



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

**BULLETIN NO. 37 (ARB/01/2023)**

**TIME OF ISSUE: 1030 HOURS IST**

**DATED: 10.06.2023**

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

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**Sub: A) Very Severe Cyclonic Storm “Biparjoy” (pronounced as “Biporjoy”) over  
eastcentral Arabian Sea  
B) Low Pressure Area over Southeast Bangladesh & neighbourhood**

**A) Very Severe Cyclonic Storm “Biparjoy” (pronounced as “Biporjoy”) over  
eastcentral Arabian Sea**

The very severe cyclonic storm “Biparjoy” (pronounced as “Biporjoy”) over eastcentral Arabian Sea moved nearly northwards with a speed of 7 kmph during past 6-hours and lay centered at 2030 hours IST of today, the 10th June, 2023 over the same region near latitude 17.3°N and longitude 67.3°E, about 600 km west-southwest of Mumbai, 540 km south-southwest of Porbandar, 600 km south-southwest of Dwarka, 680 km south of Naliya and 840 km south of Karachi.

It is likely to intensify further into an extremely severe cyclonic storm during next 06 hours. It is very likely to move nearly northwards and reach near Pakistan coast around evening of 15<sup>th</sup> June, 2023.

**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>
10.06.23/2030	17.3/67.3	155-165 Gusting To 180	Very Severe Cyclonic Storm
10.06.23/2330	17.5/67.3	165-175 Gusting To 195	Extremely Severe Cyclonic Storm
11.06.23/0530	17.9/67.4	165-175 Gusting To 195	Extremely Severe Cyclonic Storm
11.06.23/1130	18.3/67.5	155-165 Gusting To 180	Very Severe Cyclonic Storm
11.06.23/1730	18.7/67.6	155-165 Gusting To 180	Very Severe Cyclonic Storm
12.06.23/0530	19.3/67.6	145-155 Gusting To 170	Very Severe Cyclonic Storm
12.06.23/1730	20.0/67.5	135-145 Gusting To 160	Very Severe Cyclonic Storm
13.06.23/0530	20.7/67.4	135-145 Gusting To 160	Very Severe Cyclonic Storm
13.06.23/1730	21.3/67.3	125-135 Gusting To 150	Very Severe Cyclonic Storm
14.06.23/0530	22.0/67.1	115-125 Gusting To 140	Very Severe Cyclonic Storm
14.06.23/1730	22.6/67.0	115-125 Gusting To 140	Very Severe Cyclonic Storm
15.06.23/0530	23.3/67.0	95-105 Gusting To 115	Severe Cyclonic Storm
15.06.23/1730	24.1/67.2	90-100 Gusting To 110	Severe Cyclonic Storm
16.06.23/0530	24.9/67.4	85-95 Gusting To 105	Severe Cyclonic Storm

**(i) Wind warning:**

**10<sup>th</sup> June:** Gale wind speed reaching 155-165 kmph gusting to 180 kmph is prevailing over eastcentral & adjoining areas of westcentral Arabian Sea and likely to increase becoming 165-175 kmph gusting to 195 kmph from night. Gale wind speed reaching 80-90 kmph gusting to 100 kmph is likely to prevail over adjoining areas of northeast Arabian Sea.

**11<sup>th</sup> June:** Gale wind speed reaching 165-175 kmph gusting to 195 kmph is likely to prevail over eastcentral and adjoining westcentral & northeast Arabian Sea and becoming 155-165 kmph gusting to 180 kmph over the region from night.

**12<sup>th</sup> June:** Gale wind speed reaching 145-155 kmph gusting to 170 kmph is likely to prevail over northeast and adjoining central Arabian Sea and becoming 135-145 kmph gusting to 160 kmph from evening.

**13<sup>th</sup> June:** Gale wind speed reaching 135-145 kmph gusting to 160 kmph is likely to prevail over northeast and adjoining northwest & central Arabian Sea and decrease thereafter to become 125-135 kmph gusting to 150 kmph from evening.

**14<sup>th</sup> June:** Gale wind speed reaching 115-125 kmph gusting to 140 kmph is likely to prevail over northeast and adjoining northwest Arabian Sea. Gale wind speed reaching 70-80 kmph gusting to 90 kmph over adjoining areas of central Arabian Sea.

