**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**TROPICAL CYCLONE ADVISORY BULLETIN NO. 14**

**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. 14 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1730 UTC OF 25.05.2021 BASED ON 1500 UTC OF 25.05.2021.**

**SUB: THE VERY SEVERE CYCLONIC STORM 'YAAS' (PRONOUNCED AS 'YASS') OVER NORTHWEST BAY OF BENGAL– (CYCLONE WARNING FOR ODISHA – WEST BENGAL COASTS)**

THE **VERY SEVERE CYCLONIC STORM 'YAAS' (PRONOUNCED AS 'YASS')** OVER NORTHWEST & BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 13 KMPH DURING PAST 6 HOURS, AND LAY CENTRED AT 1500UTC OF 25$^{TH}$ MAY, 2021 OVER NORTHWEST BAY OF BENGAL NEAR LATITUDE 19.8°N AND LONGITUDE 87.9°E, ABOUT 140 KM EAST-SOUTHEAST OF PARADIP (42976), 220 KM SOUTH-SOUTHEAST OF BALASORE (42895), 210 KM SOUTH-SOUTHEAST OF DIGHA (42901) AND 210 KM SOUTH OF SAGAR ISLANDS (42903).

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER AND REACH NEAR NORTH ODISHA COAST CLOSE TO DHAMRA PORT BY THE EARLY MORNING OF WEDNESDAY, THE 26$^{TH}$ MAY. IT IS VERY LIKELY TO CROSS NORTH ODISHA-WEST BENGAL COASTS BETWEEN PARADIP AND SAGAR ISLAND CLOSE TO NORTH OF DHAMRA AND SOUTH OF BALASORE, DURING NOON (0600-0800 UTC) OF WEDNESDAY, THE 26$^{TH}$ MAY AS A **VERY SEVERE CYCLONIC STORM**.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADAR AT PARADIP.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

| DATE/TIME(UTC) | POSITION LAT. $^0$N/ LONG. $^0$E | AXIMUM SUSTAINED SURFAC WIND SPEED (KMPH) | CATEGORY OF CYCLONIC DISTURBANCE |
|---|---|---|---|
| 25.05.21/1500 | 19.8/87.9 | 125-135 GUSTING TO 150 | VERY SEVERE CYCLONIC STORM |
| 25.05.21/1800 | 20.2/87.7 | 135-145 GUSTING TO 160 | VERY SEVERE CYCLONIC STORM |
| 26.05.21/0000 | 20.7/87.3 | 155-165 GUSTING TO 185 | VERY SEVERE CYCLONIC STORM |
| 26.05.21/0600 | 21.2/86.9 | 155-165 GUSTING TO 185 | VERY SEVERE CYCLONIC STORM |
| 26.05.21/1200 | 21.7/86.4 | 115-125 GUSTING TO 140 | VERY SEVERE CYCLONIC STORM |
| 27.05.21/0000 | 22.2/85.8 | 70-80 GUSTING TO 90 | CYCLONIC STORM |
| 27.05.21/1200 | 22.9/85.0 | 35-45 GUSTING TO 55 | DEPRESSION |

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

THE MAXIMUM SUSTAINED WIND SPEED IS 70 KNOTS GUSTING TO 80 KNOTS AROUND SYSTEM CENTRE. SEA CONDITION IS VERY HIGH TO PHENOMENAL. THE ESTIMATED CENTRAL PRESSURE IS 976 HPA. MAXIMUM WINDS ARE OBSERVED IN THE NORTHEAST & SOUTHEAST SECTOR WITH LARGE AREAL EXTENSION. GALE WINDS EXCEEDING 35 KNOTS HAVE COMMENCED ALONG & OFF NORTH ODISHA & WEST BENGAL COASTS.

AT 1500 UTC, A BUOY (23092) NEAR 17.4°N/89.2°E REPORTED MAXIMUM SUSTAINED WIND OF 240°/25.0 KTS, MEAN SEA LEVEL PRESSURE OF 996.5 HPA AND SEA SURFACE TEMPERATURE 28.2°C.

