



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

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 06.06.2023

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. 1 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 06.06.2023 BASED ON 1200 UTC OF 06.06.2023

SUB: DEEP DEPRESSION INTENSIFIED INTO THE CYCLONIC STORM “BIPARJOY” (PRONOUNCED AS “BIPORJOY”) OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA

THE DEEP DEPRESSION OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA MOVED NEARLY NORTHWARDS WITH A SPEED OF 4 KMPH DURING LAST 6 HOURS, INTENSIFIED INTO A CYCLONIC STORM “BIPARJOY” (PRONOUNCED AS “BIPORJOY”) AND LAY CENTERED AT 1200UTC OF TODAY, THE 06TH JUNE, 2023 OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 12.1°N AND LONGITUDE 66.0°E, ABOUT 920 KM WEST-SOUTHWEST OF GOA(43192), 1050 KM SOUTHWEST OF MUMBAI(43057), 1130 KM SOUTH-SOUTHWEST OF PORBANDAR(42830) AND 1430 KM SOUTH OF KARACHI(41780).

IT IS LIKELY TO MOVE NEARLY NORTHWARDS AND INTENSIFY GRADUALLY INTO A SEVERE CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA DURING NEXT 24 HOURS.

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
06.06.23/1200	12.1/66.0	60-70 gusting to 80	Cyclonic Storm
06.06.23/1800	12.4/66.0	70-80 gusting to 90	Cyclonic Storm
07.06.23/0000	12.7/66.0	80-90 gusting to 100	Cyclonic Storm
07.06.23/0600	13.0/66.0	90-100 gusting to 110	Severe Cyclonic Storm
07.06.23/1200	13.3/65.9	95-105 gusting to 115	Severe Cyclonic Storm
08.06.23/0000	13.9/65.8	105-115 gusting to 125	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%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

08.06.23/1200	14.5/65.7	115-125 gusting to 140	Very Severe Cyclonic Storm
09.06.23/0000	15.1/65.6	125-135 gusting to 150	Very Severe Cyclonic Storm
09.06.23/1200	15.8/65.5	135-145 gusting to 160	Very Severe Cyclonic Storm
10.06.23/0000	16.5/65.3	145-155 gusting to 170	Very Severe Cyclonic Storm
10.06.23/1200	17.4/65.1	145-155 gusting to 170	Very Severe Cyclonic Storm
11.06.23/0000	18.3/64.9	145-155 gusting to 170	Very Severe Cyclonic Storm
11.06.23/1200	19.2/64.7	135-145 gusting to 160	Very Severe Cyclonic Storm

AS PER INSAT 3D IMAGERY, THE CLOUDS HAVE FURTHER ORGANIZED DURING PAST 6 HOURS. INTENSITY OF THE SYSTEM IS T 2.5. 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 10.0N & 16.0N LONGITUDE 60.0E & 70.0E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93DEG C.

