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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 08.09.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 1500 UTC OF 08.09.2024 BASED ON 1200 UTC OF 08.09.2024.

DEPRESSION OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL:

THE DEPRESSION OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL MOVED SLOWLY NORTHWESTWARDS WITH A SPEED OF 7 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1200 UTC OF TODAY, THE 8TH SEPTEMBER, 2024 OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 18.6°N AND LONGITUDE 86.4°E, ABOUT 150 KM SOUTH-SOUTHEAST OF PURI (43053), 180 KM EAST-SOUTHEAST OF GOPALPUR (43049), 190 KM SOUTH OF PARADIP (42976), 250 KM SOUTH OF CHANDBALI (42973), 240 KM EAST OF KALINGAPATNAM (43105) AND 350 KM SOUTH-SOUTHWEST OF DIGHA (42901).

IT IS VERY LIKELY TO MOVE NEARLY NORTHWESTWARDS AND INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 12 HOURS. THEREAFTER, CONTINUING TO MOVE FURTHER NORTHWESTWARDS, IT IS LIKELY TO CROSS ODISHA COAST NEAR PURI BY 0600 UTC OF 9TH SEPTEMBER. IT WOULD THEN MOVE WEST-NORTHWESTWARDS ACROSS ODISHA & CHHATTISGARH DURING SUBSEQUENT 2 DAYS.

THE SYSTEM IS UNDER THE CONTINUOUS SURVEILLANCE OF DOPPLER WEATHER RADARS AT VISHAKHAPATNAM AND GOPALPUR.

BOTH THE RADARS ARE SHOWING MODERATE TO INTENSE CONVECTION OVER NORTH COASTAL ANDHRA PRADESH AND ADJOINING AREAS OF SOUTH ODISHA.

AT 1200 UTC, INTENSITY OF THE SYSTEM IS CHARACTERISED AS T1.5. CLOUDS ARE ORGANISED IN SHEAR PATTERN. AREA OF INTENSE CONVECTION IS SHEARED TO THE SOUTHWEST OF SYSTEM CENTRE. INTENSE CLOUD MASS IS SEEN OVER WESTCENTRAL BAY OF BENGAL AND ADJOINING AREAS OF NORTH COASTAL ANDHRA PRADESH. AS PER INSAT 3D IMAGERY AT 1200 UTC, ASSOCIATED SCATERRED TO BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER CENTRAL & ADJOINING NORTHWEST BAY OF BENGAL, SOUTH COASTAL ODISHA & NORTH COASTAL ANDHRA PRADESH. MINIMUM CLOUD TOP TEMPERATURE IS -93°C. TOTAL PRECIPITABLE WATER IMAGERY INDICATES WARM MOIST AIR INCURSION INTO THE SYSTEM CORE FROM SOUTHERN SECTOR.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 25 KTS GUSTING TO 35 KTS. ESTIMATED CENTRAL PRESSURE IS 993 HPA.

AT 1200 UTC, KALINGPATTNAM REPORTED MEAN SEA LEVEL PRESSURE (MSLP) OF 997.5 HPA, AND MSW OF 270°/05KT. GOPALPUR REPORTED MSLP OF 996.4 HPA, AND MSW OF 020°/05KT. PURI REPORTED MSLP OF 995.3 HPA AND MSW OF 090°/10KT. A BUOY (17.8N/89.2) REPORTED MSLP OF 999.2 HPA AND MSW OF 195°/08KT. ANOTHER BUOY (17.4N/89.0) REPORTED MSLP OF 999.3 HPA AND MSW OF 238°/10KT

WIND WARNING

SQUALLY WEATHER WITH WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS CURRENTLY PREVAILING OVER NORTHWEST AND ADJOINING NORTHEAST & CENTRAL BAY OF BENGAL AND ALONG & OFF ANDHRA PRADESH-ODISHA-WEST BENGAL AND ADJOINING BANGLADESH COASTS. IT IS LIKELY TO INCREASE BECOMING 50-60 KMPH GUSTING TO 70 KMPH OVER THE SAME REGION FROM 1800 UTC OF TODAY, THE 8TH SEPTEMBER TILL 0000 UTC OF 10TH SEPTEMBER AND DECREASE GRADUALLY THEREAFTER.

