



**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. 11 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2115 UTC OF 07.06.2023 BASED ON 1800 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 NORTH-NORTHWESTWARD WITH A SPEED OF 7 KMPH DURING LAST 6 HOURS AND LAY CENTERED AT 1800UTC OF TODAY, THE 07TH JUNE, 2023 OVER THE SAME REGION NEAR LATITUDE 13.6°N AND LONGITUDE 66.0 °E, ABOUT 870 KM WEST-SOUTHWEST OF GOA(43192), 930 KM SOUTHWEST OF MUMBAI(43057), 970 KM SOUTH-SOUTHWEST OF PORBANDAR(42830) AND 1260 KM SOUTH OF KARACHI(41780).

IT WOULD INTENSIFY FURTHER GRADUALLY DURING NEXT 48 HOURS AND MOVE NEARLY NORTH-NORTHWESTWARDS DURING NEXT 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
07.06.23/1800	13.6/66.0	125-135 gusting to 150	Very Severe Cyclonic Storm
08.06.23/0000	13.9/65.9	130-140 gusting to 155	Very Severe Cyclonic Storm
08.06.23/0600	14.2/65.8	135-145 gusting to 160	Very Severe Cyclonic Storm
08.06.23/1200	14.5/65.7	135-145 gusting to 160	Very Severe Cyclonic Storm
08.06.23/1800	14.8/65.6	145-155 gusting to 170	Very Severe Cyclonic Storm
09.06.23/0600	15.5/65.3	145-155 gusting to 170	Very Severe Cyclonic Storm
09.06.23/1800	16.3/65.1	145-155 gusting to 170	Very Severe Cyclonic Storm
10.06.23/0600	17.0/65.0	145-155 gusting to 170	Very Severe Cyclonic Storm
10.06.23/1800	17.6/64.8	135-145 gusting to 160	Very Severe Cyclonic Storm
11.06.23/0600	18.3/64.6	135-145 gusting to 160	Very Severe Cyclonic Storm
11.06.23/1800	19.0/64.4	135-145 gusting to 160	Very Severe Cyclonic Storm
12.06.23/0600	19.6/64.2	130-140 gusting to 155	Very Severe Cyclonic Storm
12.06.23/1800	20.2/64.0	130-140 gusting to 155	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 11.0N & 16.0N LONGITUDE 61.0E & 67.0E. 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 70 KNOTS GUSTING TO 75 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 980 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 ($200 \times 10^{-6} \text{S}^{-1}$) NEAR SYSTEM CENTRE, LOW LEVEL CONVERGENCE OF ABOUT $40 \times 10^{-5} \text{S}^{-1}$ OVER THE AREA AND UPPER LEVEL DIVERGENCE OF ABOUT $20 \times 10^{-5} \text{S}^{-1}$ 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.

