

# India Meteorological Department (Ministry of Earth Sciences)

## NATIONAL BULLETIN NO. 12 (ARB/03/2023)

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# Sub: (A) Very Severe Cyclonic Storm "Tej" (pronounced as Tej) over southwest Arabian Sea

(B) Depression over westcentral Bay of Bengal

# (A) Very Severe Cyclonic Storm "Tej" (pronounced as Tej) over southwest Arabian Sea

The Very Severe Cyclonic Storm "Tej" (pronounced as Tej) over southwest Arabian Sea moved north-westwards with a speed of 20 kmph during past 6 hours, and lay centered at 0230 hours IST of today, the 22<sup>nd</sup> October over the same region, near latitude 11.7°N and longitude 56.1°E about 260 km east-southeast of Socotra (Yemen), 630 km south-southeast of Salalah (Oman) and 650 km southeast of Al Ghaidah (Yemen).

It is very likely to intensify further into an Extremely Severe Cyclonic Storm in the forenoon of 22<sup>nd</sup> October. It is very likely to move northwestwards till 24<sup>th</sup> morning & then northnorthwestwards. It is likely to cross Yemen-Oman coasts between Al Ghaidah (Yemen) & Salalah (Oman) around evening of 24<sup>th</sup> October.

### Forecast track and intensity are given below:

Date/Time(IST)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
22.10.23/0230	11.7/56.1	140-150 gusting to 160	Very Severe Cyclonic Storm
22.10.23/0530	11.9/55.8	150-160 gusting to 175	Very Severe Cyclonic Storm
22.10.23/1130	12.4/55.5	165-175 gusting to 195	Extremely Severe Cyclonic Storm
22.10.23/1730	12.9/55.1	180-190 gusting to 210	Extremely Severe Cyclonic Storm
22.10.23/2330	13.5/54.4	180-190 gusting to 210	Extremely Severe Cyclonic Storm
23.10.23/1130	14.3/53.7	150-160 gusting to 175	Very Severe Cyclonic Storm
23.10.23/2330	15.0/53.1	135-145 gusting to 155	Very Severe Cyclonic Storm
24.10.23/1130	15.7/52.6	105-115 gusting to 125	Severe Cyclonic Storm
24.10.23/2330	16.8/52.1	90-100 gusting to 110	Cyclonic Storm
25.10.23/1130	17.7/51.7	50-60 gusting to 70	Depression

#### Warnings:

## (i) Wind warning (warning graphics enclosed):

#### Southwest Arabian Sea:

**Gale wind** speed reaching **140-150 kmph gusting to 160 kmph** is prevailing and likely to increase gradually becoming **150-160 kmph gusting to 175 kmph** by morning of 22<sup>nd</sup> October. Thereafter, it is likely to decrease gradually becoming **Gale wind** speed reaching **90-100 kmph gusting to 110 kmph** by morning of 23<sup>rd</sup> and **Squally wind** speed reaching **50-60 kmph gusting to 70 kmph** by morning of 24<sup>th</sup> October. It would decrease gradually thereafter.

#### Westcentral Arabian Sea:

Gale wind speed reaching 90-100 kmph gusting to 110 kmph is prevailing and likely to increase gradually becoming Gale wind speed reaching 150-160 kmph gusting to 175 kmph in the morning of 22<sup>nd</sup>, 180-190 kmph gusting to 210 kmph in the evening of 22<sup>nd</sup> till morning of 23<sup>rd</sup> October. Thereafter, it is likely to decrease gradually from evening of 23<sup>rd</sup> October becoming Gale wind speed reaching 125-135 kmph gusting to 150 kmph by 24<sup>th</sup> morning and 90-100 kmph gusting to 110 kmph on 25<sup>th</sup> morning. It would decrease rapidly after the landfall becoming Squally wind speed reaching 40-50 kmph gusting to 60 kmph in the evening of 25<sup>th</sup> October.

## (ii) Sea Condition

#### • Southwest Arabian Sea:

**Phenomenal** sea condition is prevailing and will continue till 23<sup>rd</sup> October. It is likely to improve gradually becoming **very high** from 24<sup>th</sup> morning and continue till 25<sup>th</sup> morning. Thereafter, it would improve gradually.

