REGIONALSPECIALISED METEOROLOGICALCENTRE-TROPICALCYCLONES,NEW DELHI
TROPICAL CYCLONE ADVISORY

DEMS-RSMCSPECIAL TROPICAL CYCLONES NEW DELHI DATED 16.06.2023

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. 82 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1800 UTC OF 16.06.2023 BASED ON 1500 UTC OF 16.06.2023

SUB: CYCLONIC STORM “BIPARJOY” (PRONOUNCED AS “BIPORJOY”) OVER SOUTHEAST PAKISTAN ADJOINING SOUTHWEST RAJASTHAN AND KUTCH

THE CYCLONIC STORM “BIPARJOY” (PRONOUNCED AS “BIPORJOY”) OVER KUTCH AND ADJOINING PAKISTAN MOVED NORTHEASTWARDS WITH A SPEED OF 16 KMPH DURING PAST 6-HOURS AND LAY CENTERED AT 1500 UTC OF TODAY, THE 16TH JUNE, 2023 OVER SOUTHEAST PAKISTAN ADJOINING SOUTHWEST RAJASTHAN AND KUTCH NEAR LATITUDE 24.5°N AND LONGITUDE 70.7°E, ABOUT 80 KM NORTHEAST OF DHOLAVIRA (GUJARAT), 150 KM WEST-NORTHWEST OF DEESA (42539) AND 150 KM SOUTH-SOUTHWEST OF BARMER (42435).

IT IS VERY LIKELY TO MOVE NEARLY NORTHEASTWARDS AND WEAKEN FURTHER INTO A DEEP DEPRESSION DURING NEXT 3 HOURS AND FURTHER INTO A DEPRESSION DURING SUBSEQUENT 12 HOURS.

FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
16.06.23/1500	24.5/70.7	60-70 GUSTING TO 80	CYCLONIC STORM
16.06.23/1800	24.7/71.0	50-60 GUSTING TO 70	DEEP DEPRESSION
17.06.23/0000	25.1/71.8	40-50 GUSTING TO 60	DEPRESSION

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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AS PER INSAT 3D IMAGERY, ASSOCIATED SCATTERED TO BROKEN LOW/MEDIUM CLOUDS WITH WITH EMBEDED INTENSE TO VERY INTENSE CONVECTION LAY OVER KUTCH, SAURASHTRA & GULF OF KUTCH. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SCATTERED TO BROKEN LOW/MEDIUM CLOUDS WITH EMBEDED MODERATE TO INTENSE CONVECTION LAY OVER SOUTHWEST RAJASTHAN, GUJARAT REGION AND GULF OFCAMBAY AND WEAK TO MODERATE CONVECTION OVER REST OF RAJASTHAN. SCATTERED LOW/MEDIUM CLOUDS WITH EMBEDED ISOLATE WEAK CONVECTION LAY OVER MADHYA PRADESH, MAHARASHTRA & GOA. MICROWAVE IMAGERY AT 1500 UTC OF 16^{TH} INDICATES DECREASE IN STRENGTH OF WALL CLOUD REGION. IT ALSO SHOWS THAT AREA OF INTENSE CLOUD MASS IS TO THE SOUTHWEST OF SYSTEM CENTRE. TOTAL PRECIPITABLE WATER IMAGERY INDICATES WARM MOIST AIR FEEDBACK FROM ARABIAN SEA INTO THE CORE FROM SOUTHEAST SECTOR. WATER VAPOUR IMAGERY INDICATES RELATIVE HUMIDITY MORE THAN 50% IN THE MIDDLE TROPOSPHERIC LEVELS IN THE SOUTHWEST SECTOR.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IS 35 KNOTS GUSTING TO 45 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 987 HPA. SEA CONDITION IS LIKELY TO BE VERY ROUGH OVER NORTHEAST ARABIAN SEA LIKELY TO BECOME ROUGH FROM 1800 UTC OF 16^{TH} JUNE FOR SUBSEQUENT SIX HOURS.

