REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

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. 4 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0000 UTC OF 26.05.2021 BASED ON 2100 UTC OF 25.05.2021.

SUB: THE CYCLONIC STORM 'GULAB' (PRONOUNCED AS GUL-AAB) OVER NORTHWEST & ADJOINING WEST-CENTRAL BAY OF BENGAL: CYCLONE WARNING FOR NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS

THE CYCLONIC STORM **'GULAB' (PRONOUNCED AS GUL-AAB)** OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL MOVED NEARLY WESTWARDS WITH A SPEED OF 07 KMPH IN LAST 06 HOURS, AND LAY CENTERED AT 2100 UTC OF 25th SEPTEMBER 2021, OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LAT. 18.3°N AND LONG. 87.7°E, ABOUT 310 KM EAST-SOUTHEAST OF GOPALPUR (43049) & 380 KM EAST OF KALINGAPATNAM (43105).

IT IS LIKELY TO MOVE NEARLY WESTWARDS AND CROSS NORTH ANDHRA PRADESH - SOUTH ODISHA COASTS BETWEEN KALINGAPATNAM (43105) & GOPALPUR (43049) AROUND 1500 UTC OF 26TH SEPTEMBER, 2021.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.09.21/2100	18.3/87.7	65-75 gusting to 85	Cyclonic Storm
26.09.21/0000	18.4/86.8	70-80 gusting to 90	Cyclonic Storm
26.09.21/0600	18.4/85.9	75-85 gusting to 95	Cyclonic Storm
26.09.21/1200	18.5/84.8	75-85 gusting to 95	Cyclonic Storm
26.09.21/1800	18.6/83.9	60-70 gusting to 80	Cyclonic Storm
27.09.21/0600	18.8/82.2	30-40 gusting to 50	Depression

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

AS PER INSAT-3D IMAGERY AT 2100 UTC OF 25TH SEP. THE INTENSITY OF THE SYSTEM IS CATEGORISED AS T 2.5. MINIMUM CLOUD TOP TEMPERATURE IS -93^{0}C. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH AND ADJONING CENTRAL BAY OF BENGAL BETWEEN LATITUDE 14.5°N & 19.5°N AND LONGITUDE 82.5°E & 89.0°E .

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. THE SEA CONDITION IS VERY ROUGH TO HIGH OVER NORTHWEST & ADJOINING WESTCENTRAL BOB AROUND SYSTEM CENTRE DURING NEXT 24 HOURS. THE ESTIMATED CENTRAL PRESSURE IS 996 HPA.

STORM SURGE GUIDANCE: TIDAL WAVE OF ABOUT 0.5 M HEIGHT ABOVE THE ASTRONOMICAL TIDE LIKELY TO INUNDATE LOW LYING AREAS OF SRIKAKULAM, VIZIANAGARAM, GANJAM DISTRICTS DURING THE TIME OF LANDFALL.

REMARKS:

SEA SURFACE TEMPERATURE (SST) IS ABOUT 28-29°C OVER CENTRAL & ADJOINING NORTH BAY OF BENGAL (BOB) AND TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 80-100 KJ/CM^{2} OVER THE SAME AREA. MADDEN JULIAN OSCILLATION (MJO) INDEX IS LYING IN PHASE 5 WITH AMPLITUDE CLOSE TO 1, THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE BECOMING MORE THAN 1 FOR NEXT 5 DAYS. A ZONE OF POSITIVE LOW LEVEL VORTICITY (150X10^{-6}S^{-1}) LIES AROUND THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO UPPER TROPOSPHERIC LEVEL. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF 10 X10^{-5}S^{-1} LIES TO THE NORTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE OF 10 X10^{-5}S^{-1} IS ALSO SEEN AROUND THE SYSTEM CENTRE. MODERATE VERTICAL WIND SHEAR (VWS) IS ABOUT (15-20 KTS) OVER NORTHWEST AND ADJOINING CENTRAL BOB ALONG THE FORECAST TRACK. MAINLY THE MODERATE VERTICAL WIND SHEAR, HIGH TROPICAL CYCLONE HEAT POTENTIAL AND FAVOURABLE MJO PHASE HELPED IN MARGINAL INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM. THE EASTERLY TO EAST-NORTHEASTERLY WINDS PREVAILING OVER THE SYSTEM AREA IN ASSOCIATION WITH THE ANTICYCLONE LYING OVER THE NORTH INDIA REGION WOULD STEER THE SYSTEM NEARLY WESTWARDS DURING NEXT 48 HOURS.

