



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

**BULLETIN NO. 38 (ARB/01/2023)**

**TIME OF ISSUE: 0245 HOURS IST**

**DATED: 11.06.2023**

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**Sub: Very Severe Cyclonic Storm "Biparjoy" (pronounced as "Biporjoy") over eastcentral Arabian Sea**

**Cyclone Watch for Saurashtra & Kutch Coast:**

The very severe cyclonic storm "Biparjoy" (pronounced as "Biporjoy") over eastcentral Arabian Sea moved nearly northwards with a speed of 5 kmph during past 6-hours and lay centered at 2330 hours IST of 10th June, 2023 over the same region near latitude 17.4°N and longitude 67.3°E, about 600 km west-southwest of Mumbai, 530 km south-southwest of Porbandar, 580 km south-southwest of Dwarka, 670 km south-southwest of Naliya and 830 km south of Karachi.

It is likely to intensify into an extremely severe cyclonic storm during next 06 hours. It is very likely to move nearly northwards and reach near Pakistan and adjoining Saurashtra & Kutch coasts around afternoon of 15<sup>th</sup> June, 2023 as a very severe cyclonic storm.

**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>
10.06.23/2330	17.4/67.3	155-165 Gusting To 180	Very Severe Cyclonic Storm
11.06.23/0530	17.9/67.3	165-175 Gusting To 195	Extremely Severe Cyclonic Storm
11.06.23/1130	18.3/67.4	165-175 Gusting To 195	Extremely Severe Cyclonic Storm
11.06.23/1730	18.7/67.5	155-165 Gusting To 180	Very Severe Cyclonic Storm
11.06.23/2330	19.0/67.6	145-155 Gusting To 170	Very Severe Cyclonic Storm
12.06.23/1130	19.5/67.6	145-155 Gusting To 170	Very Severe Cyclonic Storm
12.06.23/2330	20.2/67.6	135-145 Gusting To 160	Very Severe Cyclonic Storm
13.06.23/1130	20.9/67.5	135-145 Gusting To 160	Very Severe Cyclonic Storm
13.06.23/2330	21.5/67.4	125-135 Gusting To 150	Very Severe Cyclonic Storm
14.06.23/1130	22.2/67.3	125-135 Gusting To 150	Very Severe Cyclonic Storm
14.06.23/2330	22.9/67.4	120-130 Gusting To 145	Very Severe Cyclonic Storm
15.06.23/1130	23.6/67.6	120-130 Gusting To 145	Very Severe Cyclonic Storm
15.06.23/2330	24.4/67.9	95-105 Gusting To 115	Severe Cyclonic Storm

**(i) Wind warning:**

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

**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 125-135 kmph gusting to 150 kmph is likely to prevail over northeast Arabian Sea. Gale wind speed reaching 70-80 kmph gusting to 90 kmph over adjoining areas of central & northwest Arabian Sea.

**15<sup>th</sup> June:** Gale wind speed reaching 120-130 kmph gusting to 145 kmph is likely to prevail over northeast Arabian Sea and likely to decrease becoming 95-105 kmph gusting to 115 kmph from night over the region. Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely over adjoining areas of central & northwest Arabian Sea.

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

Squally wind speed reaching 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 14<sup>th</sup> June.

Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely to prevail along & off Kutch districts and Gulf of Kutch on 15<sup>th</sup> June.

Squally wind speed reaching 55-65 kmph gusting to 75 kmph very likely to prevail along & off Saurashtra coast.

**(ii) Sea condition**

**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 conditions likely to be rough to very rough till 14<sup>th</sup> and very rough to high on 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 till 15<sup>th</sup> June.**
- Those out at sea are advised to return to coast.
- Judicious regulation of offshore and onshore activities.

