



India Meteorological Department  
(Ministry of Earth Sciences)

BULLETIN NO. 25: (ARB/01/2021)

TIME OF ISSUE: 1430 HOURS IST

DATED: 17.05.2021

FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23092398/23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421101, 23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, KERALA (FAX NO. 0471-2327176)

ADMINISTRATOR, LAKSHADWEEP ISLANDS (FAX NO. 0413-262184)

CHIEF SECRETARY, KARNATAKA (FAX NO. 080-22258913)

CHIEF SECRETARY, GOA (FAX NO. 0832-2415201)

CHIEF SECRETARY, MAHARASHTRA (FAX NO. 022- 22028594)

CHIEF SECRETARY, GUJARAT (FAX NO. 079-23250305)

CHIEF SECRETARY, DAMAN & DIU (FAX NO. 0260-2230775)

CHIEF SECRETARY, DADRA & NAGAR HAVELI (FAX NO. 0260-2645466)

CHIEF SECRETARY, TAMIL (FAX NO. 044-25672304)

**Subject: Extremely Severe Cyclonic Storm "Tauktae" (pronounced as Tau'Te) over Eastcentral Arabian Sea: Cyclone Warning for Gujarat & Diu coasts & post landfall outlook for Gujarat & Rajasthan (Red message)**

The Extremely Severe Cyclonic Storm "Tauktae" (pronounced as Tau'Te) over eastcentral Arabian Sea moved nearly northwards with a speed of about 13 kmph during past 06 hours, and lay centred at 1130 hours IST of today, the 17<sup>th</sup> May, 2021 over eastcentral Arabian Sea near latitude 19.2°N and longitude 71.5°E, about 145 km west of Mumbai, 180 km south-southeast of Diu, 220 km southeast of Veraval (Gujarat), and 475 km east-southeast of Karachi (Pakistan).

It is very likely to move north-northwestwards and reach Gujarat coast in the evening hours of 17<sup>th</sup> & cross Gujarat coast between Porbandar & Mahuva (Bhavnagar district) **to the east of Diu** during the night (2000 – 2300 hrs IST) of 17<sup>th</sup> May with a maximum sustained wind speed 155-165 kmph gusting to 185 kmph.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
17.05.21/1130	19.2/71.5	180-190 gusting to 210	Extremely Severe Cyclonic Storm
17.05.21/1730	20.0/71.3	170-180 gusting to 200	Extremely Severe Cyclonic Storm
17.05.21/2330	20.8/71.1	150-160 gusting to 175	Very Severe Cyclonic Storm
18.05.21/0530	21.6/71.1	110-120 gusting to 130	Severe Cyclonic Storm

18.05.21/1130	22.5/71.4	70-80 gusting to 90	Cyclonic Storm
18.05.21/2330	24.0/72.2	50-60 gusting to 70	Deep Depression
19.05.21/1130	25.7/73.0	35-45 gusting to 55	Depression

## Warnings:

### (i) Rainfall:

- **Konkan & adjoining Madhya Maharashtra:** Light to moderate rainfall at most places with heavy to very heavy falls and extremely heavy falls at isolated places on 17<sup>th</sup> May and isolated heavy rainfall over north Konkan on 18<sup>th</sup> May.
- **Gujarat:** Light to moderate rainfall at most places with heavy to very heavy falls at a few places and extremely heavy falls at isolated places very likely over Saurashtra, Diu and adjoining Gujarat region on 17<sup>th</sup> & heavy to very heavy falls at a few places over Gujarat region and heavy to very heavy falls at isolated places over Saurashtra on 18<sup>th</sup> May. Isolated heavy to very heavy rainfall also likely over Kutch during the same period.
- **Rajasthan:** Light to moderate rainfall at many places with heavy to very heavy falls & extremely heavy falls at isolated places very likely over south Rajasthan on 18<sup>th</sup> & heavy to very heavy falls at isolated places over Rajasthan on 19<sup>th</sup> May.