**15<sup>th</sup> June:** Gale wind speed reaching 95-105 kmph gusting to 115 kmph is likely to prevail over northeast and adjoining northwest Arabian Sea and likely to decrease becoming 90-100 kmph gusting to 110 kmph. Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely over adjoining areas of central Arabian Sea.

**Along & off Saurashtra & Kutch coasts:**

Squally wind speed reaching 35-45 kmph gusting to 55 kmph is likely to prevail on 10<sup>th</sup> June and likely to increase becoming 40-50 kmph gusting to 60 kmph on 11<sup>th</sup> June, 45-55 kmph gusting to 65 kmph during 12<sup>th</sup> and 50-60 kmph gusting to 70 kmph during 13<sup>th</sup> to 15<sup>th</sup> June.

**(ii) Sea condition**

**10<sup>th</sup> June:** Sea condition is likely to be phenomenal over eastcentral & adjoining areas of westcentral Arabian Sea. Very rough to high sea condition is likely to prevail over adjoining areas of northeast Arabian Sea.

**11<sup>th</sup> June:** Sea condition is likely to be phenomenal over eastcentral and adjoining westcentral & northeast Arabian Sea.

**12<sup>th</sup> June:** Sea condition is likely to be phenomenal over northeast and adjoining central Arabian Sea.

**13<sup>th</sup> June:** Sea condition is likely to be phenomenal over northeast and adjoining northwest & central Arabian Sea

**14<sup>th</sup> June:** Sea condition is likely to be phenomenal to very high over northeast and adjoining northwest Arabian Sea and high to very rough sea condition is likely over adjoining areas of central Arabian Sea.

**15<sup>th</sup> June:** Sea condition is likely to be very high to high over northeast and adjoining northwest Arabian Sea and very rough to rough sea condition is likely over adjoining areas of central Arabian Sea.

**Along & off Saurashtra & Kutch coasts:**

Sea condition is likely to be rough on 10<sup>th</sup> June and likely to become rough to very rough during 11<sup>th</sup> to 15<sup>th</sup> June.

**(iii) Warning for Fishermen and Offshore & Onshore Industries (Graphics Attached)**

- Total suspension of fishing operations over
  - eastcentral and adjoining westcentral Arabian Sea till 15<sup>th</sup> June.
  - north and adjoining central Arabian Sea during 12<sup>th</sup> -15<sup>th</sup> June
- Fishermen are advised not to venture into:
  - Central Arabian Sea till 15<sup>th</sup> June.
  - North Arabian Sea during 12<sup>th</sup> -15<sup>th</sup> June.
  - **Along & off Saurashtra & Kutch coasts during 10<sup>th</sup> to 15<sup>th</sup> June.**
- Those out at sea are advised to return to coast.
- Judicious regulation of offshore and onshore activities.

**B) Low Pressure Area over Southeast Bangladesh & neighbourhood**

The low pressure area over southeast Bangladesh and neighbourhood persists over the same region at 2030 hours IST of today, the 10th June, 2023.

*This is the last bulletin in association with the system. However regular weather bulletins shall continue from the respective Meteorological Centres, Regional Meteorological Centres and National Weather Forecasting Centre (NWFC), New Delhi, India Meteorological Department in association this system.*

