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: DEPRESSION OVER CENTRAL UTTAR PRADESH

THE DEPRESSION OVER CENTRAL UTTAR PRADESH MOVED SLOWLY NORTHEASTWARDS WITH A SPEED OF 5 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1800 UTC OF TODAY, THE 12TH SEPTEMBER OVER THE SAME REGION NEAR LATITUDE 27.7°N AND LONGITUDE 79.5°E, ABOUT 40 KM WEST-OUTHWEST OF SHAHJAHANPUR (42266), 70KM WEST-NORTHWESTOF HARDOI (42271), 70 KM SOUTH OF BAREILLY (42189), 140 KM EAST-OF ALIGARH (42262) AND 160 KM EAST-NORTHEAST OF AGRA (42261).

IT IS LIKELY TO CONTINUE TO MOVE NORTHEASTWARDS 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 AND LUCKNOW.

AS PER INSAT 3DR IMAGERY AT 1800 UTC THE ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTHEAST UTTARAKHAND, UTTAR PRADESH WITH CLOUD TOP TEMPERATURE OF MINUS 70-93 DEGREE CELCIUS. MODRATE TO INTENSE CONVECTION LAY OVER REST OF THE UTTARAKHAND, EAST RAJASTHAN AND 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 993 HPA. At 1800 UTC, THE LOWEST MEAN SEA LEVEL PRESSURE 996.6 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.

THE LOW LEVEL CONVERGENCE IS ABOUT $20X10^{-5}$ 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 (10-15 KT) OVER SYSTEM AREA. VORTICITY AT 850 HPA LEVEL IS AROUND $250X10^{-5}$ 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 0300 UTC OF 13TH SEPTEMBER 2024.

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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BAY OF BENGAL:

THE UPPER AIR CYCLONIC CIRCULATION OVER SOUTHEAST BANGLADESH AND NEIGHBOURHOOD PERSISTED OVER THE SAME REGION AT 1800 UTC OF TODAY, THE 12TH SEPTEMBER 2024. UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS LIKELY TO FORM OVER COASTAL BANGLADESH AND ADJOINING NORTH BAY OF BENGAL DURING NEXT 12 HOURS. THEREAFTER, IT IS LIKELY TO MOVE SLOWLY WEST-NORTHWESTWARDS AND CONCENTRATE INTO A DEPRESSION OVER COASTAL WEST BENGAL AND ADJOINING NORTHWEST BAY OF BENGAL DURING SUBSEQUENT 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 1800 UTC OF TODAY THE 12TH SEPTEMBER 2024. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST GANGETIC WEST BENGAL, SOUTH BANGLADESH, EXTREME SOUTH TRIPURA, NORTH AND ADJOINING CENTRAL BAY OF BENGAL, ARAKAN OAST, MYANMAR WITH MINIMUM CLOUD TOP TEMPERATURE OF MINUS 80 TO 93°C. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER ANDAMAN SEA, GULF OF MARTABAN AND TENASSERIM COAST. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LAY OVER REST OF BAY OF BENGAL.

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 150X10^{-5} S^{-1} OVER NORTHEAST BAY OF BENGAL & ADJOINING MYANMAR WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL.
MOST OF THE NWP MODELS INDICATE GRADUAL WEST-NORTHWESTWARD MOVEMENT AND INTENSIFICATION INTO A DEPRESSION DURING NEXT 3 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
NIL	LOW	MOD	HIGH	-	-	-

