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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 12.09.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 2100 UTC OF 12.09.2024 BASED ON 1800 UTC OF 12.09.2024.

SUB: (A) DEPRESSION OVER NORTHWEST UTTAR PRADESH & NEIGHBORHOOD (B) LOW PRESSURE AREA OVER SOUTHEAST BANGLADESH AND NEIGHBORHOOD

(A) DEPRESSION OVER NORTHWEST UTTAR PRADESH & NEIGHBORHOOD

THE DEPRESSION OVER CENTRAL UTTAR PRADESH MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0000 UTC OF 13TH SEPTEMBER OVER NORTHWEST UTTAR PRADESH & NEIGHBOURHOOD, NEAR LATITUDE 28.2°N AND LONGITUDE 79.3°E, ABOUT 20 KM SOUTH-SOUTHWEST OF BAREILLY (42189), 70 KM WEST-NORTHWEST OF SHAHJAHANPUR (42266), 120 KM NORTHWEST OF HARDOI (42271), 130 KM EAST-NORTHEAST OF ALIGARH (42262) AND 170 KM NORTHEAST OF AGRA (42261).

IT IS LIKELY TO CONTINUE TO MOVE NEARLY NORTH-NORTHWESTWARDS AND WEAKEN GRADUALLY INTO A WELL-MARKED LOW PRESSURE AREA DURING NEXT 12 HOURS.

THE SYSTEM IS UNDER CONTINUOUS SURVEILLANCE OF DOPPLER WEATHER RADARS AT DELHI (42182) AND LUCKNOW (42369).

AS PER INSAT 3DR IMAGERY AT 0000 UTC THE ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTH UTTARAKHAND, ADJOINING UTTAR PRADESH WITH CLOUD TOP TEMPERATURE OF MINUS 70-93 DEGREE CELCIUS. MODRATE TO INTENSE CONVECTION LAY OVER REST OF NORTH UTTARAKHAND, EAST RAJASTHAN AND NORTHWEST MADHYA PRADESH WITH MINIMUM CLOUD TOP TEMPERATURE OF MINUS 50-70 DEGREE CELCIUS.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 20 KTS GUSTING TO 30 KTS. ESTIMATED CENTRAL PRESSURE IS 994 HPA. At 0000 UTC, THE LOWEST MEAN SEA LEVEL PRESSURE 994.5 HPA IS RECORDED AT BAREILLY (42189).

REMARKS:

MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 5 WITH AMPLITUDE CLOSE TO 1. IT IS LIKELY TO CONTINUE IN SAME PHASE DURING NEXT 2-3 DAYS. THUS, MJO WOULD SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER NORTHERN PART OF INDIA.

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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THE LOW LEVEL CONVERGENCE IS ABOUT $15X10^{-5}$ S^{-1} TO THE EAST OF SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS ABOUT $20X10^{-5}$ S^{-1} AROUND SYSTEM AREA. THE WIND SHEAR IS MODERATE TO HIGH (15-20 KT) OVER SYSTEM AREA. VORTICITY AT 850 HPA LEVEL IS AROUND $150X10^{-5}$ S^{-1} OVER SYSTEM AREA WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. CURRENT ENVIRONMENTAL CONDITONS INDICATE THAT THE DEPRESSION OVER CENTRAL UTTAR PRADESH IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 12 HOURS.
NEXT UPDATE IN ASSOCIATION WITH THIS SYSTEM WILL BE ISSUED AT 0600 UTC OF 13^{TH} SEPTEMBER 2024.

(B) LOW PRESSURE AREA OVER SOUTHEAST BANGLADESH AND NEIGHBORHOOD

UNDER THE INFLUENCE OF A CYCLONIC CIRCULATION OVER SOUTHEAST BANGLADESH AND NEIGHBOURHOOD, A LOW PRESSURE AREA FORMED OVER SOUTHEAST BANGLADESH AND NEIGHBOURHOOD AROUND 1800 UTC OF 12^{TH} SEPTEMBER AND LAY OVER THE SAME REGION AT 0000 UTC OF TODAY, THE 13^{TH} SEPTEMBER, 2024.

IT IS LIKELY TO MOVE SLOWLY WEST-NORTHWESTWARDS AND INTENSIFY INTO A DEPRESSION OVER COASTAL WEST BENGAL AND ADJOINING NORTHWEST BAY OF BENGAL DURING NEXT 48 HOURS.

