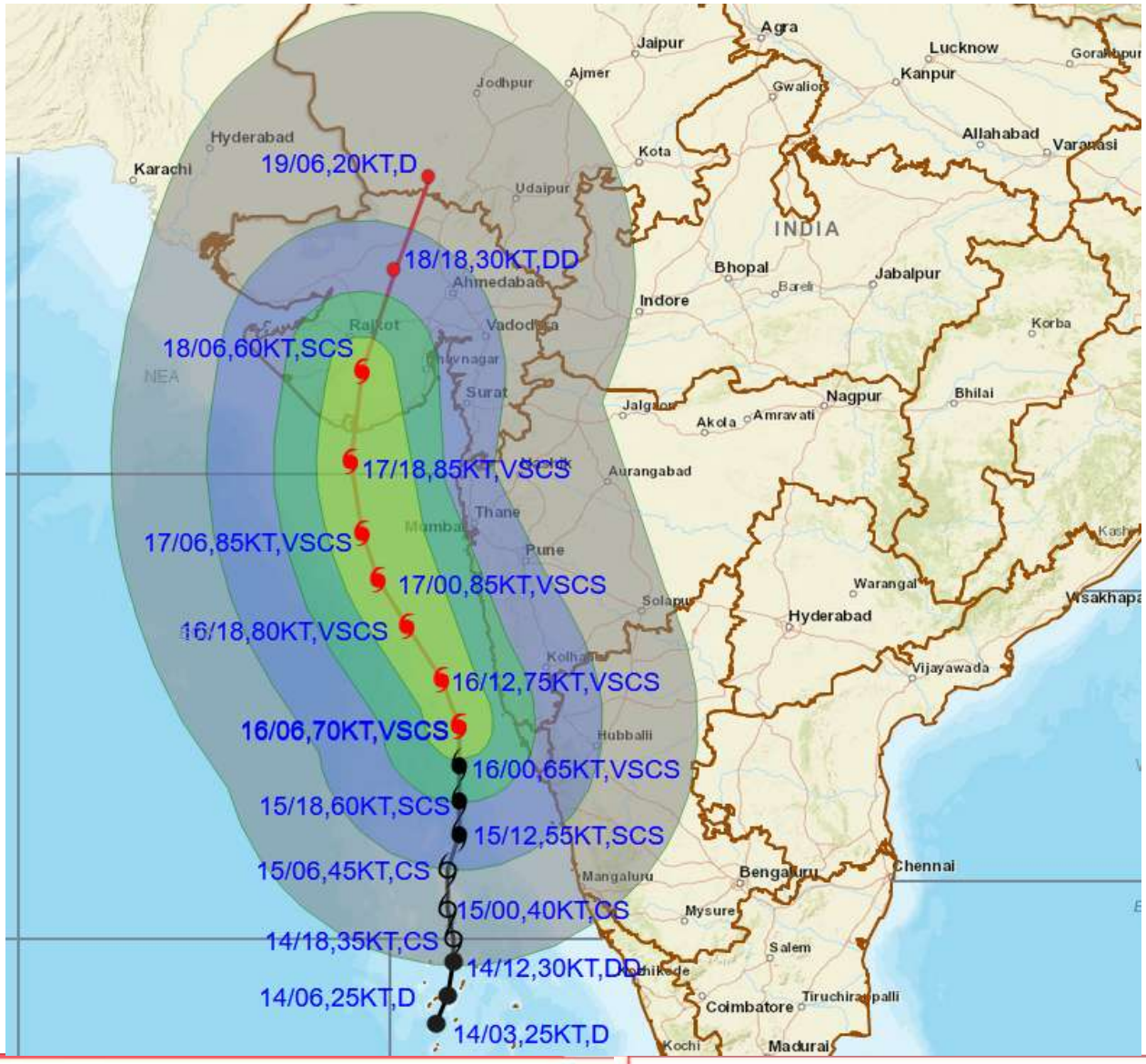

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LESS THAN 34 KT
34-47 KT
≥ 48 KT
OBSERVED TRACK
FORECAST TRACK
CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
28-33 KT (52-61 KMPH)
34-49 KT (62-91 KMPH)
50-63 KT (92-117 KMPH)
≥ 64 KT (≥118 KMPH)

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)
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ANNEXURE-1