#### Westcentral Arabian Sea:

**Phenomenal** sea condition is prevailing and will continue till evening of 24<sup>th</sup> October. It would improve gradually thereafter becoming **very high to high** from 24<sup>th</sup> night. Thereafter, it would improve gradually.

## (iii) Fishermen Warning (Graphics attached):

Fishermen are advised not to venture into

- ❖ Southwest Arabian Sea till 25<sup>th</sup> October.
- ❖ Westcentral Arabian Sea till night of 25<sup>th</sup> October.
- Those out at sea are advised to return to coast.

## (B) Depression over westcentral Bay of Bengal

The Depression over westcentral Bay of Bengal remains practically stationary during past 3 hours, and lay centered at 0230 hours IST of today, the 22<sup>nd</sup> October over the same region, near latitude 14.8°N and longitude 86.5°E about 610 km south of Paradip (Odisha), 760 km south of Digha (West Bengal), and 980 km south-southwest of Khepupara (Bangladesh).

It is likely to further intensify into a deep depression during next 24 hours. It is likely to move northwestwards during next 12 hours, then recurve and move north-northeastwards during subsequent 3 days towards Bangladesh and adjoining West Bengal coasts.

## Forecast track and intensity are given below:

Date/Time(IST)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
22.10.23/0230	14.8/86.5	40-50 gusting to 60	Depression
22.10.23/1130	15.1/85.8	40-50 gusting to 60	Depression
22.10.23/2330	15.6/85.6	50-60 gusting to 70	Deep Depression
23.10.23/1130	16.5/85.9	50-60 gusting to 70	Deep Depression
23.10.23/2330	17.8/86.6	60-70 gusting to 80	Cyclonic Storm
24.10.23/1130	19.0/87.5	60-70 gusting to 80	Cyclonic Storm
24.10.23/2330	19.9/88.4	60-70 gusting to 80	Cyclonic Storm

#### Warnings:

## (i) Rainfall Warning

**Nagaland, Manipur, Mizoram & Tripura:** Light to moderate rainfall at most places with isolated heavy rainfall is likely on 24<sup>th</sup> and 25<sup>th</sup> October.

**Coastal Districts of Odisha:** Light to moderate rainfall at a few places is likely on 23<sup>rd</sup> and at many places on 24<sup>th</sup> & 25<sup>th</sup> October.

**Coastal Districts of West Bengal:** Light to moderate rainfall at many places is likely on 24<sup>th</sup> and 25<sup>th</sup> October.

## (ii) Wind warning (warning graphics enclosed):

- Westcentral Bay of Bengal: Squally wind speed reaching 40-50 kmph gusting to 60 kmph is prevailing and likely to increase gradually becoming 50-60 kmph gusting to 70 kmph from morning of 22<sup>nd</sup> till 25<sup>th</sup> October. It is likely to decrease gradually thereafter.
- Adjoining eastcentral & southeast Bay of Bengal: Squally wind speed reaching 40-50 kmph gusting to 60 kmph is prevailing near the system and likely to become 50-60 kmph gusting to 70 kmph from morning of 22<sup>nd</sup> till 23<sup>rd</sup> October. It is likely to decrease gradually thereafter.
- North Bay of Bengal and along & off Odisha, West Bengal and Bangladesh coasts:
   Squally wind speed reaching 60-70 kmph gusting to 80 kmph is likely to prevail from 24<sup>th</sup> to 26<sup>th</sup> October.

#### (iii) Sea Condition

- Westcentral Bay of Bengal: Rough to very rough sea condition is prevailing and will continue till 25<sup>th</sup> October. It is likely to improve gradually thereafter.
- Adjoining eastcentral Bay of Bengal: Moderate to rough sea condition is prevailing and likely till 24<sup>th</sup> October. It is likely to improve gradually thereafter.
- Southwest Bay of Bengal: Moderate to rough sea condition is prevailing and likely till 22<sup>nd</sup> October. It is likely to improve gradually thereafter.
- North Bay of Bengal and along & off Odisha, West Bengal and Bangladesh coasts:

Rough to very rough sea condition is likely from 24<sup>th</sup> to 26<sup>th</sup> October.

