



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
SPECIAL TROPICAL WEATHER OUTLOOK**

**DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 07.06.2023**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**

**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)  
STORM WARNING CENTRE, BANGKOK (THAILAND)  
STORM WARNING CENTRE, COLOMBO (SRILANKA)  
STORM WARNING CENTRE, DHAKA (BANGLADESH)  
STORM WARNING CENTRE, KARACHI (PAKISTAN)  
METEOROLOGICAL OFFICE, MALE (MALDIVES)  
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)  
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)  
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)  
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)  
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)  
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY NO. 9 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1530 UTC OF 07.06.2023 BASED ON 1200 UTC OF 07.06.2023**

**SUB: 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 9 KMPH DURING LAST 6 HOURS AND LAY CENTERED AT 1200UTC OF TODAY, THE 07<sup>TH</sup> JUNE, 2023 OVER THE SAME REGION NEAR LATITUDE 13.3°N AND LONGITUDE 66.2 °E, ABOUT 860 KM WEST-SOUTHWEST OF GOA(43192), 940 KM SOUTHWEST OF MUMBAI(43057), 1000 KM SOUTH-SOUTHWEST OF PORBANDAR(42830) AND 1300 KM SOUTH OF KARACHI(41780).

IT WOULD INTENSIFY FURTHER AND MOVE NEARLY NORTHWARDS DURING NEXT 12 HOURS. IT WOULD THEN MOVE NORTH-NORTHWESTWARDS DURING SUBSEQUENT 3 DAYS.

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

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
07.06.23/1200	13.3/66.2	120-130 gusting to 145	Very Severe Cyclonic Storm
07.06.23/1800	13.6/66.1	125-135 gusting to 150	Very Severe Cyclonic Storm
08.06.23/0000	13.9/66.0	130-140 gusting to 155	Very Severe Cyclonic Storm
08.06.23/0600	14.2/65.9	135-145 gusting to 160	Very Severe Cyclonic Storm
08.06.23/1200	14.5/65.8	135-145 gusting to 160	Very Severe Cyclonic Storm

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C  
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%  
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09.06.23/0000	15.1/65.5	135-145 gusting to 160	Very Severe Cyclonic Storm
09.06.23/1200	15.7/65.2	145-155 gusting to 170	Very Severe Cyclonic Storm
10.06.23/0000	16.4/64.9	145-155 gusting to 170	Very Severe Cyclonic Storm
10.06.23/1200	17.1/64.5	145-155 gusting to 170	Very Severe Cyclonic Storm
11.06.23/0000	17.8/64.1	135-145 gusting to 160	Very Severe Cyclonic Storm
11.06.23/1200	18.5/63.6	135-145 gusting to 160	Very Severe Cyclonic Storm
12.06.23/0000	19.2/63.1	130-140 gusting to 155	Very Severe Cyclonic Storm
12.06.23/1200	19.9/62.5	125-135 gusting to 150	Very Severe Cyclonic Storm

AS PER INSAT 3D IMAGERY INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER CENTRAL AND ADJOINING SOUTH ARABIAN SEA BETWEEN LATITUDE 10.5N & 15.0N LONGITUDE 61.5E & 66.5E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93DEG C. AS PER MULTISAT WINDS, STRONGER WINDS ARE SEEN IN THE SOUTHEAST SECTOR.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 983 HPA. SEA CONDITION IS LIKELY TO BE PHENOMENAL OVER EASTCENTRAL AND ADJOINING EASTCENTRAL ARABIAN SEA.