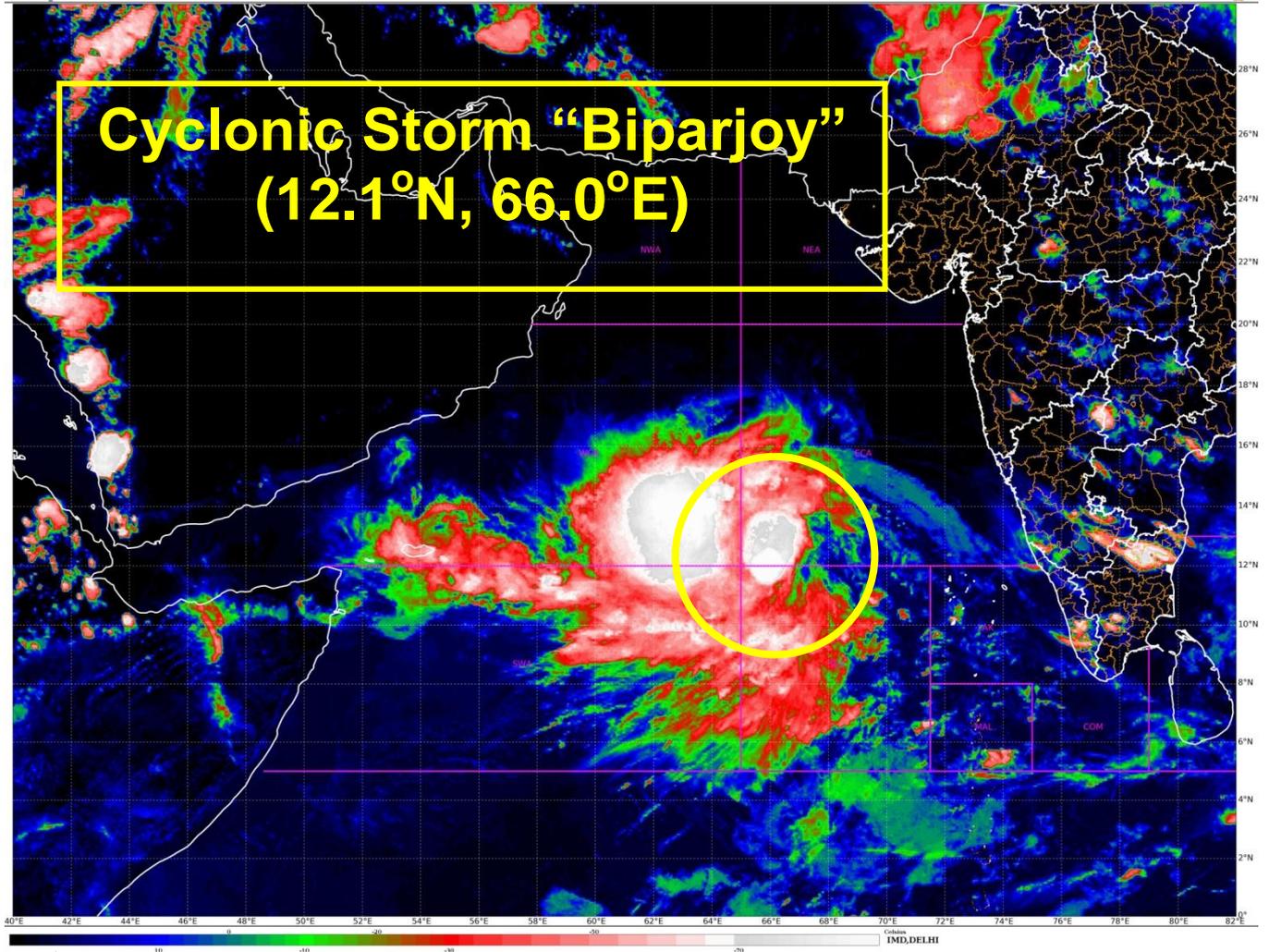
ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA. SEA CONDITION IS LIKELY TO BE HIGH OVER EASTCENTRAL AND ADJOINING EASTCENTRAL ARABIAN SEA.

REMARKS: SEA SURFACE TEMPERATURE IS AROUND 30-32°C OVER SOUTH & ADJOINING CENTRAL ARABIAN SEA. THE DEEP DEPRESSION IS CURRENTLY IN A VERY FAVOURABLE ENVIROMENT WITH POSITIVE LOW LEVEL VORTICITY ($150 \times 10^{-6} \text{S}^{-1}$) TO THE SOUTH OF SYSTEM CENTRE, LOW LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT $50-60 \times 10^{-5} \text{S}^{-1}$ TO THE SOUTH OF SYSTEM CENTRE, UPPER LEVEL DIVERGENCE HAS INCREASED AND IS ABOUT $40 \times 10^{-5} \text{S}^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. WIND SHEAR IS MODERATE OVER SYSTEM AREA (15-20 KNOTS). 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 ARE INDICATING FURTHER INTESIFICATION OF THE SYSTEM INTO A SEVERE CATEGORY OF CYCLONIC STORM AND NEARLY NORTHWARDS MOVEMENT DURING NEXT 5 DAYS AND THERE IS LARGE VARIATION THEREAFTER. ECMWF INDICATING WEAKENING OVER EASTCENTRAL ARABIAN SEA, IMD GFS INDICATING WEAKENING OVER NORTHEAST ARABIAN SEA, NCEP GFS INDICATING LIKELY MOVEMENT TOWARDS OMAN COAST AND NCUM INDICATING MOVEMENT TOWARDS PAKISTAN-IRAN COASTS.