# (iv) Fishermen Warning (Graphics attached):

Fishermen are advised not to venture into

- ❖ Westcentral Bay of Bengal till 25<sup>th</sup> October.
- ❖ Adjoining eastcentral & southeast Bay of Bengal till 23<sup>rd</sup> October.
- ❖ North Bay of Bengal and along & off Odisha, West Bengal and Bangladesh coasts from 24<sup>th</sup> to 26<sup>th</sup> October.

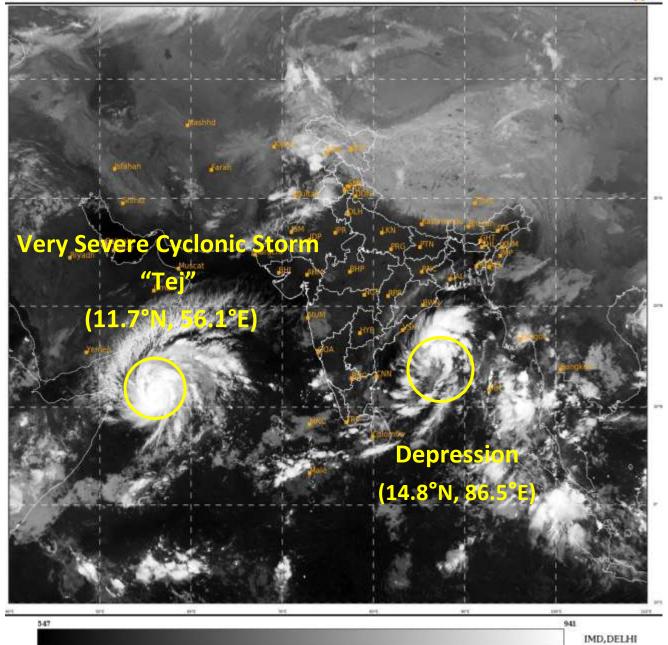
Those out at sea are advised to return to coast.

Both the systems are under continuous surveillance and the next bulletin will be issued at 0830 hours IST of 22<sup>nd</sup> October, 2023.

(S. P. Singh) Scientist C, Cyclone Warning, New Delhi

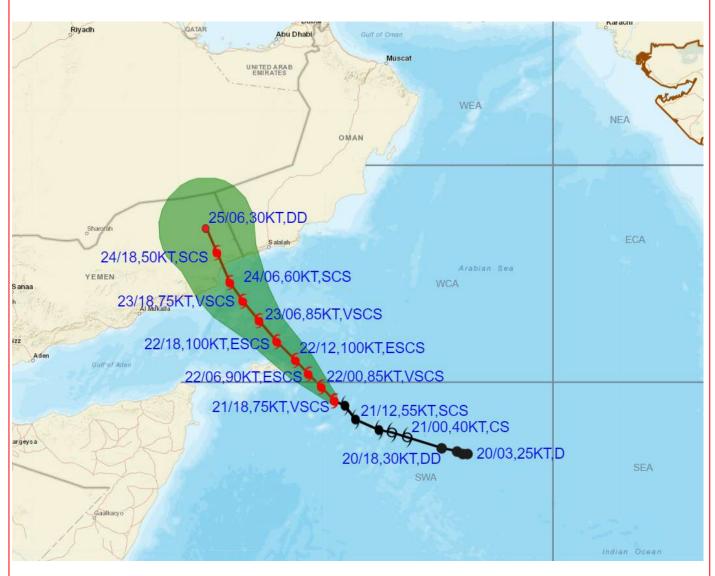
Copy to: ACWC Mumbai/ ACWC Chennai/ ACWC Kolkata/CWC Ahmedabad/CWC Bhubaneswar/CWC Vishakhapatnam/CWC Thiruvananthapuram/MC Goa
Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.







OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY OF VERY SEVERE CYCLONIC STORM "TEJ" OVER SOUTHWEST ARABIAN SEA BASED ON 1800 UTC (2330 IST) OF 21st OCTOBER 2023.