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

AKHIL SRIVASTAVA
SC.-D, RSMC NEW DELHI

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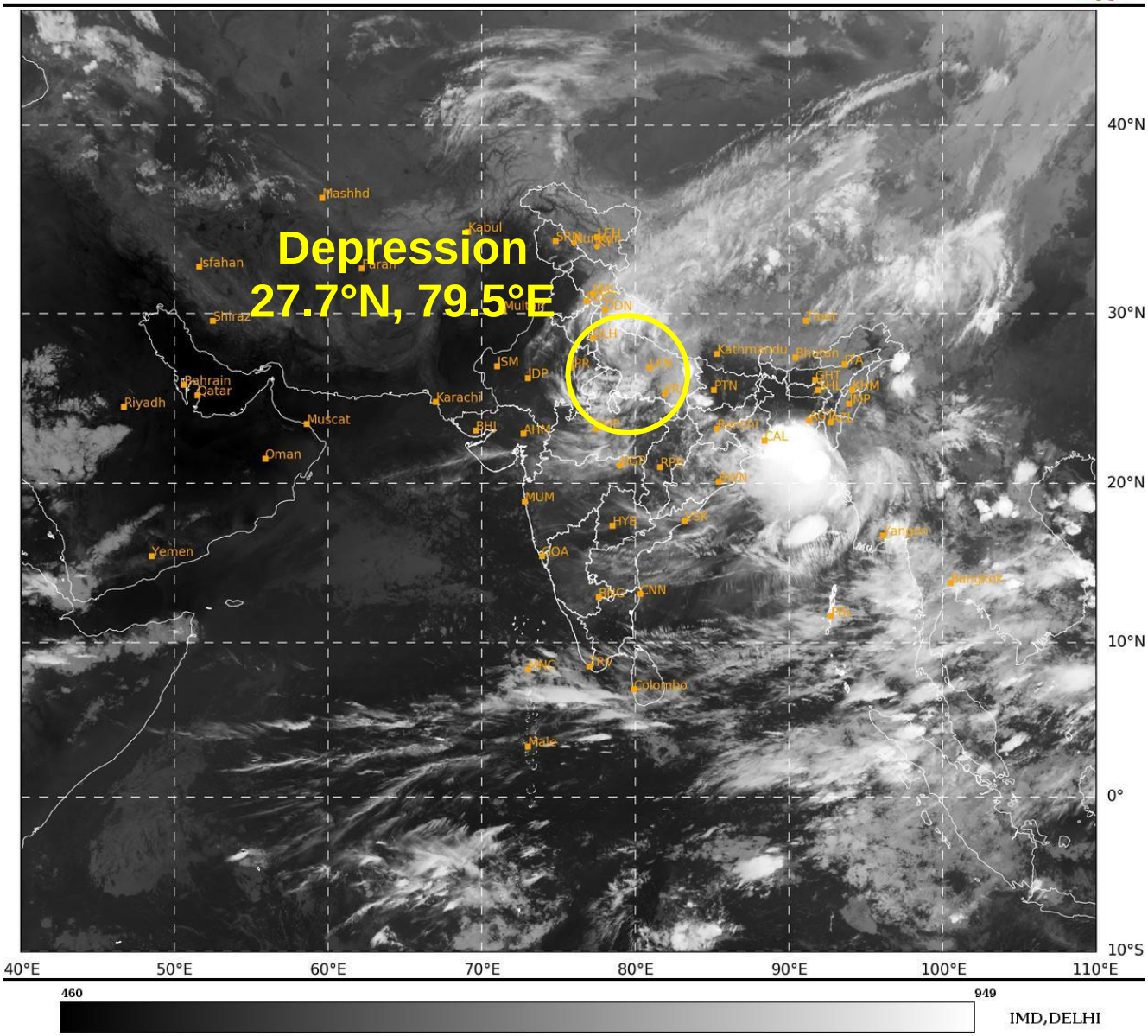
SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
L1C Mercator