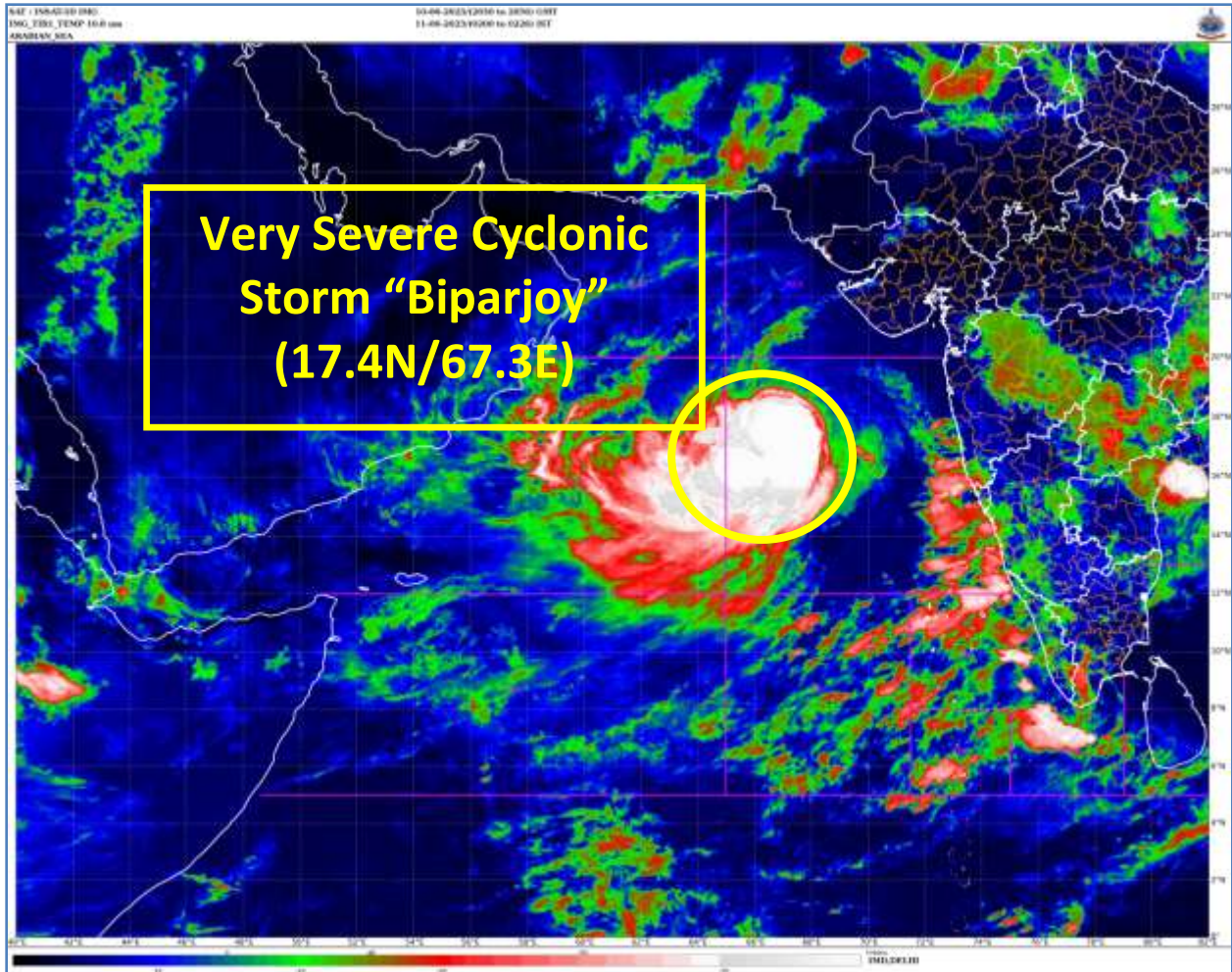
**The systems are under continuous surveillance and the next message will be issued at 0530 hours IST of 11<sup>th</sup> June, 2023.**

**(Shobhit Katiyar)**

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

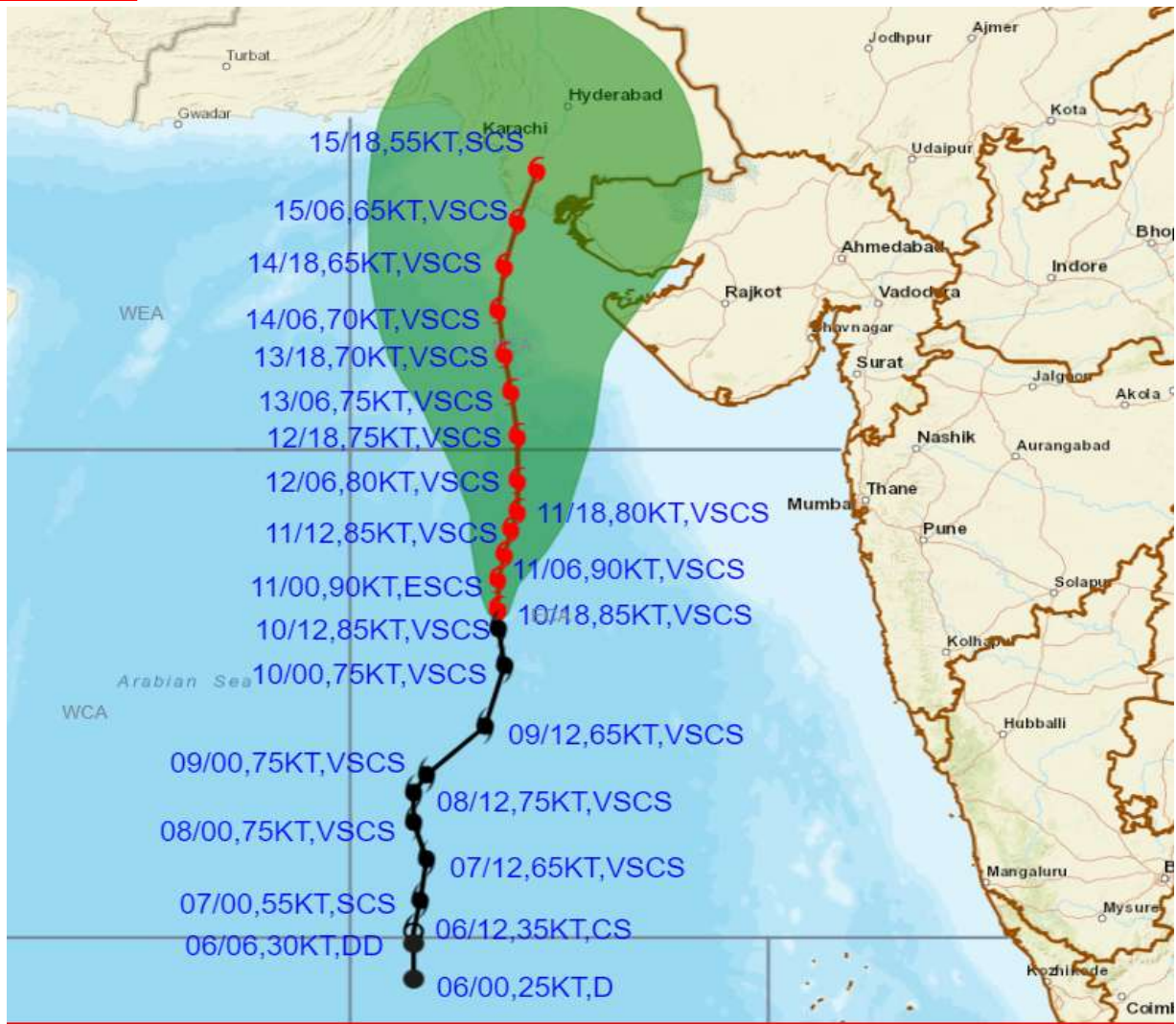
*Copy to: ACWC Kolkata/ ACWC Chennai/ CWC Bhubaneswar/CWC Visakhapatnam/CWC Ahmedabad/ MO Port Blair/MC Raipur/MC Bhopal/MC Hyderabad/RMC Nagpur*

**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 1800 UTC (2330 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