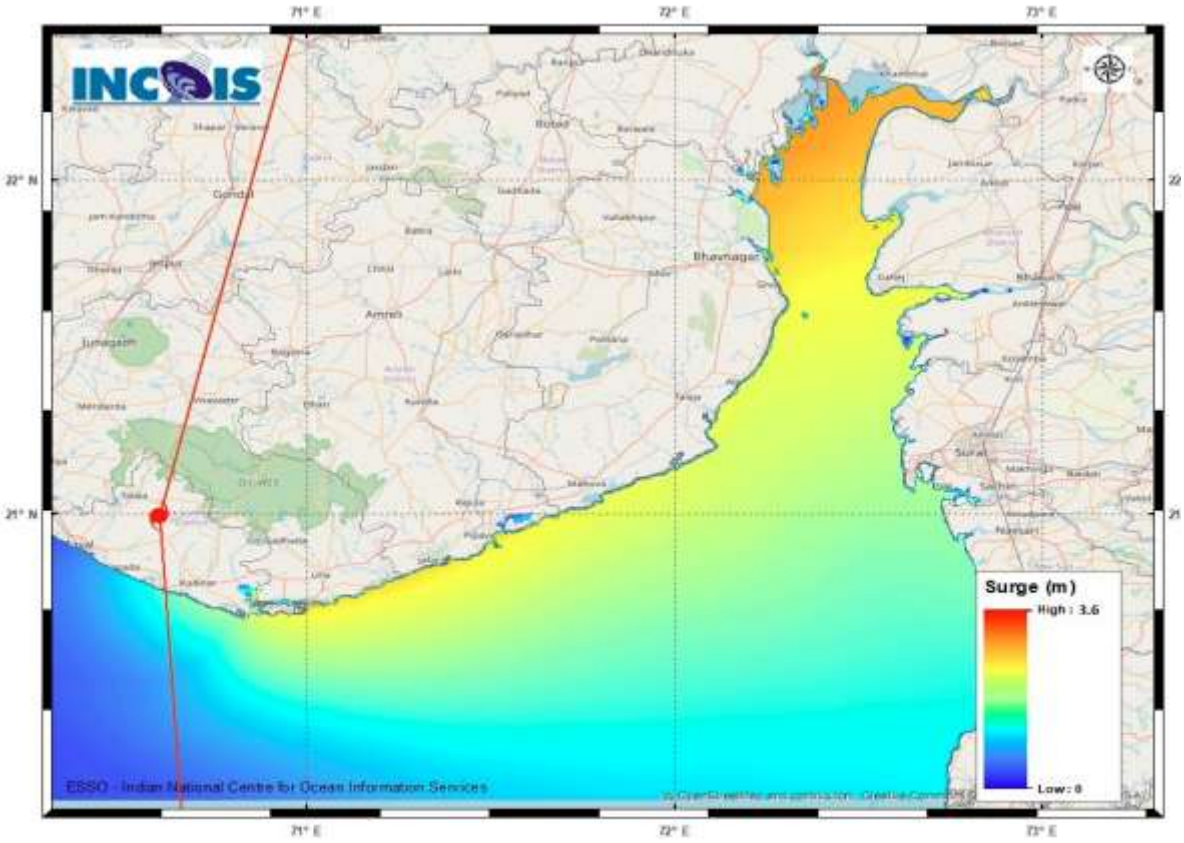

Figure:Storm Surge Map

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MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m) *	EXPECTED INUNDATION EXTENT (km)
Una	Junagadh	Gujarat	Una	1.2-3.6	Upto 0.9
Dhandhuka	Ahmadabad	Gujarat	Mitli	0.8-3.3	Upto 4.3
Hansot Mahal	Bharuch	Gujarat	Kantiyajal	1.0-2.3	Upto 3.3
Jafarabad	Amreli	Gujarat	Rohisa	2.5-2.6	Upto 0.1
Hazira	Surat	Gujarat	Hajira Ina (ina)	1.2-2.0	Upto 1.0
Kodinar	Gir Somnath	Gujarat	Kodinar	1.5-3.0	Upto 0.5
Mundra	Bhavnagar	Gujarat	Vadgam	2.4-2.4	Upto 0.9
Diu	Diu	Daman and Diu	Diu	1.6-2.9	Upto 0.7
Mahuva	Bhavnagar	Gujarat	Katpar (ct)	1.4-2.4	Upto 0.2
Bharuch	Bharuch	Gujarat	Kasva	1.3-2.3	Upto 0.1
Bhavnagar	Bhavnagar	Gujarat	Narbad	1.1-2.9	Upto 2.4
Borsad	Anand	Gujarat	Tithor	1.9-2.7	Upto 0.3
Chorasi	Surat	Gujarat	Bhimpor	1.4-1.8	Upto 1.0
Vagra	Bharuch	Gujarat	Harinagar	1.7-2.5	Upto 0.5
Valsad	Valsad	Gujarat	Malvan	1.1-1.5	Upto 0.3
Gandevi	Navsari	Gujarat	Mendhar	0.8-1.6	Upto 1.2
Dahanu	Palghar	Maharashtra	Narpad	0.5-1.2	Upto 1.0
Daman	Daman	Daman and Diu	Daman	0.9-1.3	Nil
Navsari	Navsari	Gujarat	Borsi	0.9-1.8	Upto 0.4
Olpad	Surat	Gujarat	Vansva	1.5-2.1	Upto 0.6
Veraval	Gir Somnath	Gujarat	Mul Dwarka	0.5-1.8	Upto 0.2
Palghar	Palghar	Maharashtra	Akkarpatti	0.4-1.0	Upto 0.5
Panvel	Raigarh	Maharashtra	Gavhan	0.7-0.7	Upto 0.5
Rajula	Amreli	Gujarat	Patva	1.1-2.7	Upto 0.3
Talaja	Bhavnagar	Gujarat	Talaja	1.6-2.3	Upto 0.2
Umargam	Valsad	Gujarat	Umargam	1.2-1.3	Upto 0.2
Uran	Raigarh	Maharashtra	Sheva	0.6-0.7	Upto 2.2
Vasai	Palghar	Maharashtra	Jalsar	0.8-0.9	Upto 1.1
Wada	Thane	Maharashtra	Juchandra	0.8-0.8	Upto 0.2
Bombay	Mumbai City	Maharashtra	Greater Bombay	0.6-0.7	Nil
Alibag	Raigarh	Maharashtra	Ranjankhar Davali	0.5-0.7	Upto 1.9
Maliya	Junagadh	Gujarat	Vadodra Dodiya	0.3-0.3	Upto 0.1
Mangaon	Raigarh	Maharashtra	Water Body	0.5-0.5	Upto 0.1

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