CONSIDERING THE LATEST ENVIRONMENTAL FEATURES AND MODEL GUIDANCE, THE CYCLONIC STORM "BIPARJOY" (PRONOUNCED AS "BIPORJOY") IS LIKELY TO MOVE NEARLY NORTHWARDS AND INTENSIFY GRADUALLY INTO A SEVERE CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA DURING NEXT 24 HOURS.

DR RK JENAMANI
SC-G
RSMC NEW DELHI

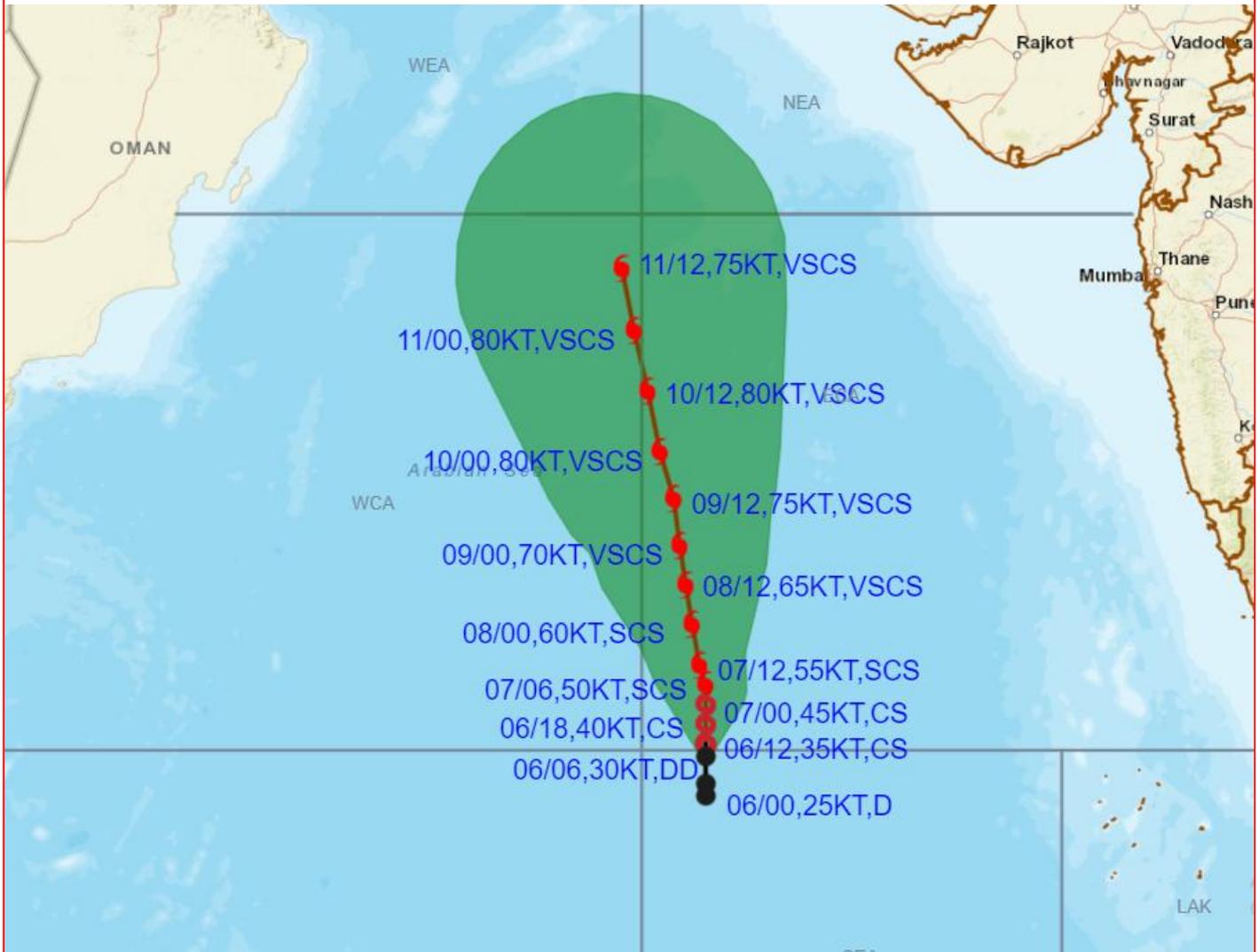


Cyclonic Storm "Biparjoy"
(12.1°N, 66.0°E)

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%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM "BIPARJOY" OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA BASED ON 1200 UTC (1730 IST) OF 06TH JUNE 2023.