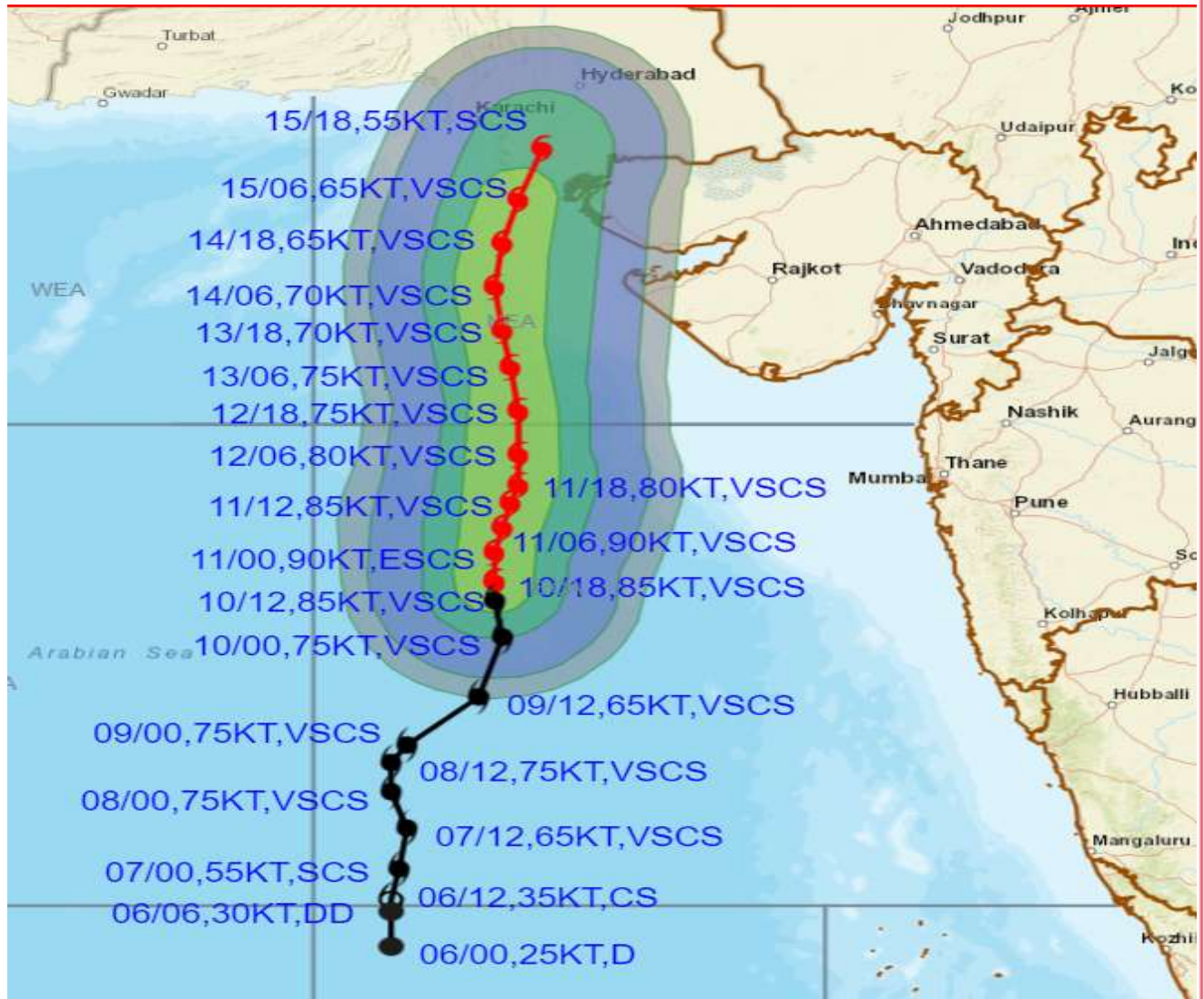
— FORECAST TRACK

▲ CONE OF UNCERTAINTY

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS				
	11.06.23/1800	12.06.23/1800	13.06.23/1800	14.06.23/1800	15.06.23/1800
PORBANDAR	360, SW	260, SW	240, W	280, WNW	350, NNW
BOMBAY / COLABA	550, W	570, WNW	640, WNW	720, NW	790, NW
GOA/PANJIM	770, WNW	850, NW	960, NW	1070, NW	1160, NNW
KARACHI AIRPORT	650, S	520, S	370, S	220, S	90, SE
DWARKA	400, SSW	280, SSW	190, WSW	190, WNW	250, NNW



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF VERY SEVERE CYCLONIC STORM "BIPARJOY" OVER EASTCENTRAL ARABIAN SEA BASED ON 1800 UTC (2330 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