### (ii) Wind warning

- Gale wind speed reaching 180–190 kmph gusting to 210 kmph is likely to prevail over eastcentral Arabian Sea during next six hours.
- Gale winds speed reaching 90-100 kmph gusting to 100 kmph is likely to prevail along & off Maharashtra coast on 17<sup>th</sup> and gradually decrease thereafter.
- Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing over adjoining northeast Arabian Sea. It would gradually increase becoming 170–180 kmph gusting to 200 kmph from evening of 17<sup>th</sup> for subsequent 06 hrs and decrease thereafter
- Gale wind speed reaching 70-80 kmph gusting to 90 kmph is prevailing along and off south Gujarat & Daman and Diu coasts. It is likely to increase becoming Gale winds speed reaching 155-165 kmph gusting to 185 kmph along & off Gujarat coast (Amreli, Bhavnagar) Junagarh, Gir Somnath and 120 -140 kmph gusting to 165 kmph over Bharuch, Anand, south Ahmedabad, Botad, 90 -100 kmph gusting to 120 kmph over Devbhoomi Dwarka, Jamnagar, Porbandar, Rajkot, Morbi, Kheda districts of Gujarat from today evening till 18<sup>th</sup> early morning. Gale winds speed reaching 80-90 kmph gusting to 100 kmph likely to prevail along & off Dadra, Nagar Haveli, Daman, Valsad, Navsari, Surat, Surendranagar, districts from 17<sup>th</sup> evening till 18<sup>th</sup> morning.

### (iii) Sea condition

- Sea conditions will be Phenomenal over eastcentral and adjoining northeast Arabian Sea till 18<sup>th</sup> morning and improve gradually thereafter.
- Sea conditions will be High to very High along & off Maharashtra coast during next 12 hours and improve thereafter.
- It is very likely to be High along & off south Gujarat, Daman, Diu, Dadra & Nagar Haveli coasts during next 6 hours becoming Phenomenal till 18<sup>th</sup> morning. It will improve gradually thereafter.

**(iv) Storm surge warning**

- Tidal wave above astronomical tide is likely to inundate coastal areas as per details below: **about 3 -4 meter (m) over Anand & Amreli, Gir Somnath, Diu, Bhavnagar**, 2-3 m over Bharuch, southern parts of Ahmedabad, 1-2 m over Surat, Navsari, Valsad, and 0.5 – 1m over the remaining coastal districts of Gujarat during the time of landfall.(Details given in Annexure-I).

**(v) Fishermen Warning**

- Total suspension of fishing operations over eastcentral Arabian Sea, northeast Arabian Sea and along & off Gujarat, Daman, Diu, Dadra & Nagar Haveli coasts till the Noon of 18<sup>th</sup> May.
- The fishermen are advised not to venture into eastcentral Arabian Sea along & off Maharashtra - Goa coasts and into northeast Arabian Sea along & off Gujarat, Daman, Diu, Dadra & Nagar Haveli coast till the noon of 18<sup>th</sup> May.
- Those who are out at Sea over north Arabian Sea are advised to return to the coast.

**(vi) (A) Damage Expected over Diu, Amreli Junagarh, Gir Somnath Botad & Bhavnagar and coastal areas of Ahmedabad:**

- Total destruction of thatched houses/ extensive damage to kutcha houses. Some damage to pucca houses. Potential threat from flying objects.
- Bending/ uprooting of power and communication poles.
- Major damage to Kutcha and Pucca roads. Flooding of escape routes. Minor disruption of railways, overhead power lines and signaling systems.
- Widespread damage to salt pans & standing crops. Blowing down of bushy trees.
- Small boats, country crafts may get detached from moorings.
- Visibility severely affected.

**(B) Damage Expected over Devbhoomi Dwarka, Porbandar, Kutch, Jamnagar, Rajkot & Morbi, Valsad, Surat, Vadodara, Bharuch, Navsari, Anand, Kheda and interior parts of Ahmedabad districts of Gujarat, Daman, Dadra & Nagar Haveli:**

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Minor damage to power and communication lines.
- Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Breaking of tree branches, uprooting of large avenue trees. Moderate damage to banana and papaya trees. Large dead limbs blown from trees.
- Major damage to coastal crops.
- Damage to embankments/ salt pans.