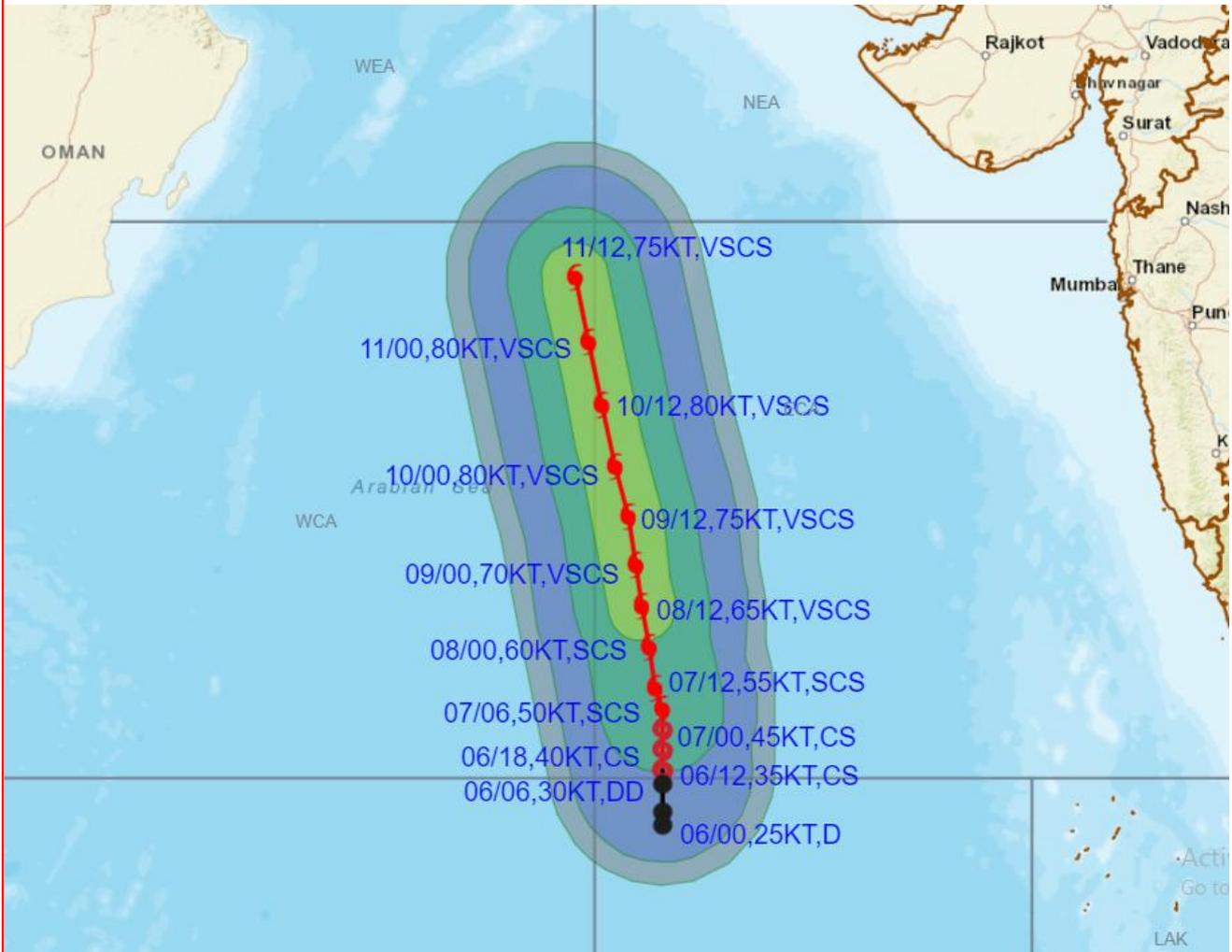


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM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