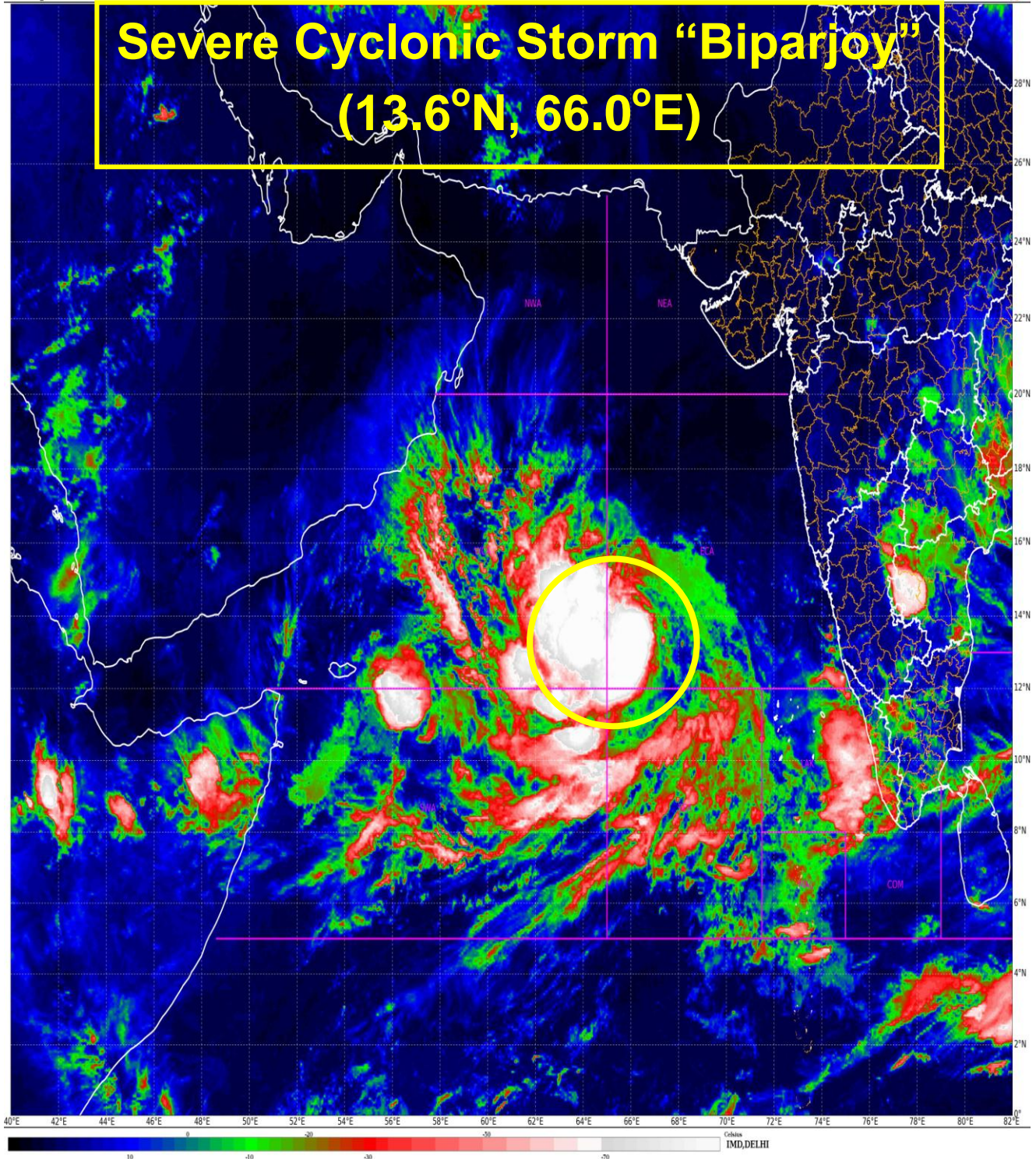
MOST OF THE MODELS SUCH AS ECMWF, IMDGFS, NCEP GFS, NCEP, IMD MME, IMD HWRF FURTHER INTENSIFYING THE SYSTEM DURING NEXT 12 HOURS. THE MODELS SUCH AS ECMWF, IMD GFS, NCEP, IMD MME, IMD HWRF ARE INDICATING INITIALLY NEAR NORTHWARDS MOVEMENT FOR 12 HOURS AND THEN NORTH-NORTHWESTWARDS DURING SUBSEQUENT 3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

CONSIDERING ALL THE ABOVE, VERY SEVERE CYCLONIC STORM "BIPARJOY" WOULD INTENSIFY FURTHER GRADUALLY DURING NEXT 48 HOURS AND MOVE NEARLY NORTH-NORTHWESTWARDS DURING NEXT 3 DAYS.