AS PER SATELLITE IMAGERY BASED ON 1500 UTC OF THE 25$^{TH}$ MAY, THE REGULAR AND COMPACT. OUTER SPIRAL BANDS ARE ENTERING COASTAL ODISHA AND WEST BENGAL LEADING TO RAINFALL OVER THE AREA. THE INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 4.0. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER THE NORTHWEST AND ADJOINING WEST-CENTRAL BAY OF BENGAL BETWEEN LATITUDE 17.0°N & 21.5°N AND 85.0°E & 90.0E . MINIMUM CLOUD TOP TEMPERATURE IS 93°C.

**REMARKS:**

THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 150 KJ/CM$^2$ OVER MAJOR PARTS OF BOB. IT IS SLIGHTLY DECREASING OVER EXTREME NORTH BOB AND ALONG & OFF ANDHRA, ODISHA, WEST BENGAL COASTS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30-31$^0$C OVER MAJOR PARTS OF BOB.

POSITIVE LOW LEVEL VORTICITY IS AROUND 300 X10$^{-6}$ S$^{-1}$ TO THE SOUTH OF SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE IS ABOUT 30 X 10$^{-5}$ S$^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. THE POSITIVE UPPER LEVEL DIVERGENCE IS 20x 10$^{-5}$ S$^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. STRONG POLEWARD AND EQUATORWARD OUTFLOW IS SEEN IN THE UPPER LEVEL. CURRENTLY MODERATE TO HIGH VERTICAL WIND SHEAR (VWS) (20-25 KTS) IS PREVAILING OVER THE SYSYEM CENTRE. HOWEVER, HIGH SST, HIGH TCHP AND STRONG EQUATORWARD & POLEWARD OUTFLOW ARE CONDUCIVE AND LEADING TO FURTHER INTENSIFICATION OF THE SYSTEM . THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 24.0$^0$N TO THE NORTHEAST OF SYSTEM CENTRE. MOVING NORTH-NORTHWESTWARDS ALONG THE WESTERN PERIPHERY OF THE SUB TROPICAL RIDGE TO THE NORTHEAST OF SYSTEM CENTRE THE SYSTEM WILL MAKE LANDFALL CLOSE TO NORTH OF DHAMRA AND SOUTH OF BALASORE AROUND NOON (0600-0800 UTC OF 26$^{TH}$ MAY). AFTER LANDFALL THE SYSTEM WILL WEAKEN GRADUALLY WHILE MOVING NORTHWESTWARDS ACROSS ODISHA TOWARDS JHARKHAND.

MOST OF THE NUMERICAL MODELS ARE INDICATING NORTH-NORTHWESTWARD MOVEMENT TOWARDS NORTH ODISHA COAST. MODELS ARE ALSO INDICATING FURTHER INTENSIFICATION OF SYSTEM UPTO VERY SEVERE CYCLONIC STORM CATEGORY. BUT THERE IS SOME DIVERGENCE AMONG VARIOUS MODELS WITH RESPECT TO THE TIME OF LANDFALL. CONSIDERING THE MEAN MODEL GUIDANCE, THE SYSTEM IS EXPECTED TO REACH NORTHWEST BAY OF BENGAL NEAR NORTH ODISHA AND WEST BENGAL COASTS CLOSE TO DHAMRA PORT BY 26TH MAY EARLY MORNING (0000 UTC OF 26$^{TH}$) AND CROSS COAST CLOSE TO NORTH OF DHAMRA & SOUTH OF BALASORE IN THE AFTERNOON OF 26$^{TH}$ MAY.

CONSIDERING ALL THE ABOVE, SEVERE CYCLONIC STORM “YASS” IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER AND REACH NEAR NORTH ODISHA COAST CLOSE TO DHAMRA PORT BY THE EARLY MORNING OF WEDNESDAY, THE 26TH MAY. IT IS VERY LIKELY TO CROSS NORTH ODISHA-WEST BENGAL COASTS BETWEEN PARADIP (42976) AND SAGAR ISLAND (42903) CLOSE TO NORTH OF DHAMRA AND SOUTH OF BALASORE, DURING NOON (0600-0800 UTC) OF WEDNESDAY, THE 26TH MAY AS A VERY SEVERE CYCLONIC STORM.