SEA CONDITION: ROUGH TO VERY ROUGH SEA CONDITION IS LIKELY OVER NORTHWEST AND ADJOINING NORTHEAST & CENTRAL BAY OF BENGAL AND ALONG & OFF ANDHRA PRADESH-ODISHA-WEST BENGAL AND ADJOINING BANGLADESH COASTS FROM TODAY, THE 8TH SEPTEMBER TILL 0000 UTC OF 10TH. SEA CONDITIONS WOULD GRADUALLY IMROVE BECOMING ROUGH ON 11TH SEPTEMBER.

(V) FISHERMEN WARNING

FISHERMEN ARE ADVISED NOT TO VENTURE INTO NORTHWEST AND ADJOINING NORTHEAST & CENTRAL BAY OF BENGAL; ALONG & OFF ANDHRA PRADESH-ODISHA-WEST BENGAL AND ADJOINING BANGLADESH COASTS TILL 0600 UTC OF 11TH SEPTEMBER.

REMARKS:

CURRENT ENVIRONMENTAL CONDITONS INDICATE THAT THE DEPRESSION OVER WESTCENTRAL BAY OF BENGAL (BOB) IS LYING IN A FAVOURABLE ENVIRONMENT. SEA SURFACE TEMPERATURE IS 29-30°C OVER WESTCENTRAL & ADJOINING EASTCENTRAL BOB. IT IS HIGHER AROUND 32°C OVER NORTHWEST BOB OFF ODISHA COAST. TROPICAL CYCLONE HEAT POTENTIAL IS 60-80KJ/CM^2 NEAR SYSTEM LOCATION. IT IS SLIGHTLY HIGHER OVER NORTHWEST BOB (100 KJ/CM^2). THUS, DURING ITS NORTH-NORTHWESTWARDS MOVEMENT, IT WILL ENTER INTO WARM OCEANIC AREA.

MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 5 WITH AMPLITUDE LESS THAN 1. IT IS LIKELY TO CONTINUE IN SAME PHASE DURING NEXT 4 DAYS. THUS, MJO WOULD SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER NORTH BOB. NCICS BASED GUIDANCE ON EQUATORIAL WAVES INDICATE, STRONG WESTERLY WINDS (5-7 MPS) ALONGWITH ROSSBY WAVES OVER SOUTH BOB AND STRONG EASTERLY WINDS (5-7MPS) OVER NORTH BOB. THESE FEATURES WOULD SUPPORT FURTHER INTENSIFICATION OF SYSTEM.

THE LOW LEVEL CONVERGENCE HAS INCREASED AND IS AROUND $40X10^{-5}$ S^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS IS AROUND $10X10^{-5}$ S^{-1} TO THE SOUTHWEST AND ANOTHER ZONE OF $20X10^{-5}$ S^{-1} TO THE SOUTHEAST OF SYSTEM CENTRE. THE WIND SHEAR IS LOW (05-10 KT) OVER SYSTEM AREA AND ALONG THE FORECAST TRACK. VORTICITY AT 850 HPA LEVEL IS AROUND $250X10^{-5}$ S^{-1} TO THE SOUTHWEST OF SYSTEM AREA WITH EXTENSION UPTO 500 HPA LEVEL.

ALL THESE FEATURES INDICATE A FAVOURABLE ENVIRONMENT FOR FURTHER INTENSIFICATION OF SYSTEM.

