



**India Meteorological Department  
(Ministry of Earth Sciences)**

**NATIONAL BULLETIN NO. 5 (ARB/03/2023)**

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**Sub: (A) Deep Depression intensified into a cyclonic storm "Tej" (pronounced as Tej) over southwest Arabian Sea**

**(B) Low pressure Area over southeast and adjoining eastcentral Bay of Bengal**

**(A) Deep Depression intensified into a cyclonic storm "Tej" (pronounced as Tej) over southwest Arabian Sea**

The deep depression over southwest Arabian Sea moved west-northwestwards with a speed of 24 kmph during past 6 hours, intensified into a cyclonic storm "Tej" (pronounced as Tej) and lay centered at 0530 hours IST of 21<sup>st</sup> October over the same region, near latitude 9.9°N and longitude 59.4°E about 670 km east-southeast of Socotra (Yemen), 980 km south-southeast of Salalah (Oman) and 1050 km east-southeast of Al Ghaidah (Yemen).

It is very likely to intensify into a severe cyclonic storm during next 12 hours and further into a very severe cyclonic storm during subsequent 24 hours. It is very likely to move west-northwestwards till 22<sup>nd</sup> morning, northwestwards thereafter till 24<sup>th</sup> morning & then north-northwestwards. It is likely to cross Yemen-Oman coasts between Al Ghaidah (Yemen) & Salalah (Oman) around early morning of 25<sup>th</sup> October.

**Forecast track and intensity are given below:**

<b>Date/Time(IST)</b>	<b>Position (Lat. °N/ long. °E)</b>	<b>Maximum sustained surface wind speed (Kmph)</b>	<b>Category of cyclonic disturbance</b>
21.10.23/0530	9.9/59.4	70-80 gusting to 90	Cyclonic Storm
21.10.23/1130	10.4/58.7	80-90 gusting to 100	Cyclonic Storm
21.10.23/1730	10.9/57.9	90-100 gusting to 110	Severe Cyclonic Storm
21.10.23/2330	11.3/57.2	105-115 gusting to 125	Severe Cyclonic Storm
22.10.23/0530	11.8/56.5	110-120 gusting to 135	Very Severe Cyclonic Storm
22.10.23/1730	12.7/55.4	135-145 gusting to 160	Very Severe Cyclonic Storm
23.10.23/0530	13.6/54.5	150-160 gusting to 175	Very Severe Cyclonic Storm
23.10.23/1730	14.3/53.9	145-155 gusting to 170	Very Severe Cyclonic Storm
24.10.23/0530	15.0/53.4	135-145 gusting to 160	Very Severe Cyclonic Storm
24.10.23/1730	15.9/53.1	125-135 gusting to 150	Very Severe Cyclonic Storm
25.10.23/0000	16.6/52.9	100-110 gusting to 120	Severe Cyclonic Storm
25.10.23/1200	17.3/52.7	60-70 gusting to 80	Cyclonic Storm
26.10.23/0000	18.0/52.7	40-50 gusting to 60	Depression

**Warnings:**

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

• **Southwest Arabian Sea:**

**Gale wind** speed reaching **70-80 kmph gusting to 90 kmph** is prevailing and likely to increase gradually becoming **90-100 kmph gusting to 110 kmph** by evening of today, the 21<sup>st</sup> October and **110-120 kmph gusting to 135 kmph** by morning of 22<sup>nd</sup> October. It is likely to decrease gradually becoming **Gale wind** speed reaching **60-70 kmph gusting to 80 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:**

**Squally wind** speed reaching **50-60 kmph gusting to 70 kmph** is prevailing and likely to become **Gale wind speed reaching 80-90 kmph gusting to 100 kmph** by evening of 21<sup>st</sup> October. It is likely to increase gradually becoming **Gale wind speed reaching 110-120 kmph gusting to 135 kmph** in the morning of 22<sup>nd</sup>, **150-160 kmph gusting to 175 kmph** in the 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 135-145 kmph gusting to 160 kmph** by 24<sup>th</sup> morning and **100-110 kmph gusting to 120 kmph** on 25<sup>th</sup> morning. It would decrease rapidly after the landfall becoming **Gale wind speed reaching 60-70 kmph gusting to 80 kmph** in the evening of 25<sup>th</sup> October and **Squally wind speed reaching 35-45 kmph gusting to 55 kmph** by morning of 26<sup>th</sup> October.