**(ANANDA KUMAR DAS)**
**SCIENTIST-E, RSMC NEWDELHI**

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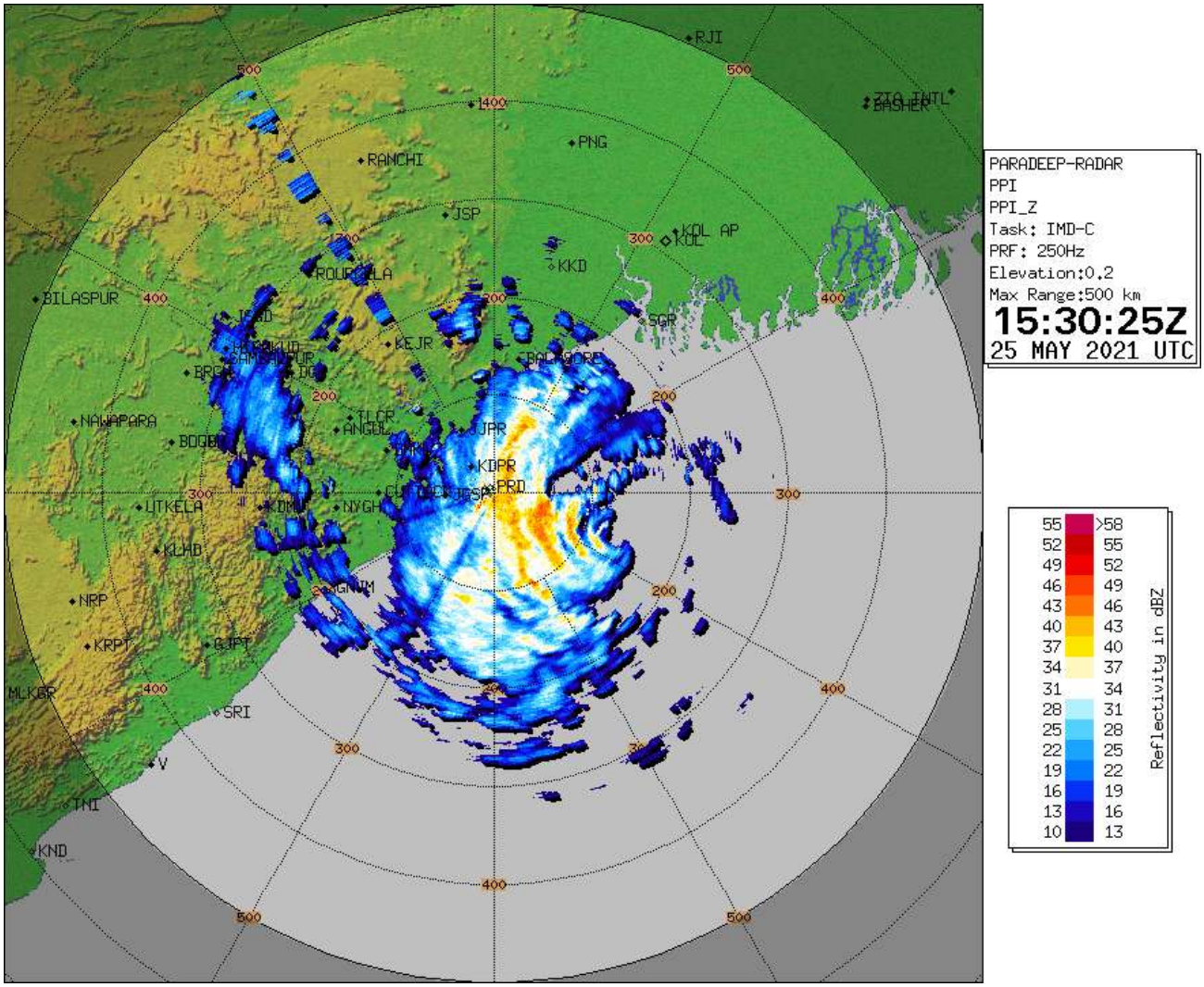
**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**