NUMERICAL MODEL GUIDANCE SHOW GOOD CONSENSUS W.R.T. TRACK, LANDFALL POINT AND MARGINAL INTENSIFICATION OF THE SYSTEM.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 26TH SEPTEMBER, 2021.

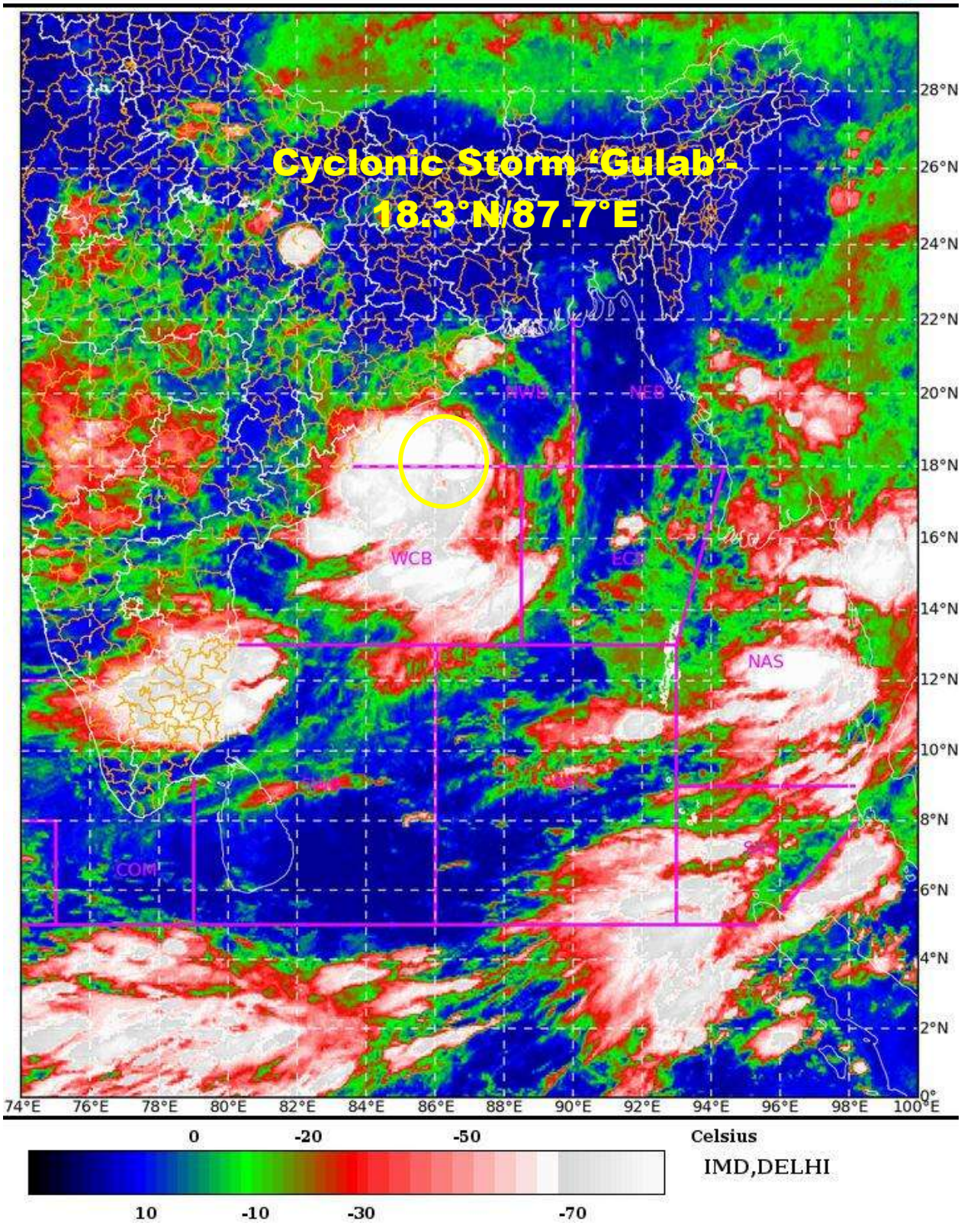
(D R PATTANAIK)