**DR TRISANU BANIK
SC-C
RSMC NEW DELHI**



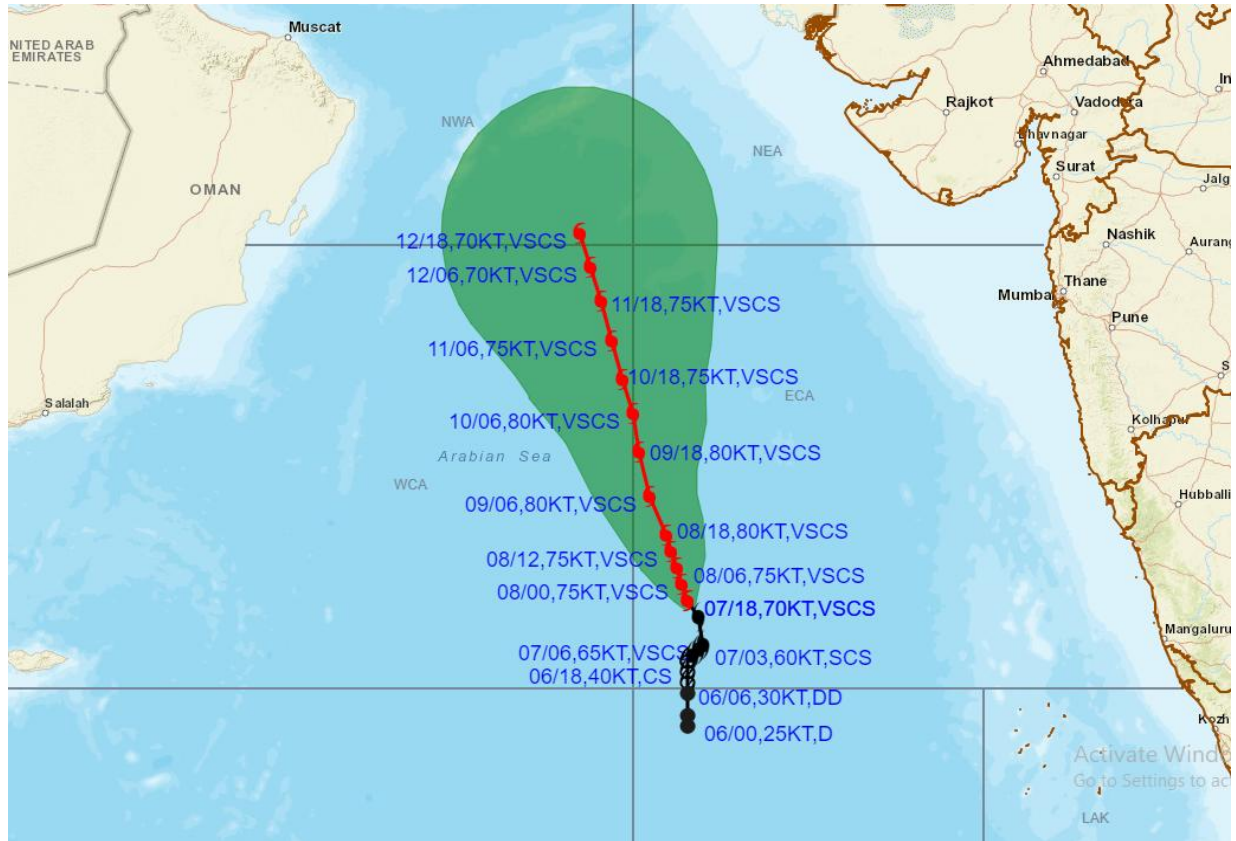
Severe Cyclonic Storm "Biparjoy" (13.6°N, 66.0°E)



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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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 07TH 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)