Latest imagery from Doppler Weather RADAR Paradip

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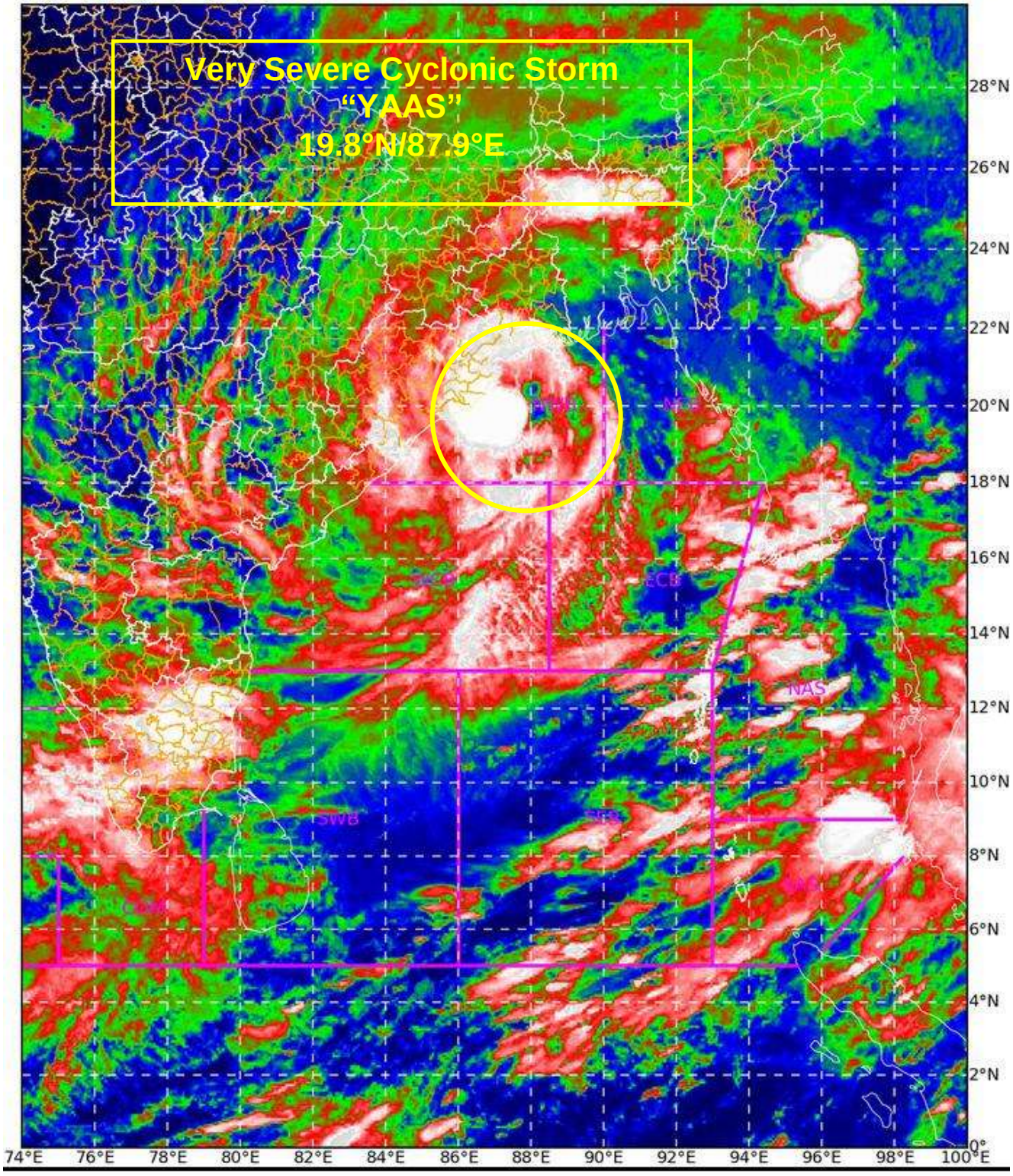
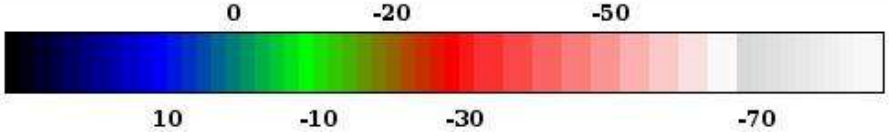
SAT : INSAT-3D IMG 25-05-2021/(1530 to 1556) GMT