RECENT INSAT SATELLITE IMAGERY INDICATES THAT THE LOW LEVEL CYCLONIC CIRCULATON OVER SOUTHEAST BANGLADESH AND ADJOINING NORTHEAST BAY OF BENGAL AND NEIGHBOURHOOD AT 0000 UTC OF TODAY THE 13TH SEPTEMBER 2024. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH GANGETIC WEST BENGAL, SOUTH BANGLDESH ADJOINING NORTH AND ADJOINING CENTRAL BAY OF BENGAL AND NEIGHBOURHOOD. GANGETIC WEST BENGAL, SOUTH BANGLADESH, EXTREME SOUTH ARAKAN COAST WITH MINIMUM CLOUD TOP TEMPERATURE OF MINUS 80 TO 93°C.

THE LOW LEVEL CONVERGENCE IS ABOUT $20X10^{-5}$ S^{-1} OVER NORTHEAST BAY OF BENGAL & ADJOINING MYANMAR. UPPER LEVEL DIVERGENCE IS ABOUT $20X10^{-5}$ S^{-1} OVER NORTHEAST BAY OF BENGAL & ADJOINING MYANMAR. THE WIND SHEAR IS LOW TO MODERATE (5-15 KT) OVER COASTAL BANGLADESH & NEIGHBOURHOOD. VORTICITY AT 850 HPA LEVEL IS AROUND $70\text{-}100X10^{-5}$ S^{-1} OVER NORTHEAST BAY OF BENGAL & ADJOINING MYANMAR WITH SIGNIFICANT VERTICAL EXTENSION UPTO 500 HPA LEVEL.

MOST OF THE NWP MODELS INDICATE GRADUAL WEST-NORTHWESTWARD MOVEMENT AND INTENSIFICATION INTO A DEPRESSION DURING NEXT 2 DAYS.

***PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS:**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
LOW	MOD	HIGH	-	-	-	-

*NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY

ANANDA KUMAR DAS
SC.-F, RSMC NEW DELHI

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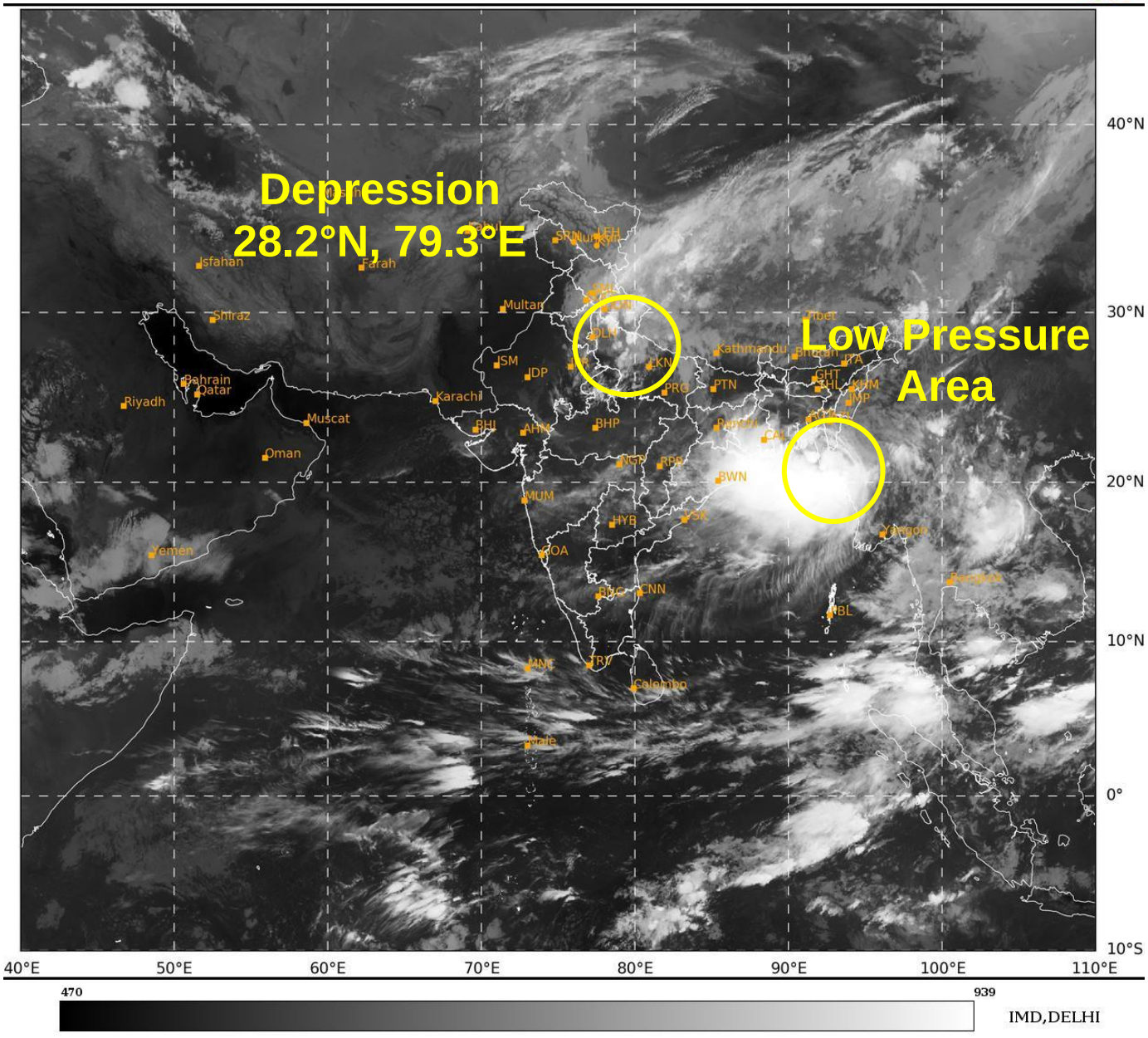
SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
L1C Mercator