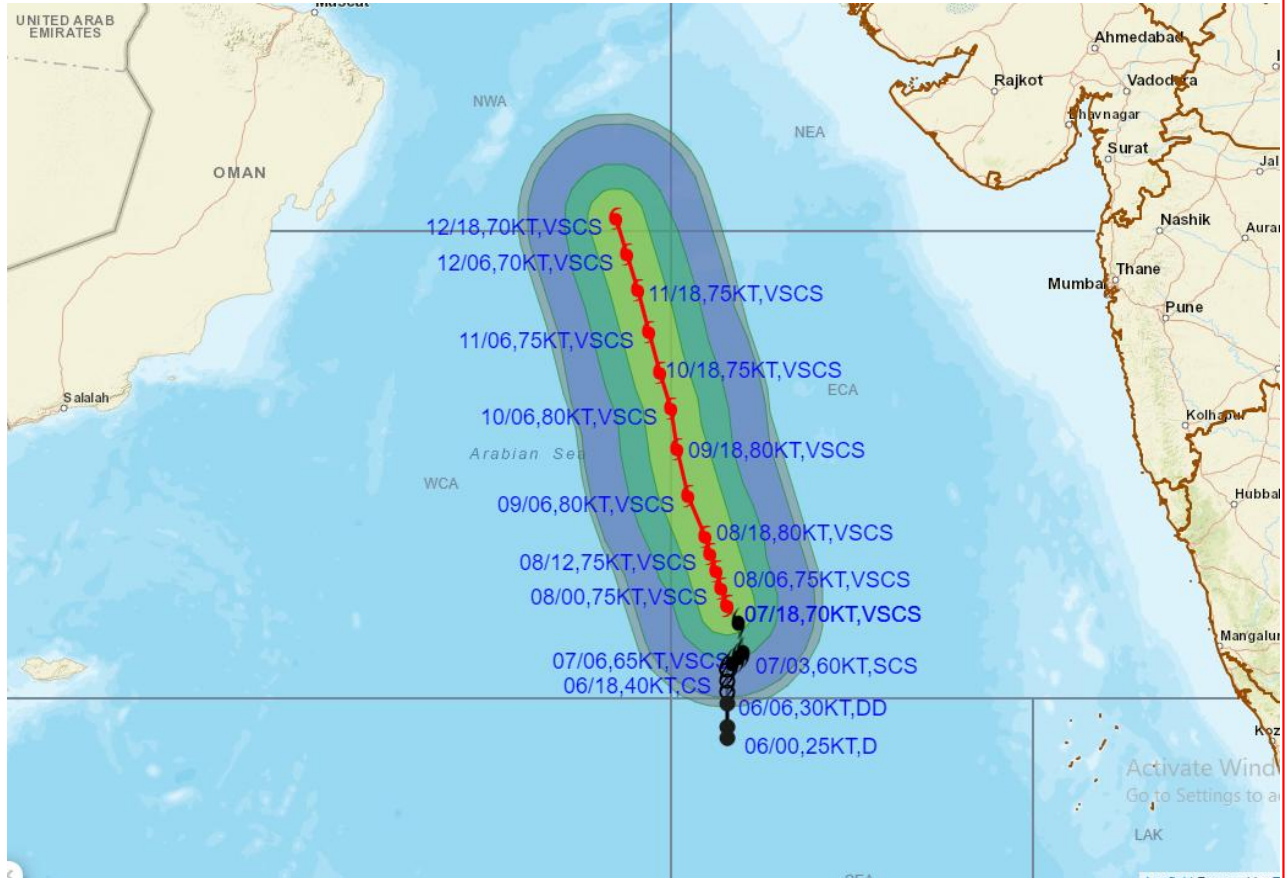
- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS		
	08.06.23/1800	09.06.23/1800	10.06.23/1800
PORBANDAR	870, SSW	760, SW	680, SW
BOMBAY / COLABA	890, WSW	860, WSW	850, W
GOA/PANJIM	890, W	940, W	990, WNW
KARACHI AIRPORT	1130, S	980, SSW	840, SSW
MASIRAH	960, SE	810, SE	700, 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 1800 UTC (2330 IST) OF 07TH JUNE 2023.