SCIENTIST-F, RSMC, NEW DELHI

SAT : INSAT-3D IMG 25-09-2021/(2300 to 2326) GMT

IMG_TIR1_TEMP 10.8 um 26-09-2021/(0430 to 0456) IST

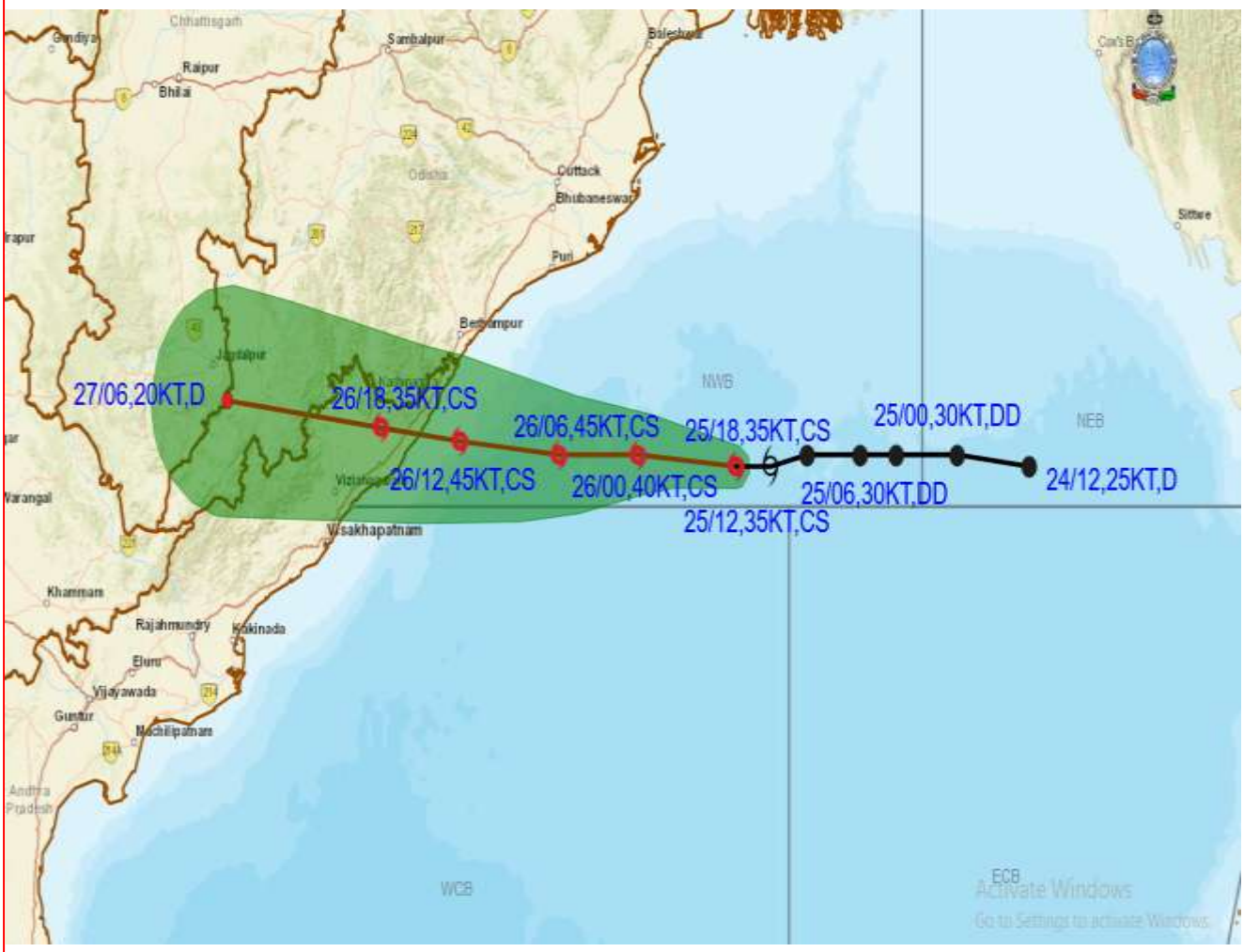
L1C Mercator



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 