13-09-2024/(0145 to 0212) GMT
13-09-2024/(0715 to 0742) IST



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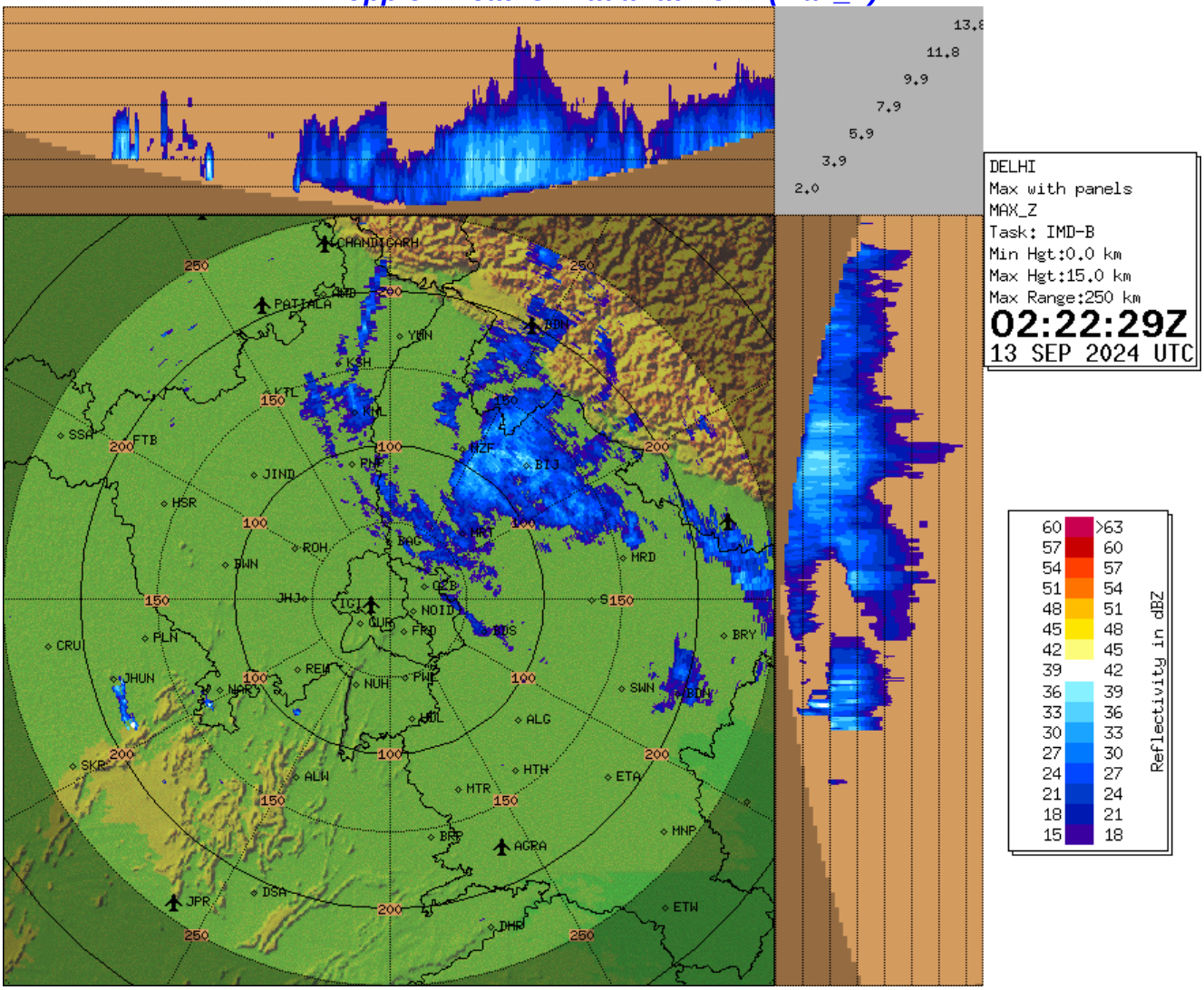
Doppler Weather Radar at Delhi (Max_Z)