**(ii) Sea Condition**

• **Southwest Arabian Sea:**

**Very rough** sea condition is prevailing and becoming **high** in the evening of today, the 21<sup>st</sup> October. It is likely to become **phenomenal sea condition** from morning of 22<sup>nd</sup> to morning of 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:**

**Rough to very rough sea condition** is prevailing and it is likely to become **high to very high** from evening of today, 21<sup>st</sup> October. It is likely to become phenomenal from 22<sup>nd</sup> morning and likely to continue till night of 24<sup>th</sup> October. It would improve gradually thereafter becoming **very high to high** from 25<sup>th</sup> morning. 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 26<sup>th</sup> October.
- ❖ Those out at sea are advised to return to coast.

## **(B) Low pressure Area over southeast and adjoining eastcentral Bay of Bengal**

The low pressure area over southwest and adjoining southeast Bay of Bengal lay centered over southeast & adjoining eastcentral Bay of Bengal at 0530 hours IST of 21<sup>st</sup> October, 2023. It is very likely to move northwestwards and intensify into a depression over westcentral Bay of Bengal around 22<sup>nd</sup> October. Thereafter, it is likely to move north-northeastwards towards Bangladesh and adjoining West Bengal coasts during subsequent 3 days.

### **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):**

##### **• Southeast and adjoining eastcentral & southwest Bay of Bengal:**

**Squally wind** speed reaching **45-55 kmph gusting to 65 kmph** is likely to prevail near the system on 21<sup>st</sup> & 22<sup>nd</sup> and **50-60 kmph gusting to 70 kmph** on 23<sup>rd</sup> October. It is likely to decrease gradually thereafter.

##### **• Westcentral Bay of Bengal:**

**Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely to prevail on 21<sup>st</sup> October. It is likely to gradually increase becoming **45-55 kmph gusting to 65 kmph** on 22<sup>nd</sup> and **50-60 kmph gusting to 70 kmph** on 23<sup>rd</sup> & 24<sup>th</sup> October.

##### **• North Bay of Bengal and along & off Odisha, West Bengal and Bangladesh coasts:**

**Squally wind** speed reaching **45-55 kmph gusting to 65 kmph** is likely to prevail from 24<sup>th</sup> to 26<sup>th</sup> October.

#### **(iii) Sea Condition**

##### **• Southeast and adjoining eastcentral & southwest Bay of Bengal:**

**Moderate to rough sea condition** is likely to prevail near the system on 21<sup>st</sup> and it is likely to become **rough to very rough** on 23<sup>rd</sup> October. It is likely to improve gradually thereafter.

##### **• Westcentral Bay of Bengal:**

**Rough sea condition** is likely to prevail on 21<sup>st</sup> October. It is likely to become **rough to very rough** from 23<sup>rd</sup> October.

##### **• 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

❖ **Southeast and adjoining eastcentral & southwest Bay of Bengal** till 23<sup>rd</sup> October.

❖ **Westcentral Bay of Bengal** from 21<sup>st</sup> October onwards.

❖ **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 1130 hours IST of today, the 21<sup>st</sup> October, 2023.**

