



India Meteorological Department
(Ministry of Earth Sciences)

BULLETIN NO.: 15 (ARB/01/2021)

TIME OF ISSUE: 0810 HOURS IST

DATED: 16.05.2021

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Sub: Very Severe Cyclonic Storm "Tauktae" (pronounced as Tau'Te) over Eastcentral Arabian Sea: Cyclone Alert for Gujarat & Diu coasts (Yellow message)

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 0530 hours IST of today, the 16th May, 2021 over eastcentral Arabian Sea near latitude 15.0°N and longitude 72.7°E, about 130 km west-southwest of Panjim-Goa, 450 km south of Mumbai, 700 km south-southeast of Veraval (Gujarat) and 840 km southeast of Karachi (Pakistan).

It is very likely to intensify during next 24 hours. It is very likely to move north-northwestwards and reach Gujarat coast in the evening hours of 17th & cross Gujarat coast between Porbandar & Mahuva (Bhavnagar district) around 18th May early morning.

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
16.05.21/0530	15.0/72.7	120-130 gusting to 145	Very Severe Cyclonic Storm
16.05.21/1130	15.8/72.4	130-140 gusting to 155	Very Severe Cyclonic Storm
16.05.21/1730	16.5/72.0	140-150 gusting to 165	Very Severe Cyclonic Storm
16.05.21/2330	17.3/71.5	145-155 gusting to 170	Very Severe Cyclonic Storm
17.05.21/0530	18.1/71.2	150-160 gusting to 175	Very Severe Cyclonic Storm
17.05.21/1730	19.5/70.7	150-160 gusting to 175	Very Severe Cyclonic Storm
18.05.21/0530	21.0/70.6	150-160 gusting to 175	Very Severe Cyclonic Storm
18.05.21/1730	22.6/71.0	70-80 gusting to 90	Cyclonic Storm
19.05.21/0530	24.2/71.7	30-40 gusting to 50	Depression

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warnings:

(i) Rainfall:

- **Kerala:** Light to moderate rainfall at many places with heavy to very heavy falls at isolated places on 16th and heavy falls at isolated places on 17th May.
- **Karnataka (coastal & adjoining Ghat districts):** Light to moderate rainfall at most places with heavy to very heavy falls at isolated places on 16th.
- **Konkan & Goa:** Light to moderate rainfall at most places with heavy to very heavy falls at a few places over Konkan & Goa & adjoining Ghat areas on 16th and heavy falls at isolated places on 17th May over north Konkan.
- **Gujarat:** Light to moderate rainfall at many places very likely to commence over coastal districts of Saurashtra from 16th May afternoon, with heavy to very heavy falls at isolated places over Saurashtra & Kutch and Diu and extremely heavy falls at isolated places on 17th and with heavy to very heavy falls at a few places over Saurashtra & Kutch and Diu with extremely heavy falls (≥ 20 cm) at isolated places on 18th.
- **Rajasthan:** Light to moderate rainfall at many places with heavy to very heavy falls at isolated places very likely over south Rajasthan on 18th & over Rajasthan on 19th May.

(ii) Wind warning

- Gale wind speed reaching 120–130 kmph gusting to 145 kmph is prevailing over eastcentral Arabian Sea. It is likely to increase over eastcentral Arabian Sea becoming 145-155 kmph gusting to 170 kmph from 16th May morning.
- Gale winds speed reaching 70-80 kmph gusting to 90 kmph along & off south Maharashtra –Goa and adjoining Karnataka coasts on 16th, 40-50 kmph gusting to 60 kmph along & off north Maharashtra coast on 16th. It is likely to become 65- 75 kmph gusting to 85 kmph along & off north Maharashtra coast from 17th till 18th morning.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely over northeast Arabian Sea and along & off south Gujarat & Daman and Diu coasts from 16th morning and gradually increase becoming Gale winds speed reaching 150-160 kmph gusting to 175 kmph over northeast Arabian Sea and along & off Gujarat coast (Porbandar, Junagarh, Gir Somnath, Amreli) and 120 -150 kmph gusting to 165 kmph over Devbhoomi Dwarka, Jamnagar, Bhavnagar districts of Gujarat from early hours of 18th. Gale winds speed reaching 70-80 kmph gusting to 90 kmph likely to prevail along & off Dadra, Nagar Haveli, Daman, Valsad, Navsari, Surat, Bharuch, southern parts of Ahmedabad, Anand districts from 17th mid-night till 18th morning.