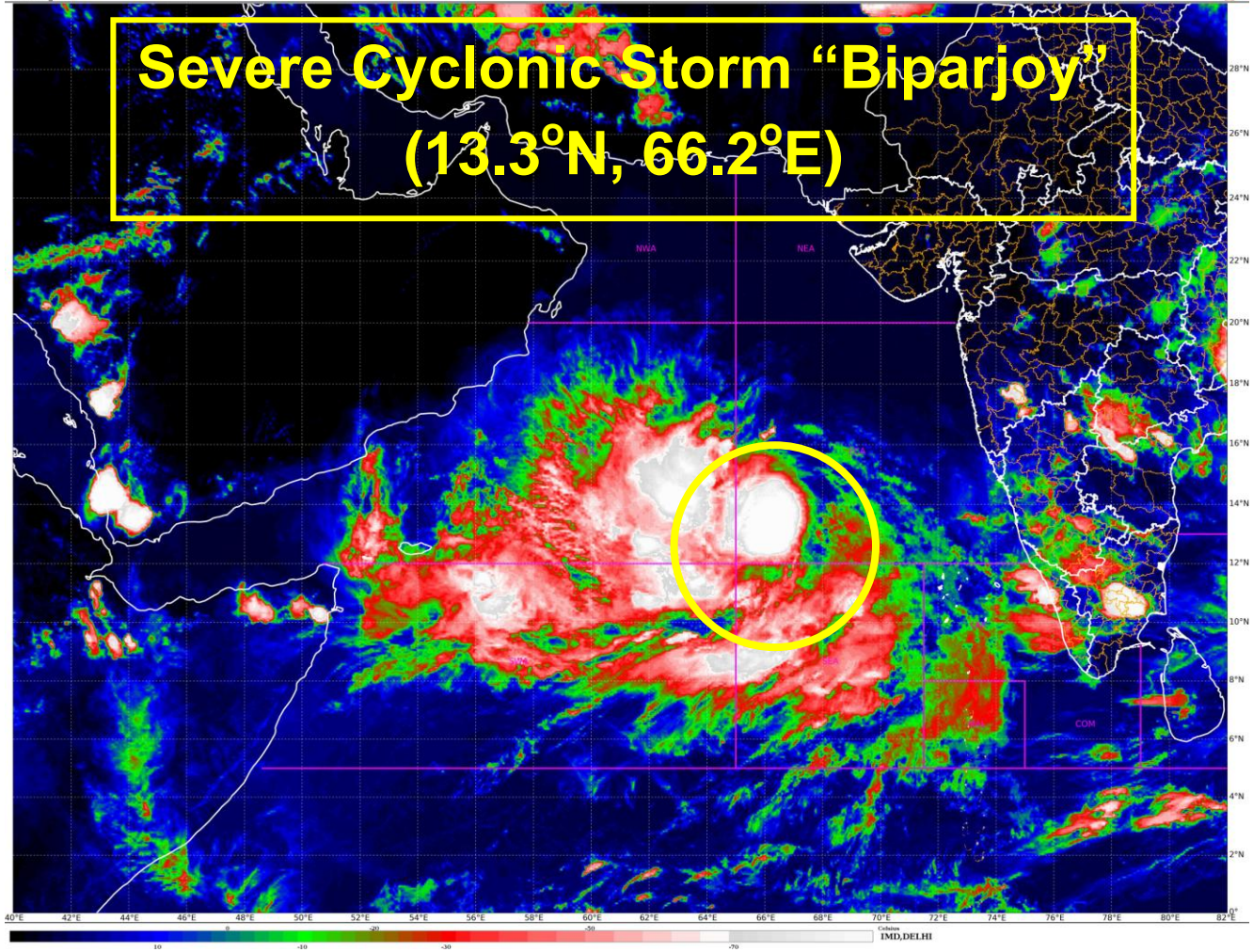
**REMARKS:**

SEA SURFACE TEMPERATURE IS AROUND 30-32°C OVER CENTRAL & ADJOINING SOUTH ARABIAN SEA. THE CYCLONIC STORM "BIPARJOY" IS CURRENTLY IN A VERY FAVOURABLE ENVIROMENT WITH POSITIVE LOW LEVEL VORTICITY ( $200 \times 10^{-6} S^{-1}$ ) NEAR SYSTEM CENTRE, LOW LEVEL CONVERGENCE OF ABOUT  $40 \times 10^{-5} S^{-1}$  OVER THE AREA AND UPPER LEVEL DIVERGENCE OF ABOUT  $30 \times 10^{-5} S^{-1}$  TO THE SOUTH OF SYSTEM CENTRE. WIND SHEAR IS MODERATE OVER SYSTEM AREA (15-20 KNOTS) AND IS WEAK 10-15 KTS ALONG THE FORECASTE TRACK . MJO IS IN PHASE 2 WITH AMPLITUDE CLOSE TO 1 AND EQUATORIAL ROSSBY WAVES, KELVIN WAVES ALONGWITH WESTERLY WINDS (5-7 MPS) ARE ALSO PREVAILING OVER SOUTH AND CENTRAL ARABIAN SEA. TOTAL PRECEIPITABLE WATER IMAGERY INDICATE THE WARM MOIST AIR INCURSION INTO THE SYSTEM.