**(A K Das)**

**Scientist F, Cyclone Warning, New Delhi**

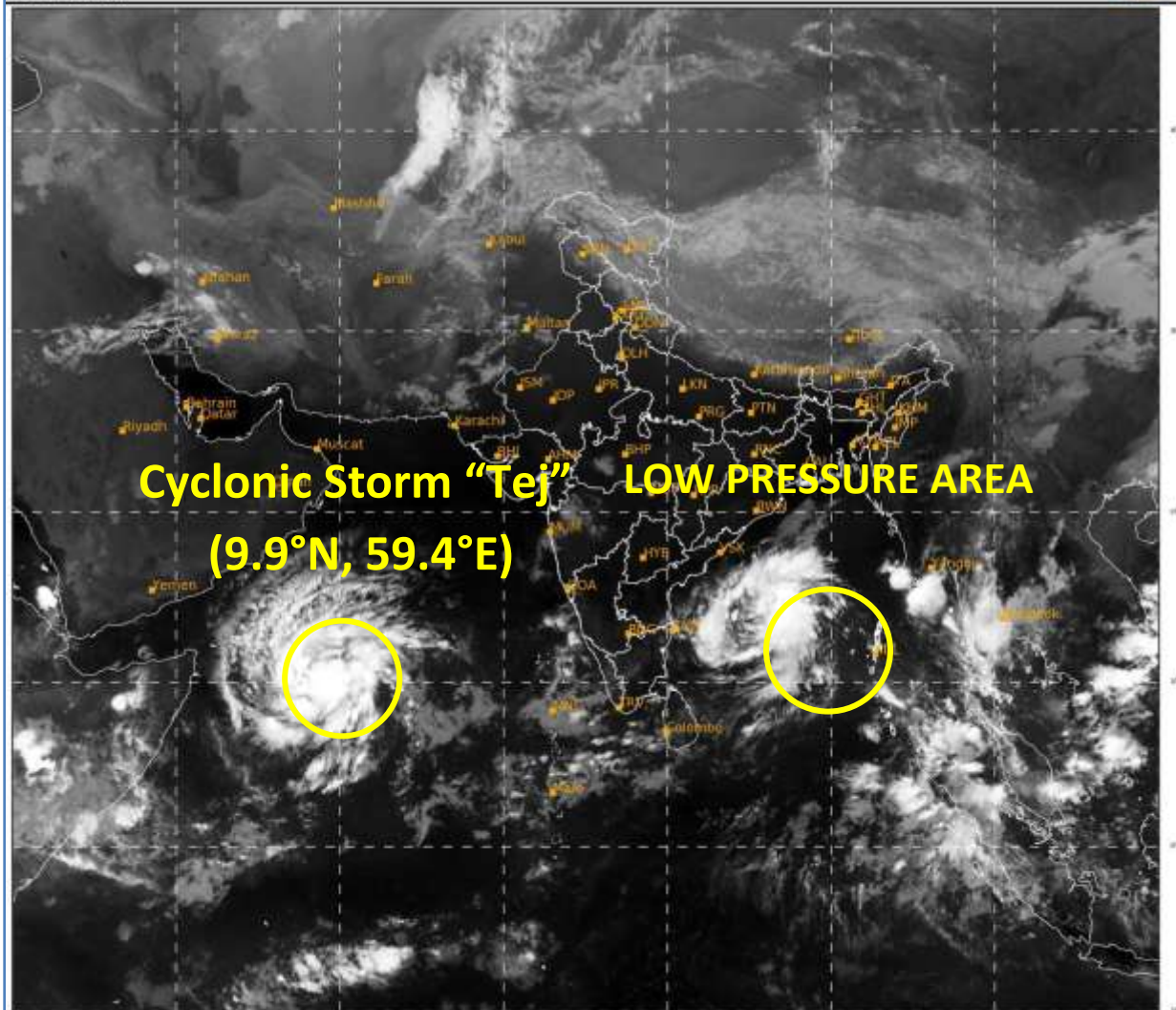
*Copy to: ACWC Mumbai/ ACWC Chennai/ ACWC Kolkata/CWC Ahmedabad/CWC Bhubaneswar/CWC Vishakhapatnam/CWC Thiruvananthapuram/MC Goa*