(iii) Sea condition

- Sea condition over eastcentral Arabian Sea will be very high to Phenomenal on 16th May and over northeast Arabian Sea on 17th & 18th May.
- Sea conditions will be very rough to High along & off Maharashtra–Goa coasts on 16th May and along & off north Maharashtra coast on 17th Morning. It is very likely to be very rough to High along & off south Gujarat coast from 17th May morning and very high to Phenomenal from 17th midnight.

(iv) Storm surge warning

Tidal wave of about 3 m Junagarh, 1-2.5 m above astronomical tide is likely to inundate coastal areas of Diu, Gir Somnath, Amreli, Bharuch, Bhavnagar, Ahmedabad, Anand, Surat and about 0.5 -1m over Devbhoomi Dwarka, Jamnagar, Porbandar, Kutch the remaining coastal districts of Gujarat during the time of landfall. (Details enclosed).

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

(v) Fishermen Warning

- Total suspension of fishing operations over eastcentral Arabian Sea and along & off Karnataka-Goa-Maharashtra coasts.
- Total suspension of fishing operations over northeast Arabian Sea and along & off Gujarat coast from 17th May.
- The fishermen are advised not to venture into eastcentral Arabian Sea along & off Karnataka coast till 17th Morning and into eastcentral Arabian Sea and along & off Maharashtra-Goa coasts and into northeast Arabian Sea along & off Gujarat coast till 18th May.
- Those who are out at Sea over north Arabian Sea are advised to return to the coast.

(vi) (A) Damage Expected over Kutch, Porbandar, Junagarh, Gir Somnath, Amreli, Jamnagar & Bhavnagar districts of Gujarat:

- 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.

(vi) (B) Damage Expected over Devbhoomi Dwarka, Rajkot, Botad & Morbi districts of Gujarat:

- 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:

- 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.

The next bulletin will be issued at 1130 hrs IST of today, the 16th May, 2021.

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

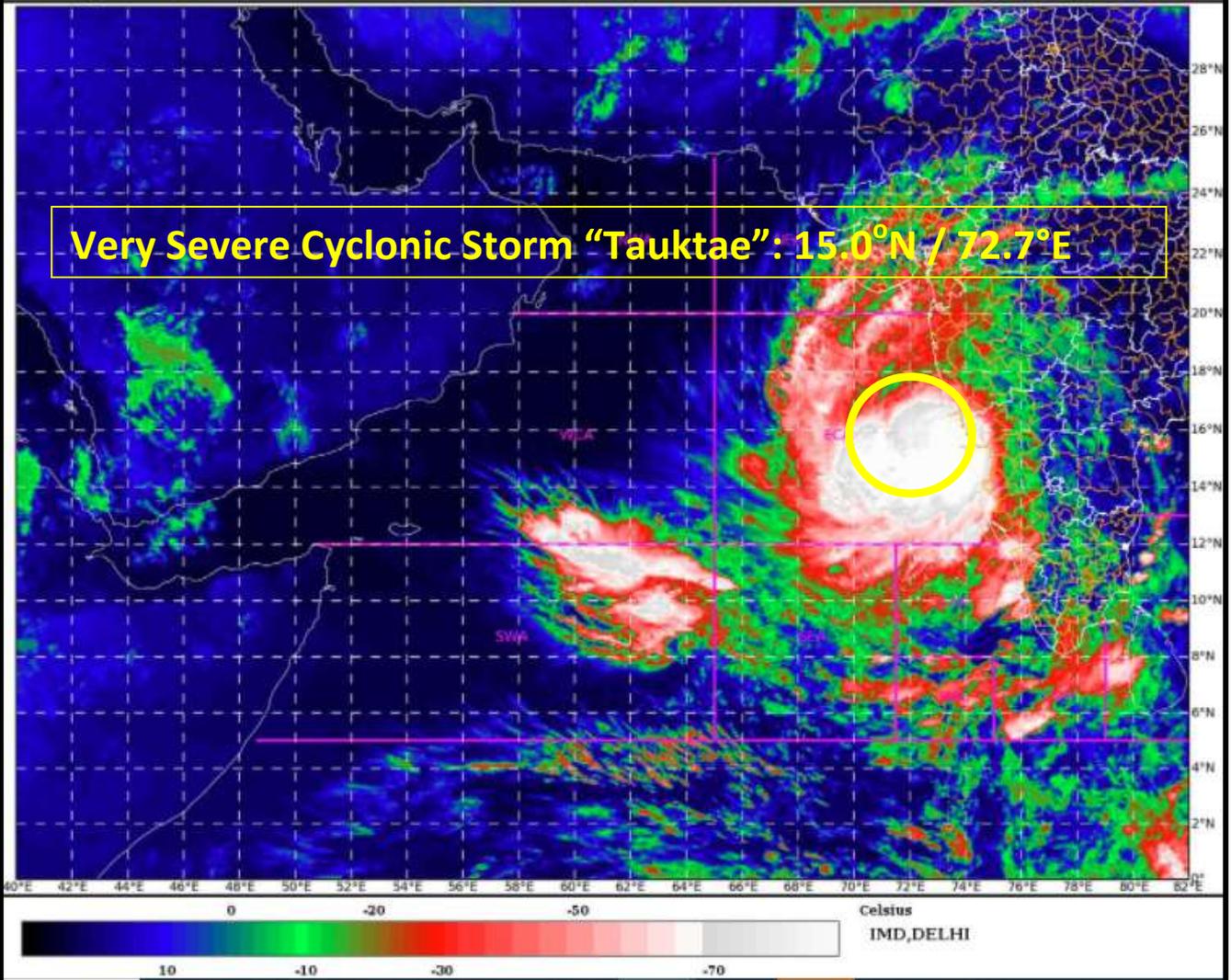
Copy to: ACWC Chennai/ ACWC Mumbai/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram.