**(vii) Action Suggested:**

- Mobilise evacuation in vulnerable areas.
- Total suspension of fishing operations.
- Judicious regulation of rail and road traffic.
- People in affected areas to remain indoors.
- Movement in motor boats and small ships unsafe.

**(viii) Post Landfall Outlook for interior districts of Gujarat (Districts apart from those mentioned under warning above):**

After the landfall the system is very likely to re-curve north-northeastwards, across Gujarat and weaken gradually. It is likely to maintain the intensity of Cyclonic Storm till the evening of 18<sup>th</sup> May and thereafter it will weaken gradually into a Depression over south Rajasthan.

Under its influence, light to moderate rainfall at most places with heavy to very heavy rainfall at a few places very likely over interior districts of Gujarat on 17<sup>th</sup> and upto 18<sup>th</sup> afternoon .and over south Rajasthan on 18<sup>th</sup> May.

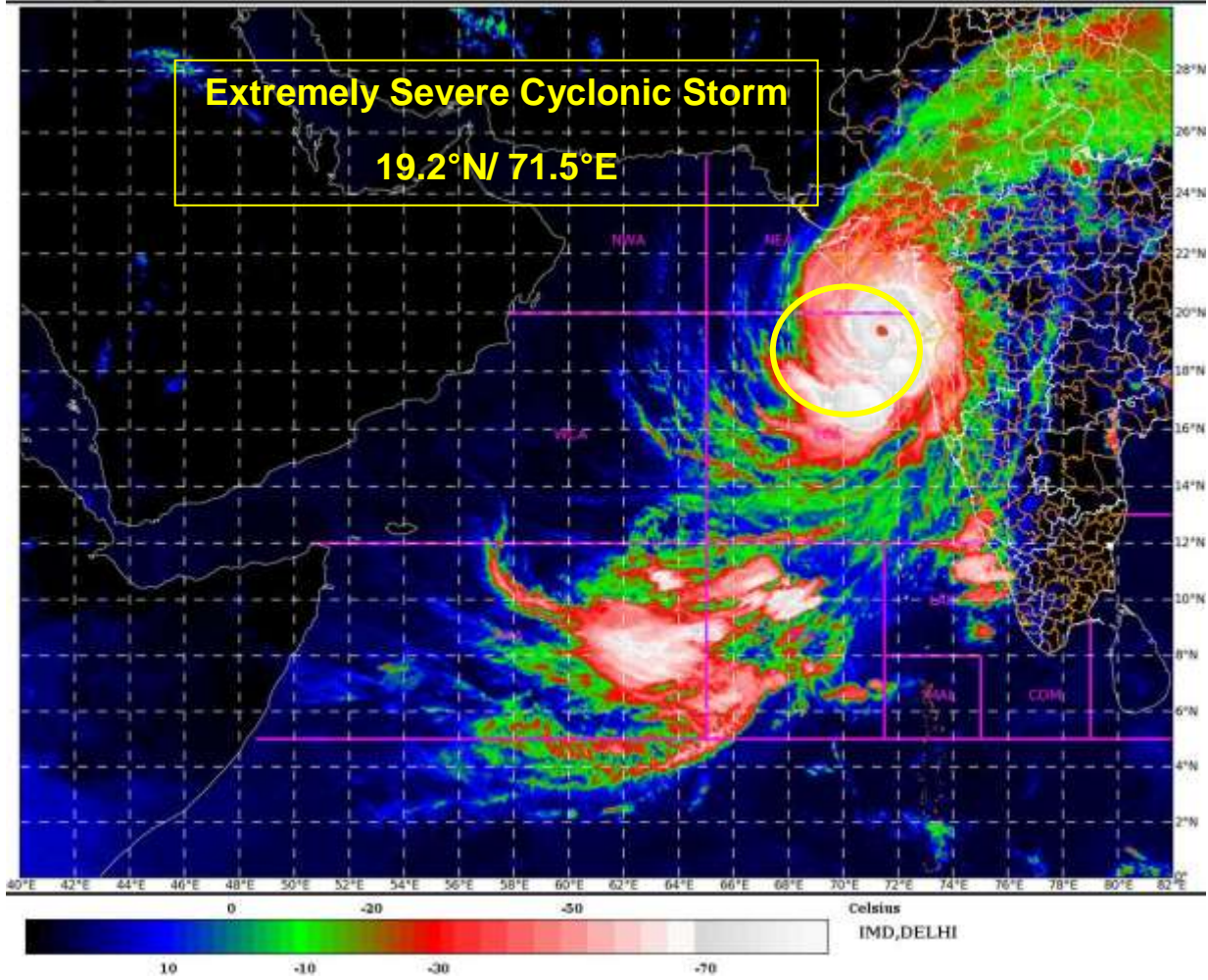
**Damage expected over interior districts of Gujarat (Districts apart from those mentioned under warning) on 18<sup>th</sup> May 2021.**