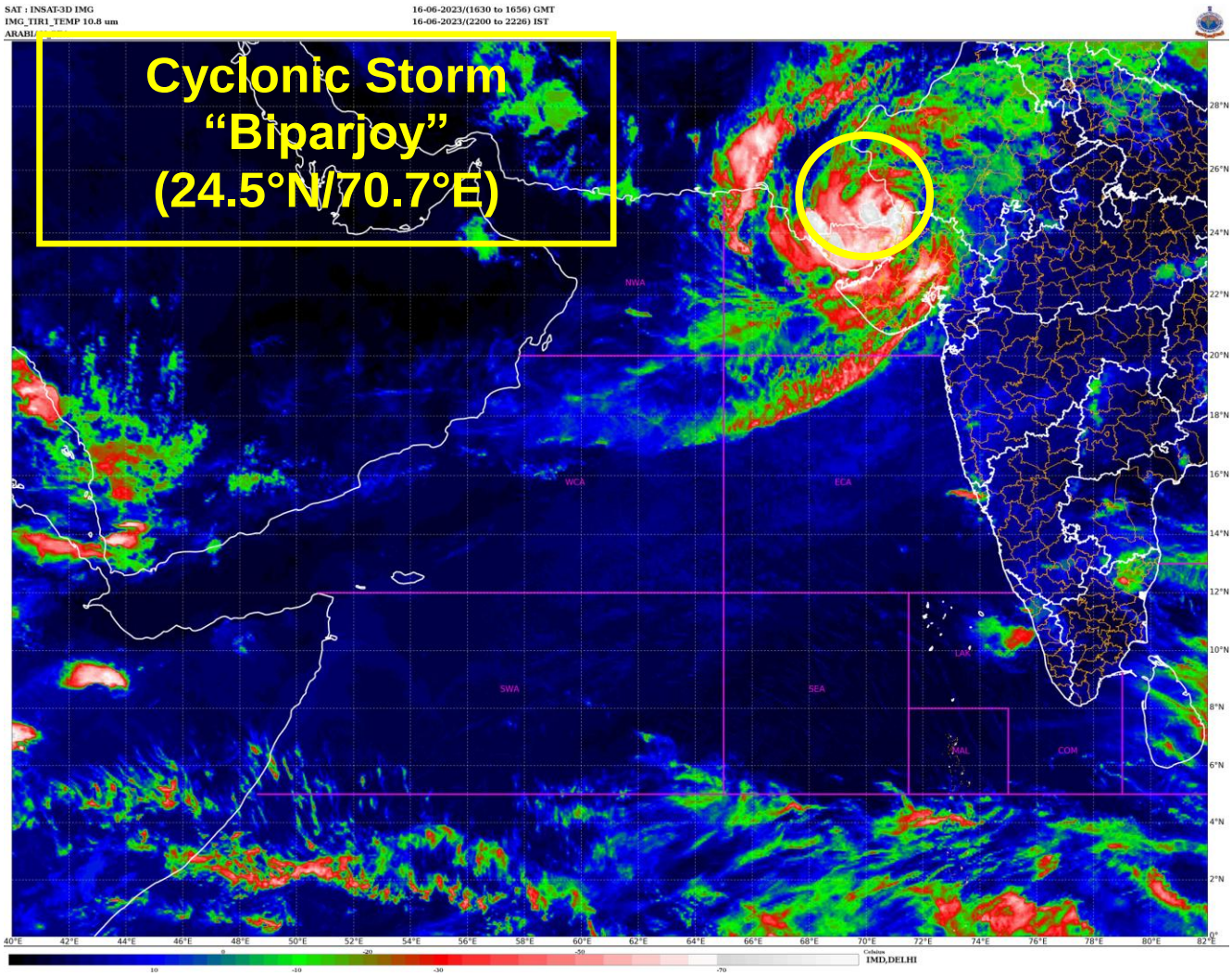
AT 1500 UTC, CHHOR (41768) MEAN SEA LEVEL PRESSURE (MSLP) OF 993.5 HPA, AND MAXIMUM SUSTAINED WIND SPEED (MSW) OF 230°/08KT. BARMER (42435) REPORTED MSLP OF 997.0 HPA AND MSW OF 90°/08KT. DEESA (42539) REPORTED MSLP OF 995.3 HPA AND MSW OF 160°/14KT. BHUJ (42634) REPORTED MSLP OF 997.4 HPA AND MSW OF 250°/2.9KT.

