



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

BULLETIN NO. 33 (ARB/01/2023)

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Sub: A) Very Severe Cyclonic Storm "Biparjoy" (pronounced as "Biporjoy") over eastcentral Arabian Sea
B) Well Marked Low Pressure Area over northeast Bay of Bengal and adjoining Southeast Bangladesh & North Myanmar coasts

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 0830 hours IST of today, the 10th June, 2023 over the same region near latitude 16.7°N and longitude 67.4°E, about 700 km west-northwest of Goa, 620 km west-southwest of Mumbai, 600 km south-southwest of Porbandar and 910 km south of Karachi.

It is very likely to intensify further and move north-northeastwards gradually during next 24 hours. Then it would move gradually north-northwestwards during subsequent 3 days.

Forecast track and intensity are given below:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
10.06.23/0830	16.7/67.4	135-145 Gusting To 160	Very Severe Cyclonic Storm
10.06.23/1130	17.0/67.5	140-150 Gusting To 165	Very Severe Cyclonic Storm
10.06.23/1730	17.4/67.6	145-155 Gusting To 170	Very Severe Cyclonic Storm
10.06.23/2330	17.8/67.7	150-160 Gusting To 175	Very Severe Cyclonic Storm
11.06.23/0530	18.1/67.8	155-165 Gusting To 180	Very Severe Cyclonic Storm
11.06.23/1730	18.8/67.8	145-155 Gusting To 170	Very Severe Cyclonic Storm
12.06.23/0530	19.5/67.7	140-150 Gusting To 165	Very Severe Cyclonic Storm
12.06.23/1730	20.1/67.6	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	21.3/67.2	125-135 Gusting To 150	Very Severe Cyclonic Storm
14.06.23/0530	22.0/67.0	115-125 Gusting To 140	Very Severe Cyclonic Storm
14.06.23/1730	22.6/66.9	105-115 Gusting To 125	Severe Cyclonic Storm
15.06.23/0530	23.2/66.8	95-105 Gusting To 115	Severe Cyclonic Storm

(i) Wind warning:

10th June: Gale wind speed reaching 135-145 kmph gusting to 160 kmph is prevailing over eastcentral & adjoining areas of westcentral Arabian Sea and likely to increase gradually becoming 150-160 kmph gusting to 175 kmph from night. Gale wind speed reaching 90-100 kmph gusting to 110 kmph is likely to prevail over adjoining areas of northeast Arabian Sea.

11th June: Gale wind speed reaching 155-165 kmph gusting to 180 kmph is likely to prevail over eastcentral and adjoining westcentral & northeast Arabian Sea and becoming 145-155 kmph gusting to 170 kmph over the region from evening.

12th June: Gale wind speed reaching 140-150 kmph gusting to 165 kmph is likely to prevail over northeast and adjoining central Arabian Sea and becoming 135-145 kmph gusting to 160 kmph from evening.

13th 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.

14th June: Gale wind speed reaching 115-125 kmph gusting to 140 kmph is likely to prevail over northeast and adjoining northwest Arabian Sea and decrease thereafter to become 105-115 kmph gusting to 125 kmph from evening. Gale wind speed reaching 70-80 kmph gusting to 90 kmph over adjoining areas of central Arabian Sea.

15th June: Gale wind speed reaching 95-105 kmph gusting to 115 kmph is likely to prevail over northeast and adjoining northwest Arabian Sea and Squally wind speed reaching 50-60 kmph gusting to 70 kmph 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 10th June and likely to increase becoming 40-50 kmph gusting to 60 kmph on 11th June, 45-55 kmph gusting to 65 kmph during 12th and 50-60 kmph gusting to 70 kmph during 13th to 15th June.

(ii) Sea condition

10th 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.

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

12th June: Sea condition is likely to be phenomenal over northeast and adjoining central Arabian Sea.

13th June: Sea condition is likely to be phenomenal over northeast and adjoining northwest & central Arabian Sea

14th 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.

15th 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 10th June and likely to become rough to very rough during 11th to 15th June.

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

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

B) Well Marked Low Pressure Area over northeast Bay of Bengal

The well marked low pressure area over Northeast Bay of Bengal and adjoining area of Southeast Bangladesh-North Myanmar Coasts persisted over the same region at 0830 hours IST of today, the 10th June, 2023.

(i) Wind warning:

Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail over northeast Bay of Bengal on 10th June.