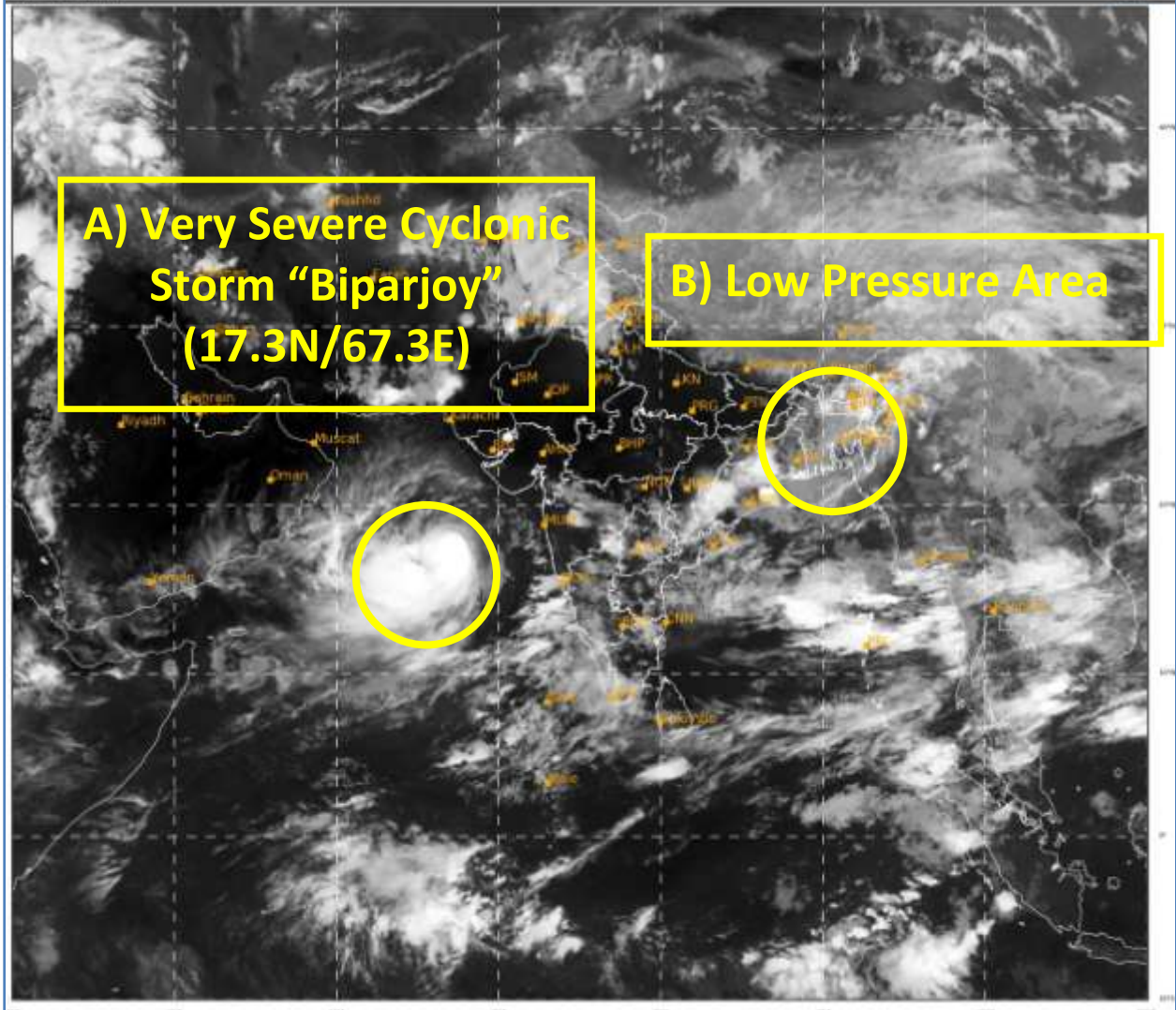
**The systems are under continuous surveillance and the next message will be issued at 0230 hours IST of 11<sup>th</sup> June, 2023.**

