



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

**DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 04.12.2021**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 04.12.2021 BASED ON 1200 UTC OF 04.12.2021.**

**SUB: CYCLONIC STORM 'JAWAD' WEAKENED INTO A DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL**

THE **CYCLONIC STORM 'JAWAD'** (PRONOUNCED AS JOWAD) OVER WESTCENTRAL BAY OF BENGAL MOVED NORTHWARDS WITH A SPEED OF 9 KMPH DURING PAST 06 HOURS, WEAKENED INTO A **DEEP DEPRESSION** AND LAY CENTERED AT 1730 HRS IST OF TODAY, THE 04<sup>TH</sup> DECEMBER 2021, OVER WESTCENTRAL BAY OF BENGAL NEAR LAT. 16.9°N AND LONG. 84.8°E, ABOUT 180 KM EAST-SOUTHEAST OF VISHAKHAPATNAM (ANDHRA PRADESH), 260 KM SOUTH OF GOPALPUR (ODISHA), 330 KM SOUTH-SOUTHWEST OF PURI (ODISHA) AND 420 KM SOUTH-SOUTHWEST OF PARADIP (ODISHA).

IT IS LIKELY TO MOVE NORTH-NORTHEAST WARDS AND **WEAKEN FURTHER INTO A DEPRESSION** BY TOMORROW MORNING. IT IS LIKELY TO REACH ODISHA COAST NEAR PURI AROUND 0600 UTC OF 5<sup>TH</sup> DECEMBER. SUBSEQUENTLY, IT IS LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS ALONG ODISHA COAST TOWARDS WEST BENGAL COAST AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA DURING SUBSEQUENT 24 HOURS.

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
04.12.21/1200	16.9/84.8	55-65 GUSTING TO 75	DEEP DEPRESSION
04.12.21/1800	17.8/85.0	50-60 GUSTING TO 70	DEEP DEPRESSION
05.12.21/0000	18.5/85.4	45-55 GUSTING TO 65	DEEP DEPRESSION
05.12.21/0600	19.4/86.0	40-50 GUSTING TO 60	DEEP DEPRESSION
05.12.21/1200	20.1/86.7	35-45 GUSTING TO 55	DEPRESSION

AS PER SATELLITE IMAGERY BASED ON 1200 UTC OF 4<sup>TH</sup> DEC, THE INTENSITY OF THE SYSTEM IS CHARACTERIZED AS T2.0 ASSOCIATED CLOUD MASS WITH EMBEDDED MODERATE TO INTENSE CONVECTION ARE SEEN OVER NORTH COASTAL ANDHRA PRADESH AND ADJOINING SOUTH ODIDHA, AND MODERATE TO INTENSE CONVECTION OVER JHARKHAND, GANGETIC WEST BENGAL AND SOUTHEAST BIHAR. ASSOAITED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER WEST CENTRAL AND NORTH BAY OF BENGAL BETWEEN LATITUDE 15.5°N & 22.0°N AND LONGITUDE 82.5°E & 92.0°E. THE MAXIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA. SEA CONDITION IS HIGH OVER

WESTCENTRAL BAY OF BENGAL AROUND THE SYSTEM CENTRE.

AT 1200 UTC, A SHIP NEAR 17.4°N/88.9°E REPORTED MAXIMUM SUSTAINED WIND SPEED (MSW) OF 140°/22KTS AND MEAN SEA LEVEL PRESSURE (MSLP) OF 1011 HPA.

**REMARKS:**

THE SEA SURFACE TEMPERATURE IS 28-29°C OVER WESTCENTRAL BOB AND ABOUT 27-28°C TOWARDS NORTHWEST BOB ALONG THE TRACK. TROPICAL CYCLONE HEAT POTENTIAL IS 80-100 KJ/CM<sup>2</sup> OVER WESTCENTRAL BOB AND IS GRADUALLY DECREASING TOWARDS COAST AND OVER EXTREME NORTHWEST BOB BECOMING 50-60 KJ/CM<sup>2</sup>. DEPTH OF 26°C ISOTHERM IS 100-120 M OVER WESTCENTRAL & ADJOINING NORTHWEST BOB. THE MADDEN JULIAN OSCILLATION INDEX IS CURRENTLY IN PHASE 6 WITH AMPLITUDE MORE THAN 1 AND WILL NOT SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE BAY OF BENGAL REGION.

MOST OF THE NUMERICAL MODELS ARE INDICATING WEAKENING OF SYSTEM WITH NORTH-NORTHEASTWARDS MOVEMENT OFF ODISHA COAST DURING 5<sup>TH</sup>/0000 UTC TO 6<sup>TH</sup> /0000 UTC. MODELS ARE ALSO INDICATING THE SYSTEM TO REACH CLOSE TO WEST BENGAL –BANGLADESH COAST AS A LOW PRESSURE AREA THEREAFTER.