SAT : INSAT-3D IMG
IMG_TIR1_TEMP 10.8 um
ARABIAN_SEA

16-05-2021/(0030 to 0056) GMT
16-05-2021/(0600 to 0626) IST



Very Severe Cyclonic Storm "Tauktae": 15.0°N / 72.7°E



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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM "TAUKTAE" OVER EASTCENTRAL ARABIAN SEA BASED ON 0000 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 (≥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)

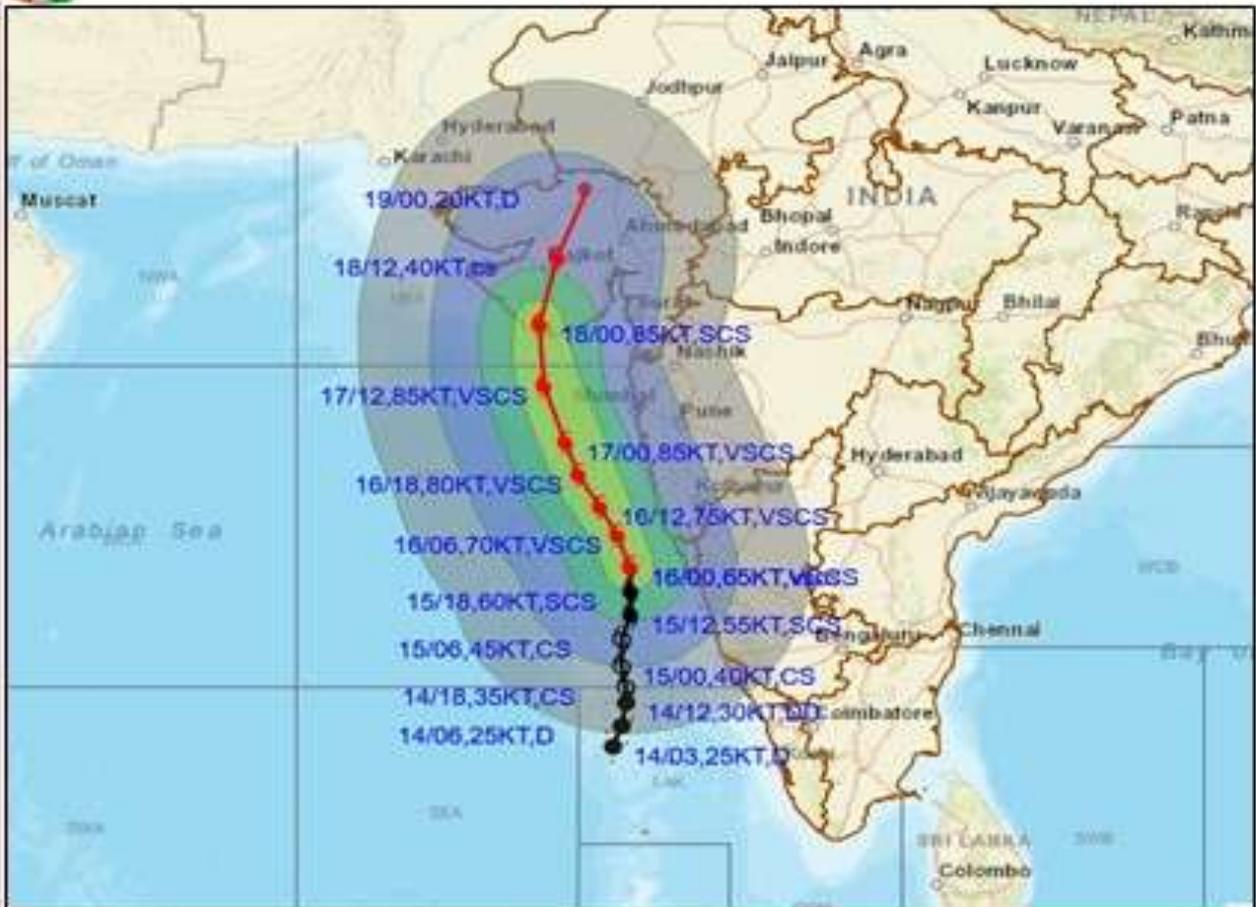
IMPACT OVER THE SEA

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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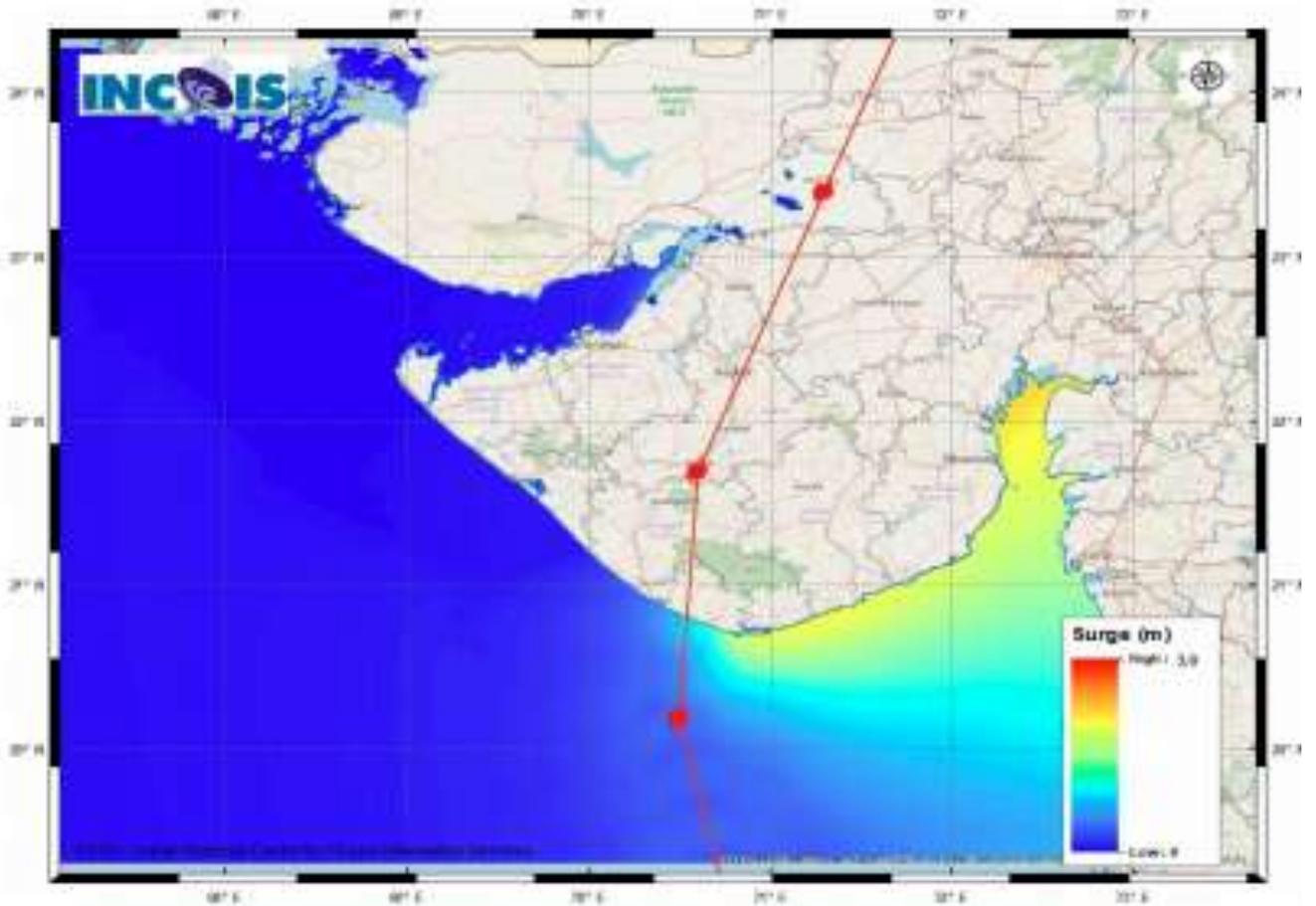


Figure:Storm Surge Map

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STORM SURGE HEIGHT INFORMATION:

* The below listed surge heights are over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m) *	EXPECTED INUNDATION EXTENT (km)
Una	Junagadh	Gujarat	Una	1.4-3.0	Upto 0.9
Kodinar	Gir Somnath	Gujarat	Kodinar	1.3-2.4	Upto 0.4
Kodinar	Gir Somnath	Gujarat	Kodinar	1.3-2.4	Upto 0.4
Khambhat	Anand	Gujarat	Akhol	0.8-2.3	Upto 1.2
Khambhat	Anand	Gujarat	Akhol	0.8-2.3	Upto 1.2
Dhandruka	Ahmadabad	Gujarat	Mithi	0.6-2.3	Upto 2.1
Diu	Diu	Daman and Diu	Diu	1.1-2.3	Upto 0.7
Rajula	Anreli	Gujarat	Parva	0.6-2.2	Upto 0.3
Jambusar	Bharuch	Gujarat	Devla	1.1-2.2	Upto 2.2
Jafarabad	Anreli	Gujarat	Rohisa	2.0-2.1	Upto 0.1
Mahuva	Bhavnagar	Gujarat	Mahuva	1.7-2.0	Upto 0.1
Mahuva	Bhavnagar	Gujarat	Mahuva	1.7-2.0	Upto 0.1
Alibag	Raigarh	Maharashtra	Ranjankhar Divali	0.3-0.7	Upto 1.9
Bharuch	Bharuch	Gujarat	Manad	1.6-1.8	Upto 0.1
Bhavnagar	Bhavnagar	Gujarat	Narbad	1.2-2.2	Upto 2.4
Bombay	Mumbai City	Maharashtra	Greater Bombay	0.6-0.8	Nil
Borsad	Anand	Gujarat	Tithor	1.6-1.6	Upto 0.3
Chorasi	Surat	Gujarat	Bhingsor	1.2-1.5	Upto 0.5
Dahanu	Palghar	Maharashtra	Narpad	0.2-1.0	Upto 1.0
Daman	Daman	Daman and Diu	Daman	0.8-1.1	Nil
Gandevi	Navsari	Gujarat	Mendhar	1.1-1.3	Upto 1.2
Greater Bombay	Mumbai Suburban	Maharashtra	Greater Bombay	0.7-0.8	Upto 1.6
Hansot Mahal	Bharuch	Gujarat	Kantivajal	1.0-1.8	Upto 0.9
Hazira	Surat	Gujarat	Hajira Ina (ina)	0.9-1.7	Upto 1.0
Jamnagar	Jamnagar	Gujarat	Jamnagar	0.3-0.3	Nil
Jodiva	Jamnagar	Gujarat	Navlakhi	0.2-0.4	Upto 0.1
Maliya	Junagadh	Gujarat	Vadodra Dodiya	0.4-0.4	Upto 0.1
Mangson	Raigarh	Maharashtra	Water Body	0.5-0.5	Upto 0.1
Mangrol	Junagadh	Gujarat	Khambhaliya	0.2-0.3	Upto 0.1
Morbi	Kachchh	Gujarat	Navlakhi	0.2-0.4	Upto 1.0
Mundra	Bhavnagar	Gujarat	Vadgam	1.7-1.7	Upto 0.6
Murud	Raigarh	Maharashtra	Water Body	0.5-0.6	Upto 0.2
Navsari	Navsari	Gujarat	Borsi	0.7-1.5	Upto 0.4

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