**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.**

SAT : INSAT-3D IMG  
IMC\_TIR1 10.8 um  
LIC Mercator

21-10-2023/(0230 to 0256) GMT  
21-10-2023/(0800 to 0826) IST



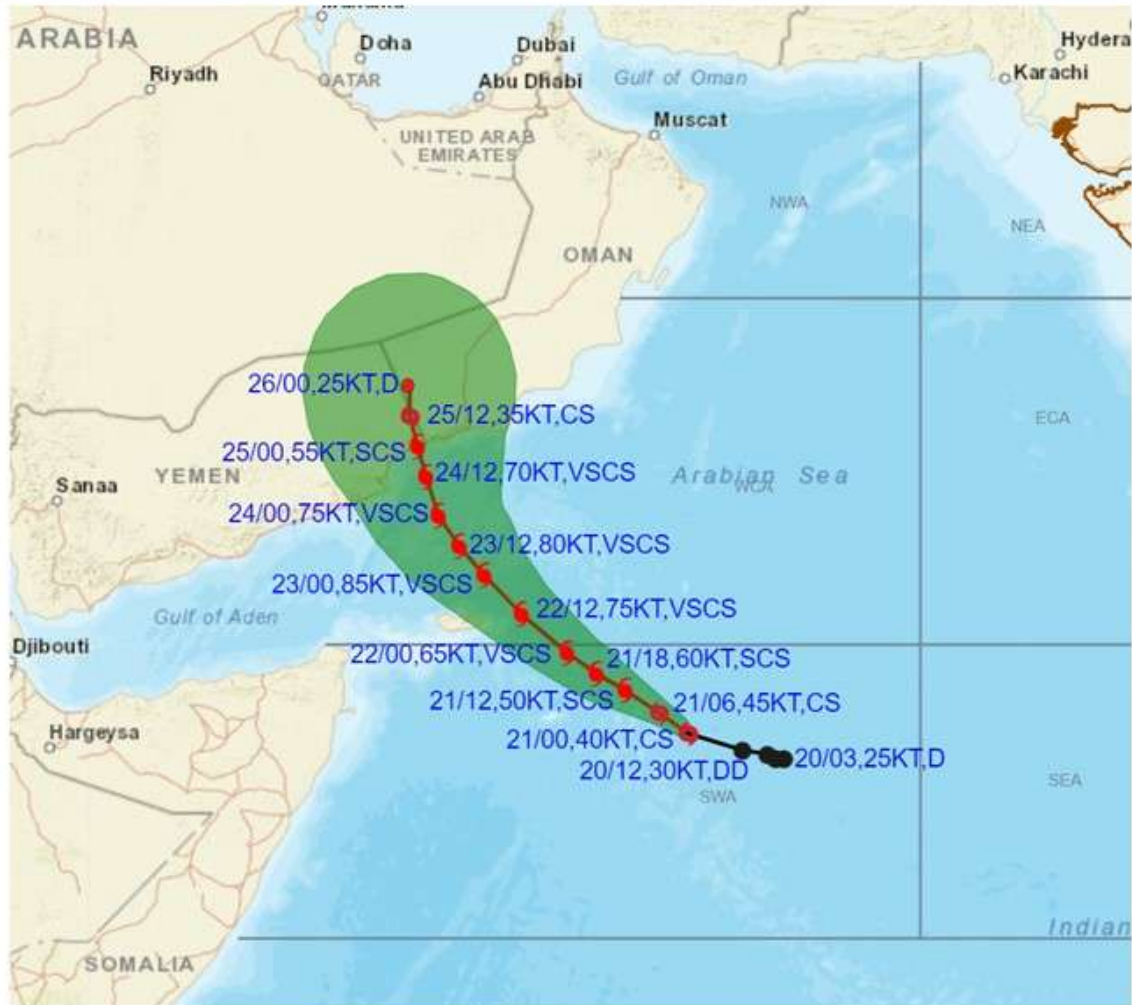
489

938

IMD, DELHI



**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM "TEJ" OVER SOUTHWEST ARABIAN SEA BASED ON 0000 UTC (0530 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 ( $\geq$  120 KT)

● LESS THAN 34 KT

○ 34-47 KT

○  $\geq$  48 KT

— OBSERVED TRACK

— FORECAST TRACK

▲ CONE OF UNCERTAINTY



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "TEJ" OVER SOUTHWEST ARABIAN SEA BASED ON 0000 UTC (0530 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)