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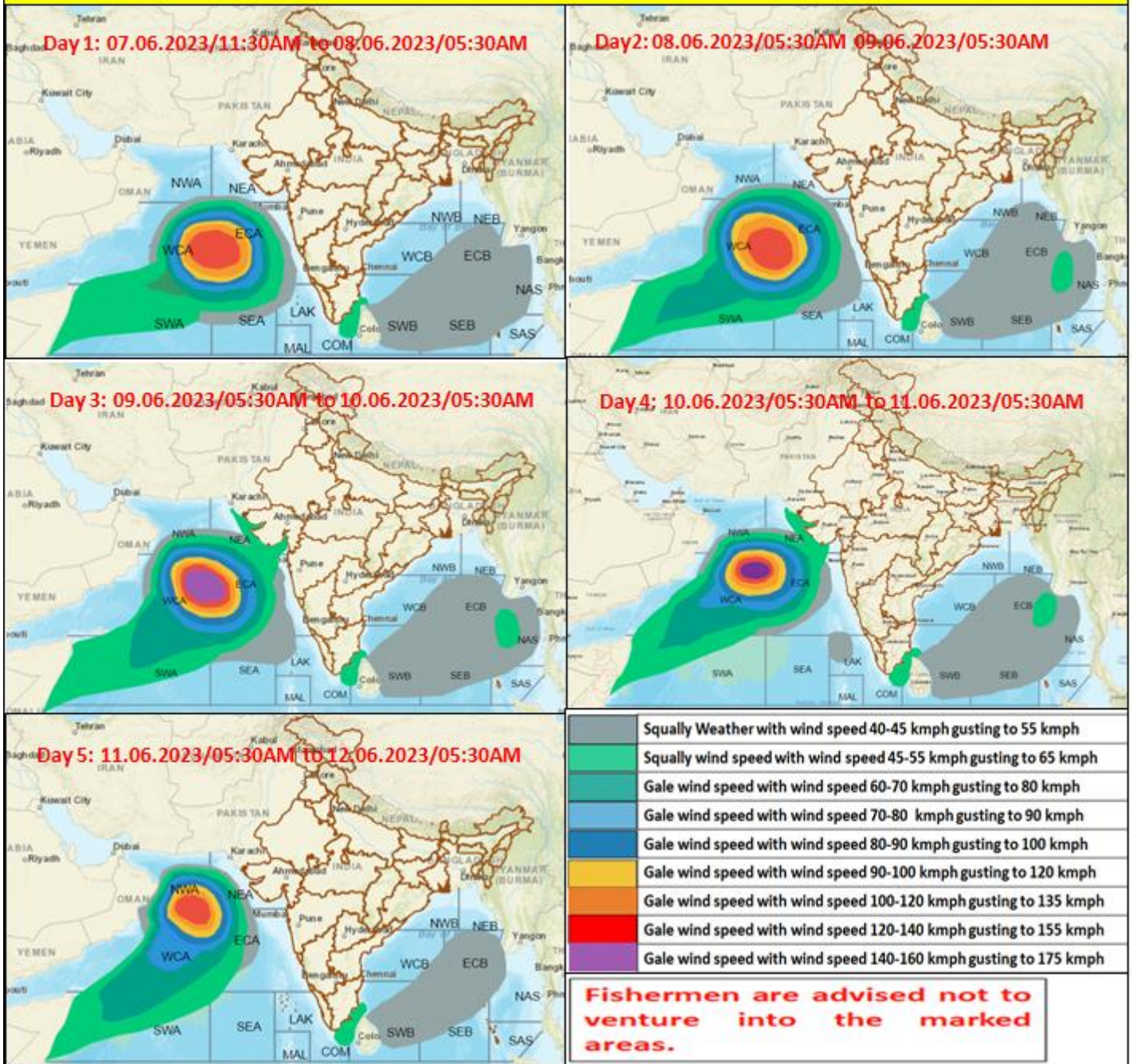
● LESS THAN 34 KT
 ○ 34-47 KT
 ⊙ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ▲ CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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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