WIND SHEAR IS MODERATE AND IS ABOUT 10-15 KNOTS OVER THE SYSTEM AREA. IT IS BECOMING HIGH (20-30 KNOTS) OVER NORTHWEST BOB. POSITIVE LOW LEVEL VORTICITY IS ABOUT  $100 \times 10^{-6} \text{S}^{-1}$  AROUND THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS  $20 \times 10^{-6} \text{S}^{-1}$  TO THE NORTH-NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS  $10 \times 10^{-5} \text{S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 18°N. THE SYSTEM WILL START RE-CURVING NORTH-NORTHEASTWARDS ALONG ODISHA COAST AS IT IS LYING CLOSE TO THE WESTERN PERIPHERY OF ANTICYCLONE OVER MYANMAR REGION.

THE SYSTEM MOVED NEARLY NORTHWARDS AND WEAKENED INTO A DEEP DEPRESSION DUE TO ENHANCED VERTICAL WIND SHEAR, LAND INTERACTION AND DECREASING OCEAN THERMAL ENERGY. IT WILL CONTINUE TO MOVE NORTH-NORTHEASTWARDS REACH NEAR PURI AROUND 0600 UTC OF 5TH DECEMBER AND SUBSEQUENTLY MOVE NORTH-NORTHEASTWARDS ALONG ODISHA COAST TOWARDS WEST BENGAL COAST AND WEKEN FURTHER INTO A DEPRESSION DUE TO ADVERSE ENVIRONMENTAL FACTORS AND LOW TROPICAL CYCLONE HEAT POTENTIAL.

NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 4<sup>th</sup> DECEMBER 2021.

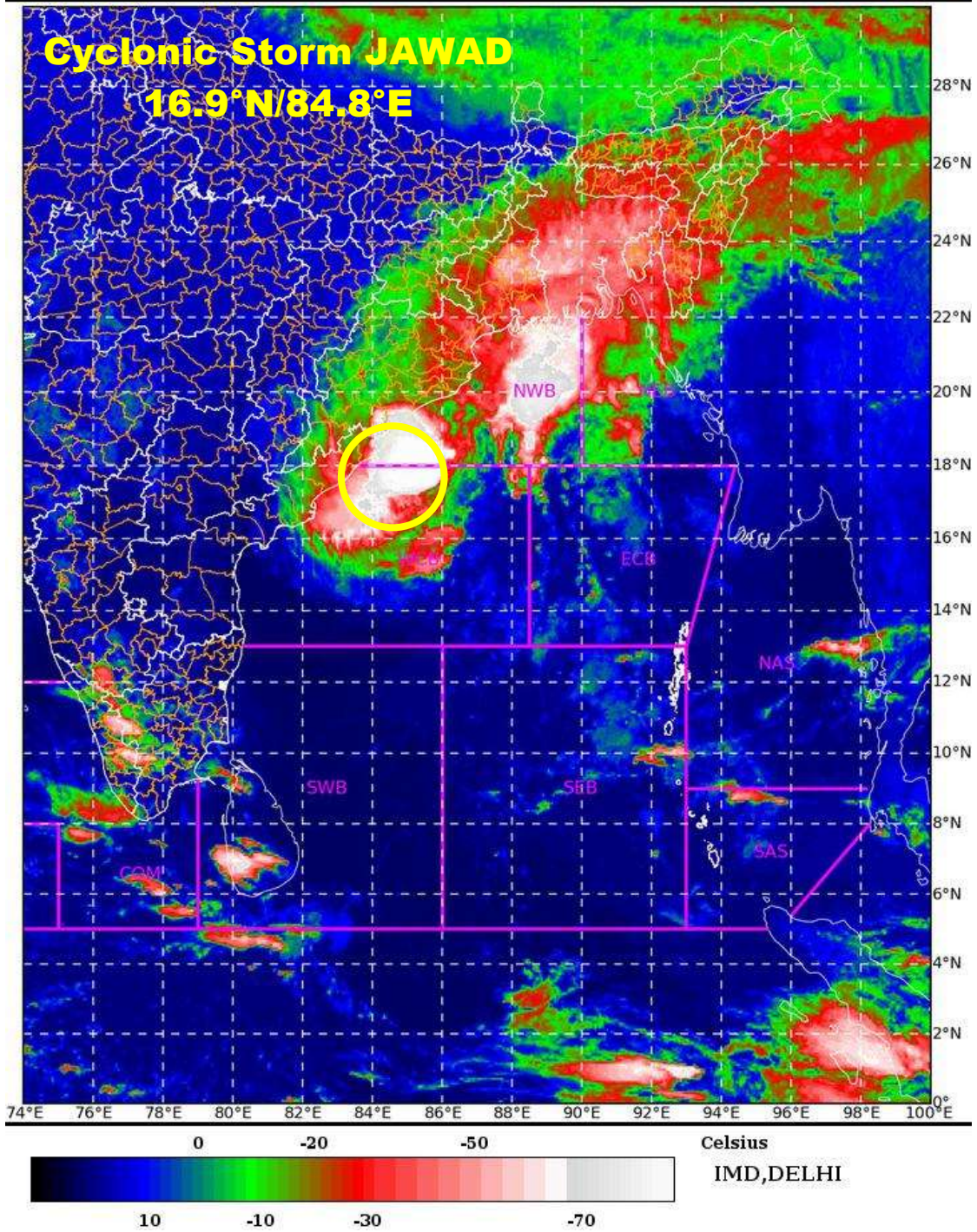
**(SUNITHA DEVI S)**  
**Scientist-F, RSMC, New Delhi**