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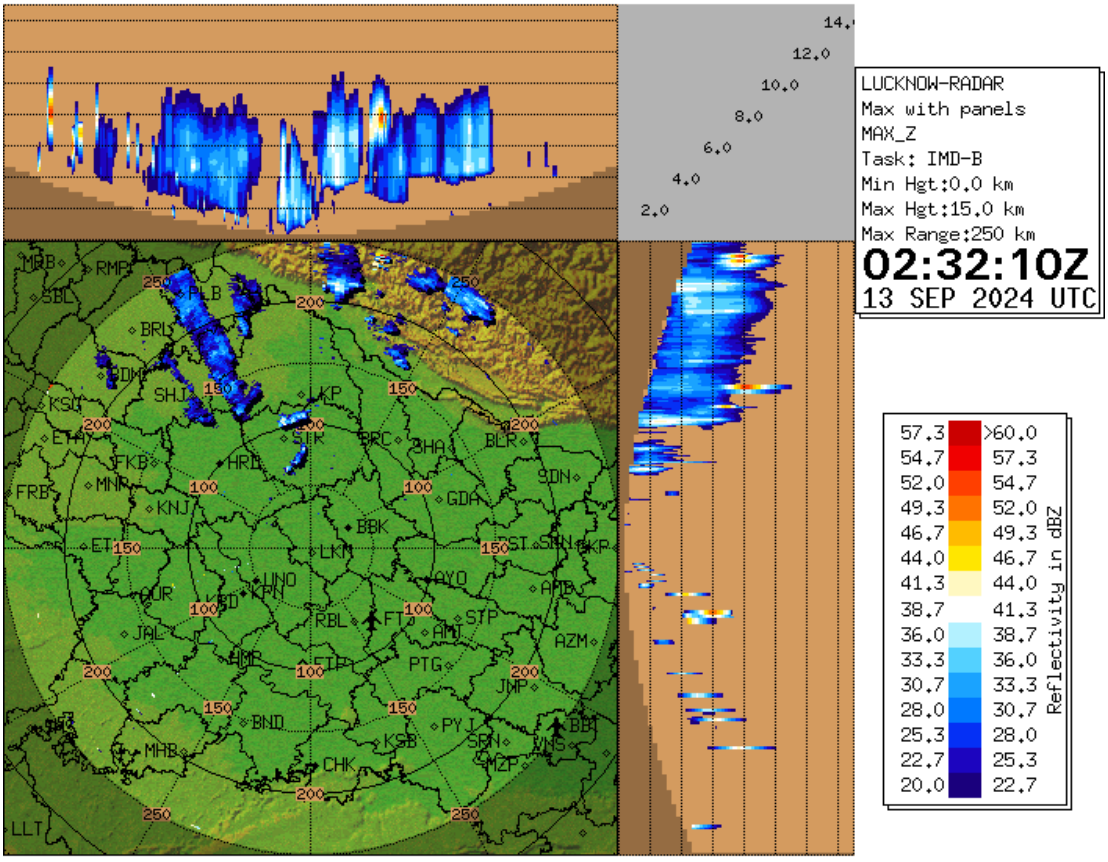
Doppler Weather Radar at Lucknow (Max_Z)