(ii) Sea condition

Sea condition is likely to be rough over northeast Bay of Bengal on 10th June.

(iii) Fishermen Warning (Graphics Attached)

Fishermen are advised not to venture into northeast Bay of Bengal on 10th June.

The systems are under continuous surveillance and the next message will be issued at 1430 hours IST of today, the 10th June, 2023.

(Ananda Kumar Das)

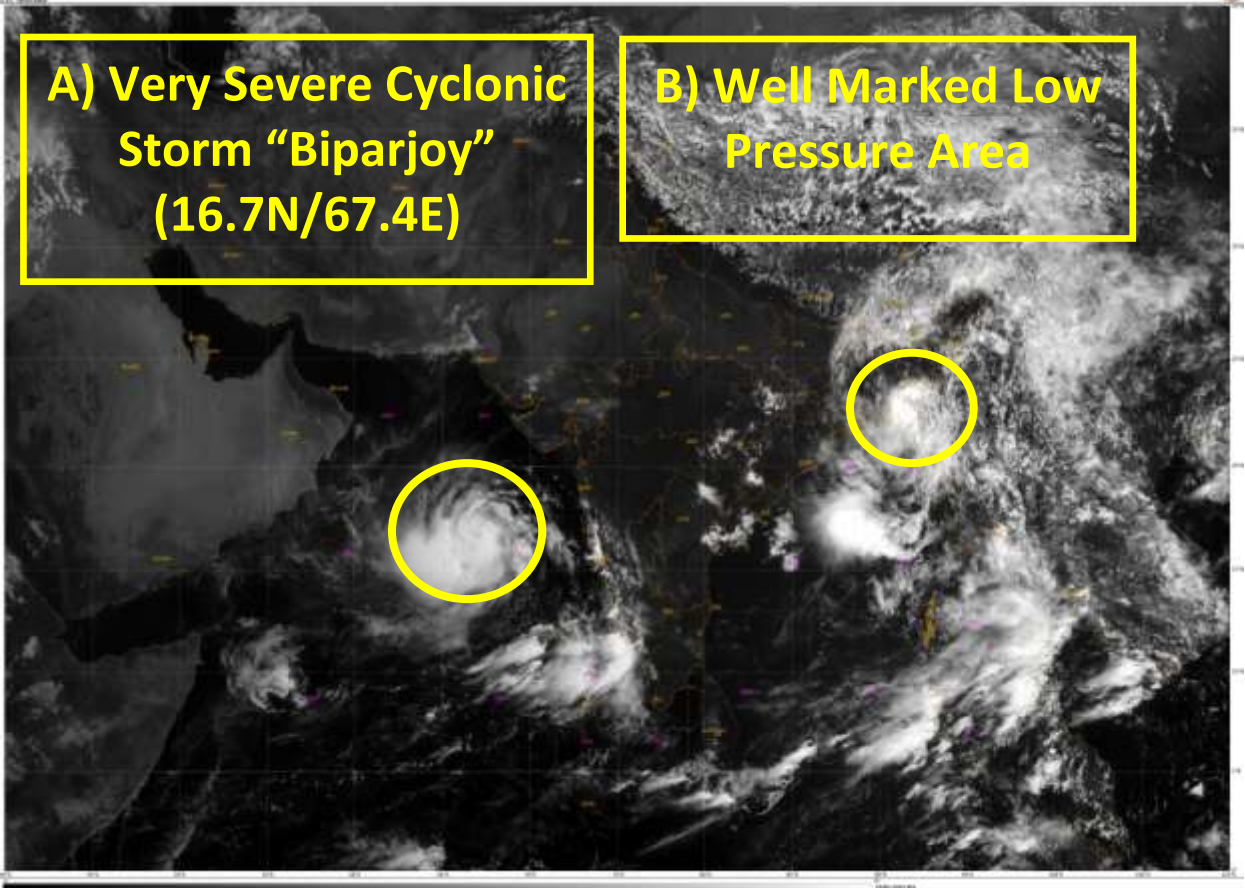
Scientist F, Cyclone Warning Division, New Delhi

Copy to: ACWC Kolkata/ ACWC Chennai/ CWC Bhubaneswar/CWCVisakhapatnam/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