GUIDANCE FROM VARIOUS NUMERICAL WEATHER PREDICTION MODELS (IMD GFS, NCEP GFS, GEFS, ECMWF, AND NCUM) IS SHOWING INITIAL NORTHWARDS MOVEMENT TILL 0000 UTC 09^{TH} SEPTEMBER, FOLLOWED BY WEST-NORHWESTWARDS MOVEMENT TOWARDS ODISHA COAST. NCEP GFS IS INDICATING NEARLY NORTHWARDS MOVEMENT AND CROSSING NEAR 20°N/86°E AROUND 0600 UTC OF 9^{TH} SEPTEMBER. ECMWF 0000 UTC RUN IS INDICATING NEARLY NORTHWARDS MOVEMENT WITH CROSSING NEAR 20.3°N/86.8°E AROUND 0600 UTC OF 9^{TH} SEPTEMBER. IMD GFS IS INDICATING NEAR NORTHWARDS MOVEMENT AND CROSSING NEAR 19.5°N/86.2°E AROUND 0000 UTC OF 9^{TH} SEPTEMBER. NCUM IS INDICATING CROSSING NEAR 20°N/85°E AROUND 0600 UTC OF 9^{TH} SEPTEMBER. IMD MME IS INDICATING THE SYSTEM TO CROSS ODISHA COAST NEAR PURI (19.9/86.1) AROUND 0400 UTC OF 9^{TH} SEPTEMBER. HOWEVER, THERE IS CONSENSUS AMONG ALL MODELS REGARDING WEST-NORTHWESTWARDS MOVEMENT OF THE SYSTEM AFTER LANDFALL ACROSS ODISHA, CHHATTISGARH & NORTHEAST MADHYA PRADESH.

