



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 15.10.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 2100 UTC OF 15.10.2024 BASED ON 1830 UTC OF 15.10.2024.

BAY OF BENGAL:

SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 HOURS IST OF 15TH OCTOBER 2024, THE 15TH OCTOBER 2024 OVER THE SAME REGION NEAR LATITUDE 11.8° N AND LONGITUDE 84.0° E, ABOUT 440 KM EAST-SOUTHEAST OF CHENNAI (43279), 460 KM EAST-SOUTHEAST OF PUDUCHERRY (43331) AND 530 KM EAST-SOUTHEAST OF NELLORE(43245).

IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY AND NELLORE, CLOSE TO CHENNAI DURING 0000 UTC OF 17TH OCTOBER AS A DEPRESSION.

AT 1800 UTC, INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 1.5. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER WESTCENTRAL AND SOUTH BAY OF BENGAL (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 80-93°C).

THE ASSOCIATED ESTIMATED CENTRAL PRESSURE IS 1002 HPA AND MAXIMUM SUSTAINED WIND SPEED WITH THE SYSTEM IS 25 KTS GUSTING TO 35 KTS.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (IST)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
15.10.24/1800	11.8/84.0	35-45 GUSTING TO 55	DEPRESSION
16.10.24/0600	12.5/82.7	40-50 GUSTING TO 60	DEPRESSION
16.09.24/1800	13.0/81.2	40-50 GUSTING TO 60	DEPRESSION
17.09.24/0600	13.4/79.7	40-50 GUSTING TO 60	DEPRESSION
17.09.24/1800	13.8/78.3	30-40 GUSTING TO 50	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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WARNINGS:

(I) RAINFALL WARNING:

TAMIL NADU & PUDUCHERRY: LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY TO VERY HEAVY RAINFALL AT ISOLATED PLACES OVER TAMIL NADU & PUDUCHERRY AND EXTREMELY HEAVY RAINFALL AT ISOLATED PLACES OVER NORTH TAMIL NADU ON 15TH OCTOBER.

LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY TO VERY HEAVY RAINFALL AT A FEW PLACES WITH EXTREMELY HEAVY RAINFALL AT ISOLATED PLACES IS VERY LIKELY OVER NORTH TAMIL NADU & PUDUCHERRY ON 16TH OCTOBER AND ISOLATED HEAVY TO VERY HEAVY RAINFALL OVER NORTH INTERIOR TAMIL NADU ON 17TH OCTOBER.

LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY RAINFALL AT ISOLATED PLACES IS VERY LIKELY OVER SOUTH TAMIL NADU DURING 15TH TO 17TH OCTOBER.

SOUTH ANDHRA PRADESH & RAYALASEEMA LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY TO VERY HEAVY RAINFALL AT ISOLATED PLACES IS VERY LIKELY ON 15TH; HEAVY TO VERY HEAVY RAINFALL AT A FEW PLACES WITH EXTREMELY HEAVY RAINFALL AT ISOLATED PLACES IS LIKELY ON 16TH OCTOBER AND HEAVY RAINFALL AT ISOLATED PLACES IS LIKELY ON 17TH OCTOBER.

KERALA & SOUTH INTERIOR KARNATAKA: LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY TO VERY HEAVY RAINFALL AT ISOLATED PLACES IS LIKELY OVER KERALA AND SOUTH INTERIOR KARNATAKA DURING 15TH TO 17TH OCTOBER.

(II) WIND WARNING:

SQUALLY WEATHER WITH WIND SPEED REACHING 35-45 KMPH GUSTING 55 KMPH IS PREVAILING OVER SOUTHWEST AND ADJOINING SOUTHEAST & WESTCENTRAL BAY OF BENGAL. IT IS LIKELY TO INCREASE BECOMING SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL AND ALONG & OFF TAMIL NADU, PUDUCHERRY AND SOUTH ANDHRA PRADESH COASTS TILL 17TH OCTOBER AND DECREASE GRADUALLY THEREAFTER.

(III) SEA CONDITION:

ROUGH SEA CONDITION IS PREVAILING OVER SOUTHEAST AND ADJOINING SOUTHWEST & WESTCENTRAL BAY OF BENGAL. IT IS LIKELY TO BECOME ROUGH TO VERY ROUGH SEA CONDITION OVER SOUTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL AND ALONG & OFF TAMIL NADU, PUDUCHERRY AND SOUTH ANDHRA PRADESH COASTS TILL 17TH OCTOBER AND IMPROVE GRADUALLY THEREAFTER.

(IV) FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT TO VENTURE INTO

- SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL ON 15TH OCTOBER.
- SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL FROM 15TH TO 17TH OCTOBER.

- FISHERMEN OUT AT SEA ARE ADVISED TO RETURN TO COASTS.

ARABIAN SEA:

(B) DEPRESSION OVER WESTCENTRAL ARABIAN SEA CROSSED OMAN COAST

THE DEPRESSION OVER WESTCENTRAL ARABIAN SEA OFF OMAN COAST MOVED NORTHWESTWARDS WITH A SPEED OF 23 KMPH DURING PAST 6 HOURS, CROSSED OMAN COAST NEAR LATITUDE 19.35°N AND LONGITUDE 57.7°E, CLOSE TO DUQM (41291,OMAN) BETWEEN 1700-1800 UTC AND LAY AS A WELL MARKED LOW PRESSURE AREA OVER COASTAL OMAN AT 1800 UTC OF 15TH OCTOBER, 2024.

IT IS LIKELY TO MOVE NORTHWESTWARDS AND WEAKEN GRADUALLY THEREAFTER OVER OMAN.

THIS IS THE LAST UPDATE ABOUT THE SYSTEM (B). HOWEVER, REGULAR TROPICAL WEATHER OUTLOOK AND BULLETIN WILL CONTINUE FROM THE REGIONAL SPECIALIZED METEOROLOGICAL CENTRE, NEW DELHI, NATIONAL WEATHER FORECASTING CENTRE AND OTHER REGIONAL METEOROLOGICAL CENTRES AND METEOROLOGICAL CENTRES OF IMD FOR RELEVANT INFORMATION ABOUT THE REMNANT OF THE SYSTEM.

WARNINGS:

(I) WIND WARNING:

SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO PREVAIL OVER WESTCENTRAL ARABIAN SEA AND ALONG AND OFF OMAN COAST TILL 0000 UTC OF 16TH OCTOBER AND DECREASE GRADUALLY THEREAFTER.

(II) SEA CONDITION:

ROUGH TO VERY ROUGH SEA CONDITION IS LIKELY TO PREVAIL ONLY OVER WESTCENTRAL ARABIAN SEA AND ALONG & OFF OMAN COAST TILL 0000 UTC OF 16TH OCTOBER AND IMPROVE GRADUALLY THEREAFTER.

(III) FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT VENTURE INTO WESTCENTRAL ARABIAN SEA AND ALONG & OFF OMAN COAST TILL 0000 UTC OF 16TH OCTOBER.

REMARKS:

THE DEPRESSION OVER WEST CENTRAL ARABIAN SEA OFF OMAN COAST MOVED NORTHWESTWARDS WITH A SPEED OF 23 KMPH DURING PAST 6 HOURS, CROSSED OMAN COAST CLOSE TO DUQM (41291,OMAN) BETWEEN 1700-1800 UTC AND LAY AS A WELL MARKED LOW PRESSURE AREA OVER COASTAL OMAN AT 1800 UTC OF 15TH OCTOBER, 2024.

OVER THE BAY OF BENGAL, CICS BASED FORECAST INDICATES STRONG WESTERLY

WINDS (5-7 MPS) OVER SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN AND STRONG EASTERLY WINDS (5-7 MPS) OVER WESTCENTRAL BAY OF BENGAL. MJO& KELWIN WAVES ALONGWITH ROSSBY WAVES ARE ALSO LIKELY OVER THE BAY OF BENGAL DURING NEXT 8-10 DAYS. THESE FEATURES INDICATE HIGHLY FAVOURABLE ENVIRONMENT FOR CYCLOGENESIS (FORMATION OF DEPRESSION) OVER THE BAY OF BENGAL.

BAY OF BENGAL (BOB)

THE SEA SURFACE TEMPERATURE (SST) IS 29-31°C OVER ENTIRE BOB. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) OVER >100 KJ/CM² OVER WESTCENTRAL & ADJOINING SOUTHWEST BOB AND SOUTH ANDAMAN SEA, 80-100 KJ/CM² OVER SOUTHEAST BOB. A ZONE OF POSITIVE CYCLONIC VORTICITY OF $50 \times 10^{-5} \text{ S}^{-1}$ IS SEEN OVER SOUTHWEST BOB. POSITIVE LOW-LEVEL CONVERGENCE $10 \times 10^{-5} \text{ S}^{-1}$ IS SEEN OVER SOUTHWEST BOB AND WESTCENTRAL BOB. POSITIVE UPPER-LEVEL DIVERGENCE IS AROUND $10-20 \times 10^{-5} \text{ S}^{-1}$ OVER SOUTHWEST BOB & ADJOINING EASTCENTRAL ARABIAN. VERTICAL WIND SHEAR (VWS) IS LOW (5-10 KNOTS) OVER CENTRAL AND ADJOINING AREAS OF SOUTH BAY OF BENGAL (OVER THE SYSTEM AREA). UPPER TROPOSPHERIC RIDGE RUNS ALONG 20°N. THE EAST-SOUTHEASTERLY WINDS PREVAILING OVER SOUTH BAY OF BENGAL ARE INDICATING WEST-NORTHWESTWARDS MOVEMENT OF SYSTEM. MULTI-SATELLITE WINDS INDICATE STRONGER WINDS IN THE NORTHERN AND SOUTHWEST SECTOR. CURRENT ENVIRONMENTAL FEATURES ARE SUPPORTIVE FOR CYCLOGENESIS (FORMATION OF DEPRESSION) OVER SOUTHWEST BAY OF BENGAL.

IMD GFS INDICATES A LOW PRESSURE OVER SOUTH BOB AT 15/00. TODAY THE FORECAST HAS CHANGED AND IT IS THE SYSTEM TO INTENSIFY INTO A DEPRESSION BY 16/00 AND REACH CHENNAI COAST ON 17/00 UTC. IT IS FURTHER INDICATING EMERGENCE OF SYSTEM INTO EASTCENTRAL AS ON 19TH OCT AND INDICATING THE SYSTEM TO MOVE WEST-NORTHWESTWARDS WITHOUT ANY SIGNIFICANT INTENSIFICATION TILL 22ND OCTOBER. NCUM GROUP OF MODELS ARE NOT INDICATING ANY SIGNIFICANT INTENSIFICATION OF SYSTEM. HOWEVER, THIS GROUP IS ALSO INDICATING MOVEMENT TOWARDS NORTH TAMIL NADU COAST AND EMERGENCE OF THE CYCLONIC CIRCULATION/LOW PRESSURE AREA INTO EASTCENTRAL AS ON 18TH.

ECMWF IS INDICATING A LOW PRESSURE AREA ON 15TH 0000 UTC AND INDICATING FURTHER INTENSIFICATION INTO A WELL MARKED LOW PRESSURE AREA/DEPRESSION ON 16TH OCTOBER. THE MODEL IS INDICATING THE WELL MARKED LOW PRESSURE TO MOVE WEST-NORTHWESTWARDS AND TO CROSS NORTH TAMILNADU-SOUTH ANDHRA PRADESH COAST NEAR 13.1/80.4 ON 17/09 UTC AS A WELL MARKED LOW PRESSURE AREA. IT IS ALSO INDICATING EMERGENCE INTO EASTCENTRAL ARABIAN SEA AROUND 19TH OCTOBER AND AND THEN WEST-NORTHWESTWARDS MOVEMENT TOWARDS OMAN COAST WITHOUT SIGNIFICANT INTENSIFICATION. IMD MULTI MODEL ENSEMBLE IS INDICATING NEARLY NORTHWESTWARDS MOVEMENT OF THE SYSTEM TOWARDS CHENNAI AND CROSSING AROUND 17/14 UTC NEAR 12.7/80.2.

CONSIDERING VARIOUS ENVIRONMENTAL FEATURES AND MODEL GUIDANCE, IT IS INFERRED THAT;

- (i) THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED NORTHWESTWARDS

WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 HOURS IST OF 15TH OCTOBER 2024, THE 15TH OCTOBER 2024 OVER THE SAME REGION

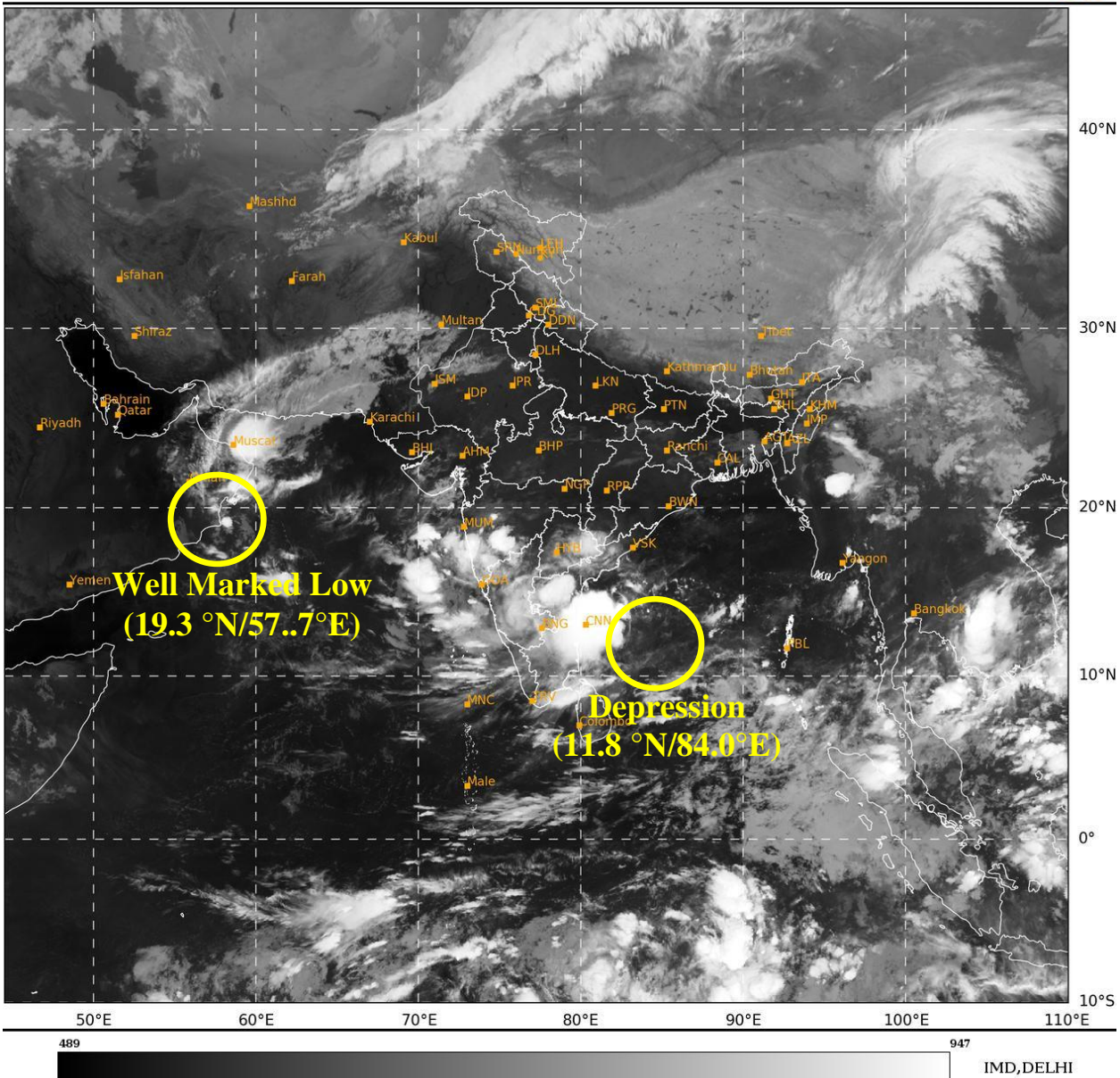
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(ii) THE DEPRESSION OVER WESTCENTRAL ARABIAN SEA OFF OMAN COAST MOVED NORTHWESTWARDS WITH A SPEED OF 23 KMPH DURING PAST 6 HOURS, CROSSED OMAN COAST CLOSE TO DUQM (41291,OMAN) BETWEEN 1700-1800 UTC AND LAY AS A WELL MARKED LOW PRESSURE AREA OVER COASTAL OMAN AT 1800 UTC OF 15TH OCTOBER, 2024.

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THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC BASED ON 0000 UTC OF 16TH OCTOBER, 2024.

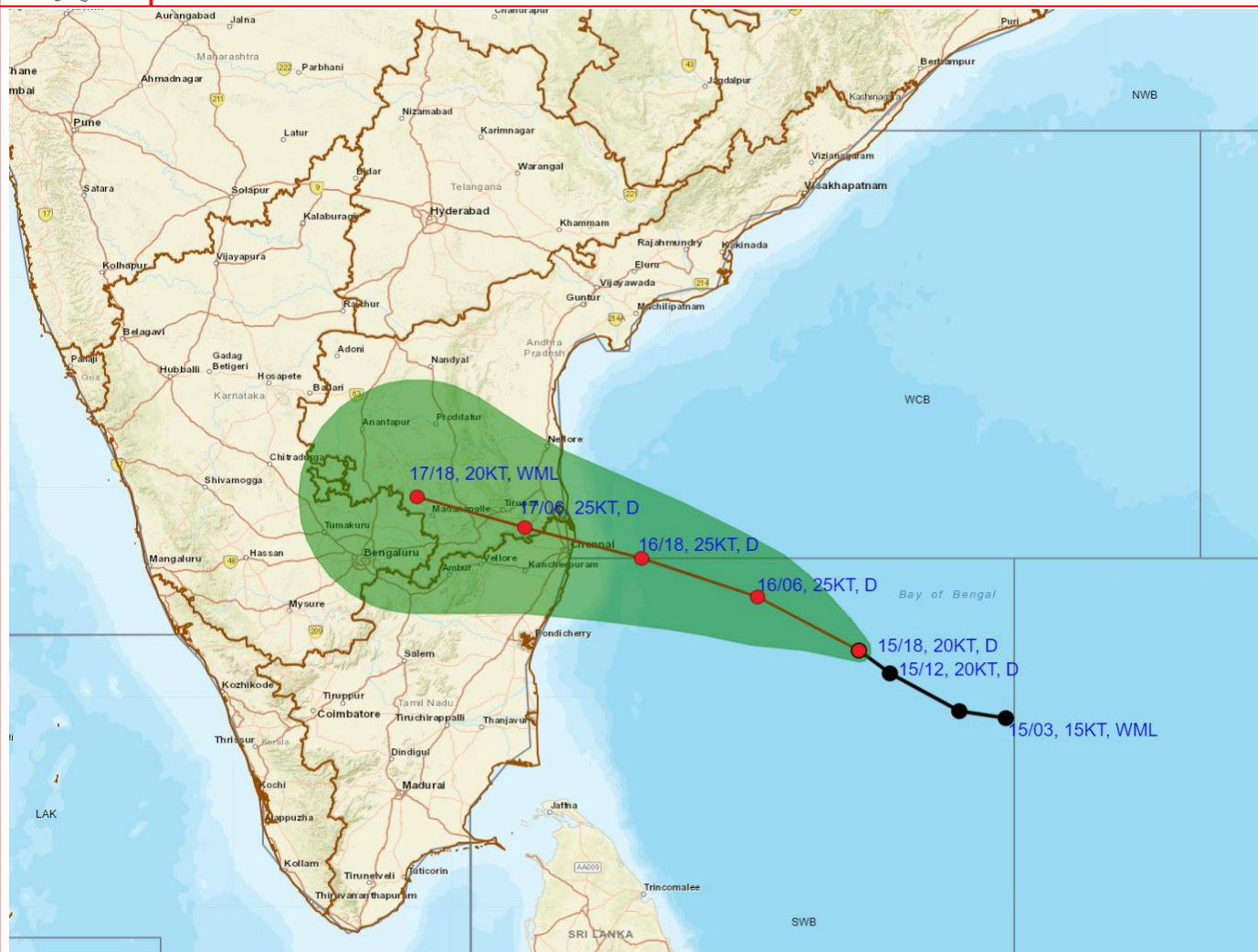
(TRISANU BANIK)
SC. D, RSMC, NEW DELHI



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
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DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 1800 UTC (2330 Hrs. IST) OF 15th OCTOBER, 2024



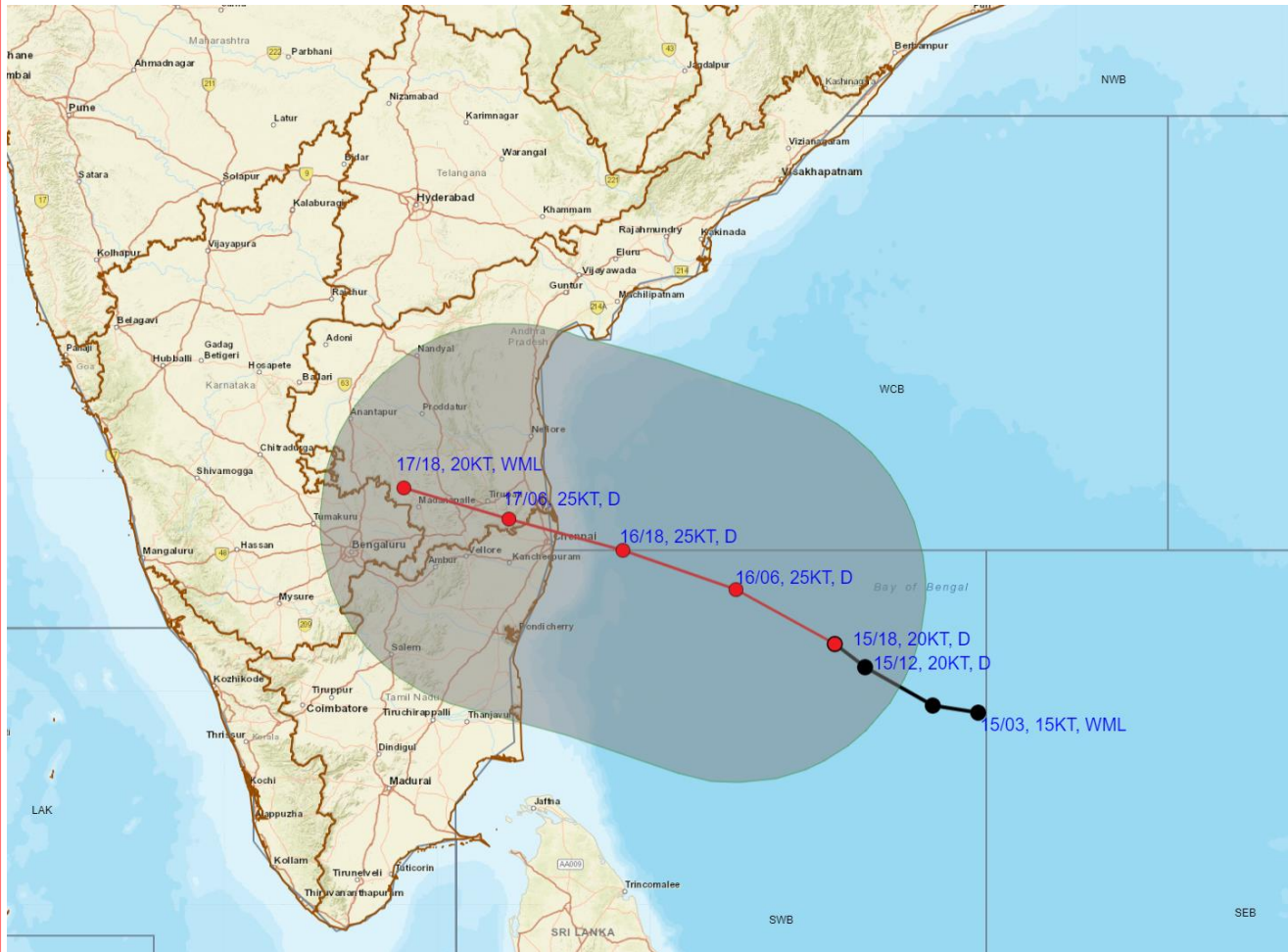
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 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

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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 1800 UTC (2330 Hrs. IST) OF 15th OCTOBER, 2024



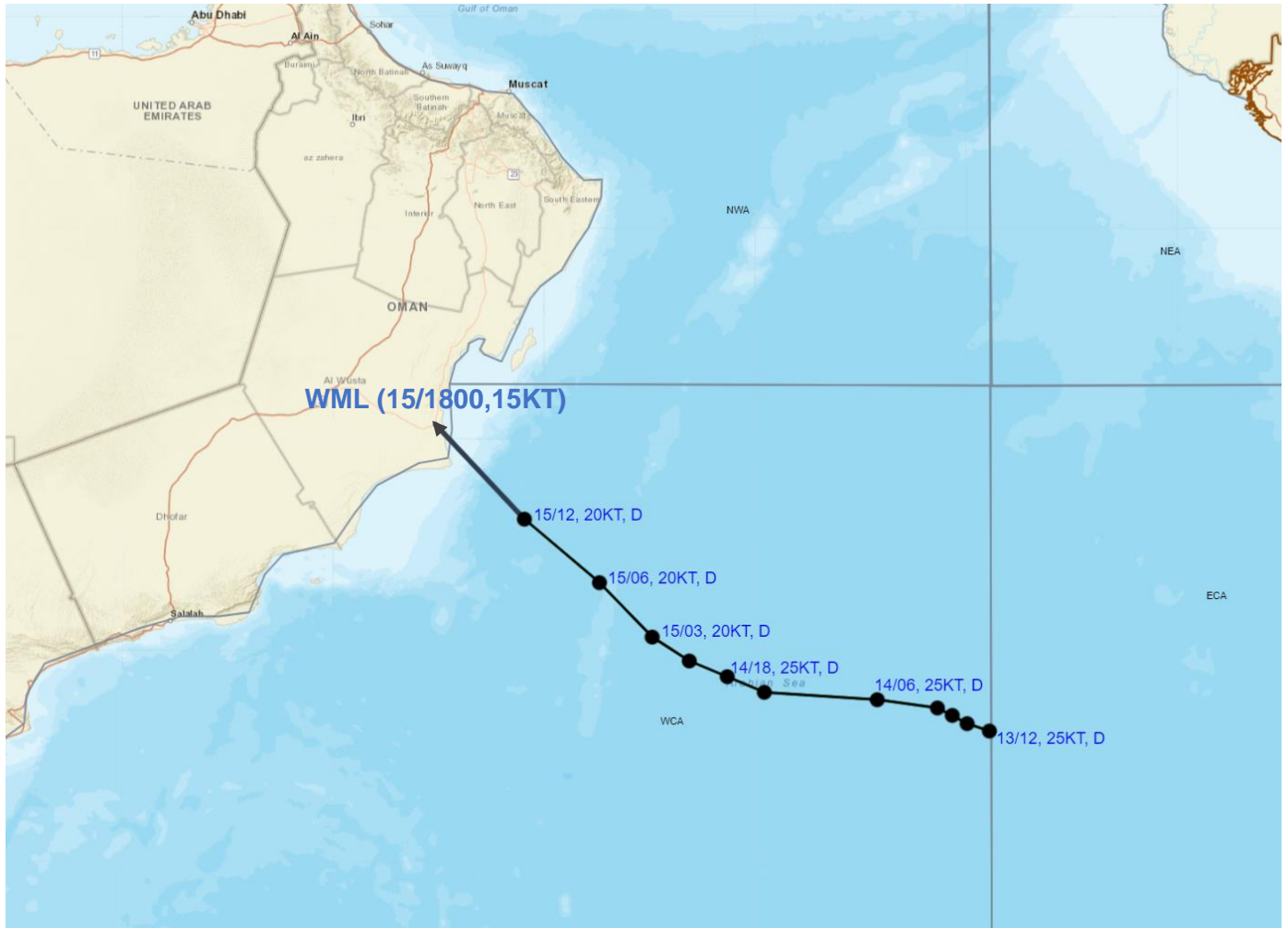
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)

● LESS THAN 34 KT
 ◐ 34-47 KT
 ◑ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ◑ CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ◑ 20-30 KT (35-55 KMPH)

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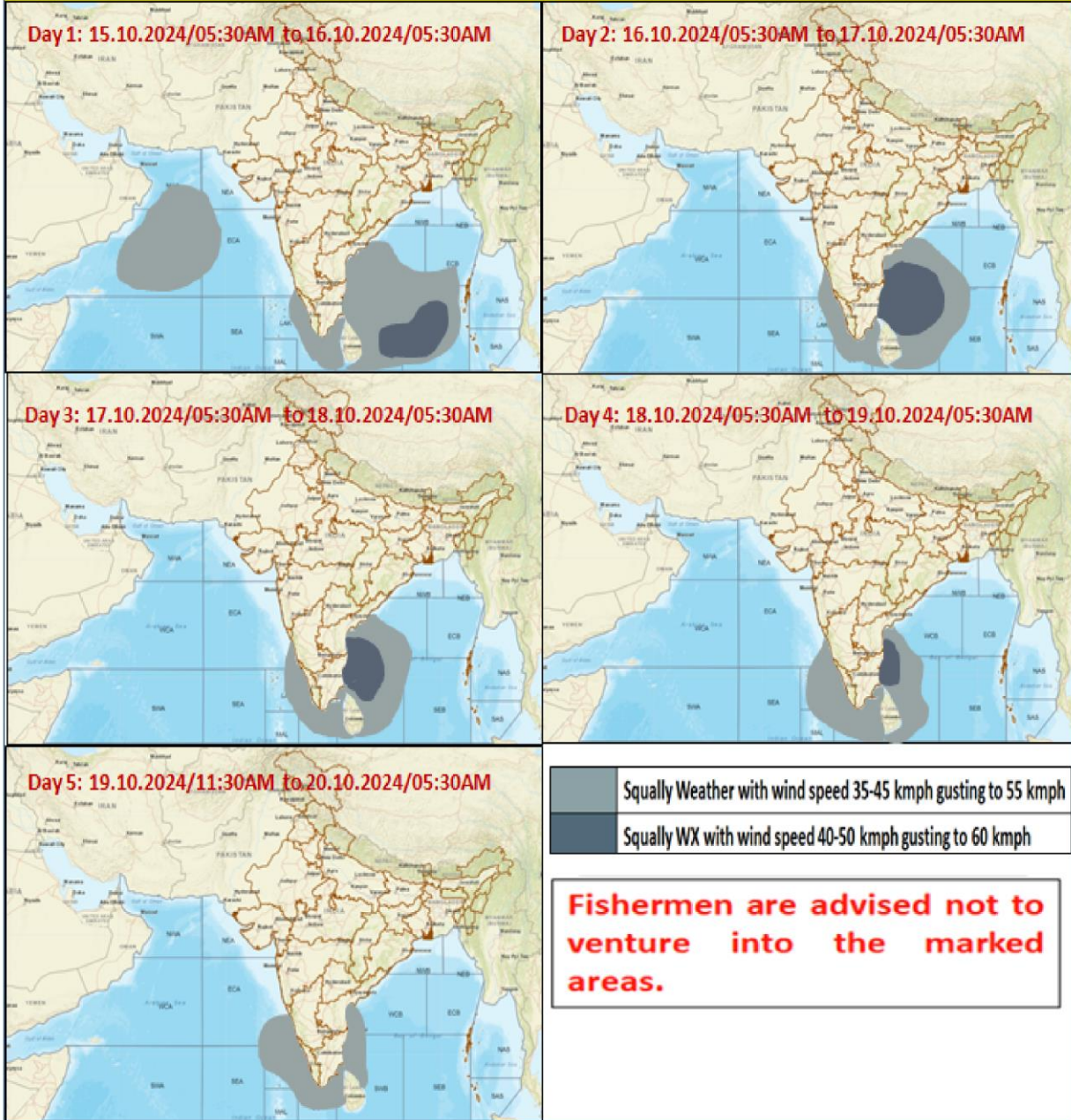
OBSERVED TRACK OF DEPRESSION OVER ARABIAN SEA DURING 13TH TO 15TH OCTOBER, 2024



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 (≥ 120 KT)

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

Fishermen Warning Graphics



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