



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 13.10.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 2000 UTC OF 13.10.2024 BASED ON 1800 UTC OF 13.10.2024.

ARABIAN SEA:

THE DEPRESSION OVER CENTRAL ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 5 KMPH DURING PAST 6 HOURS, AND LAY CENTRED AT 1800 UTC OF 13TH OCTOBER, 2024 OVER THE SAME REGION NEAR LATITUDE 15.7°N AND LONGITUDE 64.7°E, ABOUT 830 KM SOUTHEAST OF MASIRAH (41288, OMAN), 1140 KM EAST OF SALALAH (41316, OMAN) AND 1350 KM EAST OF AL GHAI DAH (41398, YEMEN).

IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS OMAN COAST DURING NEXT 2 DAYS.

LATEST SATELLITE IMAGERY AT 1800 UTC, INDICATED THAT THE INTENSITY OF THE SYSTEM IS CHARACTERISED AS T1.5. ASSOCIATED SCATTERED LOW/MED CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER ARABIAN SEA BETWEEN LATITUDE 10.0N & 23.0N AND LONGITUDE 60.0E & 72.0E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 80-90 DEG CELSIUS. MULTI-SATELLITE BASED WINDS INDICATE STRONGER WINDS IN THE SOUTHWEST AND NORTHWEST SECTOR.

THE ASSOCIATED ESTIMATED CENTRAL PRESSURE IS 1004 HPA WITH MAXIMUM SUSTAINED WIND SPEED ASSOCIATED WITH THE SYSTEM IS 25 KTS GUSTING TO 35 KTS.

WARNINGS:

(I) WIND WARNING:

- SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO PREVAIL OVER CENTRAL PARTS OF ARABIAN SEA TILL 1200 UTC OF 14TH OCTOBER AND DECREASE GRADUALLY THEREAFTER.
- SQUALLY WIND SPEED REACHING 35-45 KMPH GUSTING TO 55 KMPH IS LIKELY TO PREVAIL OVER ADJOINING CENTRAL PARTS OF NORTH ARABIAN SEA TILL 1200 UTC OF 14TH OCTOBER EVENING AND DECREASE GRADUALLY THEREAFTER.
- SQUALLY WEATHER WITH WIND SPEED REACHING 35-45 KMPH GUSTING TO 55 KMPH IS LIKELY TO PREVAIL OVER ADJOINING EASTCENTRAL ARABIAN SEA TILL 1200 UTC OF 14TH EVENING AND IMPROVE GRADUALLY THEREAFTER.
 - SQUALLY WIND SPEED REACHING 35-45 KMPH GUSTING TO 55 KMPH IS LIKELY TO PREVAIL OVER WESTCENTRAL ARABIAN SEA FROM 1800 UTC OF 14TH TILL 0000 UTC OF 16TH AND DECREASE GRADUALLY THEREAFTER.

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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(II) SEA CONDITION:

- ROUGH SEA CONDITIONS IS LIKELY TO PREVAIL OVER CENTRAL PARTS OF ARABIAN SEA TILL 1200 UTC OF 14TH AND IMPROVE THEREAFTER.
- ROUGH SEA CONDITION IS LIKELY OVER ADJOINING EASTCENTRAL ARABIAN SEA TILL 1200 UTC OF 14TH OCTOBER.
- ROUGH SEA CONDITION IS LIKELY TO PREVAIL ONLY OVER WESTCENTRAL ARABIAN SEA FROM 1800 UTC OF 14TH TILL 0000 UTC OF 16TH.

(III) FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT VENTURE INTO

- CENTRAL AND ADJOINING NORTH ARABIAN SEA TILL 1200 UTC of 14TH OCTOBER.
- WESTCENTRAL ARABIAN SEA TILL 0000 UTC OF 16TH OCTOBER.

BAY OF BENGAL:

THE CYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL PERSISTS OVER THE SAME REGION AT 1800 UTC OF 13TH OCTOBER, 2024. UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS LIKELY TO FORM OVER CENTRAL PARTS OF SOUTH BAY OF BENGAL AROUND 14TH OCTOBER. IT IS LIKELY TO BECOME WELL MARKED LOW PRESSURE AREA AND MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU, PUDUCHERRY AND ADJOINING SOUTH ANDHRA PRADESH COASTS DURING SUBSEQUENT 48 HOURS.

