



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

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 14.12.2022

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 14.12.2022 BASED ON 0300 UTC OF 14.12.2022.

BAY OF BENGAL:

YESTERDAY'S CYCLONIC CIRCULATION OVER SOUTH ANDAMAN SEA AND ADJOINING STRAIT OF MALACCA & SUMATRA PERSISTS. UNDER IT'S INFLUENCE, A LOW PRESSURE AREA IS LIKELY TO FORM OVER SOUTHEAST BAY OF BENGAL AND ADJOINING EQUATORIAL INDIAN OCEAN BY TOMORROW MORNING (0300 UTC). IT IS LIKELY TO MOVE GRADUALLY WESTWARDS TOWARDS SRI LANKA COAST.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST BAY OF BENGAL AND SOUTH ANDAMAN SEA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER SOUTHWEST BAY OF BENGAL AND NORTH ANDAMAN SEA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	NIL	NIL	NIL	NIL

ARABIAN SEA:

WELL MARKED LOW PRESSURE AREA OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA.

YESTERDAY'S LOW PRESSURE AREA OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA OFF NORTH KERALA-KARNATAKA COASTS MOVED NORTHWESTWARDS AND BECAME WELL MARKED LOW PRESSURE AREA OVER THE SAME REGION AT 1200 UTC OF 13TH DECEMBER 2022. IT MOVED FURTHER NORTHWESTWARDS AND LAY AS A WELL MARKED LOW PRESSURE AREA OVER EASTCENTRAL AND SOUTHEAST ARABIAN SEA AT 0300 UTC OF TODAY, THE 14TH DECEMBER 2022.

IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AWAY FROM INDIA COAST AND CONCENTRATE INTO A DEPRESSION OVER EASTCENTRAL ARABIAN SEA BY 15TH DECEMBER MORNING.

ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL ARABIAN SEA ADJOINING SOUTHEAST ARABIAN SEA & LAKHSDWEEP ISLANDS AREA. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG CEL.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 15-20 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1007 HPA. SEA CONDITION IS LIKELY TO BE ROUGH OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
HIGH	HIGH	MOD	MOD	NIL

Remarks:

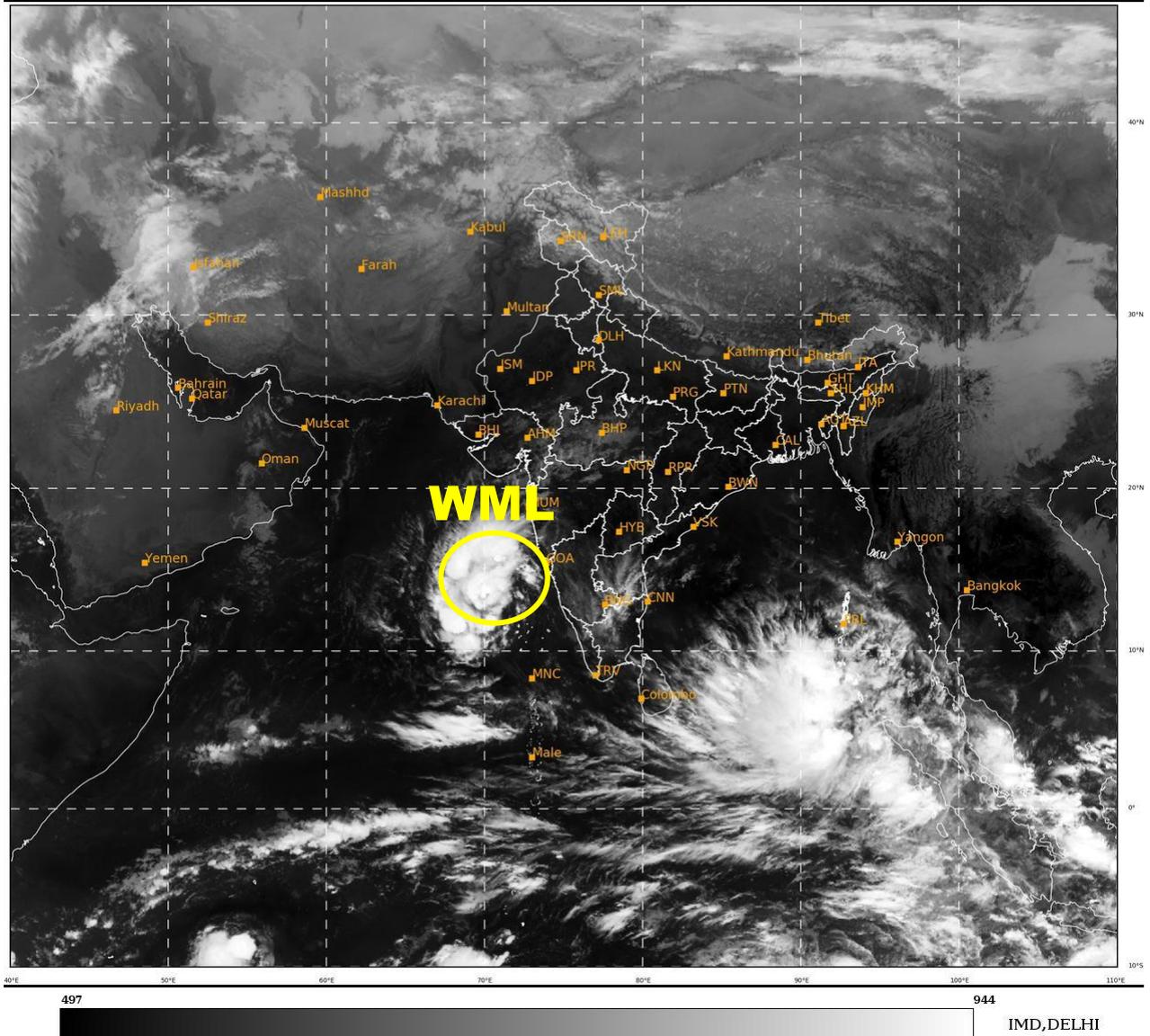
SEA SURFACE TEMPERATURE IS ABOUT 28-29°C OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA BECOMING 27°C TO THE WEST OF 67°E . LOW LEVEL RELATIVE VORTICITY HAS DECREASED DURING PAST 24 HOURS AND IS AROUND $50 \times 10^{-6} \text{ S}^{-1}$ TO THE SOUTH OF SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS SAME ABOUT $05 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT $20 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTH OF THE SYSTEM CENTRE. MODERATE TO HIGH VERTICAL WIND SHEAR OF ABOUT 15-25 KNOTS IS PREVAILING AROUND SYSTEM AREA AND IS INCREASING TOWARDS WEST AND NORTHWEST ARABIAN SEA. LATEST SATELLITE IMAGERY INDICATE THAT THE CLUSTERS HAVE STILL NOT COME CLOSER, HOWEVER, CLOUDS ARE GETTING ORGANISED IN BANDING PATTERN FROM WEST. VISIBLE IMAGERY SHOWS WELL DEFINED LOW LEVEL CYCLONIC CIRCULATION. CLOUD TOP TEMPERATURE IMAGERY IS ALSO INDICATING SEPARATE CLUSTERS. MULTI-SATELLITE WINDS ARE INDICATING STRONGER WINDS IN THE NORTHEAST SECTOR. TOTAL PRECIPITABLE WATER VAPOUR IMAGERY INDICATES WARM MOIST AIR ADVECTION FROM SOUTHERN SECTOR AND DRY COLD WIND INCURSION IS SEEN UPTO SOUTHERN SECTOR IN THE OUTER REGION. DEEP LAYER MEAN WINDS INDICATE THAT THE SYSTEM WOULD MOVE IN WEST-NORTHWESTWARDS DIRECTION WITH A SPEED OF 15-20 KMPH. AS THE CIRCULATION IS EXTENDING UPTO UPPER TROPOSPHERIC LEVELS, THE SYSTEM IS BEING SHEARED BY DEEP LAYER MEAN SHEAR IN THE LAYER EXTENDING BETWEEN LOWER TO UPPER TROPOSPHERIC LEVELS IN WEST-NORTHWESTWARDS DIRECTION WITH AN AVERAGE SPEED OF 15 KMPH. THE SYSTEM IS CURRENTLY MOVING NORTHWESTWARDS UNDER THE INFLUENCE OF SOUTHEASTERLY WINDS PREVAILING IN THE PERIPHERY OF THE RIDGE NEAR 14°N IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE 300 HPA TEMPERATURE ANAMOLY INDICATES WARMING. HOWEVER, WARM ANOMALY HAS DECREASED FROM YESTERDAY. THE GRADIENT WINDS ARE HIGHER IN MIDDLE AND UPPER TROPOSPHERIC LEVEL, UNLIKE HIGHER WINDS IN LOWER TROPOSPHERIC LEVELS YESTERDAY. IT INDICATES THAT THE SYSTEM IS TRANSITIONING FROM TROPICAL ENVIRONMENT TO MID-LATITUDE ENVIRONMENT. THIS OBSERVATION IS SUPPORTED BY THE STRONG MID-LATITUDE WESTERLIES WITH JET STRENGTH WINDS TO THE NORTH OF 17 DEG NORTH. THUS, THESE FEATURES ARE NOT FAVOURABLE FOR INTENSIFICATION OF THE SYSTEM.

ALL THESE FEATURES INDICATE THAT CURRENTLY THE SYSTEM IS IN A MODERATELY FAVOURABLE ENVIRONMENT AND IS LIKELY TO MOVE NORTHWESTWARDS WITH SLIGHT INTENSIFICATION TILL 16TH MORNING.

VARIOUS MODELS INDICATE THAT THE SYSTEM IS LIKELY TO INTENSIFY INTO A DEPRESSION BY 15TH MORNING AND IS LIKELY TO MOVE WEST-NORTHWESTWARDS TILL 17TH/18TH DECEMBER AND MAINTAIN IT'S INTENSITY OF DEPRESSION TILL 16TH DECEMBER AND WEAKEN GRADUALLY THEREAFTER WHILE MOVING OVER COLDER SEA AND REGION OF HIGH VERTICAL WIND SHEAR.

HENCE, EXISTING WELL MARKED LOW PRESSURE AREA OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA IS VERY LIKELY TO MOVE NORTHWESTWARDS AWAY FROM INDIA COAST AND CONCENTRATE INTO A DEPRESSION OVER EASTCENTRAL ARABIAN SEA BY 15TH DECEMBER MORNING (0000 UTC). IT IS LIKELY TO MAINTAIN IT'S INTENSITY OF DEPRESSION TILL 16TH DECEMBER AND WEAKEN GRADUALLY THEREAFTER.

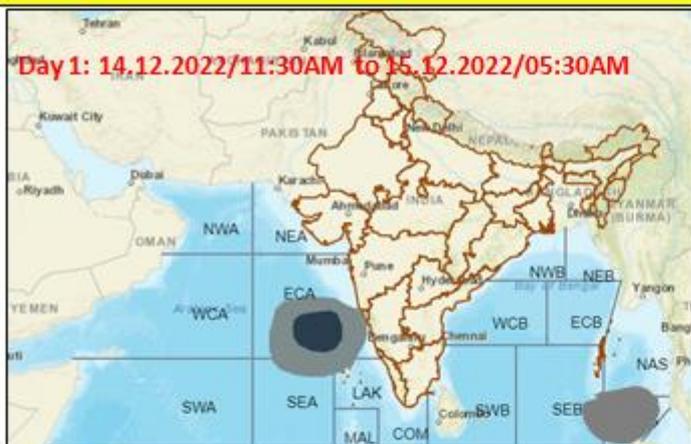
**M. SHARMA
SCIENTIST-D
RSMC NEW DELHI**



WML- WELL MARKED LOW PRESSURE AREA

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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Fishermen warning graphics



	Squally WX with wind speed 35-45 kmph gusting to 55 kmph
	Squally WX with wind speed 45-55 kmph gusting to 65 kmph
	Squally wind speed 45-55 kmph gusting to 65 kmph

Fishermen are advised not to venture into the marked areas.

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Probability of exceedance of maximum sustained winds ≥ 45 kmph



	Probability of exceedance
	Low (1-33%)
	Moderate (34-67%)
	High (68-100%)

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