IMG_TIR1_TEMP 10.8 um 25-05-2021/(2100 to 2126) IST

L1C Mercator




Celsius

IMD,DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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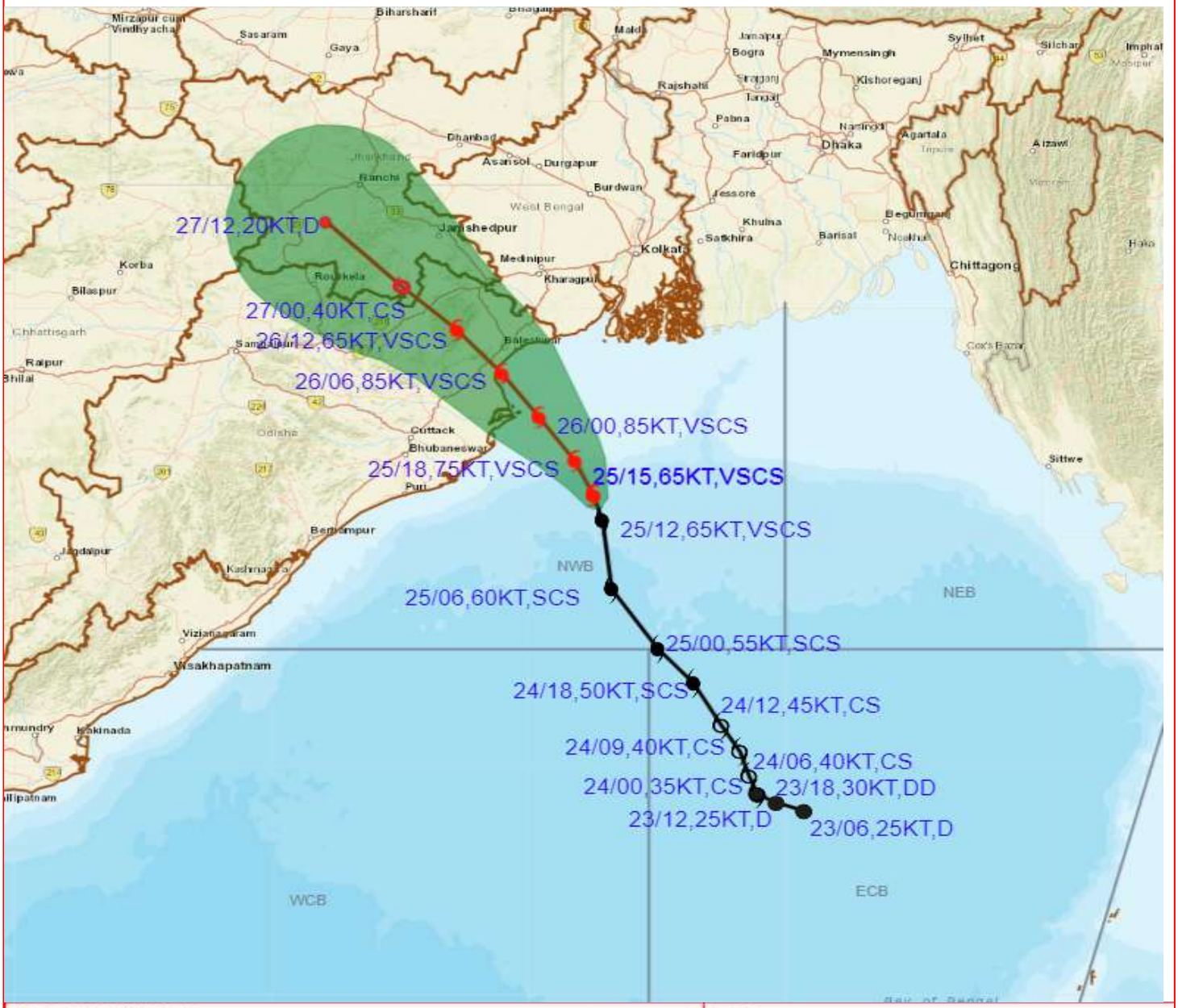
# OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY OF VERY SEVERE CYCLONIC STORM "YAAS" OVER NORTHWEST BAY OF BENGAL BASED ON 1500 UTC OF 25th MAY, 2021

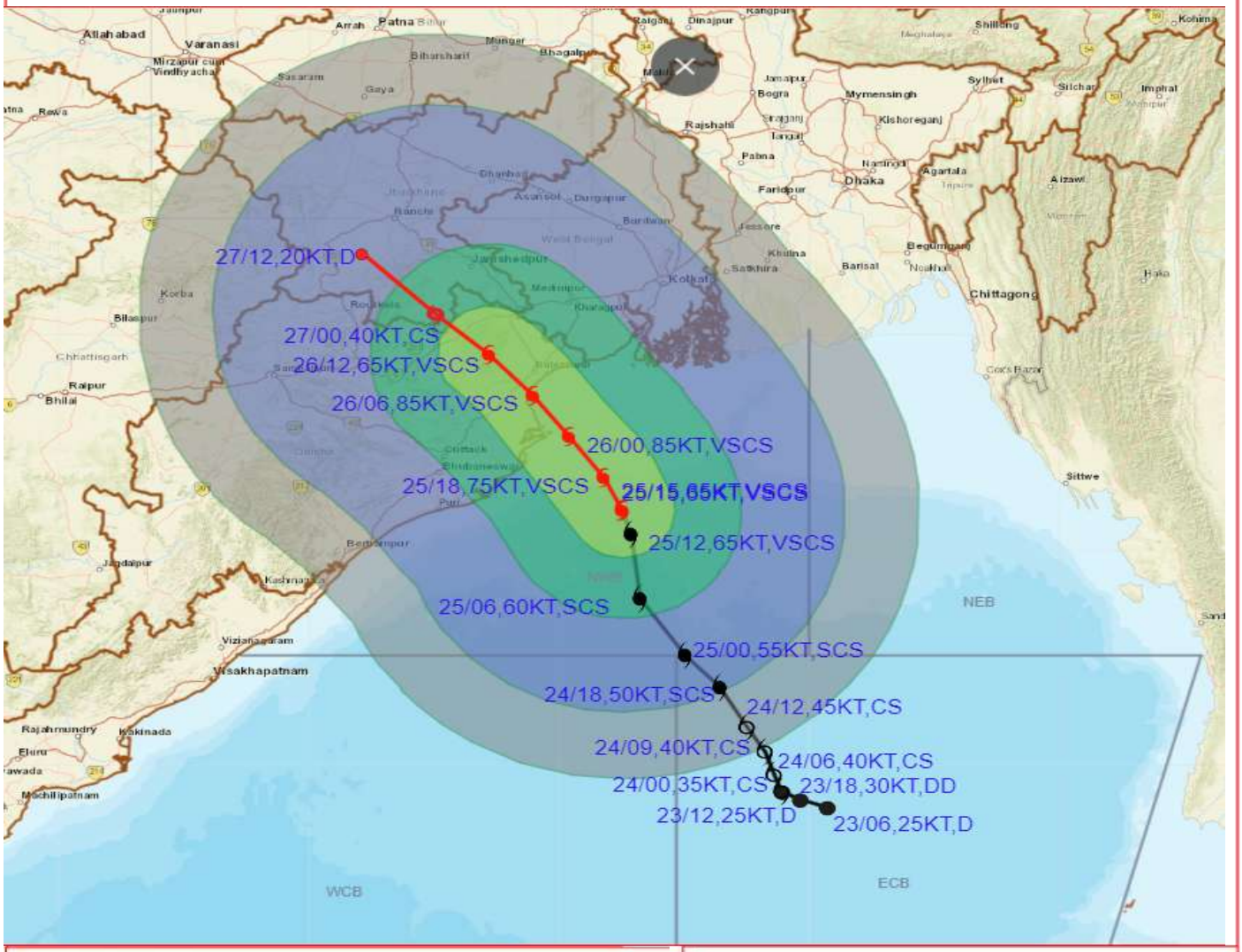



DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119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

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

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

# OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF VERY SEVERE CYCLONIC STORM "YAAS" OVER NORTHWEST BAY OF BENGAL BASED ON 1500 UTC OF 25th MAY, 2021