A TROUGH RUNS FROM THE ABOVE CYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL TO SOUTH COASTAL ANDHRA PRADESH AND EXTENDS UPTO 7.1 KM ABOVE MEAN SEA LEVEL

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER CENTRAL BAY OF BENGAL, SOUTH BAY OB BENGAL AND ADJOINING EQUATORIAL INDIAN OCEAN (MINIMUM CTT MINUS 75-93 DEG CEL). SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER ANDAMAN SEA GULF OF MARTABAN & TENASSERIM COAST.

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

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24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	LOW	LOW	NIL	NIL	NIL

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

REMARKS:

THE MADDEN-JULIAN OSCILLATION (MJO) IS CURRENTLY IN PHASE 4, WITH AMPLITUDE MORE THAN 1, AND IS EXPECTED TO MOVE ACROSS PHASE 4 DURING NEXT 4 DAYS WITH FURTHER INCREASING AMPLITUDE. THUS, MJO WOULD SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL DURING NEXT 5 DAYS. THE GUIDANCE FROM CICS MODEL INDICATE PRESENCE OF STRONG WESTERLY WINDS (7-9 MPS) OVER SOUTH ARABIAN SEA AND STRONG EASTERLY WINDS (7-9 MPS) OVER CENTRAL ARABIAN SEA ALONGWITH EASTWARD MOVING KELWIN WAVES & MJO AND WESTWARDS MOVING LARGE EQUATORIAL ROSSBY WAVE EXTENDING FROM SOUTH BAY OF BENGAL TO SOUTH ARABIAN SEA DURING NEXT 3 DAYS. THESE FEATURES

SUPPORTED MARGINAL INTENSIFICATION OF THE WELL MARKED LOW PRESSURE AREA OVER ARABIAN SEA INTO A DEPRESSION.

ARABIAN SEA:

THE SEA SURFACE TEMPERATURE (SST) IS 28-30°C OVER EASTCENTRAL AS. AROUND 27°C OVER THE WESTCENTRAL AND SOUTHWEST PARTS OF AS. THE TROPICAL CYCLONE HEAT POTENTIAL IS 60-70KJ/CM² OVER EASTCENTRAL AS AND IT IS LESS THAN 50 KJ/CM² OVER WESTCENTRAL AS & OFF OMAN COAST. TOTAL PRECIPITABLE WATER IMAGERY INDICATE CONTINUOUS WARM MOIST AIR INTRUSION INTO THE CORE. HOWEVER, AS THE SYSTEM ENTERS, WESTCENTRAL AS, COLD DRY AIR INTRUSION WOULD COMMENCE AND TROPICAL CYCLONE HEAT POTENTIAL WOULD ALSO BECOME LESS THAN 50 KJ/CM².