**(Shobhit Katiyar)**

**Scientist C, Cyclone Warning Division, New Delhi**

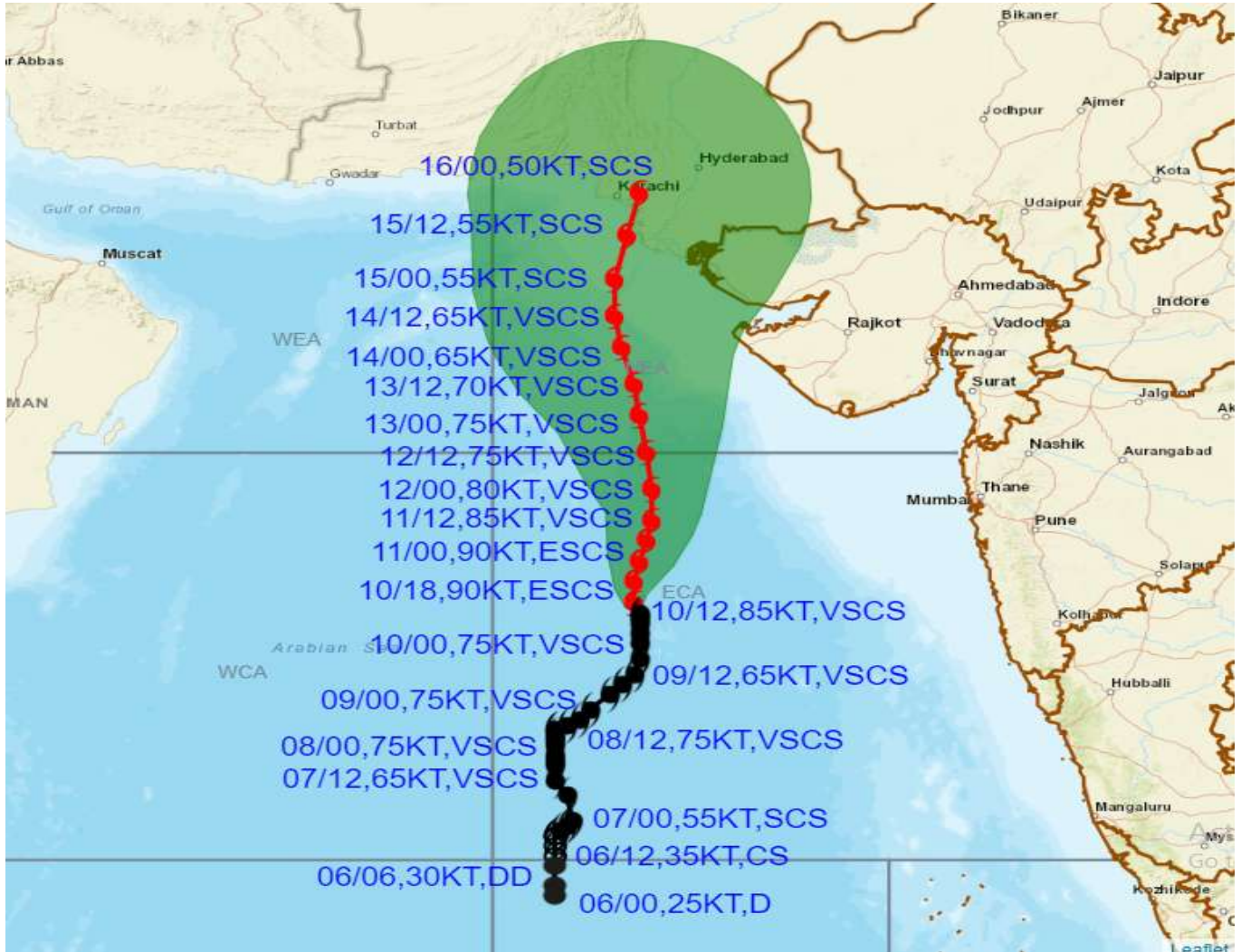
*Copy to: ACWC Kolkata/ ACWC Chennai/ CWC Bhubaneswar/CWC Visakhapatnam/CWC Ahmedabad/ MO Port Blair/MC Raipur/MC Bhopal/MC Hyderabad/RMC Nagpur*

**LEGEND: Heavy Rainfall:** 64.5 to 115.5mm, **Very Heavy Rainfall:** 115.6 to 204.4mm **Most Places:** more than 76% of total stations, **Isolated Places:** Less than 25% of total





**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM "BIPARJOY" OVER EASTCENTRAL ARABIAN SEA BASED ON 1200 UTC (1730 IST) OF 10<sup>TH</sup> JUNE 2023.**