MOST OF THE MODELS SUCH AS ECMWF, IMDGFS, NCEP GFS, NCUM, IMD MME, IMD HWRF FURTHER INTENSIFYING THE SYSTEM DURING NEXT 12 HOURS. THE MODELS SUCH AS ECMWF, IMD GFS, NCUM, IMD MME, IMD HWRF ARE INDICATING INITIALLY NEAR NORTHWARDS MOVEMENT FOR 12 HOURS AND THEN NORTH-NORTHWESTWARDS DURING SUBSEQUENT 3 DAYS. HOWEVER, NCEP GFS IS INDICATING LANDFALL OVER OMAN. THERE IS LARGE VARIATION AMONG VARIOUS MODELS WRT FURTHER MOVEMENT OF THE SYSTEM AFTER 11<sup>TH</sup> JUNE.

CONSIDERING ALL THE ABOVE, VERY SEVERE CYCLONIC STORM"BIPARJOY" WOULD INTENSIFY FURTHER AND MOVE NEARLY NORTHWARDS DURING NEXT 12 HOURS. IT WOULD THEN MOVE NORTH-NORTHWESTWARDS DURING SUBSEQUENT 3 DAYS.

**DR RK JENAMANI  
SC-G  
RSMC NEW DELHI**

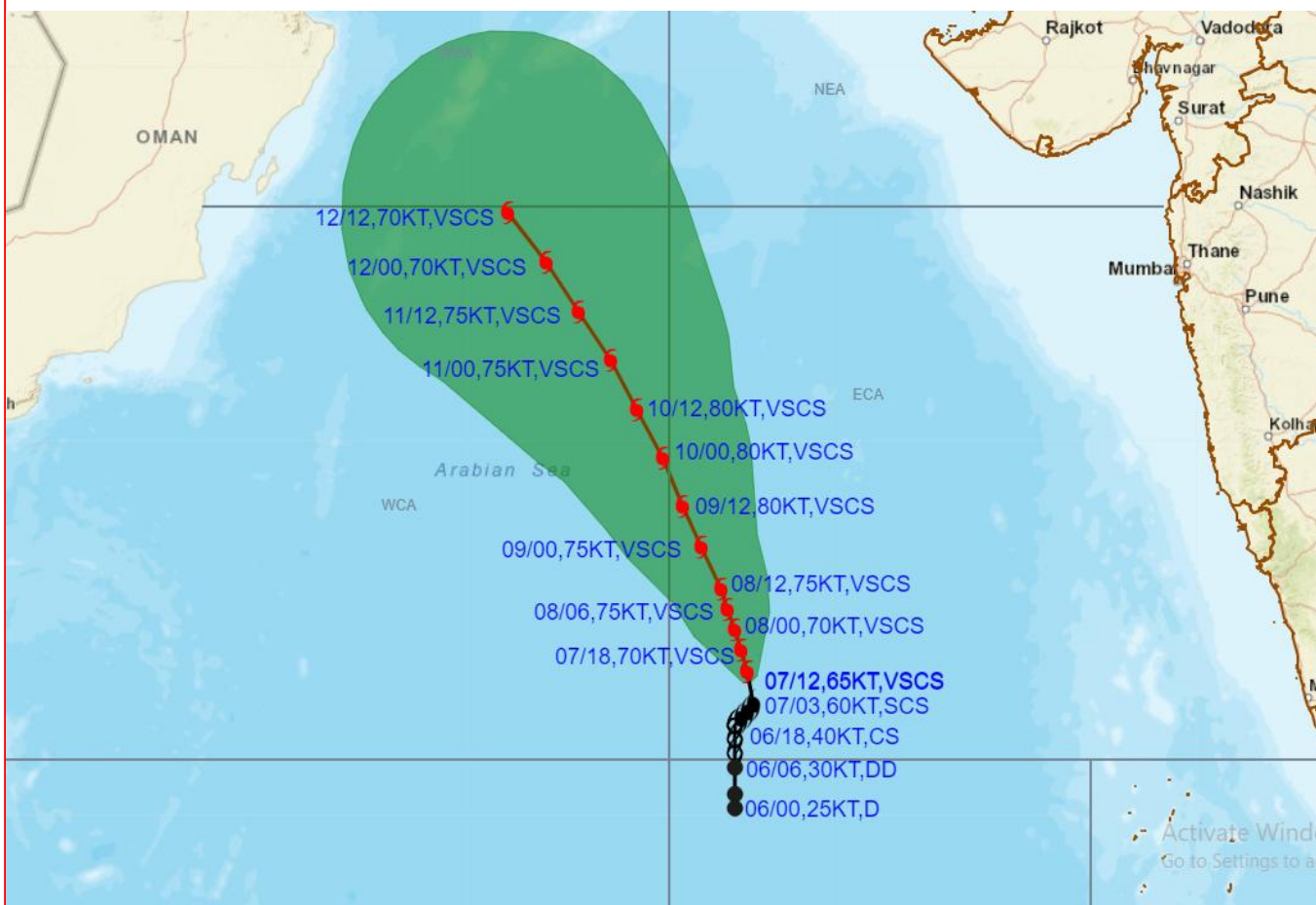


# Severe Cyclonic Storm "Biparjoy" (13.3°N, 66.2°E)

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**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 07<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