REMARKS:

THE LOW LEVEL VORTICITY IS AROUND $200X10^{-6}S^{-1}$ & IS LOCATED TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS ABOUT $30X10^{-5}S^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS ABOUT $30X10^{-5}$ S^{-1} TO THE SOUTH OF SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE (15-20 KNOTS) OVER THE SYSTEM AREA. THE RIDGE RUNS ALONG 24.5°N. THE DEEP LAYER MEAN WINDS, INDICATE A WESTERLY TROUGH ALONG 66.5E TO THE WEST OF SYSTEM CENTRE. THE SYSTEM IS MOVING EAST-NORTHEASTWARDS UNDER THE INFLUENCE OF WEST-SOUTHWESTERLY WINDS PREVAILING TO THE NORTH OF THE RIDGE AND THE WESTERLY TROUGH. SYSTEM IS STILL IN A MODERATELY FAVOURABLE ENVIRONMENT, THUS IT IS WEAKING GRADUALLY.

BASED ON ENVIRONMENTATL CONDITIONS AND NWP MULTI-MODEL FORECASTS THE SYSTEM IS VERY LIKELY TO MOVE NEARLY NORTHEASTWARDS AND WEAKEN GRADUALLY INTO A DEEP DEPRESSION AROUND 1800 UTC OF TODAY, THE 16^{TH} JUNE AND SUBSEQUENTLY INTO A DEPRESSION AROUND 0000 UTC OF TOMORROW, 17^{TH} JUNE.

AKHIL SRIVASTAVA
SCIENTIST C
RSMC NEW DELHI



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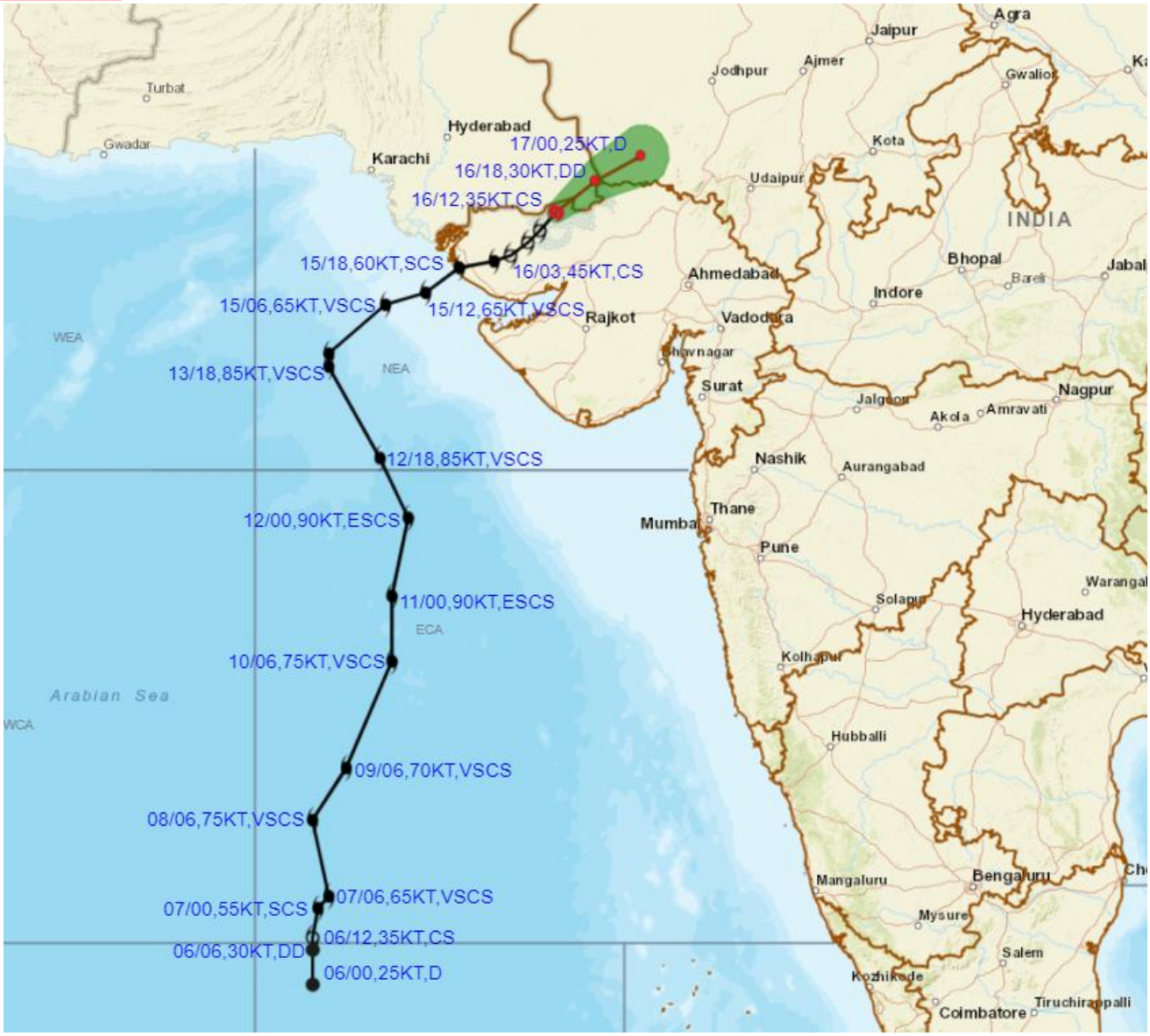
OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY OF CYCLONIC STORM "BIPARJOY" OVER KUTCH AND ADJOINING PAKISTAN BASED ON 1500 UTC (2030 IST) OF 16TH JUNE 2023.