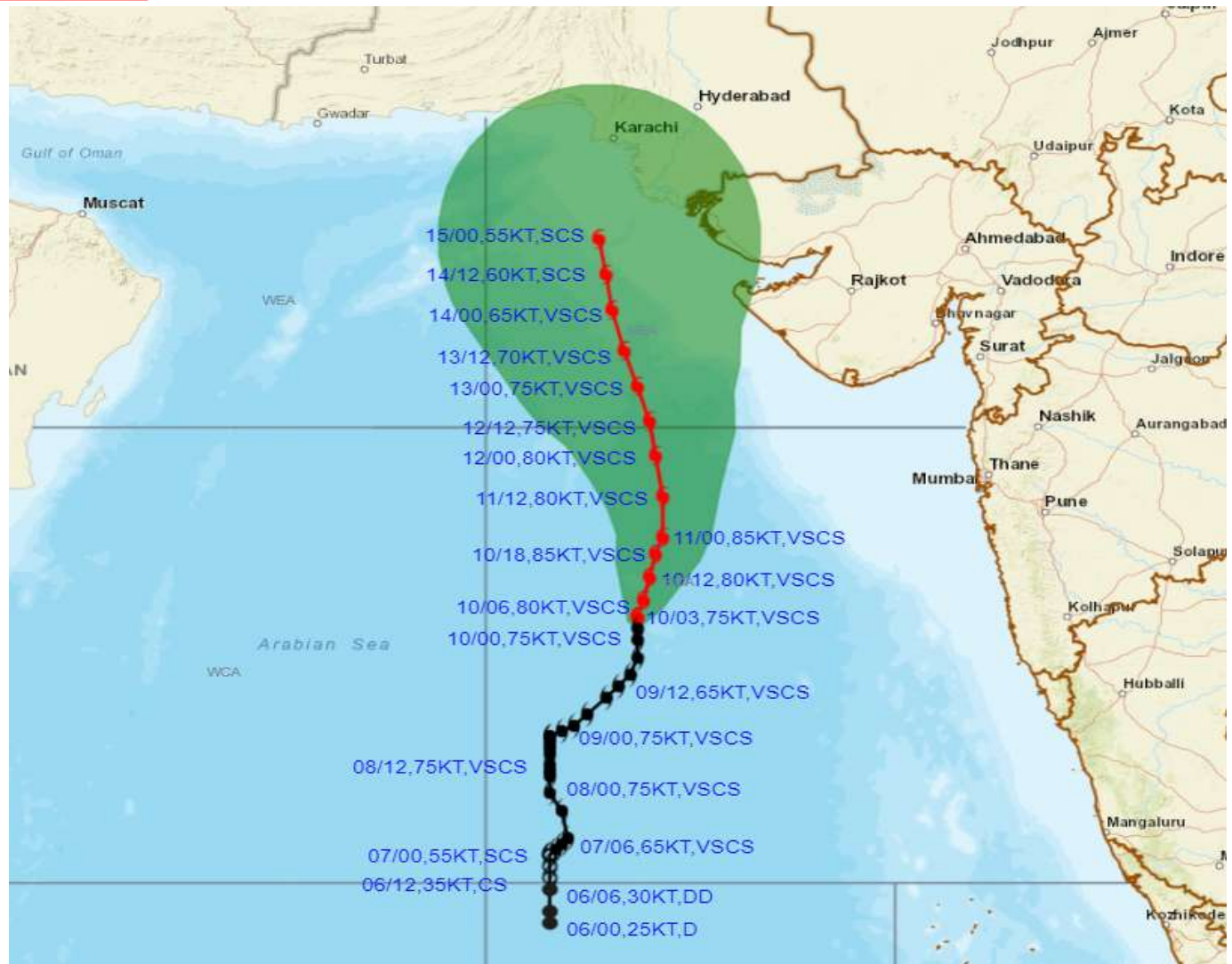
A) Very Severe Cyclonic Storm "Biparjoy" (16.7N/67.4E)

B) Well Marked Low Pressure Area





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM "BIPARJOY" OVER EASTCENTRAL ARABIAN SEA BASED ON 0300 UTC (0830 IST) OF 10TH JUNE 2023.