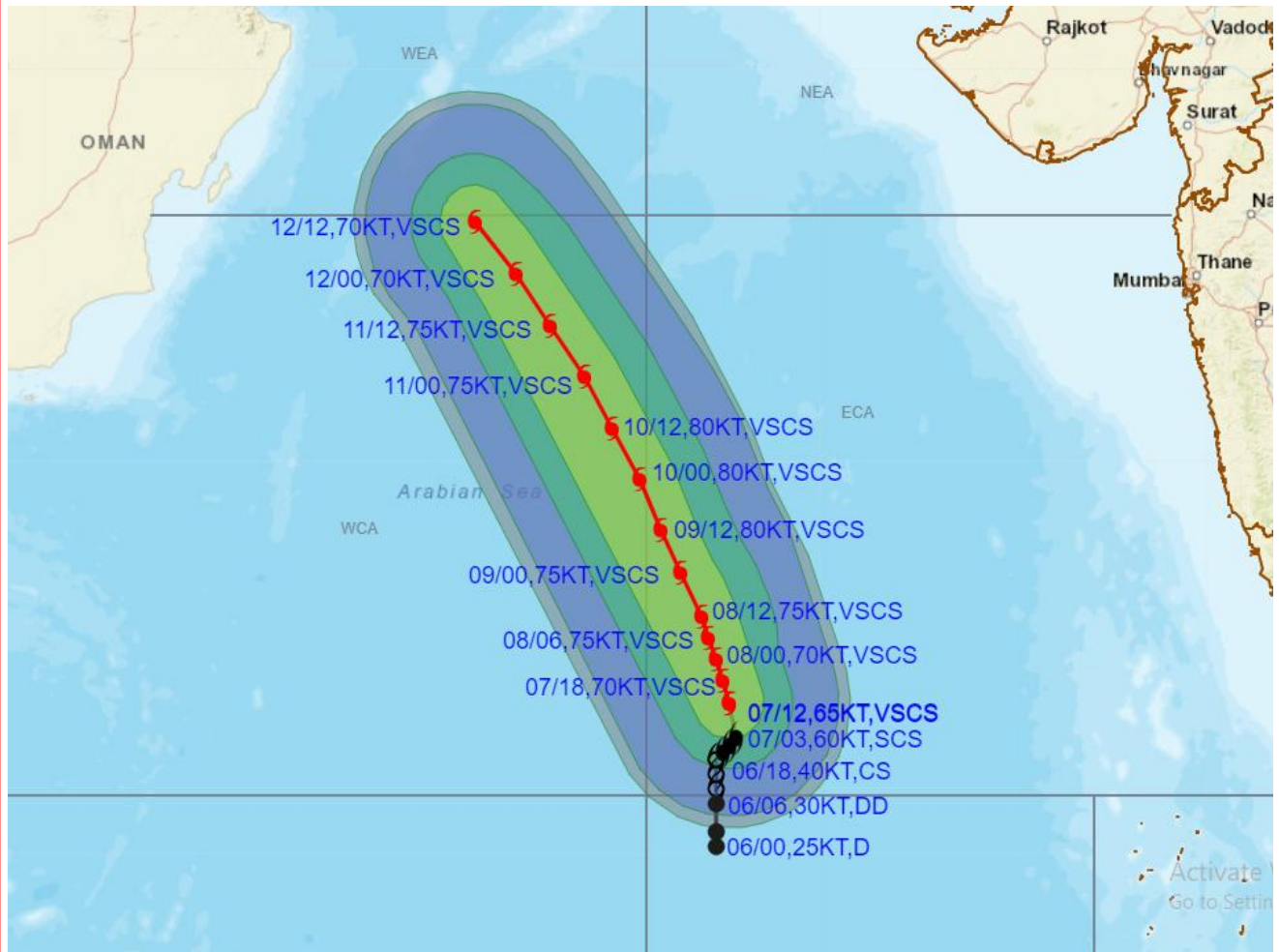
▲ CONE OF UNCERTAINTY

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS		
	08.06.23/1200	09.06.23/1200	10.06.23/1200
PORBANDAR	890, SSW	810, SW	740, SW
BOMBAY / COLABA	890, WSW	890, WSW	900, WSW
GOA/PANJIM	870, W	930, W	1010, WNW
KARACHI AIRPORT	1160, S	1040, S	910, SSW
MASIRAH	1000, SE	860, SE	710, ESE