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

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
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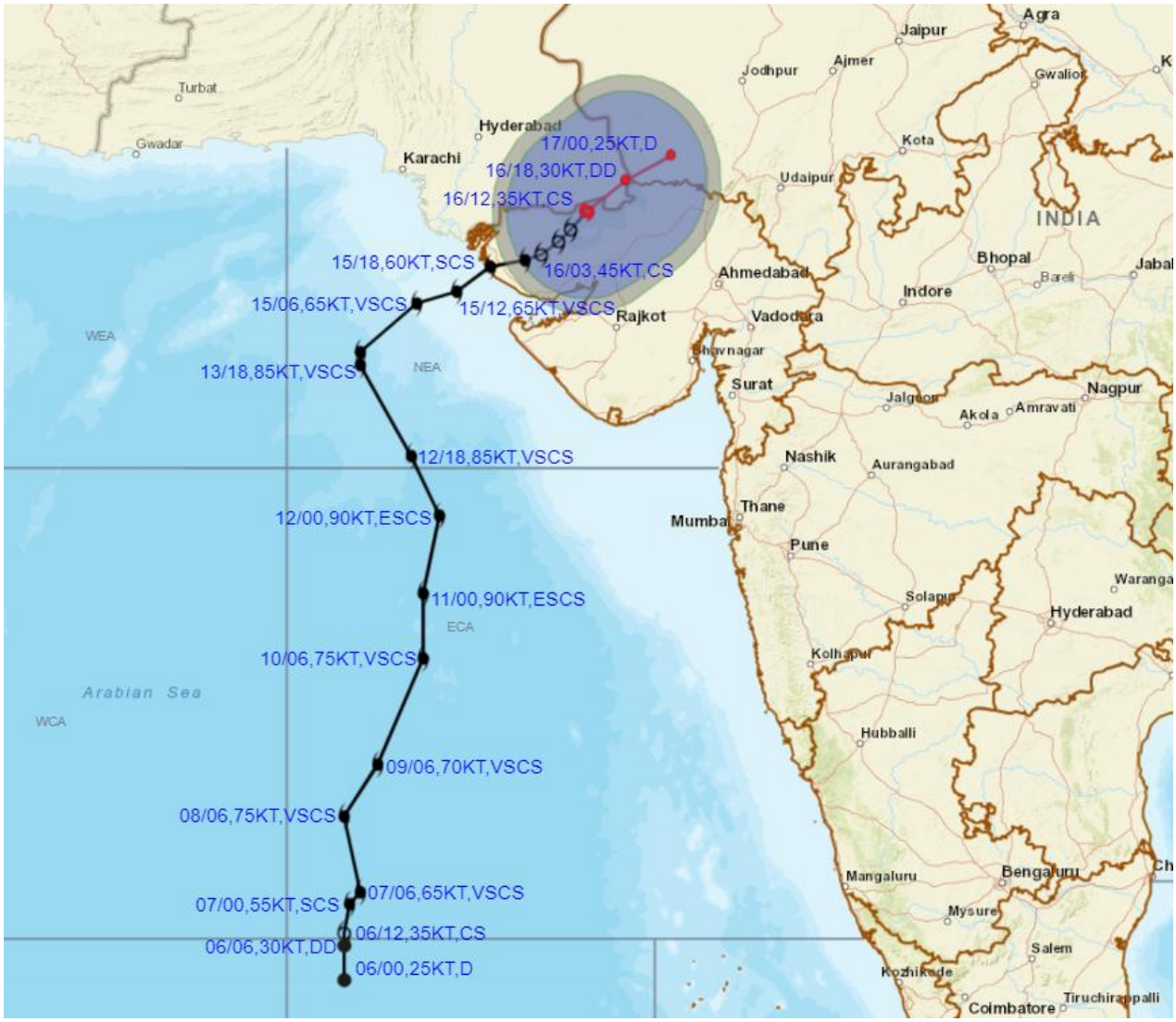
OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "BIPARJOY" OVER KUTCH AND ADJOINING PAKISTAN BASED ON 1500 UTC (2030 IST) OF 16TH JUNE 2023.