DATE/TIME IN UTC
IST=UTC + 0530
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WML: WELL MARKED LOW PRESSURE AREA
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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)**
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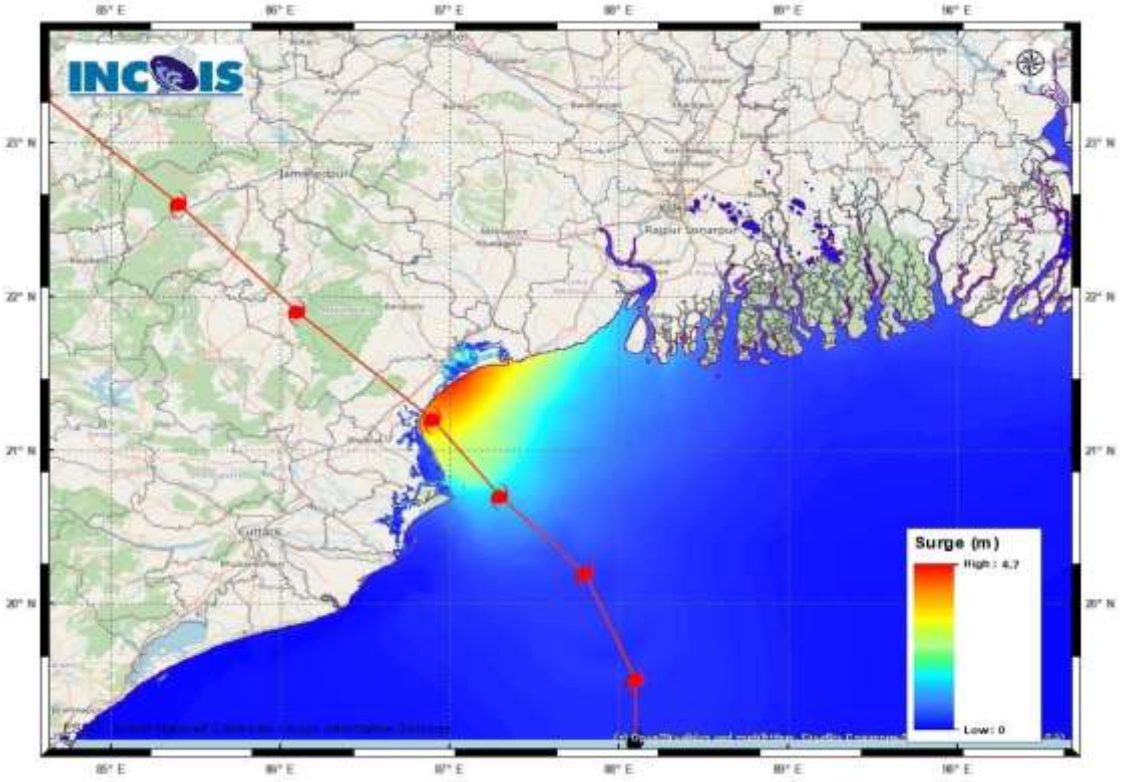


| MANDAL/TALUK | DISTRICT | STATE / UNION TERRITORY | NEAREST PLACEOF HABITATION | STORM SURGE (m) * | EXPECTED INUNDATION EXTENT (km) |
|---|---|---|---|---|---|
| Baleshwar | Baleshwar | Odisha | Kumbhirgari | 2.2-4.7 | Upto 3.53 |
| Bhadrak | Bhadrak | Odisha | Mohanpur | 1.5-3.9 | Upto 9.00 |
| Jagatsinghpur | Jagatsinghapur | Odisha | Musadia | 0.3-0.5 | Upto 0.28 |
| Kendraparha | Kendrapara | Odisha | Tikayat Nagar | 0.2-1.7 | Upto 5.47 |
| Kanthi | Purba Medinipur | West Bengal | Safar Chata | 0.5-2.9 | Upto 1.50 |
| Diamond Harbour | South 24 Parganas | West Bengal | Chakloknath | 0.2-1.2 | Upto 0.78 |
| Basirhat | North 24 Parganas | West Bengal | Amlamethi | 0.3-1.0 | Upto 0.37 |
| Tamluk | Purba Medinipur | West Bengal | Jamitta | 0.3-1.3 | Upto 0.42 |
| Uluberiya | Haora | West Bengal | Denanchar OrphuliChar | 0.3-0.5 | Upto 0.42 |

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