12-09-2024/(1715 to 1742) GMT
12-09-2024/(2245 to 2312) IST



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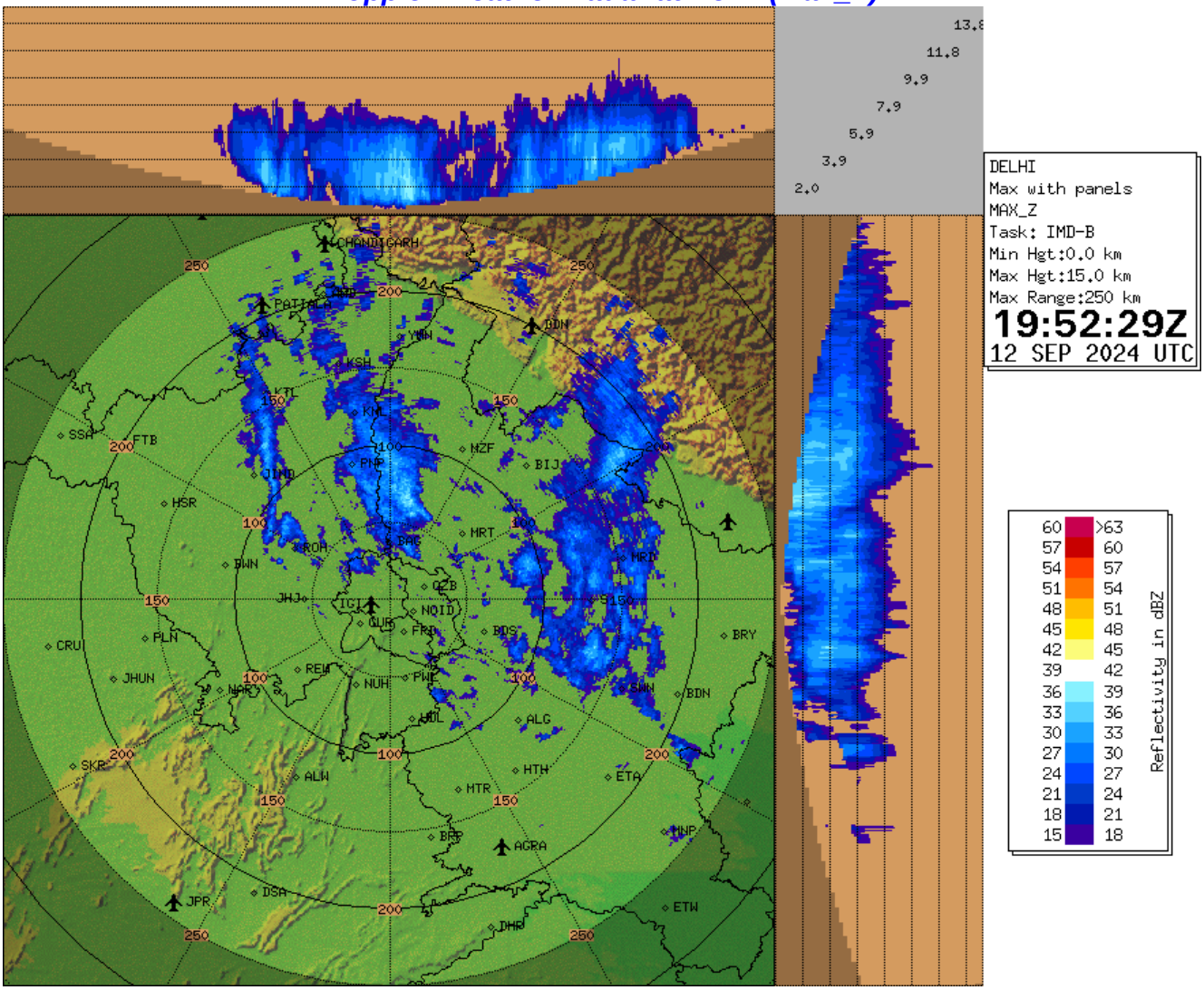
Doppler Weather Radar at Delhi (Max_Z)



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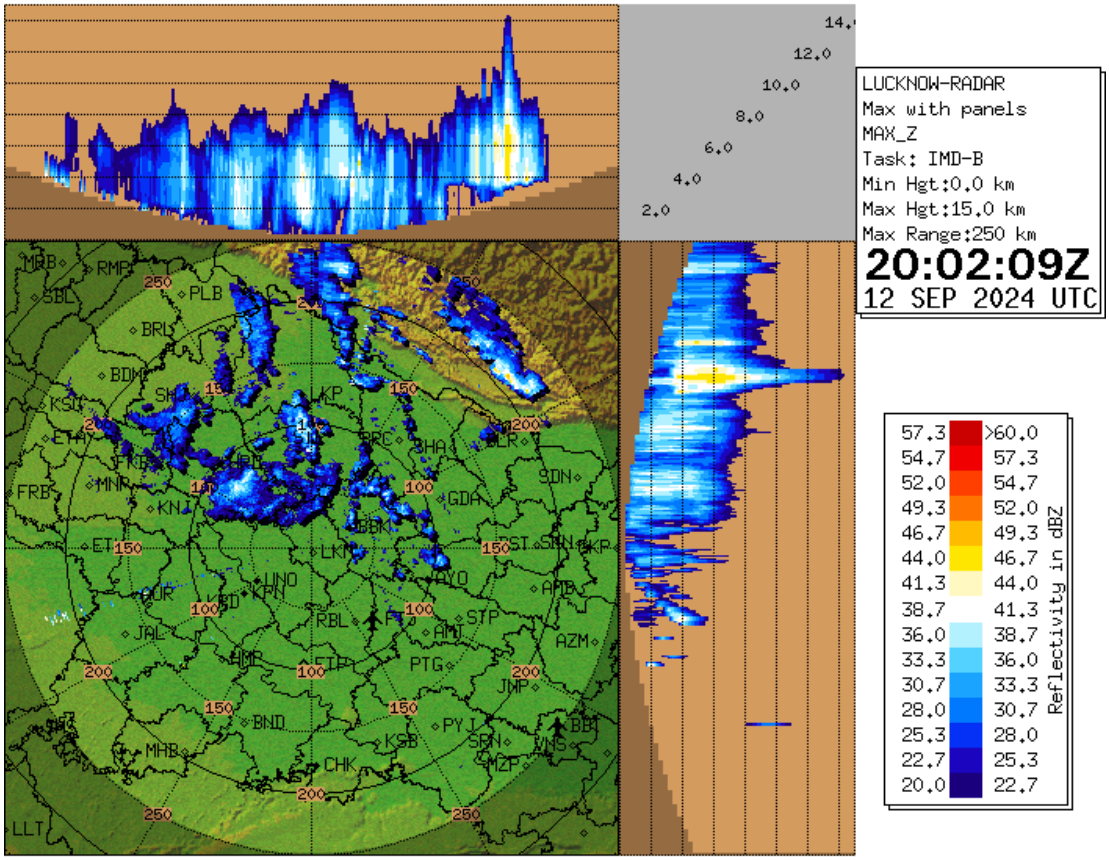
Doppler Weather Radar at Lucknow (Max_Z)