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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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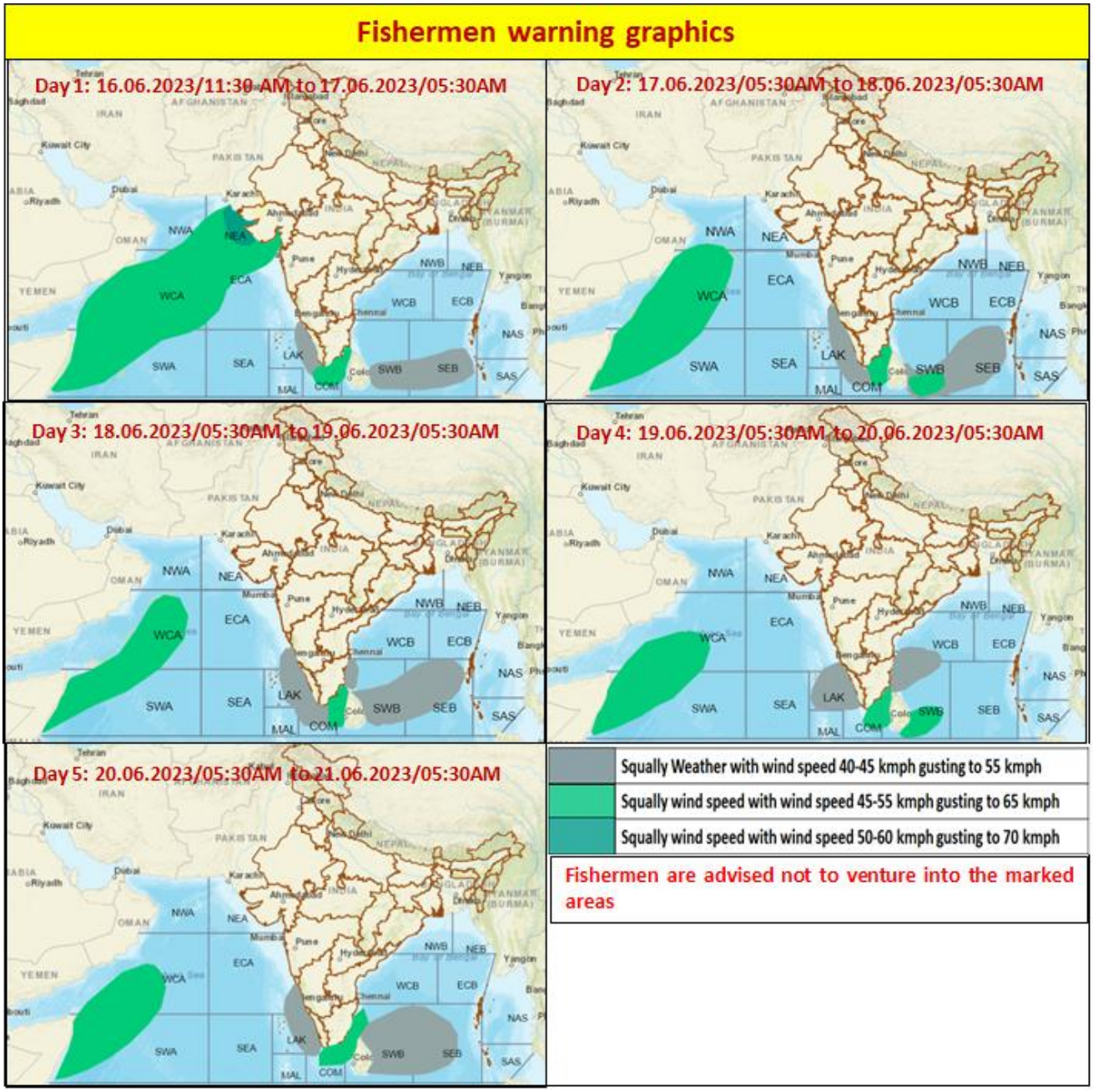
Fishermen warning graphics



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