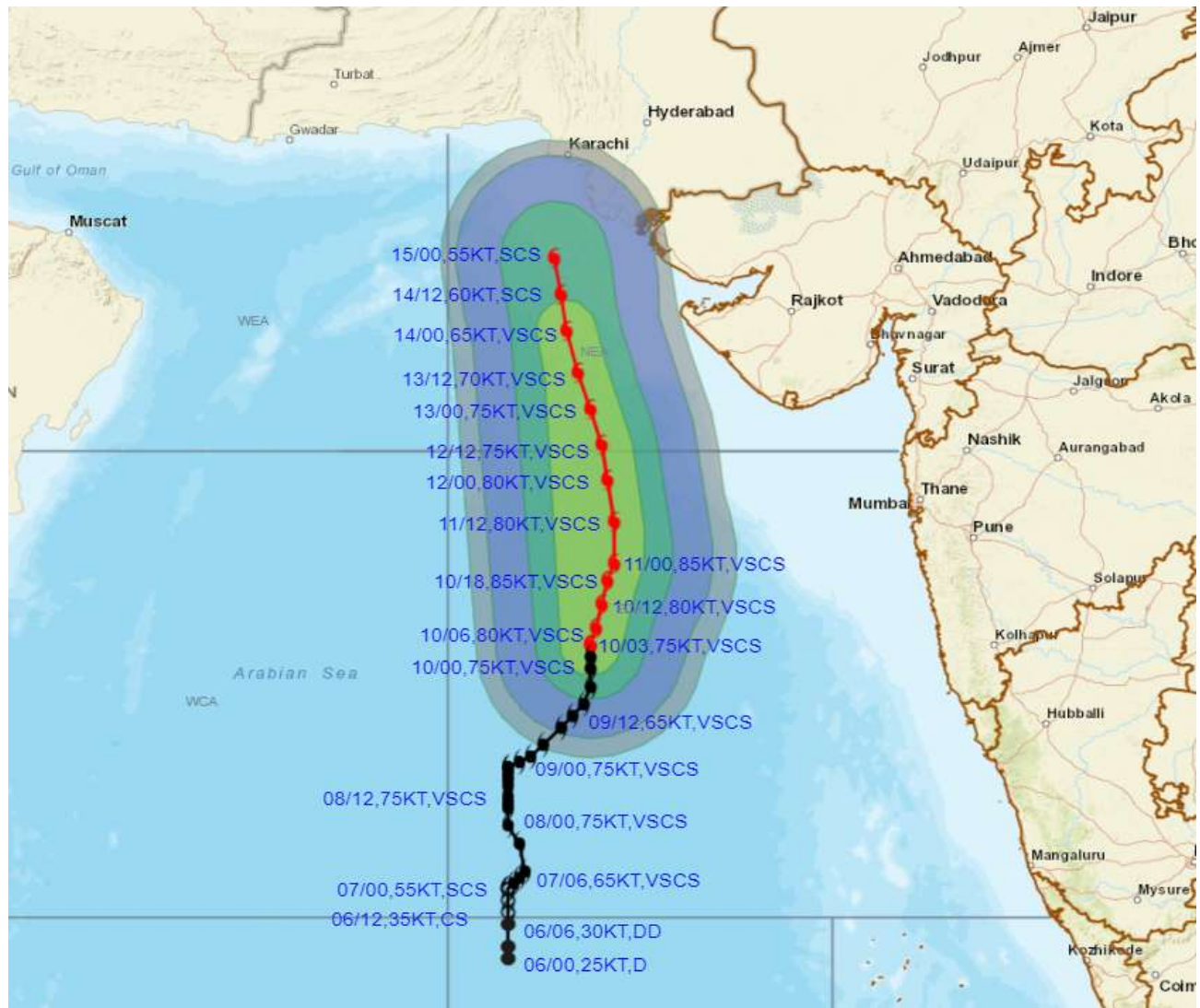
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS: SUPER CYCLONIC STORM (\geq 120 KT)

- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

Forecast	DISTANCE(KM) AND DIRECTION FROM STATIONS					
	DATE AND TIME	PORBANDAR	BOMBAY / COLABA	GOA/PANJIM	KARACHI AIRPORT	MASIRAH
	11.06.23/0000	440, SSW	540, W	710, WNW	760, S	970, ESE
	12.06.23/0000	310, SW	550, W	790, NW	600, S	920, E
	13.06.23/0000	260, WSW	610, WNW	900, NW	460, S	880, E
	14.06.23/0000	280, W	700, WNW	1030, NW	320, S	860, ENE
	15.06.23/0000	340, WNW	780, NW	1130, NW	190, S	860, ENE



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF VERY SEVERE CYCLONIC STORM "BIPARJOY" OVER EASTCENTRAL ARABIAN SEA BASED ON 0300 UTC (0830 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