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)

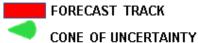
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)

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

SuCS: SUPER CYCLONIC STORM € 120 KT)

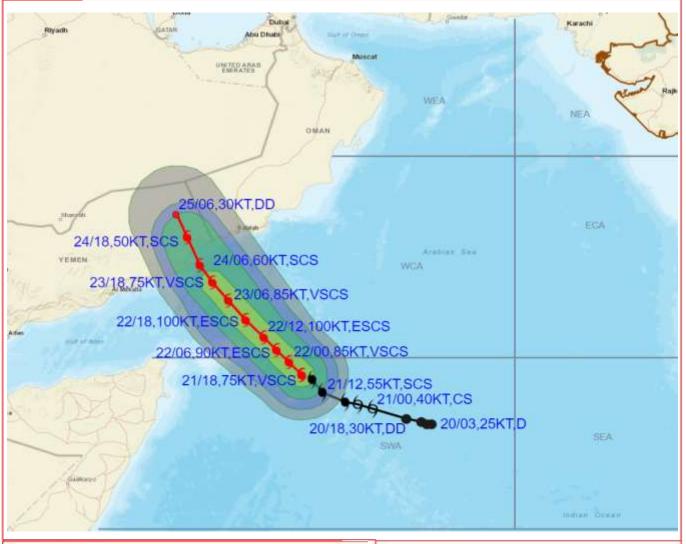








OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF VERY SEVERE CYCLONIC STORM "TEJ" OVER SOUTHWEST ARABIAN SEA BASED ON 1800 UTC (2330 IST) OF 21st OCTOBER 2023.



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

6 34.47 KT 6 ≥ 48 KT

OBSERVED TRACK
FORECAST TRACK

CONE OF UNCERTAINTY

AREA OF MAXIMUM SUSTAINED WIND SPEED:

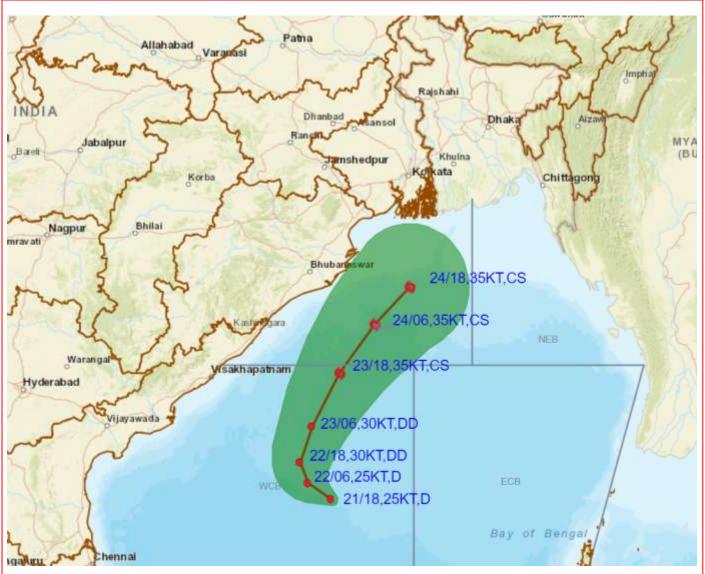
28-33 KT (52-61 KMPH) 34-49 KT (62-91 KMPH)

■ 50-63 KT (92-117 KMPH) ■ ≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA		
MSW (knot/kmph) Impact Action		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



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY OF DEPRESSION OVER WESTCENTRAL BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 21<sup>ST</sup> OCTOBER 2023.



DATE/TIME IN UTC IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

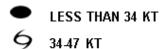
D: DEPRESSION (17-27 KT)

DD: DEEP DEPRESSION (28-33 KT) CS: CYCLONIC STORM (34-47 KT)

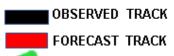
SCS: SEVERE CYCLONIC STORM (48-63KT)

VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM € 120 KT)







CONE OF UNCERTAINTY



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER WESTCENTRAL BAY OF BENGAL **BASED ON 1800 UTC (2330 IST) OF 21<sup>ST</sup> OCTOBER 2023.** 



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
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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

#### **WEATHER WARNING GRAPHICS**