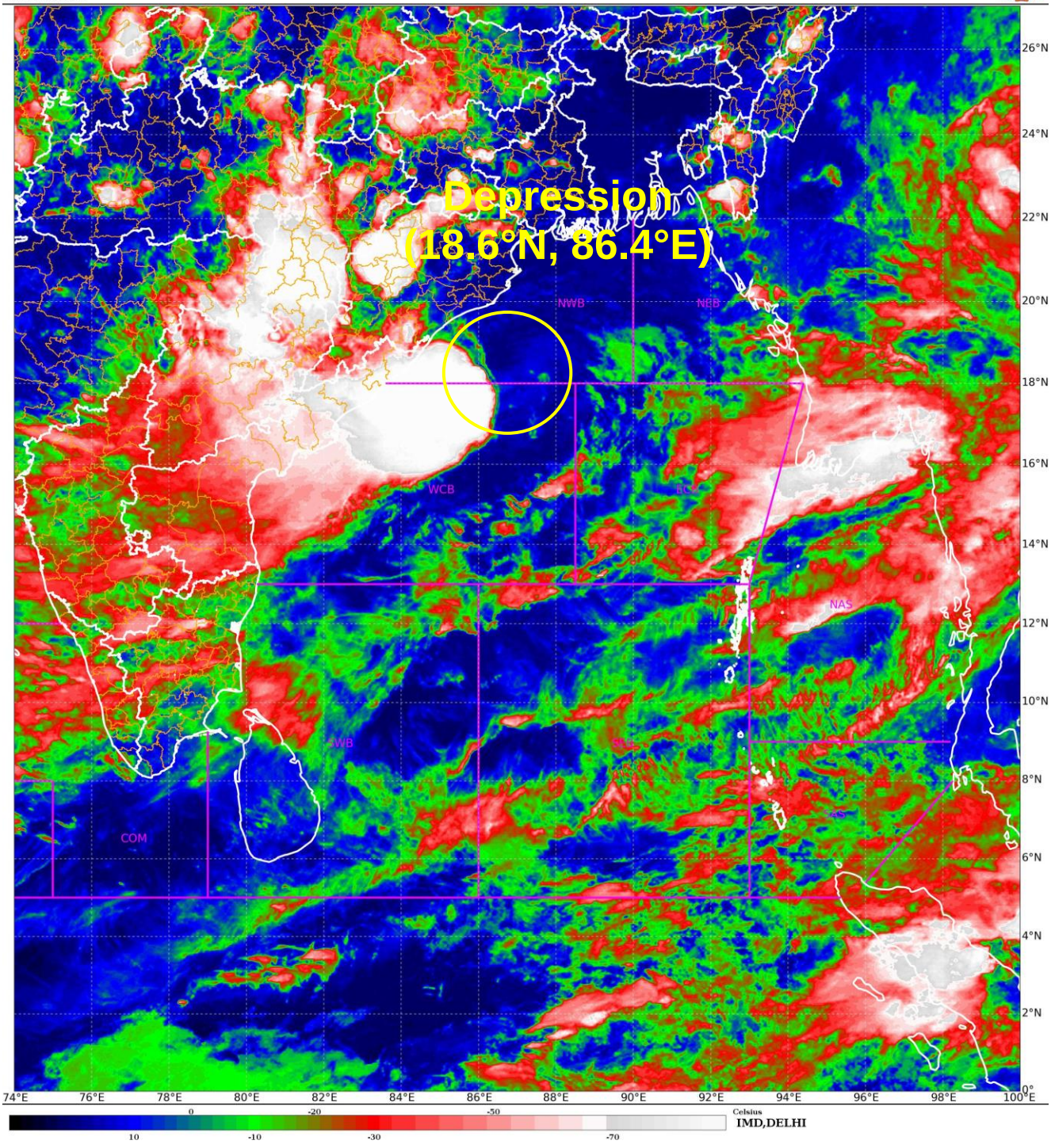
CONSIDERING ALL THE ABOVE, IT IS CONCLUDED THAT THE DEPRESSION OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL IS VERY LIKELY TO MOVE NEARLY NORTHWESTWARDS AND INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 12 HOURS. THEREAFTER, CONTINUING TO MOVE FURTHER NORTHWESTWARDS, IT IS LIKELY TO CROSS ODISHA COAST NEAR PURI BY 0600UTC OF 9TH SEPTEMBER. IT WOULD THEN MOVE WEST-NORTHWESTWARDS ACROSS ODISHA & CHHATTISGARH DURING SUBSEQUENT 2 DAYS.