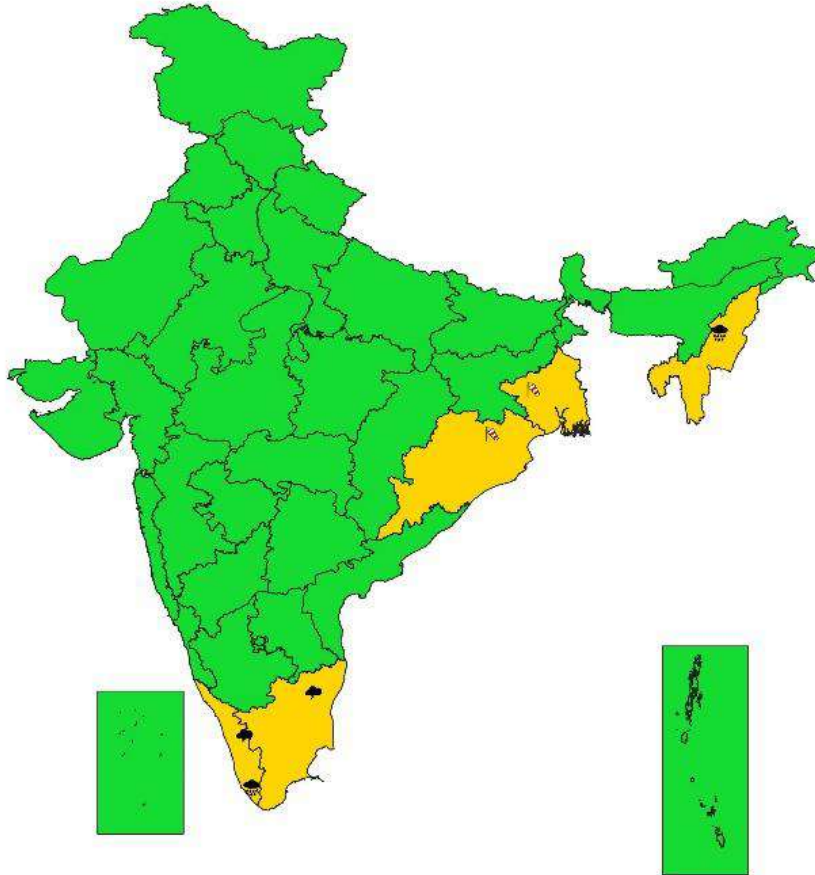
— ≥ 64 KT (≥118 KMPH)

**IMPACT OVER THE SEA**

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



# SUBDIVISIONWISE WEATHER WARNING FOR DAY 5 ( 24-10-2023)



### Subdivision Warning

- ☁ Heavy Rain
- ❄ Heavy Snow
- ⚡ Thunderstorms & Lightning
- 🌨 Hailstorm

### Dust Storm

- 🌪 Strong Surface Winds
- 🔥 Heat Wave
- ❄ Cold wave
- 🌫 Fog

### Subdivision color

- 🟢 NO WARNING
- 🟡 WATCH (BE UPDATED)
- 🟠 ALERT (BE PREPARED)
- 🔴 WARNING (TAKE ACTION)

## Fishermen warning graphics

Day 1: 21.10.2023/05:30AM to 22.10.2023/05:30AM



Day 2: 22.10.2023/05:30AM to 23.10.2023/05:30AM



Day 3: 23.10.2023/05:30AM to 24.10.2023/05:30AM



Day 4: 24.10.2023/05:30AM to 25.10.2023/05:30AM



Squally WX with wind speed 40-45 kmph gusting to 55 kmph

Squally WX with wind speed 45-55 kmph gusting to 65 kmph

Squally wind with speed 50-60 kmph gusting to 70 kmph

CS with Gale wind speed 60-90 kmph gusting to 110 kmph

SCS with Gale wind speed 90-110 kmph gusting to 120 kmph

**Fishermen are advised not to venture into the marked areas.**