

# India Meteorological Department (Ministry of Earth Sciences)

# NATIONAL BULLETIN NO. 18 (ARB/03/2023)

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

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

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**DIRECTOR GENERAL, AIR (23421105, 23421219)** 

**PIB MOES (FAX NO. 23389042)** 

**UNI (FAX NO. 23355841)** 

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

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

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

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CHIEF SECRETARY, WEST BENGAL (FAX NO. 033-22144328)

CHIEF SECRETARY, ANDHRA PRADESH (FAX NO. 0863-2441029, 08645-246600)

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

CHIEF SECRETARY, PUDUCHERRY (FAX NO 0413-2334145)

CHIEF SECRETARY, GOVT. OF TRIPURA (FAX NO. 0381-2414013, 2413200)

**CHIEF SECRETARY, GOVT. OF MIZORAM (FAX NO. 0389-2322745, 2320588)** 

CHIEF SECRETARY, GOVT. OF MANIPUR (FAX NO. 0385-2452629)

CHIEF SECRETARY, GOVT. OF NAGALAND (FAX NO. 0370-2270057)

ADMINISTRATOR, ANDAMAN & NICOBAR ISLANDS (FAX NO. 03192-232656)

# Sub: (A) Extremely Severe Cyclonic Storm "Tej" (pronounced as Tej) over Westcentral Arabian Sea and

(B) Deep Depression over Westcentral Bay of Bengal

# (A) Extremely Severe Cyclonic Storm "Tej" (pronounced as Tej) over Westcentral Arabian Sea

The Extremely Severe Cyclonic Storm "Tej" (pronounced as Tej) over Westcentral Arabian Sea continued to move northwestwards with a speed of 17 kmph during past 6 hours and lay centered at 2030 hours IST of today, the 22<sup>nd</sup> October over Westcentral Arabian Sea, near latitude 13.6°N and longitude 54.1°E, about 110 km north of Socotra (Yemen), 380 km south of Salalah (Oman) and 350 km southeast of Al Ghaidah (Yemen).

It is very likely to continue to move northwestwards and cross Yemen coast close to Al-Ghaidah around early hours of 24<sup>th</sup> October as a **Very Severe Cyclonic Storm** with wind speed of 125-135 kmph gusting to 150 kmph.

# Forecast track and intensity are given below:

Date/Time(IST)	Position	Maximum sustained surface	
	(Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	wind speed (Kmph)	disturbance
22.10.23/2030	13.6/54.1	170-180 gusting to 200	Extremely Severe Cyclonic Storm
22.10.23/2330	13.9/53.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
23.10.23/0530	14.5/53.3	165-175 gusting to 195	Extremely Severe Cyclonic Storm
23.10.23/1130	15.0/52.9	150-160 gusting to 175	Very Severe Cyclonic Storm
23.10.23/1730	15.5/52.5	135-145 gusting to 160	Very Severe Cyclonic Storm
24.10.23/0530	16.0/52.0	105-115 gusting to 125	Severe Cyclonic Storm
24.10.23/1730	16.4/51.5	70-80 gusting to 90	Cyclonic Storm
25.10.23/0530	16.8/50.9	30-40 gusting to 50	Depression

# **Warnings:**

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

## • Southwest Arabian Sea:

**Gale wind** speed reaching **170-180 kmph gusting to 200 kmph** is prevailing and is likely to continue till night of 22<sup>nd</sup> October. Thereafter, it is likely to decrease gradually becoming **Gale wind** speed reaching **80-90 kmph gusting to 100 kmph** by evening of 23<sup>rd</sup> and **Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** by early hours of 24<sup>th</sup> October. It would decrease gradually thereafter.

## • Westcentral Arabian Sea:

Gale wind speed reaching 170-180 kmph gusting to 200 kmph is prevailing and likely to continue till night of 22<sup>nd</sup>October. Thereafter, it is likely to decrease gradually becoming Gale wind speed reaching 150-160 kmph gusting to 175 kmph by 23<sup>rd</sup> noon and 125-135 kmph gusting to 150 kmph by early hours of 24<sup>th</sup> October. It would decrease rapidly after the landfall becoming Squally wind speed reaching 40-50 kmph gusting to 60 kmph in the morning of 25<sup>th</sup> October.

# (ii) Sea Condition

### • Southwest Arabian Sea:

**Phenomenal** sea condition is prevailing and will continue till morning of 23<sup>rd</sup> October. It is likely to improve gradually becoming **high to very rough** till evening of 23<sup>rd</sup>, **very rough to rough** till evening of 24<sup>th</sup> October and would improve thereafter.