(DR RK JENAMANI)
RSMC NEW DELHI

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

SAT : INSAT-3DR IMG
IMG_TIR1_TEMP 10.8 um
L1C Mercator

08-09-2024/(1345 to 1412) GMT
08-09-2024/(1915 to 1942) IST



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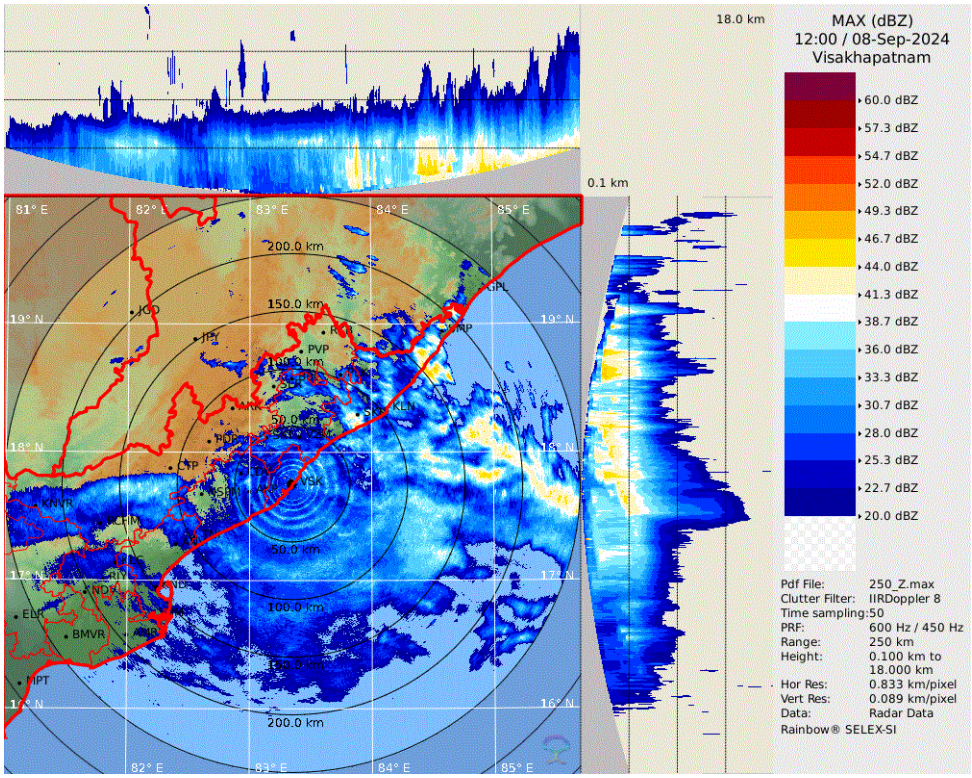
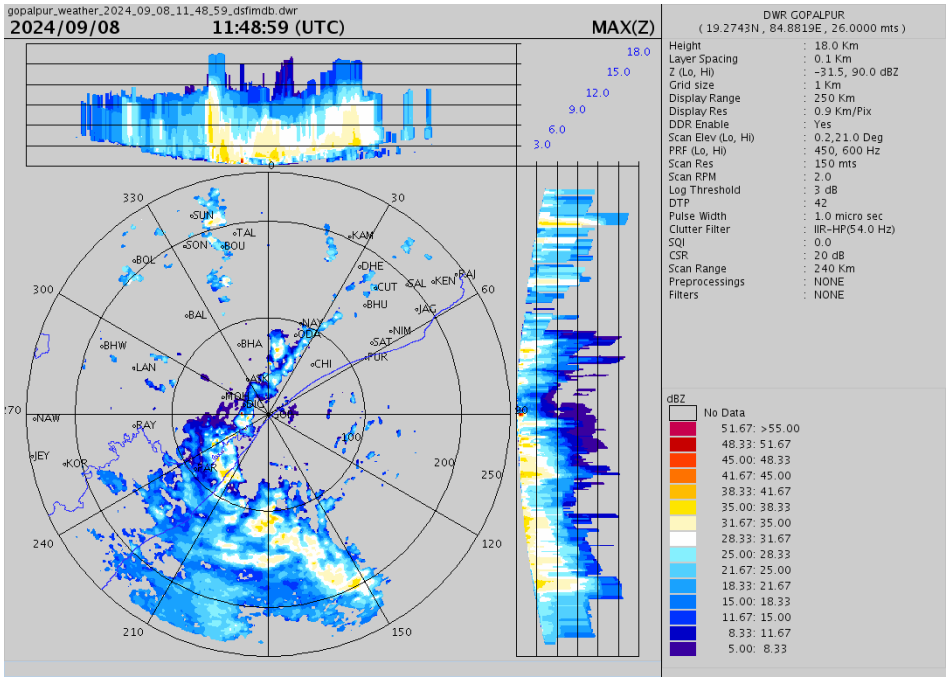
Reflectivity imagery from ***Doppler Weather Radar, Visakhapatnam***



