



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

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)**

TROPICAL CYCLONE ADVISORY NO. 2 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1030 UTC OF 03.12.2021 BASED ON 0900 UTC OF 03.12.2021

SUB: CYCLONIC STORM 'JAWAD' OVER WESTCENTRAL BAY OF BENGAL

THE **CYCLONIC STORM 'JAWAD'** (PRONOUNCED AS JOWAD) OVER WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 22 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0900 UTC OF TODAY, THE 3RD DECEMBER 2021, OVER WESTCENTRAL OF BENGAL NEAR LAT. 15.0°N AND LONG. 85.3°E, ABOUT 360 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43149), 470 KM SOUTH-SOUTHEAST OF GOPALPUR (42049), 600 KM SOUTH-SOUTHWEST OF PARADIP (42976) AND 530 KM SOUTH-SOUTHWEST OF PURI (42053).

IT IS LIKELY TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER AND REACH WEST-CENTRAL BAY OF BENGAL OFF NORTH ANDHRA PRADESH – SOUTH ODISHA COASTS BY TOMORROW, THE 4TH DECEMBER MORNING. THEREAFTER IT IS LIKELY TO RECURVE NORTH-NORTHEASTWARDS AND MOVE ALONG ODISHA COAST REACHING NEAR PURI AROUND 5TH DECEMBER NOON. SUBSEQUENTLY IT IS LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS ALONG COASTAL ODISHA TOWARDS WEST BENGAL COAST. FORECAST TRACK AND INTENSITY OF THE SYSTEM IS GIVEN IN TABLE:

DATE/TIME(UTC)	POSITION (LAT.°N/ LONG.°E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
03.12.21/0900	15.0/85.3	60-70 GUSTING TO 80	CYCLONIC STORM
03.12.21/1200	15.0/85.1	70-80 GUSTING TO 90	CYCLONIC STORM
03.12.21/1800	15.7/84.6	75-85 GUSTING TO 95	CYCLONIC STORM
04.12.21/0000	16.5/84.3	80-90 GUSTING TO 100	CYCLONIC STORM
04.12.21/0600	17.1/84.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04.12.21/1800	18.4/84.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05.12.21/0600	19.5/85.6	80-90 GUSTING TO 100	CYCLONIC STORM
05.12.21/1800	20.7/86.9	60-70 GUSTING TO 80	CYCLONIC STORM

THE INTENSITY OF THE SYSTEM IS CHARACTERIZED AS T 2.5. THE CLOUD MASS IS ORGANIZED IN SHEAR PATTERN. THE SYSTEM MOVED WEST NORTH-WESTWARDS IN LAST 3 HOURS AND CONSOLIDATED FURTHER. THE CONVECTIVE CLOUD CLUSTERS ARE SHEARED TO NORTHWEST SECTOR. AREA OF INTENSE CONVECTION LIES IN THE NORTHERN SECTOR. SECONDARY CLOUD BANDS ARE OBSERVED OVER NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS. ASSOCIATED BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER CENTRAL & ADJOINING NORTHWEST BOB BETWEEN LATITUDE 14.0°N & 22.0°N AND LONGITUDE 81.0°E & 92.0°E, NORTH COASTAL ANDHRA PRADESH AND EAST ODISHA.

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA. SEA CONDITION IS HIGH OVER WESTCENTRAL & ADJOINING SOUTH BAY OF BENGAL.