#### • Westcentral Arabian Sea:

**Phenomenal** sea condition is prevailing and will continue till night of 23<sup>rd</sup> October. It would improve gradually thereafter becoming **high to very rough** by early hours of 24<sup>th</sup> October. Thereafter, it would improve gradually.

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

Fishermen are advised not to venture into

- Southwest Arabian Sea till 24th October.
- ❖ Westcentral Arabian Sea till night of 24<sup>th</sup> October.

## (B) Deep Depression over Westcentral Bay of Bengal

The Deep Depression over Westcentral Bay of Bengal continued to move nearly northwards with a speed of 15 kmph during past 6 hours and lay centered at 2030 hours IST of today, the 22<sup>nd</sup> October over Westcentral Bay of Bengal, near latitude 16.4°N and longitude 86.4°E, about 430 km south of Paradip (Odisha), 590 km south-southwest of Digha (West Bengal), and 740 km south-southwest of Khepupara (Bangladesh).

It is likely to intensify further into a *Cyclonic Storm* during next 24 hours. It is very likely to continue to move nearly northwards till morning of 23<sup>rd</sup> October, then north-northeastwards and cross Bangladesh coast between Khepupara and Chittagong around 25<sup>th</sup> October evening as a *Deep Depression.* 

# 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
22.10.23/2030	16.4/86.4	50-60 gusting to 70	Deep Depression
22.10.23/2330	16.6/86.4	50-60 gusting to 70	Deep Depression
23.10.23/0530	17.3/86.5	55-65 gusting to 75	Deep Depression
23.10.23/1130	17.9/86.6	55-65 gusting to 75	Deep Depression
23.10.23/1730	18.6/86.9	60-70 gusting to 80	Cyclonic Storm
24.10.23/0530	19.5/87.7	60-70 gusting to 80	Cyclonic Storm
24.10.23/1730	20.4/88.8	60-70 gusting to 80	Cyclonic Storm
25.10.23/0530	21.2/89.7	55-65 gusting to 75	Deep Depression
25.10.23/1730	21.9/90.5	50-60 gusting to 70	Deep Depression
26.10.23/0530	22.8/91.0	40-50 gusting to 60	Depression

# 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 50-60 kmph gusting to 70 kmph is prevailing and likely to increase becoming 55-65 kmph gusting to 75 kmph from evening 23<sup>rd</sup> ill 24<sup>th</sup> October morning. It is likely to decrease gradually thereafter becoming squally wind speed reaching 40-50 kmph gusting 60 kmph by 24<sup>th</sup> evening.
- Adjoining eastcentral Bay of Bengal: Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail till morning of 23<sup>rd</sup> October and becoming 50-60 kmph gusting to 70 kmph on 24<sup>th</sup> and decrease from 25<sup>th</sup> onwards.
- North Bay of Bengal:
  - **Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely on 22<sup>nd</sup> **and** likely to increase gradually becoming **Gale wind** speed reaching **60-70 kmph gusting to 80 kmph** on 24<sup>th</sup> October.
- Along & off Odisha, West Bengal, Bangladesh and north Myanmar coasts:
   Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely from 23<sup>rd</sup> evening to 24<sup>th</sup> along & off Odisha coast. Squally wind speed reaching 40-50 kmph gusting to 60 kmph is

likely to commence along & off West Bengal, Bangladesh and North Myanmar coasts from 24<sup>th</sup> morning. It would gradually increase becoming **55-65 kmph gusting to 75 kmph** along & off Bangladesh coast, **50-60 kmph gusting to 70 kmph** along & off north Myanmar coast and **45-55 kmph gusting to 65** along & off west Bengal coast on 25<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.
- Adjoining Southwest Bay of Bengal: Moderate to rough sea condition is prevailing and likely till night of 22nd October. It is likely to improve gradually thereafter.
- North Bay of Bengal:
   Rough sea condition is likely on 23<sup>rd</sup> and becoming Very rough to High from 24<sup>th</sup> and very rough on 25<sup>th</sup> October.
- Along & off Odisha, West Bengal, Bangladesh and north Myanmar coasts: Rough sea condition is likely on 23<sup>rd</sup> and becoming rough to very rough sea condition from 24<sup>th</sup> to 25<sup>th</sup> October.

# (iv) Fishermen Warning (Graphics attached):

Fishermen are advised not to venture into

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

Both the systems are under continuous surveillance and the next bulletin will be issued at 0230 hours IST of 23<sup>rd</sup> October, 2023.