Maximum reflectivity imagery from Doppler Weather Radar, Gopalpur



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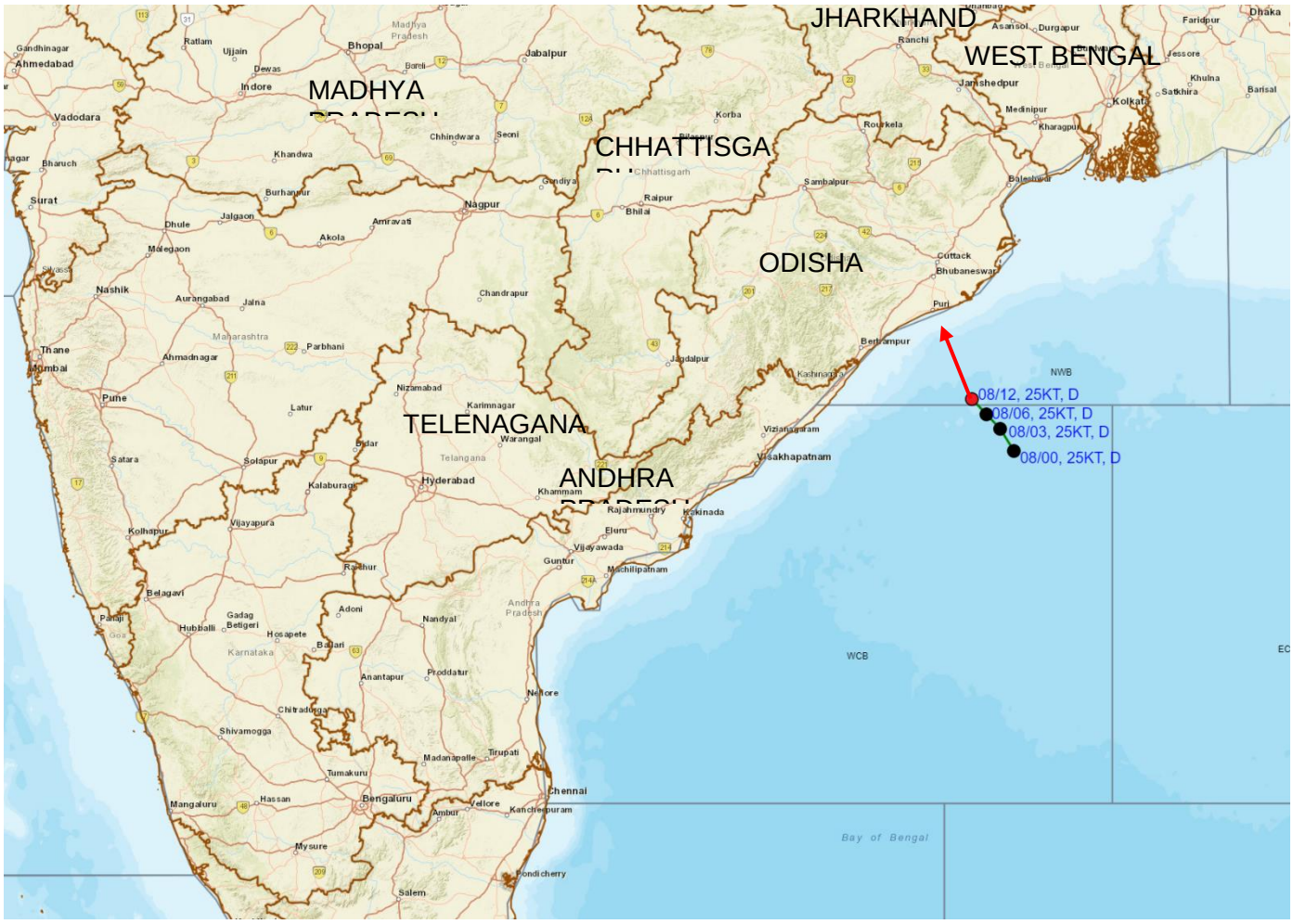
OBSERVED AND FORECAST TRACK OFDEPRESSION OVER NORTHWESTAND ADJOINING WESTCENTRALBAY OF BENGAL BASED ON 1200 UTC (1730 IST) OF 8th SEPTEMBER, 2024.