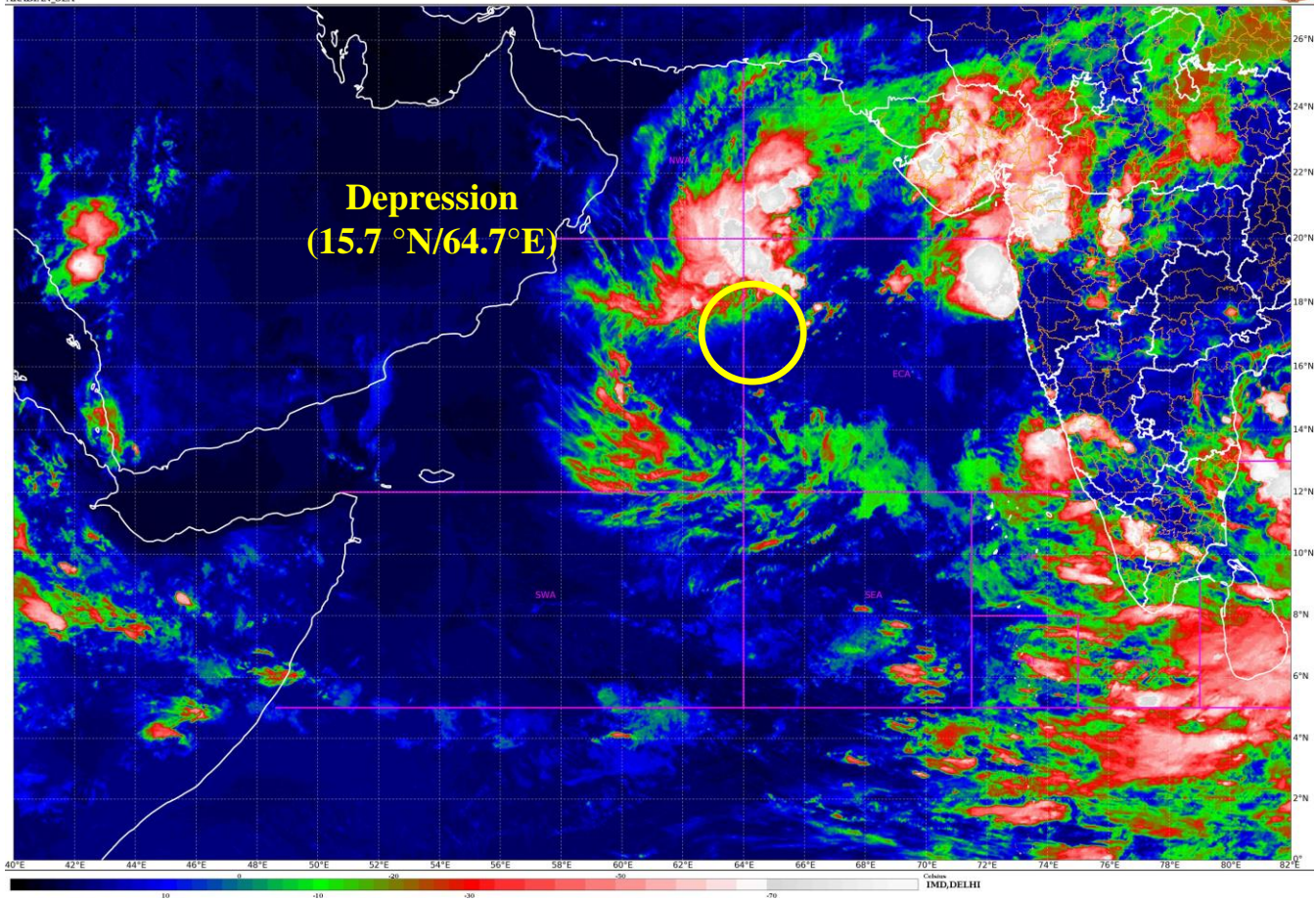
LOW-LEVEL VORTICITY IS AROUND 60-80X10⁻⁵S⁻¹ TO THE SOUTHEAST OF SYSTEM AREA WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW-LEVEL CONVERGENCE IS AROUND 05X10⁻⁵S⁻¹ OVER EASTCENTRAL ARABIAN SEA TO THE EAST OF SYSTEM CENTRE. POSITIVE UPPER-LEVEL DIVERGENCE IS AROUND 20X10⁻⁵ S⁻¹ OVER THE SYSTEM AREA. DEEP LAYER WIND SHEAR (VWS) IS LOW TO MODERATE (05-15 KNOTS) OVER THE SYSTEM AREA . UPPER TROPOSPHERIC RIDGE RUNS ALONG 20°N. THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS UNDER THE INFLUENCE OF EAST-SOUTHEASTERLY WINDS PREVAILING OVER THE SYSTEM AREA. UNDER THESE FAVOURABLE CONDITIONS, THE WELL MARKED LOW PRESSURE AREA INTENSIFIED INTO A DEPRESSION.

VARIOUS MODELS INCLUDING (IMD GFS, NCEP GFS, NCUM AND ECMWF) ARE INDICATING THE SYSTEM TO MAINTAIN ITS INTENSITY AS A DEPRESSION DURING NEXT 24 HOURS AND WEAKEN GRADUALLY THEREAFTER, FROM 15TH OCTOBER ONWARDS. THERE IS A CONSENSUS AMONG VARIOUS MODELS REGARDING THE WEST-NORTHWESTWARDS MOVEMENT OF THE SYSTEM TOWARDS OMAN-YEMEN COASTS. THIS FEATURE IS ALSO SUPPORTED BY LOW SST & LOW TCHP AND HIGH WIND SHEAR OVER WESTCENTRAL ARABIAN SEA AND ALONG & OFF OMAN COAST.