(i) Minor damage to power and communication lines. (ii) Major damage to Kutcha and some damage to Pucca roads. (iii) Breaking of tree branches, uprooting of small trees. (iv) Damage to banana and papaya trees. (v) People in affected areas to remain indoors.

The next bulletin will be issued at 1730 hrs IST of 17th May, 2021.

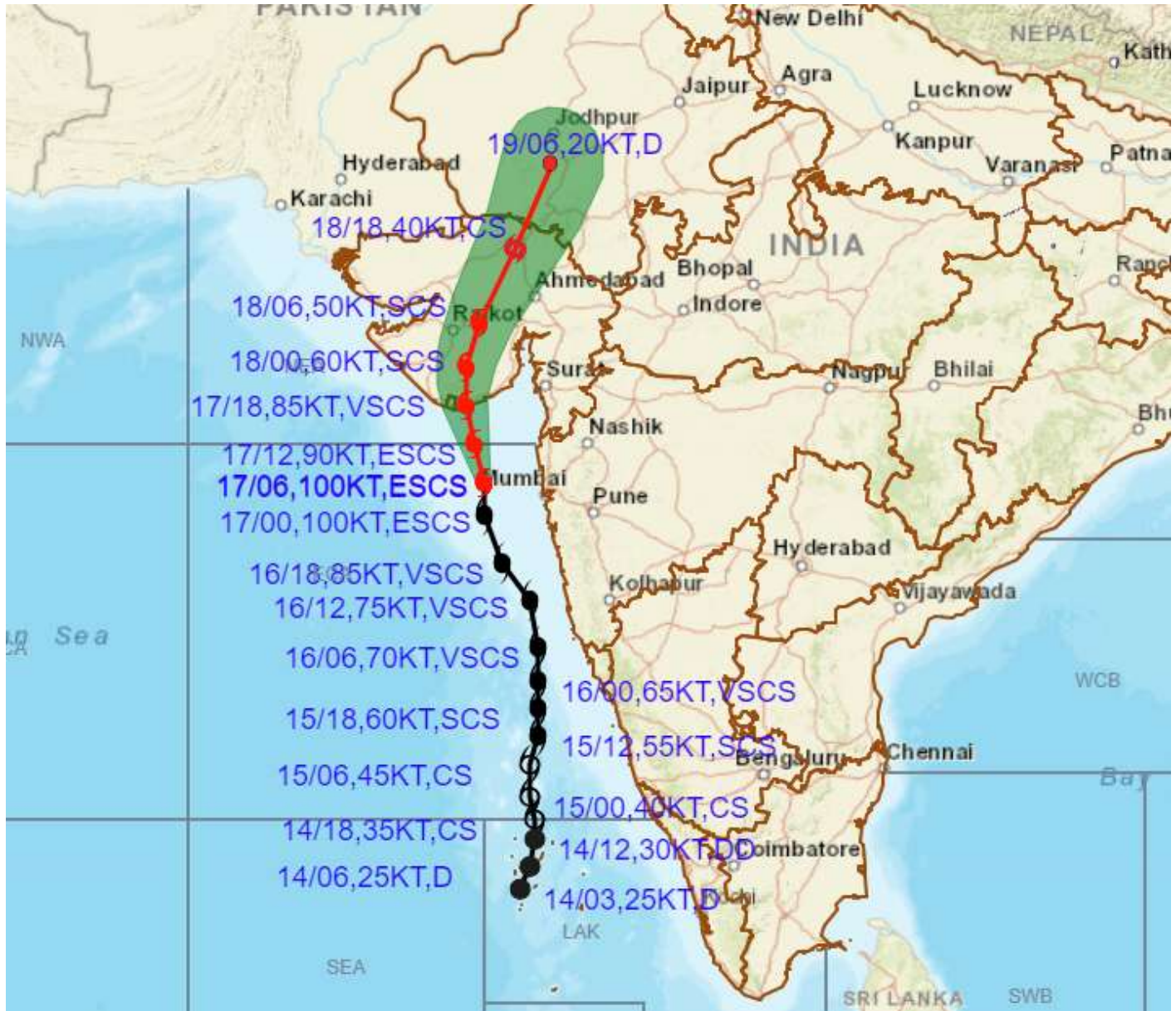
**(Sunitha Devi. S)**  
**Scientist-F, RSMC, New Delhi**