SAT : INSAT-3D IMG 04-12-2021/(1200 to 1226) GMT

IMG\_TIR1\_TEMP 10.8 um 04-12-2021/(1730 to 1756) IST

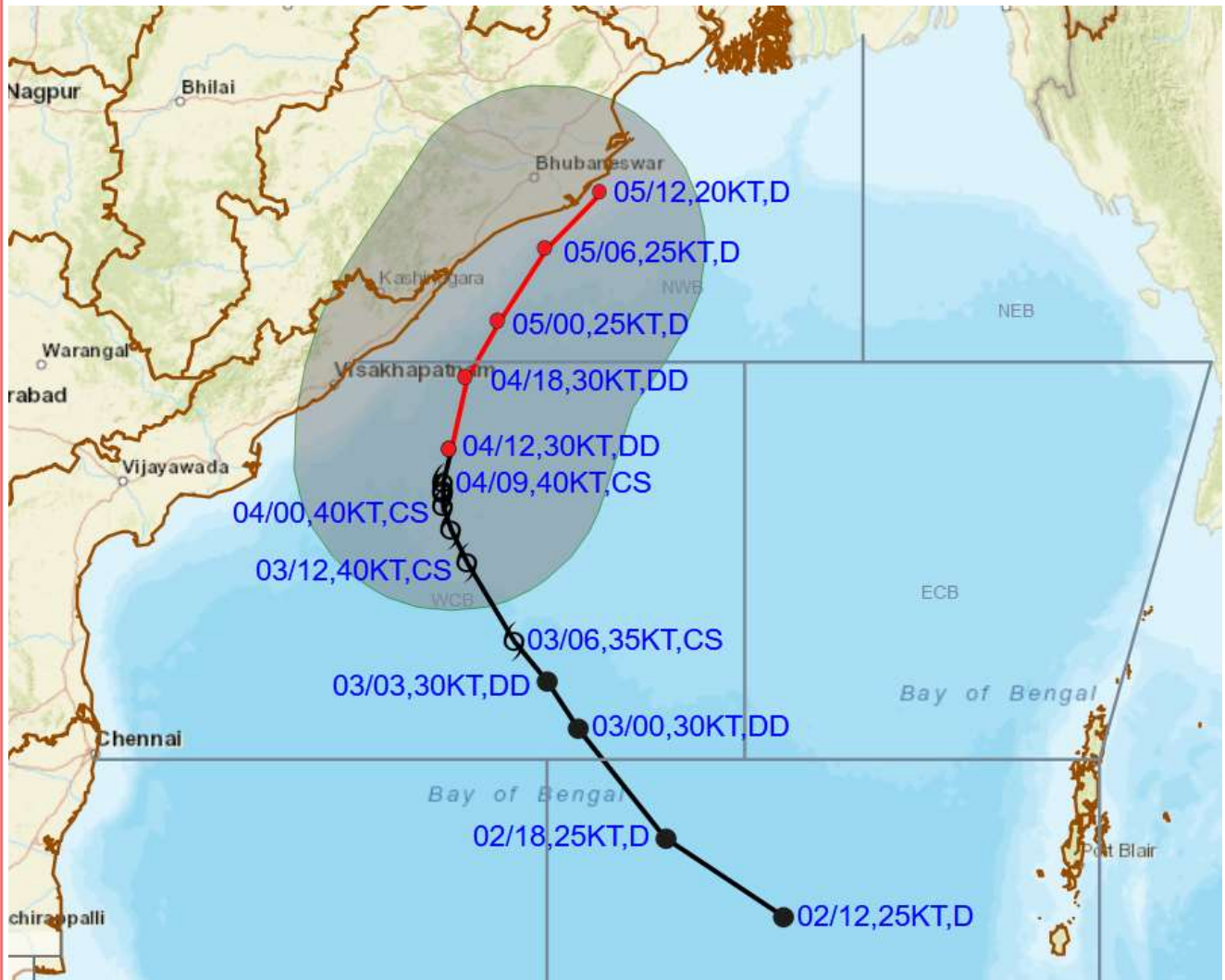


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## OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION (REMANANT OF CYCLONIC STORM 'JAWAD') OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 4<sup>th</sup> DECEMBER, 2021