CONSIDERING ALL THE ABOVE, THE DEPRESSION OVER CENTRAL ARABIAN SEA IS LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS OMAN COAST DURING NEXT 2 DAYS.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC BASED ON 0000 UTC OF 14TH OCTOBER, 2024.

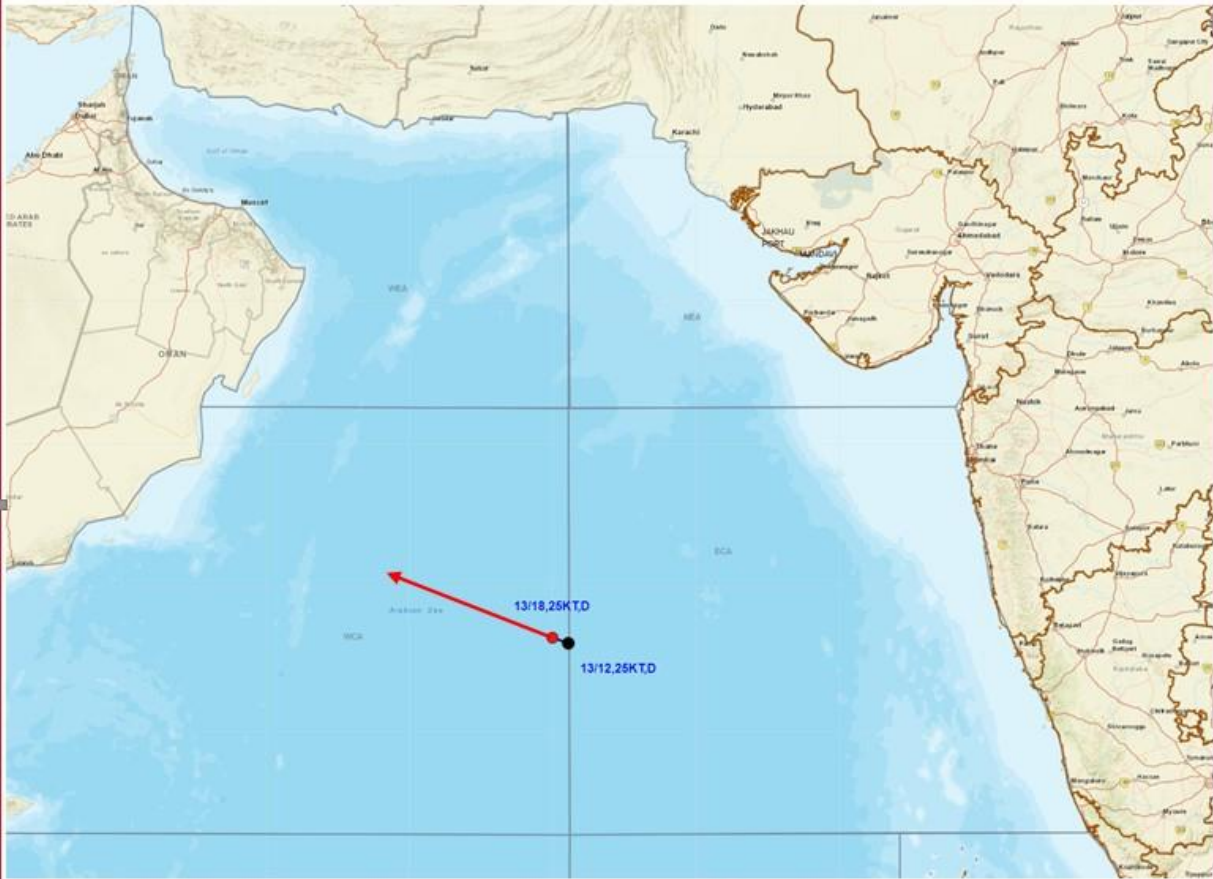
(DR. SHASHI KANT)
SC. D, RSMC, NEW DELHI



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OBSERVED AND FORECAST TRACK OF DEPRESSION OVER CENTRAL ARABIAN SEA BASED ON 1800 UTC OF 13th OCTOBER, 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 (\geq 120 KT)

-  LESS THAN 34 KT
-  34-47 KT
-  \geq 48 KT
-  OBSERVED TRACK
-  FORECAST TRACK
-  CONE OF UNCERTAINTY

Fishermen Warning Graphics