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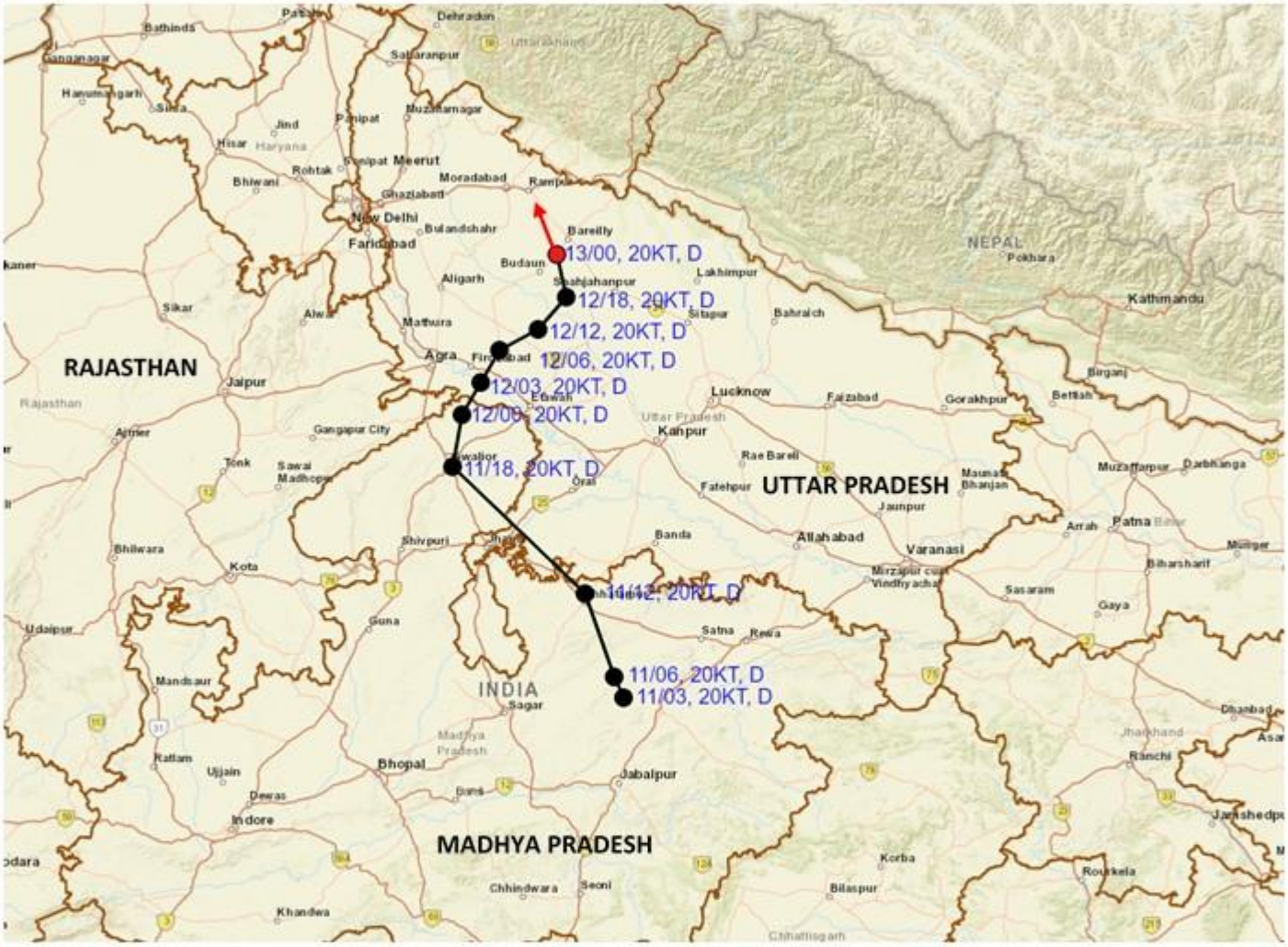
OBSERVED AND FORECAST TRACK OF DEPRESSION OVER NORTHWEST UTTAR PRADESH AND NEIGHBOURHOOD BASED ON 0000 UTC (0530 IST) OF 13TH SEPTEMBER, 2024.