Copy to: ACWC Chennai/ACWC Mumbai/ MC Goa/ MC Bengaluru/CWC Ahmedabad/CWC Thiruvananthapuram.





**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF EXTREMELY SEVERE CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 17<sup>TH</sup> MAY, 2021**

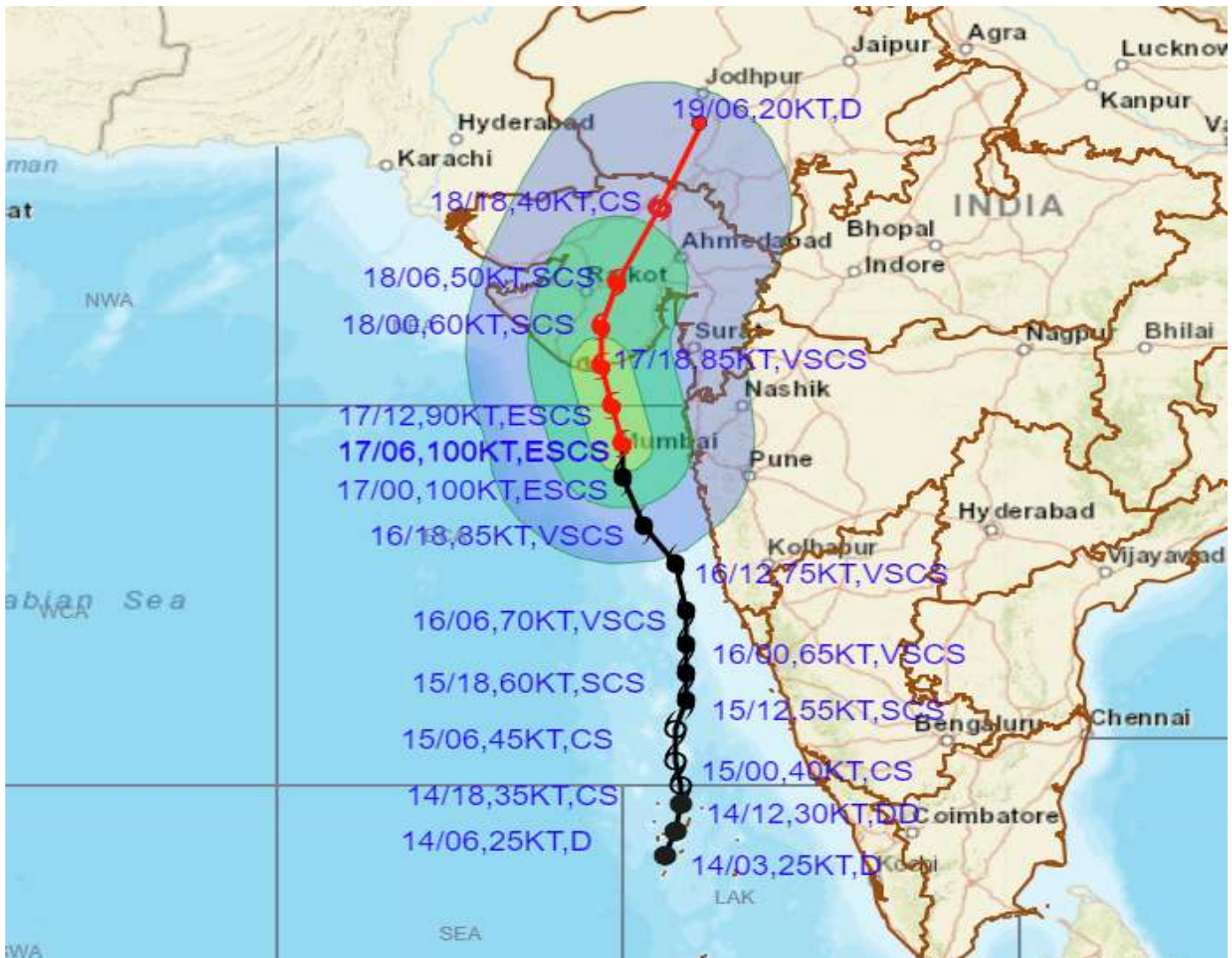


DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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



## OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF EXTREMELY SEVERE CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 0600 UTC OF 17<sup>TH</sup> 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)

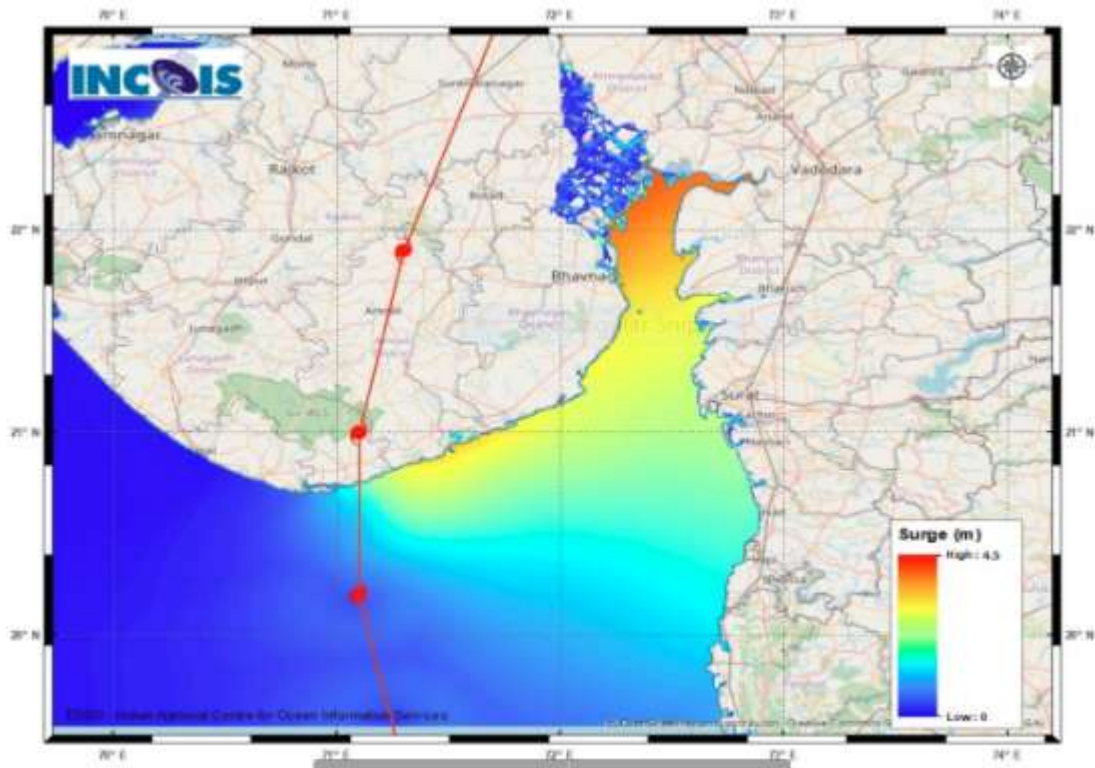
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