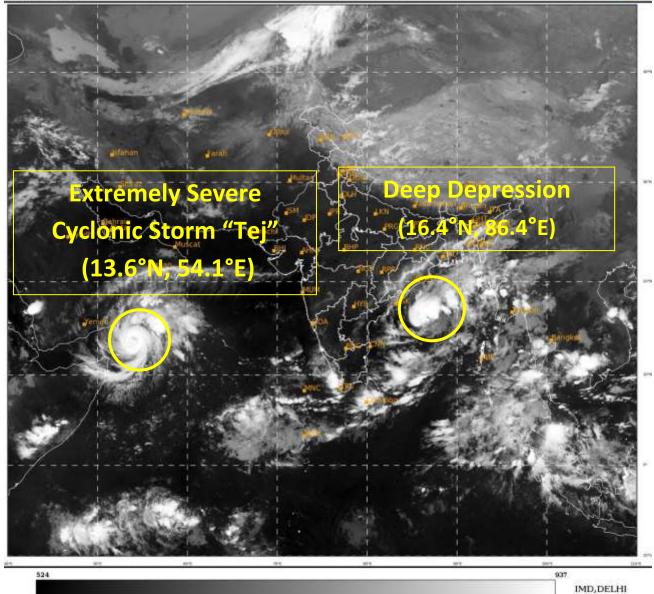
(Krishna Mishra)
Scientist C, Cyclone Warning Division, New Delhi

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%

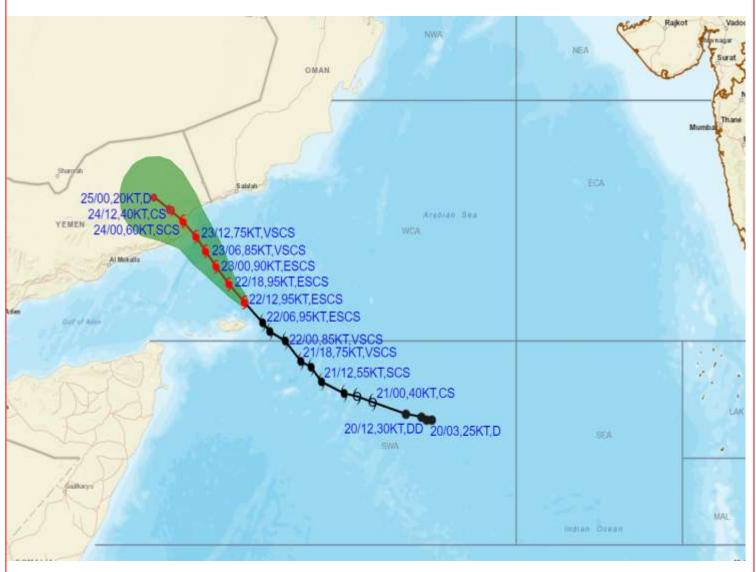
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.







OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY OF EXTREMELY SEVERE CYCLONIC STORM "TEJ" OVER WESTCENTRAL ARABIAN SEA BASED ON 1200 UTC (1730 IST) OF 22ND OCTOBER 2023.



DATE/TIME IN UTC IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

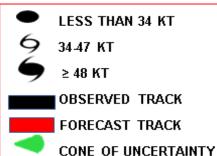
D: DEPRESSION (17-27 KT)

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)

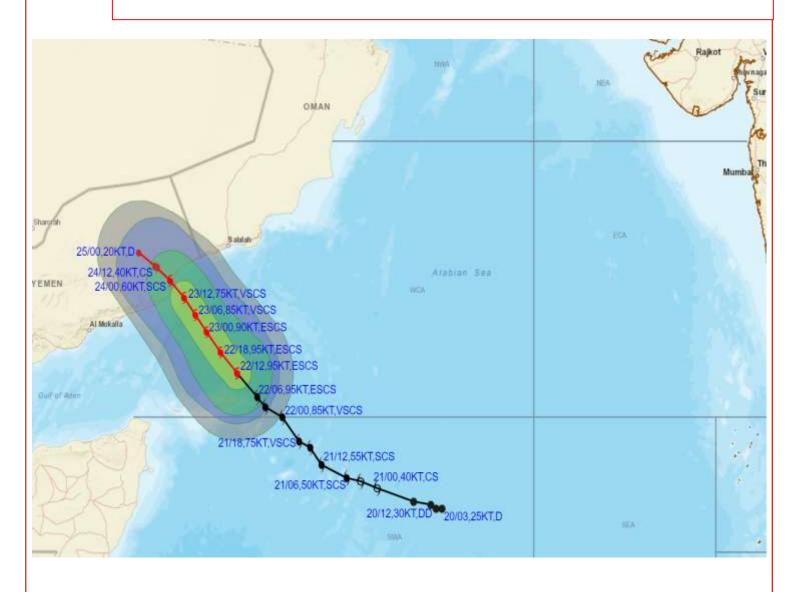
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM ₱ 120 KT)