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

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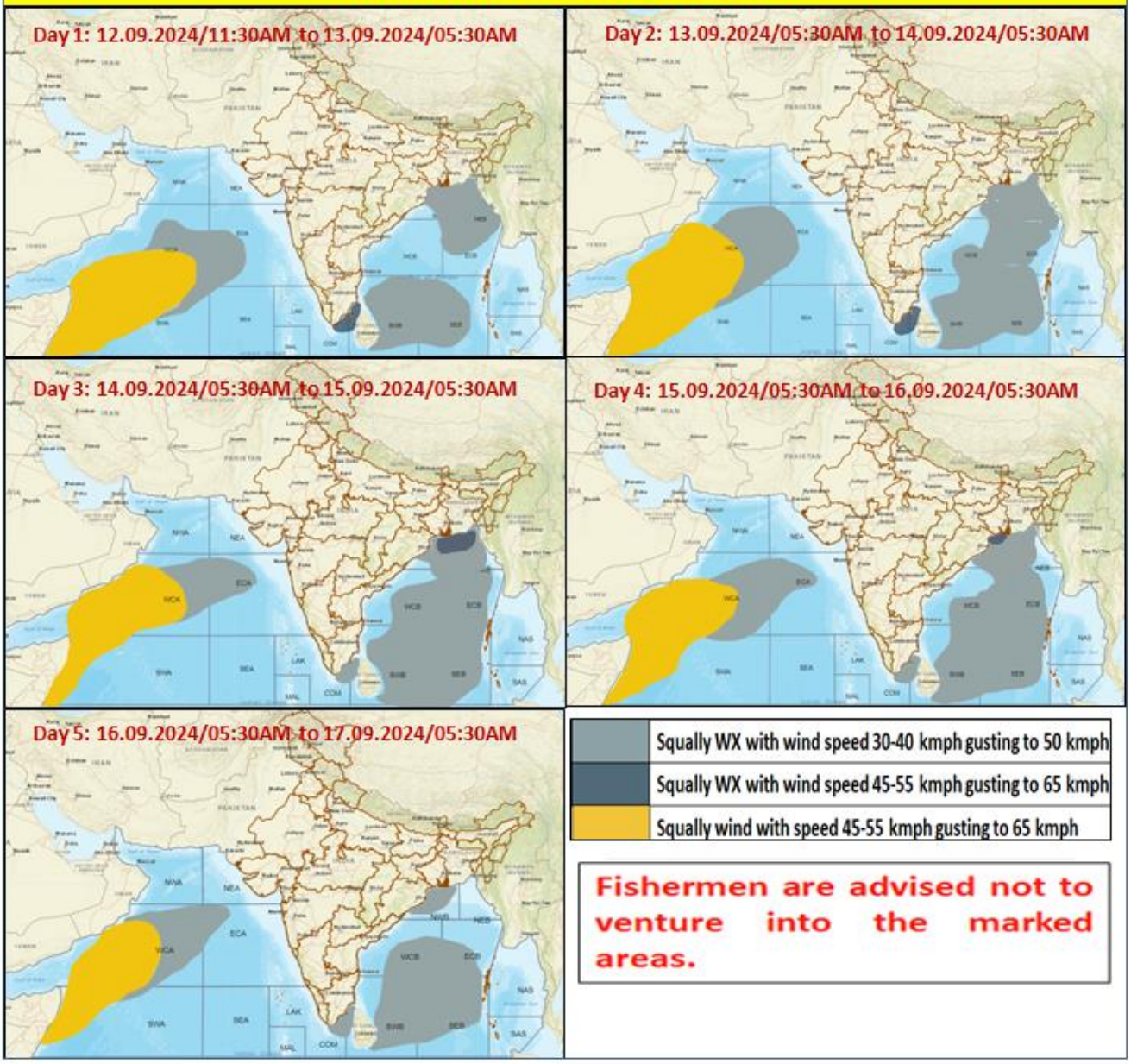
Fishermen Warning Graphics



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