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



Page 2 Figure: S6rm Surge Map 🔍 +



**STORM SURGE HEIGHT INFORMATION:**

Open with ▼

\* The below listed surge heights are over and above ast

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m) *	EXPECTED INUNDATION EXTENT (km)
Khambhat	Anand	Gujarat	Mitli	3.0-4.5	Upto 9.15
Bhavnagar	Bhavnagar	Gujarat	Narbad	3.0-4.2	Upto 2.90
Rajula	Amreli	Gujarat	Patva	2.1-3.8	Upto 1.08
Mundra	Bhavnagar	Gujarat	Vadgam	3.5-3.7	Upto 1.36
Jafarabad	Amreli	Gujarat	Rohisa	1.9-3.5	Upto 0.23
Vagra	Bharuch	Gujarat	Harinagar	1.8-3.4	Upto 0.88
Mahuva	Bhavnagar	Gujarat	Gadhada	1.6-3.3	Upto 0.31
Talaja	Bhavnagar	Gujarat	Talaja	1.6-3.2	Upto 0.39
Bharuch	Bharuch	Gujarat	Kasva	1.9-3	Upto 0.19
Hansot Mahal	Bharuch	Gujarat	Kantiyaial	1.7-3	Upto 4.41
Olpad	Surat	Gujarat	Vansva	2.1-2.7	Upto 1.16
Una	Junagadh	Gujarat	Una	0.8-2.7	Upto 0.56
Hazira	Surat	Gujarat	Hajira Ina (ina)	1.8-2.6	Upto 1.33
Chorasi	Surat	Gujarat	Bhimpor	0.8-2.5	Upto 2.31
Navsari	Navsari	Gujarat	Borsi	1.5-2.4	Upto 0.64
Gandevi	Navsari	Gujarat	Mendhar	1.9-2.1	Upto 1.26
Valsad	Valsad	Gujarat	Malvan	1.6-2.1	Upto 0.51
Daman	Daman	Daman and Diu	Daman	1.4-1.8	Upto 0.12
Umargam	Valsad	Gujarat	Umargam	1.6-1.7	Upto 0.21
Dahanu	Palghar	Maharashtra	Narpad	0.7-1.5	Upto 1.05
Palghar	Palghar	Maharashtra	Akkarpatti	0.5-1.2	Upto 0.75
Diu	Diu	Daman and Diu	Diu	0.9-1.1	Upto 0.32
Vasai	Palghar	Maharashtra	Jalsar	0.6-1.1	Upto 1.13
Wada	Thane	Maharashtra	Juchandra	1.1-1.1	Upto 0.21
Borsad	Anand	Gujarat	Tithor	1.4-1.5	Upto 0.52
Alibag	Raigarh	Maharashtra	Ramankhar Davali	0.3-0.9	Upto 1.90
Bombay	Mumbai City	Maharashtra	Greater Bombay	0.7-0.9	Nil
Kodinar	Gir Somnath	Gujarat	Chhara	0.4-0.8	Upto 0.32
Panvel	Raigarh	Maharashtra	Gavhan	0.7-0.8	Upto 0.72
Uran	Raigarh	Maharashtra	Jasai	0.7-0.8	Upto 2.40
Murud	Raigarh	Maharashtra	Borli	0.5-0.7	Upto 0.21
Dapoli	Ratnagiri	Maharashtra	Tadachakond	0.4-0.5	Upto 0.11
Mandangarh	Ratnagiri	Maharashtra	Danda	0.4-0.5	Nil