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "BIPARJOY" OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA BASED ON 1200 UTC (1730 IST) OF 06TH 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)

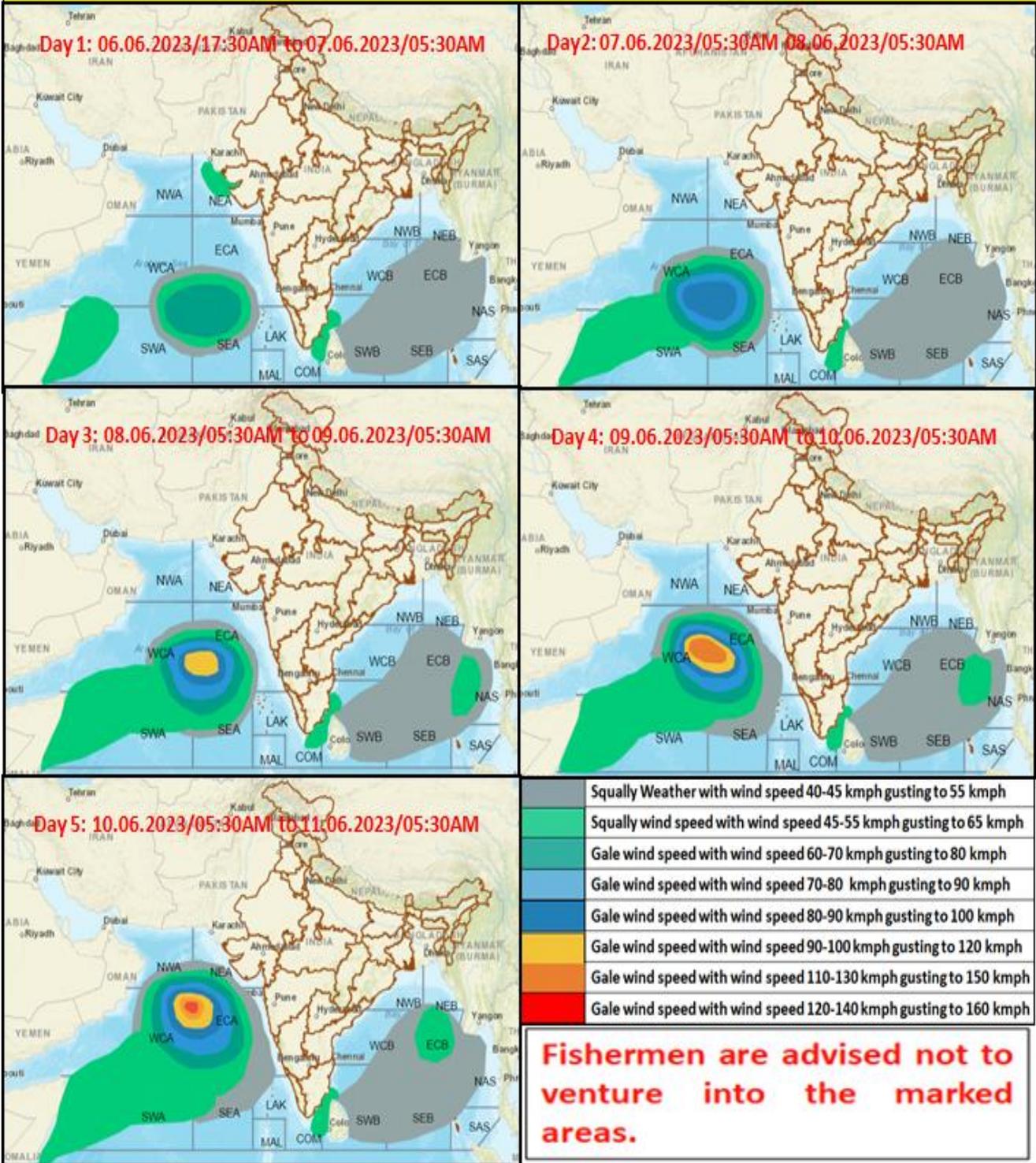
■ ≥ 64 KT (≥118 KMPH)

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

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%
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

Fishermen warning graphics



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%
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins