



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 25.09.2021

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 25.09.2021 BASED ON 0000 UTC OF 25.09.2021.

SUB: DEPRESSION OVER NORTHEAST & ADJOINING EASTCENTRAL BAY OF BENGAL

THE DEPRESSION OVER NORTHEAST AND ADJOINING EASTCENTRAL BAY OF BENGAL MOVED WESTWARDS WITH A SPEED OF 12 KMPH IN LAST 6 HOURS, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTERED AT 0000 UTC OF 25TH SEPTEMBER 2021, OVER NORTH AND ADJOINING EASTCENTRAL BAY OF BENGAL NEAR LAT. 18.4°N AND LONG. 89.7°E, ABOUT 510 KM EAST-SOUTHEAST OF GOPALPUR (43049) & 590 KM EAST-NORTHEAST OF KALINGAPATNAM (43105).

IT IS LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 12 HOURS. IT IS LIKELY TO MOVE NEARLY WESTWARDS AND CROSS NORTH ANDHRA PRADESH - SOUTH ODISHA COASTS BETWEEN VISHAKHAPATNAM (43149) & GOPALPUR (43049) AROUND KALINGAPATNAM (43105) BY EVENING OF 26TH SEPTEMBER, 2021.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
25.09.21/0530	18.4/89.7	50-60 GUSTING TO 70	DEEP DEPRESSION
25.09.21/1730	18.5/87.8	60-70 GUSTING TO 80	CYCLONIC STORM
26.09.21/0530	18.5/85.8	70-80 GUSTING TO 90	CYCLONIC STORM
26.09.21/1730	18.4/84.1	70-80 GUSTING TO 90	CYCLONIC STORM
27.09.21/0530	18.6/82.3	50-60 GUSTING TO 70	DEEP DEPRESSION
27.09.21/1730	19.0/80.7	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

AS PER INSAT-3D IMAGERY AT 0000 UTC, ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93°C. INTENSITY OF THE SYSTEM IS CATEGORISED AS T 2.0. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH AND ADJOINING CENTRAL BAY OF BENGAL .

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH OVER NORTH & ADJOINING CENTRAL BOB. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A BUOY LOCATED NEAR LAT 17.3 DEG N/LONG 89.0 DEG E OBSERVED MSLP OF 1003.2 HPA AND WINDS OF 300 DEG/17.5 KTS ANOTHER BUOY NEAR LAT 17.7DEG N/LONG 89.1 DEG E OBSERVED MSLP OF 1002.5 HPA.

THE FAVOURABLE CONDITIONS LIKE SEA SURFACE TEMPERATURE (SST) OF ABOUT 28-29°C OVER CENTRAL & ADJOINING NORTH BAY OF BENGAL (BOB), TROPICAL CYCLONE HEAT POTENTIAL (TCHP) OF ABOUT 80-100 KJ/CM² OVER THE SAME AREA, FAVOURABLE PHASE OF MADDEN JULIAN OSCILLATION (MJO) INDEX LYING IN PHASE 4 WITH AMPLITUDE CLOSE TO 1, HIGH POSITIVE VORTICITY, LOW VERTICAL WIND SHEAR AND FAVOURABLE UPPER LEVEL DIVERGENCE WILL SUPPORT SYSTEM TO INTENSIFY FURTHER. A ZONE OF POSITIVE LOW LEVEL VORTICITY ($100 \times 10^{-6} \text{S}^{-1}$) AROUND THE SYSTEM CENTRE. THE POSITIVE VORTICITY ZONE IS EXTENDING UPTO 500 HPA LEVEL. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF $20 \times 10^{-5} \text{S}^{-1}$ IS SEEN AROUND THE SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE OF $20 \times 10^{-5} \text{S}^{-1}$ IS ALSO SEEN AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR (VWS) IS ABOUT (05-10 KTS) OVER NORTH AND ADJOINING CENTRAL BOB . UNDER THESE ENVIRONMENTAL CONDITIONS, THE SYSTEM IS LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 12 HOURS.

THE SUB-TROPICAL RIDGE IS SEEN ALONG LAT. 20.5 DEG. N. EASTERLY TO EAST-SOUTHEASTERLY WINDS TO THE SOUTH OF THE RIDGE, WOULD STEER THE SYSTEM, NEARLY WESTWARDS DURING NEXT 24 HOURS. NUMERICAL MODEL GUIDANCE IS DIVERGING IN TERMS OF THE INTENSITY AS WELL AS FURTHER INTENSIFICATION OF THE SYSTEM.

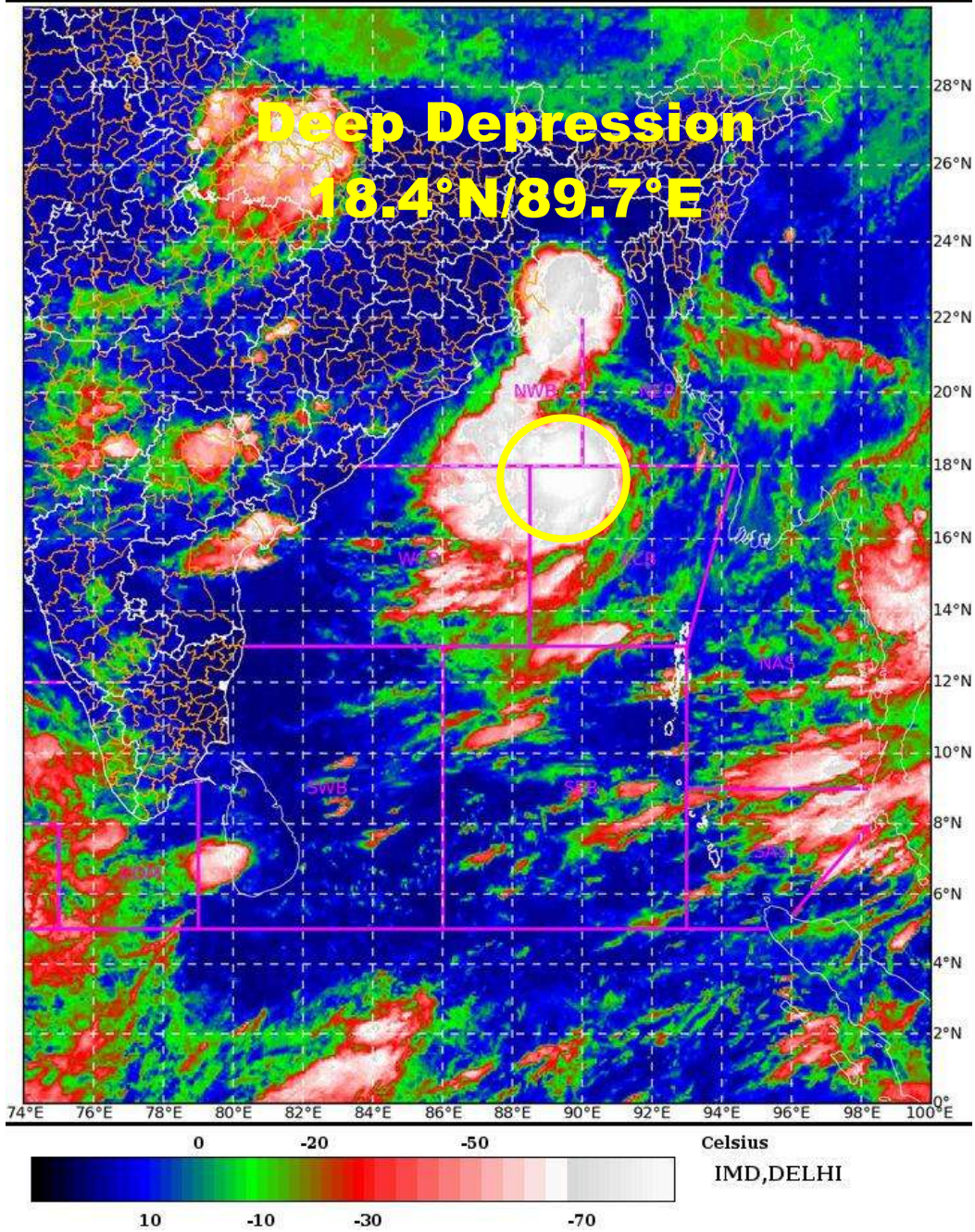
THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 25TH SEPTEMBER, 2021.

(ANANDA KUMAR DAS)
SCIENTIST-E, RSMC, NEW DELHI

SAT : INSAT-3D IMG 25-09-2021/(0200 to 0226) GMT

IMG_TIR1_TEMP 10.8 um 25-09-2021/(0730 to 0756) IST

L1C Mercator



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%
This is a guidance Bulletin for the WMO/ESCAP Panel Member countries., Please visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER NORTH AND ADJOINING CENTRAL BAY OF BENGAL BASED ON 0000 UTC OF 25TH SEPTEMBER, 2021



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 (≥ 20 KT)

● LESS THAN 34 KT

☪ 34-47 KT

☪ ≥ 48 KT

— OBSERVED TRACK

— FORECAST TRACK

▲ CONE OF UNCERTAINTY



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER NORTH AND ADJOINING CENTRAL BAY OF BENGAL BASED ON 0000 UTC OF 25TH SEPTEMBER, 2021



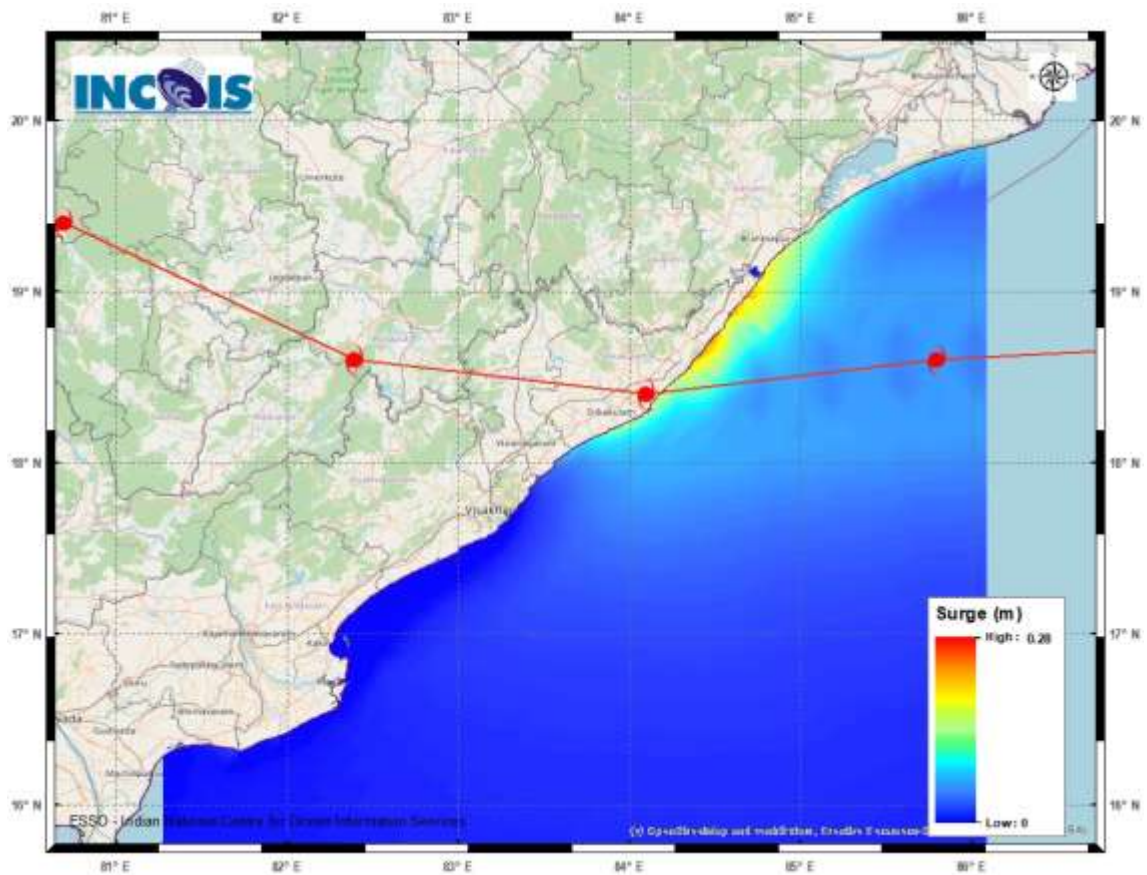
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
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D: DEPRESSION (17-27 KT)
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CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: 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
AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%
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STORM SURGE GRAPHIC FROM INCOIS FOR THE CURRENT DEPRESSION (BOB/04/2021)

PEAK STORM SURGE OF 0.27M OVER AND ABOVE THE ASTRONOMICAL TIDE NEAR TEKKALI, SRIKAKULAM, ANDHRA PRADESH.