**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 (≥ 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)

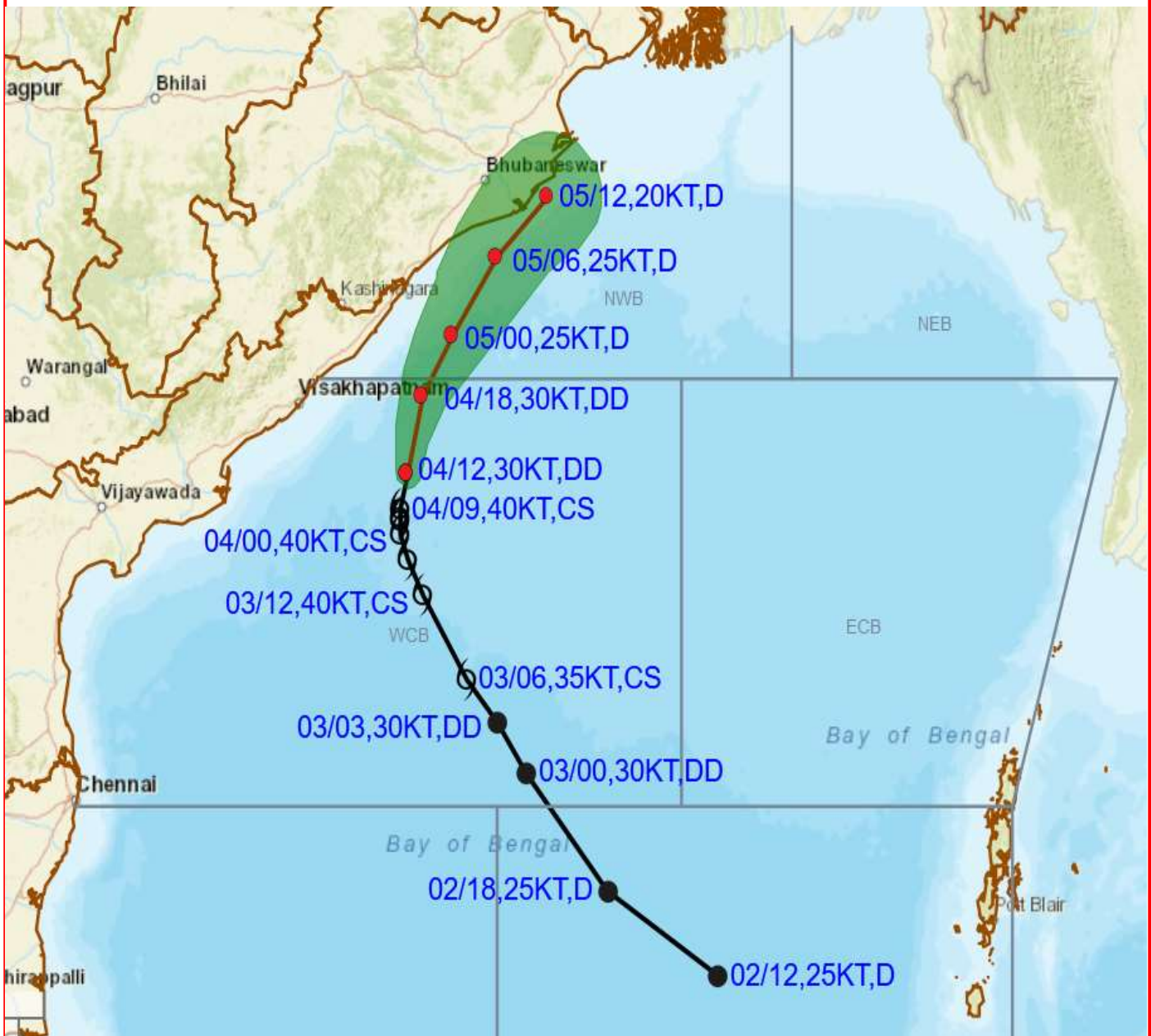
■ ≥ 64 KT (≥118 KMPH)

**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



**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION (REMANANT OF CYCLONIC STORM 'JAWAD') OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 4<sup>th</sup> DECEMBER, 2021**



<p>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 (<math>\geq</math> 120 KT)</p>	<p>● LESS THAN 34 KT          Ⓞ 34-47 KT          Ⓢ <math>\geq</math> 48 KT          — OBSERVED TRACK          — FORECAST TRACK          ▲ CONE OF UNCERTAINTY</p>
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