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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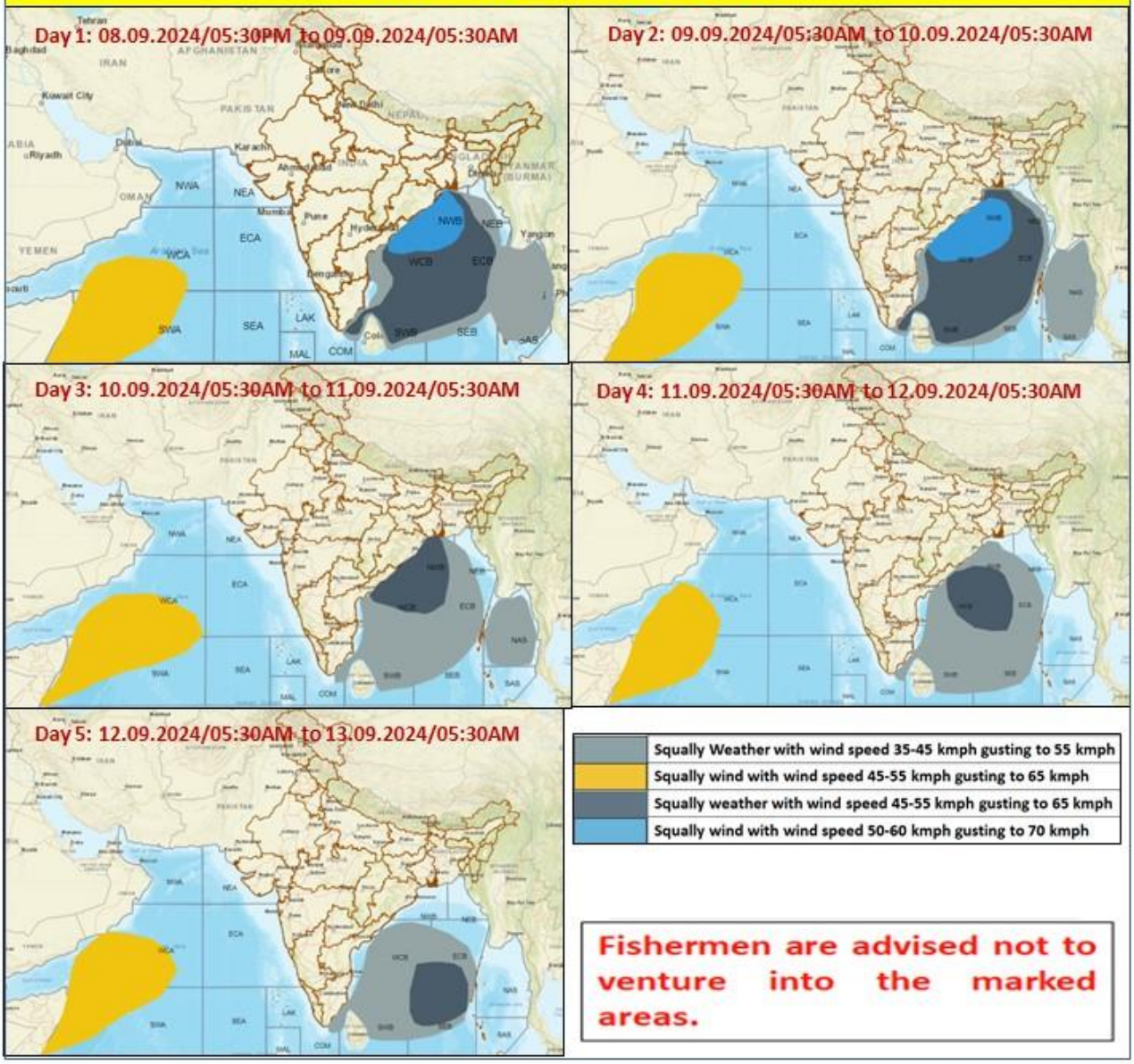
Fishermen Warning Graphics



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