CYCLONIC STORM GULAB OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 2100 UTC OF 25TH SEPTEMBER, 2021



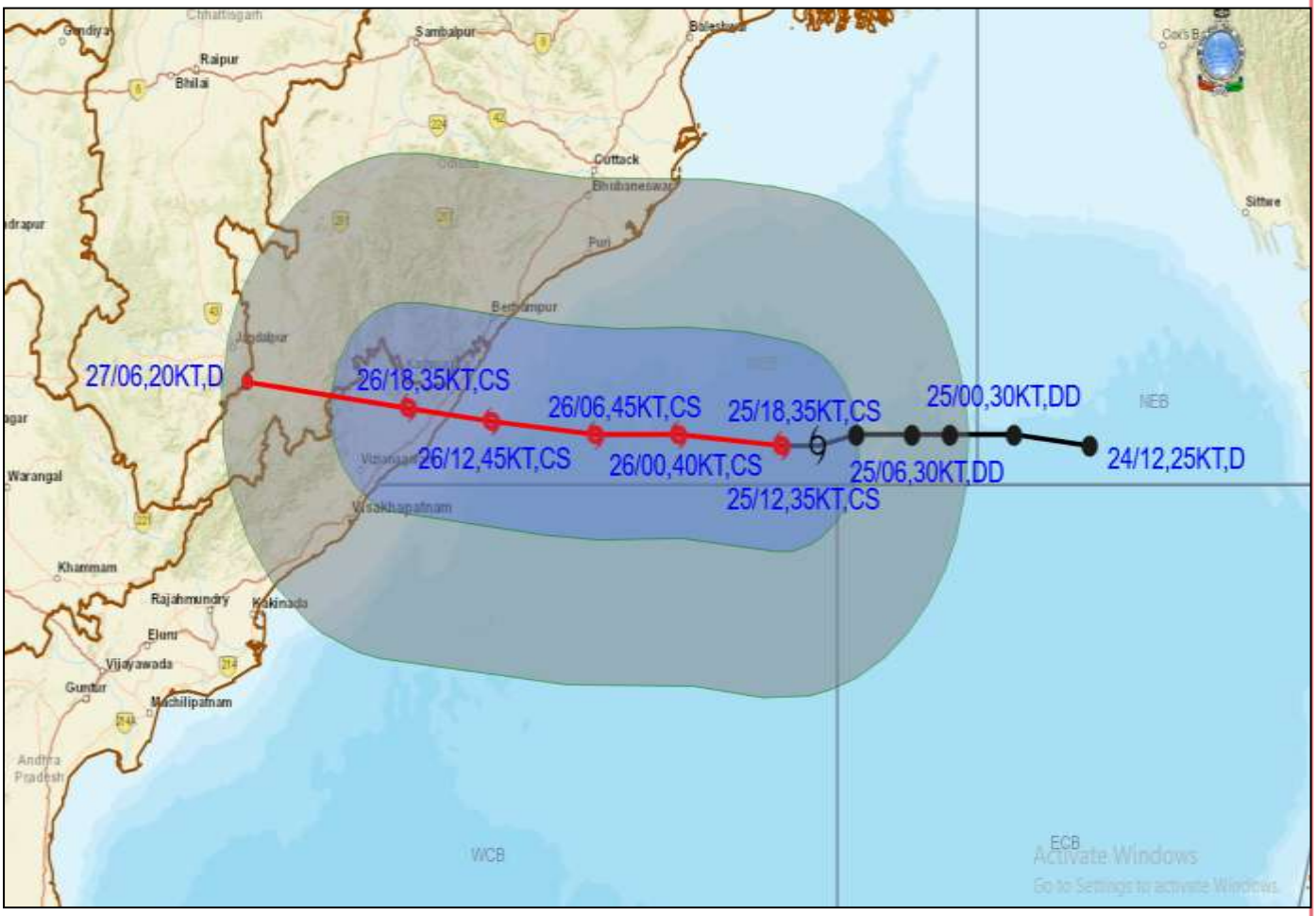
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥20 KT)