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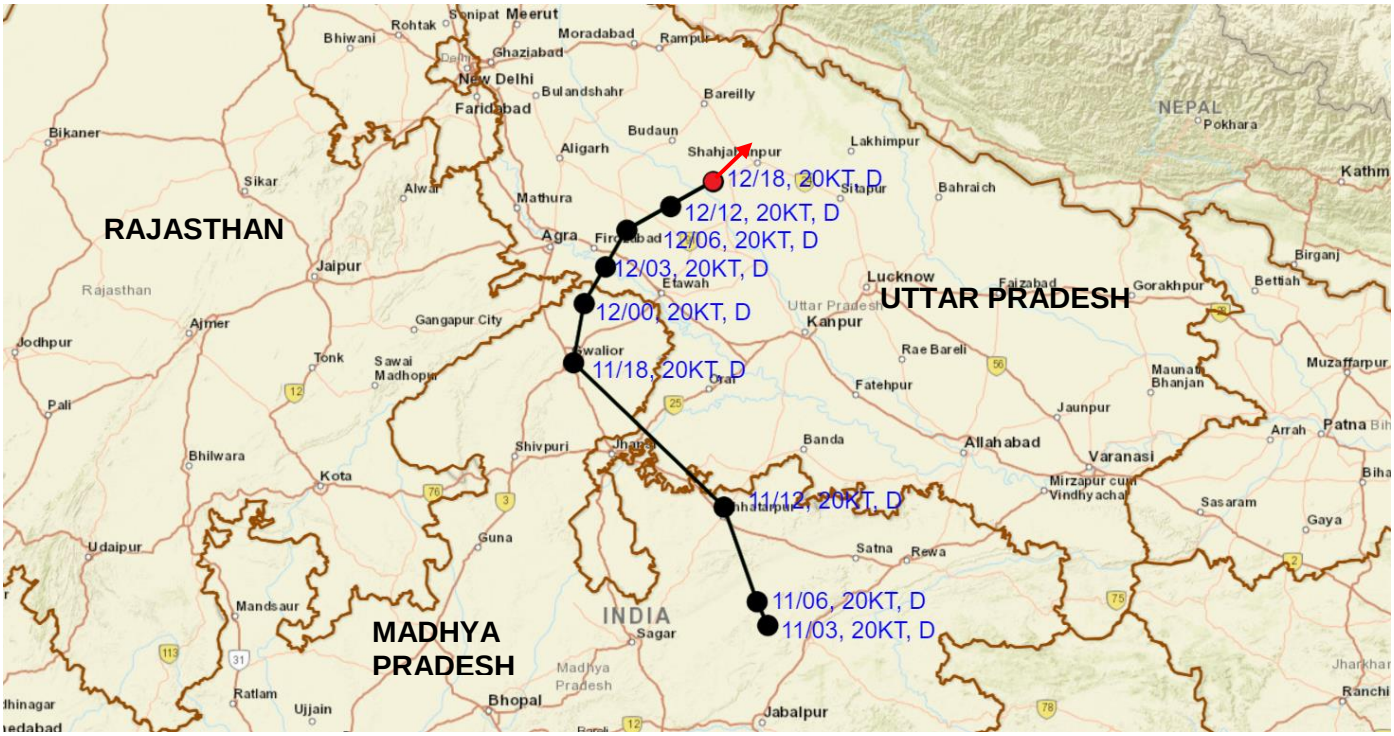
OBSERVED AND FORECAST TRACK OF DEPRESSION OVER CENTRAL UTTAR PRADESH BASED ON 1800 UTC (2330 IST) OF 12TH SEPTEMBER, 2024.