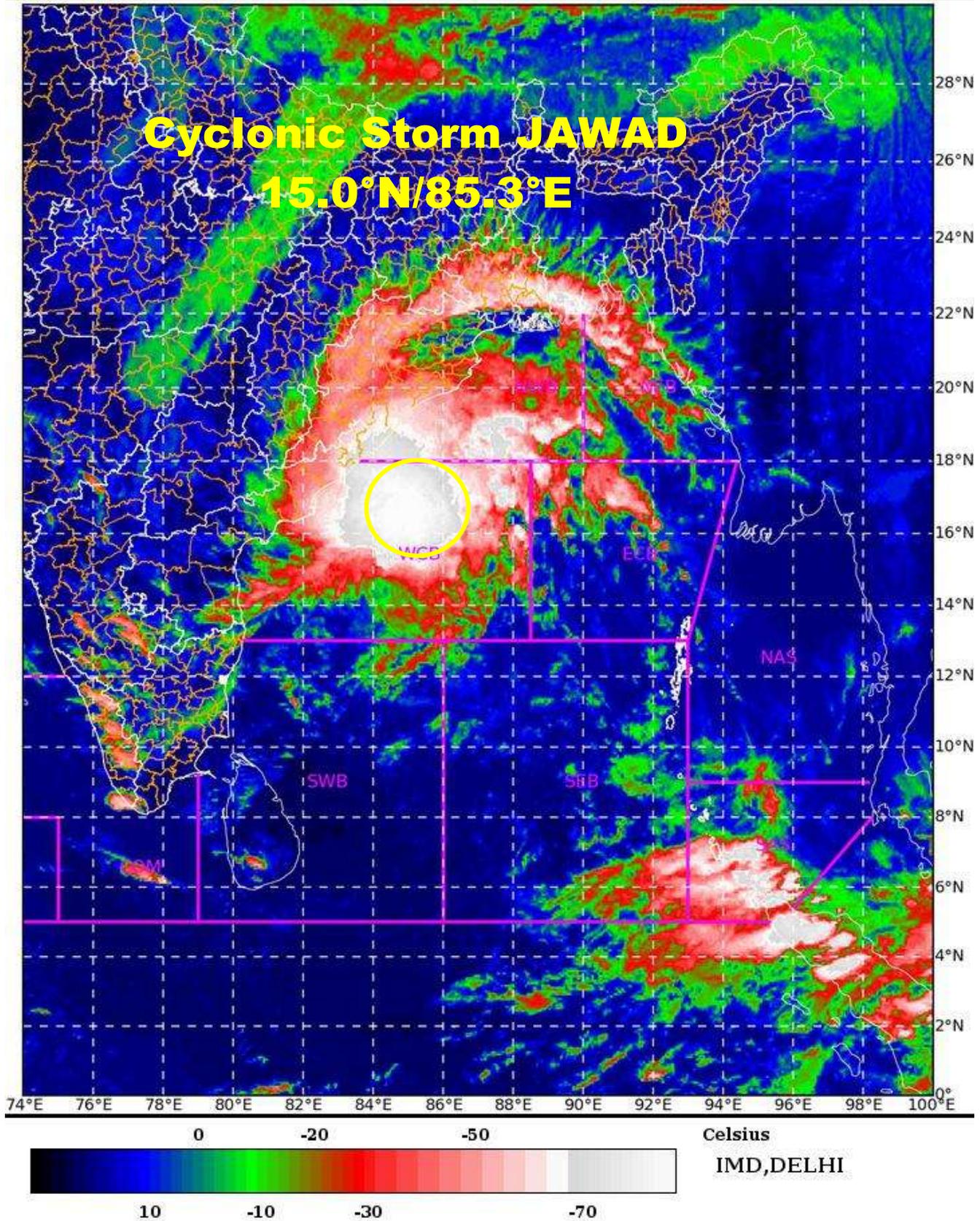
REMARKS:

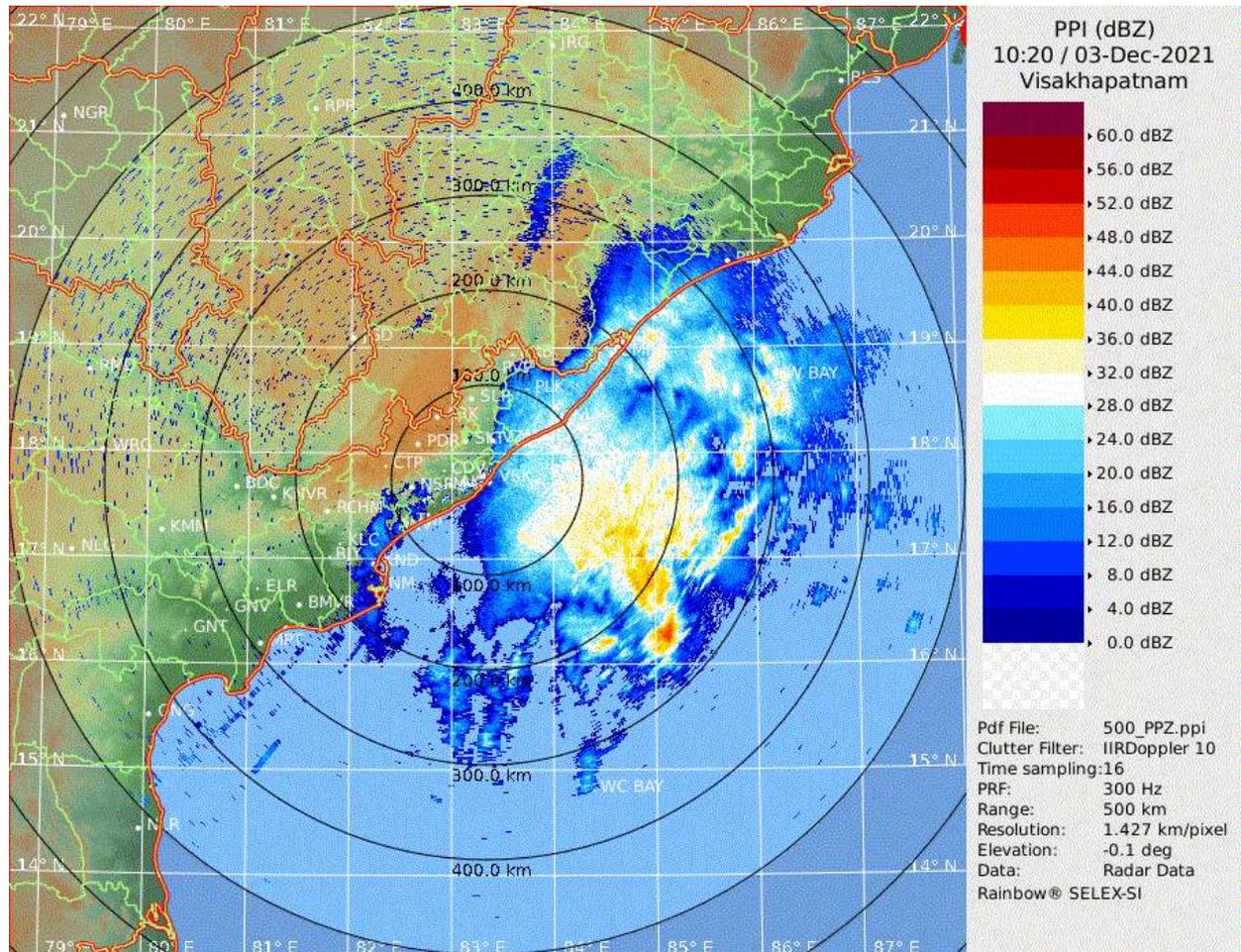
THE SEA SURFACE TEMPERATURE IS 29-31°C OVER ENTIRE BOB. TROPICAL CYCLONE HEAT POTENTIAL IS 100-120 KJ/CM² OVER SOUTHEAST BAY OF BENGAL (BOB) AND ADJOINING ANDAMAN SEA. IT IS GRADUALLY DECREASING TOWARDS NORTHWEST BECOMING 60-80 OVER WESTCENTRAL & NORTHWEST BOB. DEPTH OF 26°C ISOTHERM IS 100-120 M OVER WESTCENTRAL & ADJOINING NORTHWEST BOB. THE MADDEN JULIAN OSCILLATION INDEX IS CURRENTLY IN PHASE 6 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE DURING NEXT 7 DAYS. WIND SHEAR IS MODERATE 15-20 KNOTS OVER THE SYSTEM AREA. IT IS BECOMING SLIGHTLY HIGHER TOWARDS WESTCENTRAL & NORTHWEST BOB. POSITIVE LOW LEVEL VORTICITY IS ABOUT $180 \times 10^{-6} \text{S}^{-1}$ AROUND THE SYSTEM CENTER WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS $20-30 \times 10^{-6} \text{S}^{-1}$ TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS $40 \times 10^{-5} \text{S}^{-1}$ TO THE NORTH OF SYSTEM CENTRE. THUS, ENVIRONMENTAL FEATURES ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF SYSTEM. UPPER TROPOSPHERIC RIDGE RUNS ALONG 16°N. A TROUGH IN MID & UPPER TROPOSPHERIC WESTERLIES RUNS ALONG LONG. 73.0°E TO THE NORTH OF LAT. 15°N. AS THE SYSTEM COMES CLOSER TO THE RIDGE, IT WILL MOVE NORTHWESTWARDS TILL 0000UTC OF 4TH NOV. THEREAFTER, THE SYSTEM WILL CROSS THE RIDGE AND WILL BE STEERED NORTH-NORTHEASTWARDS, UNDER THE INFLUENCE OF SOUTH-SOUTHWESTERLIES PREVAILING IN THE NORTHERN PERIPHERY OF RIDGE AND THE APPROACHING TROUGH IN WESTERLIES AT MIDDLE AND UPPER TROPOSPHERIC LEVELS.

MOST OF THE MODELS ARE INDICATING THAT THE CURRENT CYCLONIC STORM OVER WESTCENTRAL BOB WOULD INTENSIFY SLIGHTLY FURTHER DURING NEXT 12 HOURS. MOST OF THE MODELS ARE INDICATING IT IS LIKELY TO RECURVE NORTH-NORTHEASTWARDS AND MOVE ALONG ODISHA COAST REACHING NEAR PURI AROUND 5TH DECEMBER AROUND 0600 UTC.

NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 3RD DECEMBER 2021.

(AK DAS)
Scientist-E, RSMC, New Delhi





Doppler Weather RADAR imagery from Vishakhapatnam, depicting the approaching convective cloud towards north Andhra Pradesh coast.



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM 'JAWAD' OVER WESTCENTRAL BAY OF BENGAL BASED ON 0600 UTC OF 3rd DECEMBER, 2021

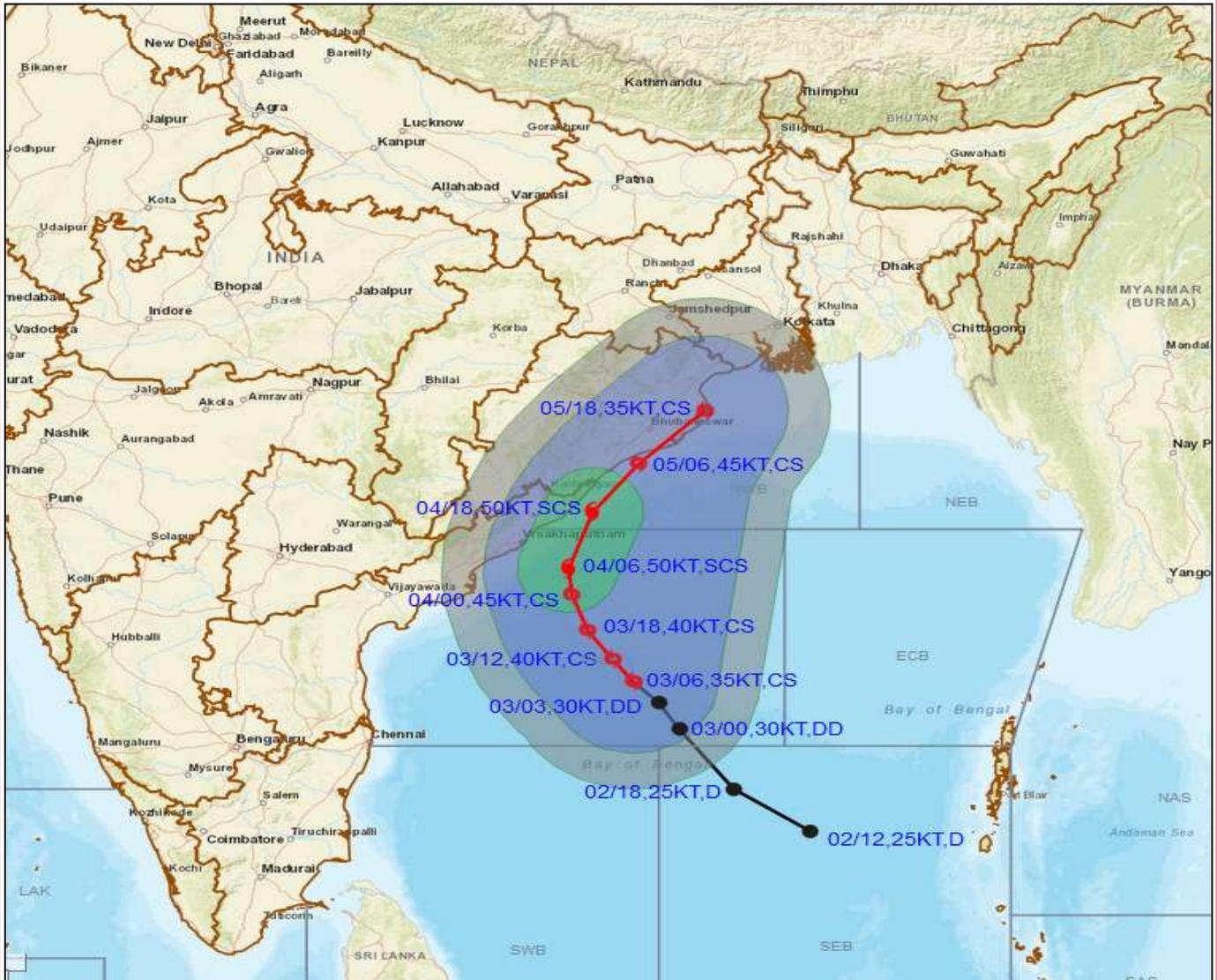


DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (\geq 120 KT)

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



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM 'JAWAD' OVER WESTCENTRAL BAY OF BENGAL BASED ON 0600 UTC OF 3rd 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