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**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 07TH JUNE 2023.**



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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)

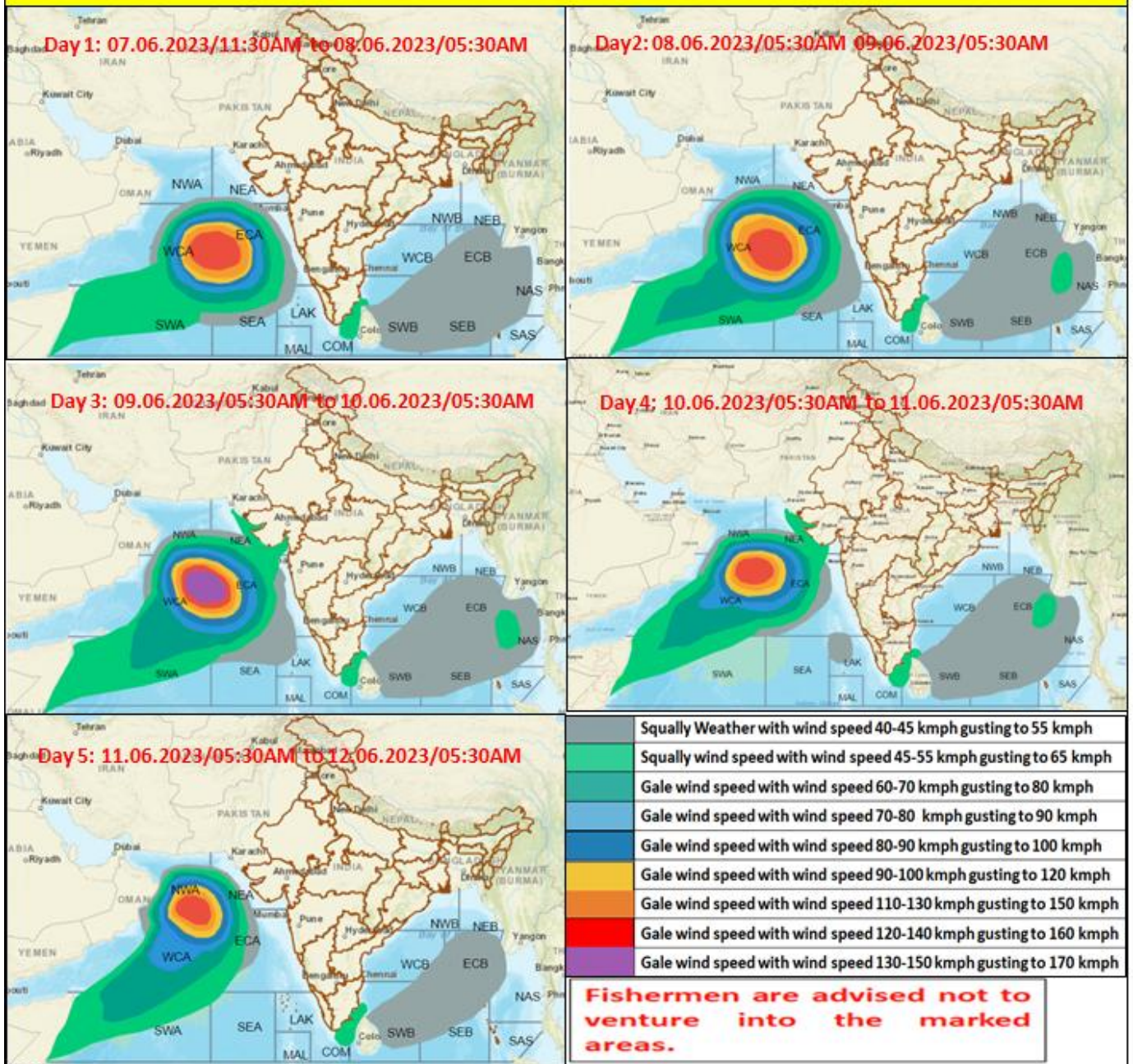
■ ≥ 64 KT (≥118 KMPH)

**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

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## Fishermen warning graphics



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