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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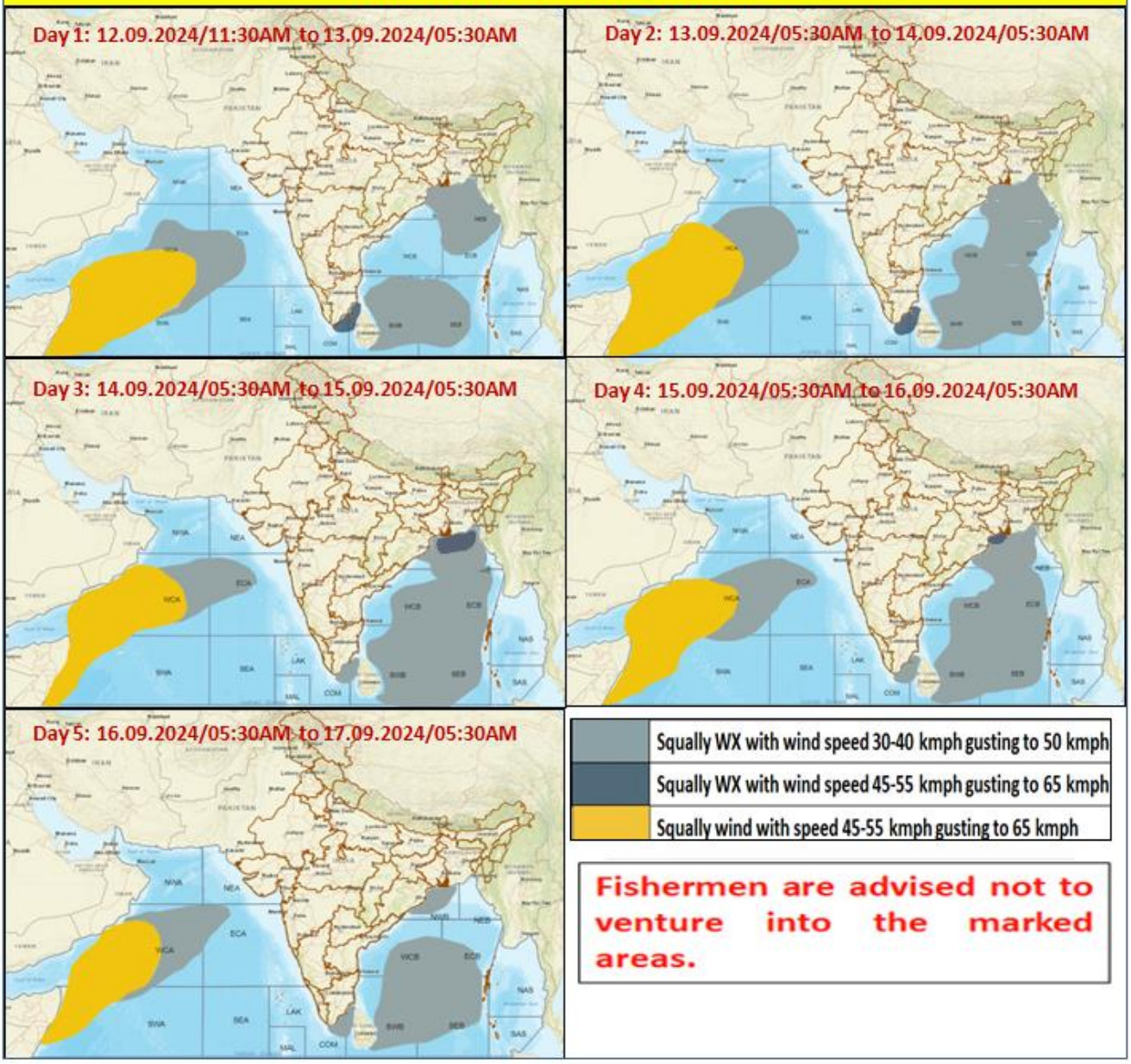
Fishermen Warning Graphics



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