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

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 ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM GULAB OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 2100 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 (≥ 120 KT)

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

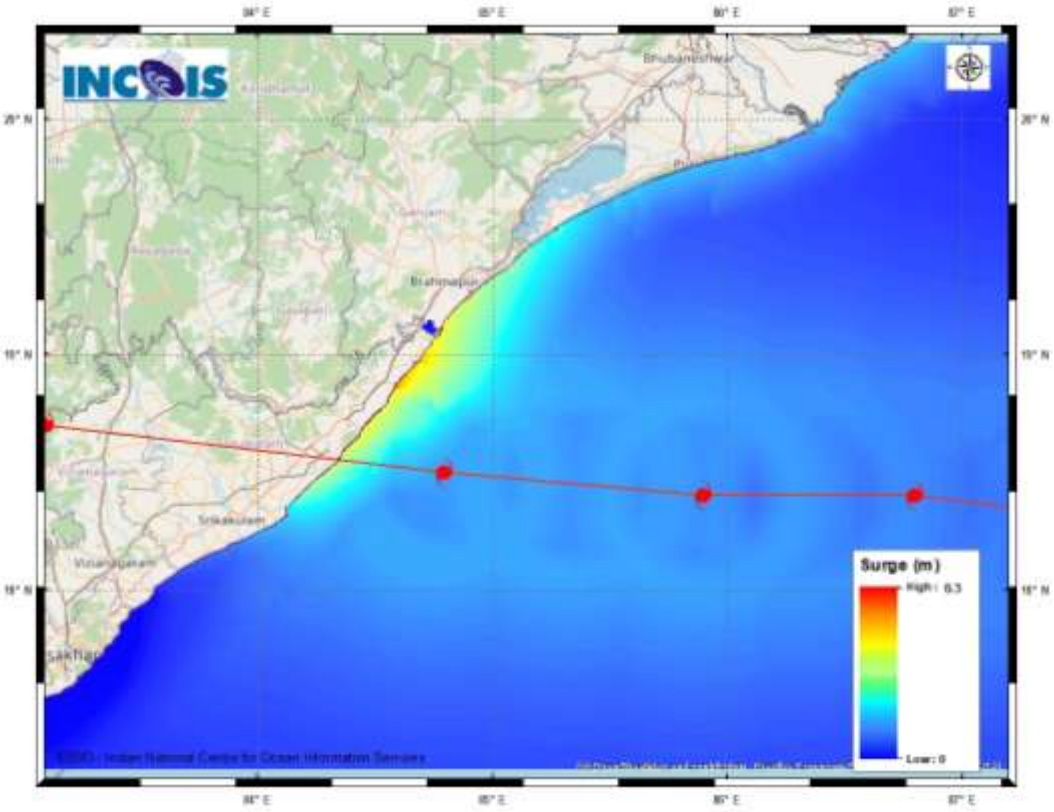
AREA OF MAXIMUM SUSTAINED WIND SPEED:
- 28-33 KT (52-61 KMPH)
- 34-49 KT (62-91 KMPH)
- 50-63 KT (92-117 KMPH)
- ≥ 64 KT (≥118 KMPH)

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%

This is a guidance Bulletin for the WMO/ESCAP Panel Member countries,. Please visit respective National websites for Country specific Bulletins



Storm surge graphic from INCOIS for the current system (BoB/04/2021)

Peak storm surge upto 0.5 m over and above the astronomical tide near Tekkali, Sompeta Srikakulam, Andhra Pradesh.

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