Forecast	DISTANCE(KM) AND DIRECTION FROM STATIONS		
Date and Time	SOCOTRA	SALALAH	AL-GHAIDAH
23.10.23/1200	360, NNW	250, SW	70, SE
24.10.23/1200	490, NNW	280, WSW	70, WNW

OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF EXTREMELY SEVERE CYCLONIC STORM "TEJ" OVER WESTCENTRAL ARABIAN SEA BASED ON 1200 UTC (1730 IST) OF 22<sup>ND</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)

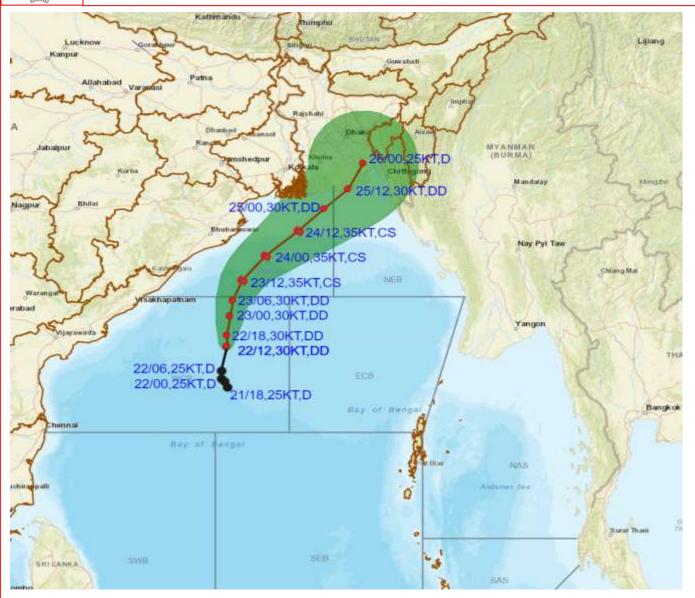
•	LESS THAN 34 KT
6	34-47 KT
6	≥ 48 KT
	OBSERVED TRACK
	FORECAST TRACK
	CONE OF UNCERTAINTY
AREA C	OF MAXIMUM SUSTAINED WIND SPEED:
	28-33 KT (52-61 KMPH)
	34-49 KT (62-91 KMPH)
	50-63 KT (92-117 KMPH)
	≥ 64 KT (≥118 KMPH)

LECC TUAN 24 KT

	IMPACI O	VER 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



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY OF DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC (1730 IST) OF 22<sup>ND</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)

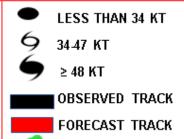
DD: DEEP DEPRESSION (28-33 KT) CS: CYCLONIC STORM (34-47 KT)

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 DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC (1730 IST) OF 22<sup>ND</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 (20-119 KT)

28-33 (52-61)

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)

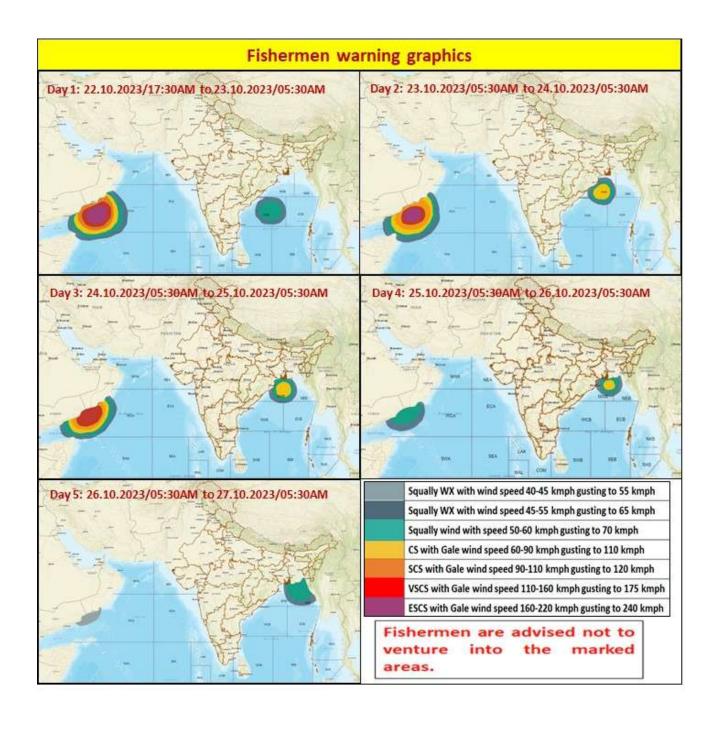
50.63 KT (92.117 KMPH)

≥ 64 KT (≥118 KMPH)

Total suspension of fishing operations

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

Very rough seas



## **WEATHER WARNING GRAPHICS**