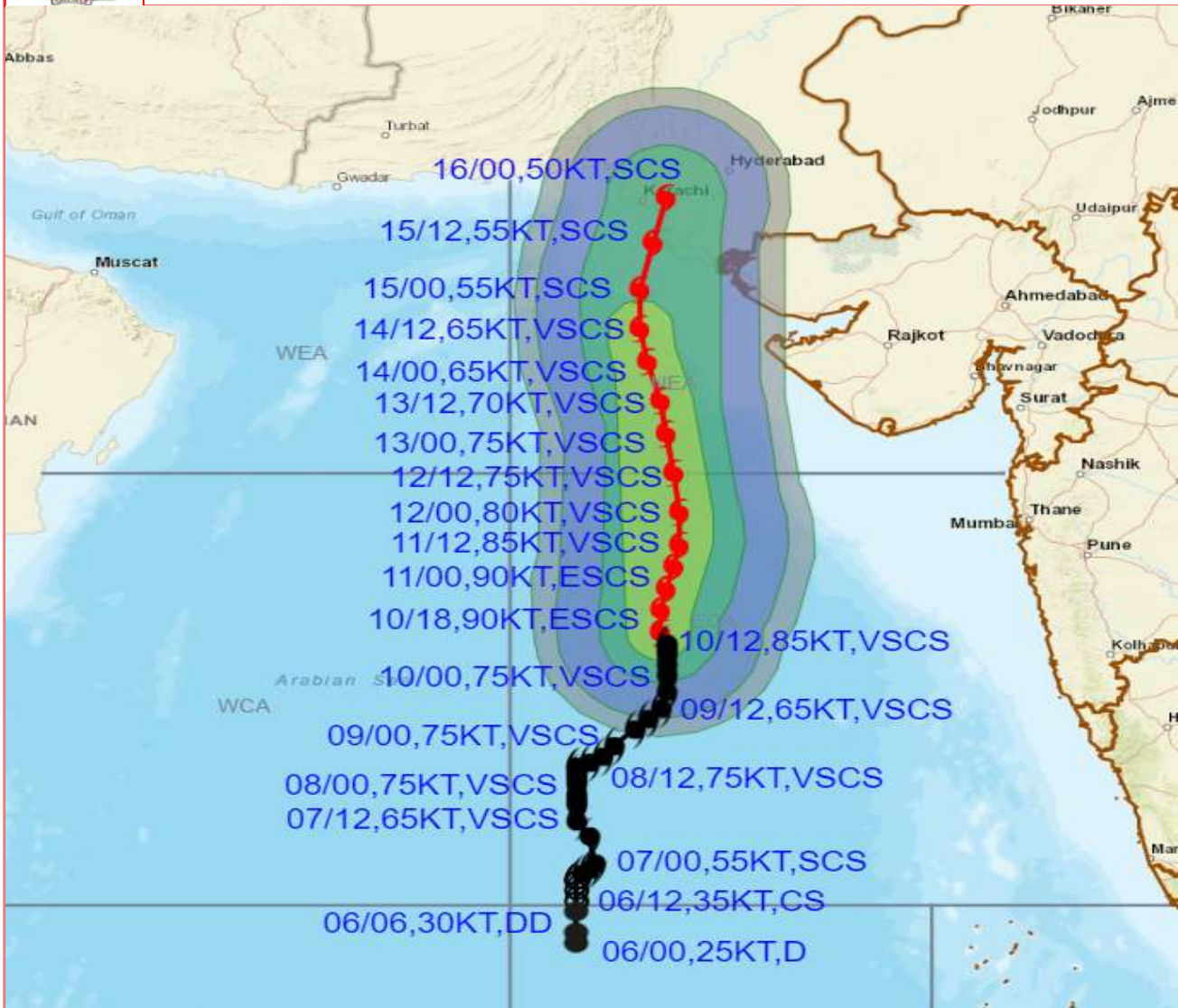
DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS				
	11.06.23/1200	12.06.23/1200	13.06.23/1200	14.06.23/1200	15.06.23/1200
PORBANDAR	390, SSW	290, SW	250, W	300, WNW	370, NW
BOMBAY / COLABA	560, W	580, WNW	640, WNW	740, NW	820, NW
GOA/PANJIM	760, WNW	840, NW	950, NW	1070, NW	1180, NW
KARACHI AIRPORT	690, S	540, S	400, S	250, S	80, S
DWARKA	430, SSW	310, SSW	210, WSW	220, W	270, NW



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF VERY SEVERE CYCLONIC STORM "BIPARJOY" OVER EASTCENTRAL ARABIAN SEA BASED ON 1200 UTC (1730 IST) OF 10TH JUNE 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

## Fishermen warning graphics

