



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
TROPICAL CYCLONE ADVISORY BULLETIN NO. 13

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. 13 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 25.05.2021 BASED ON 1200 UTC OF 25.05.2021.

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

THE SEVERE CYCLONIC STORM 'YAAS' (PRONOUNCED AS 'YASS') OVER NORTHWEST & BAY OF BENGAL INTENSIFIED INTO A **VERY SEVERE CYCLONIC STORM**, MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 15 KMPH DURING PAST 6 HOURS, AND LAY CENTRED AT 1200UTC OF TODAY, THE 25<sup>TH</sup> MAY, 2021 OVER NORTHWEST BAY OF BENGAL NEAR LATITUDE 19.5°N AND LONGITUDE 88.0°E, ABOUT 160 KM EAST-SOUTHEAST OF PARADIP (42976), 250 KM SOUTH-SOUTHEAST OF BALASORE (42895), 240 KM SOUTH-SOUTHEAST OF DIGHA (42901) AND 230 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<sup>TH</sup> 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<sup>TH</sup> 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 AT. °N/ LONG. °	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
25.05.21/1200	19.5/88.0	115-125 GUSTING TO 140	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

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

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

			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

THE MAXIMUM SUSTAINED WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS AROUND SYSTEM CENTRE. SEA CONDITION IS VERY HIGH TO PHENOMENAL. THE ESTIMATED CENTRAL PRESSURE IS 974 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 1200 UTC, A BUOY (23092) NEAR 17.4°N/89.2°E REPORTED MAXIMUM SUSTAINED WIND OF 230°/40.8 KTS AND MEAN SEA LEVEL PRESSURE OF 993.1 HPA.

AS PER SATELLITE IMAGERY BASED ON 1200 UTC OF THE 25<sup>TH</sup> MAY, THE CENTRAL DENSE OVERCAST PATTERN HAS BECOME REGULAR AND COMPACT. OUTER SPIRAL BANDS ARE ENTERING COASTAL ODISHA LEADING TO RAINFALL OVER THE AREA. THE SYSTEM HAS INTENSIFIED & 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 BAY OF BENGAL BETWEEN LATITUDE 14.0°N & 20.0°N AND 84.0°E & 91.0E . MINIMUM CLOUD TOP TEMPERATURE IS 93°C.

#### REMARKS:

THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 150 KJ/CM<sup>2</sup> 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°C OVER MAJOR PARTS OF BOB.

POSITIVE LOW LEVEL VORTICITY IS AROUND  $300 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHWEST OF SYSTEM CENTRE. THE POSITIVE UPPER LEVEL DIVERGENCE IS  $20 \times 10^{-5} \text{ S}^{-1}$  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 SYSTEM 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°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<sup>TH</sup> 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<sup>TH</sup>) AND CROSS COAST CLOSE TO NORTH OF DHAMRA & SOUTH OF BALASORE IN THE AFTERNOON OF 26<sup>TH</sup> MAY.

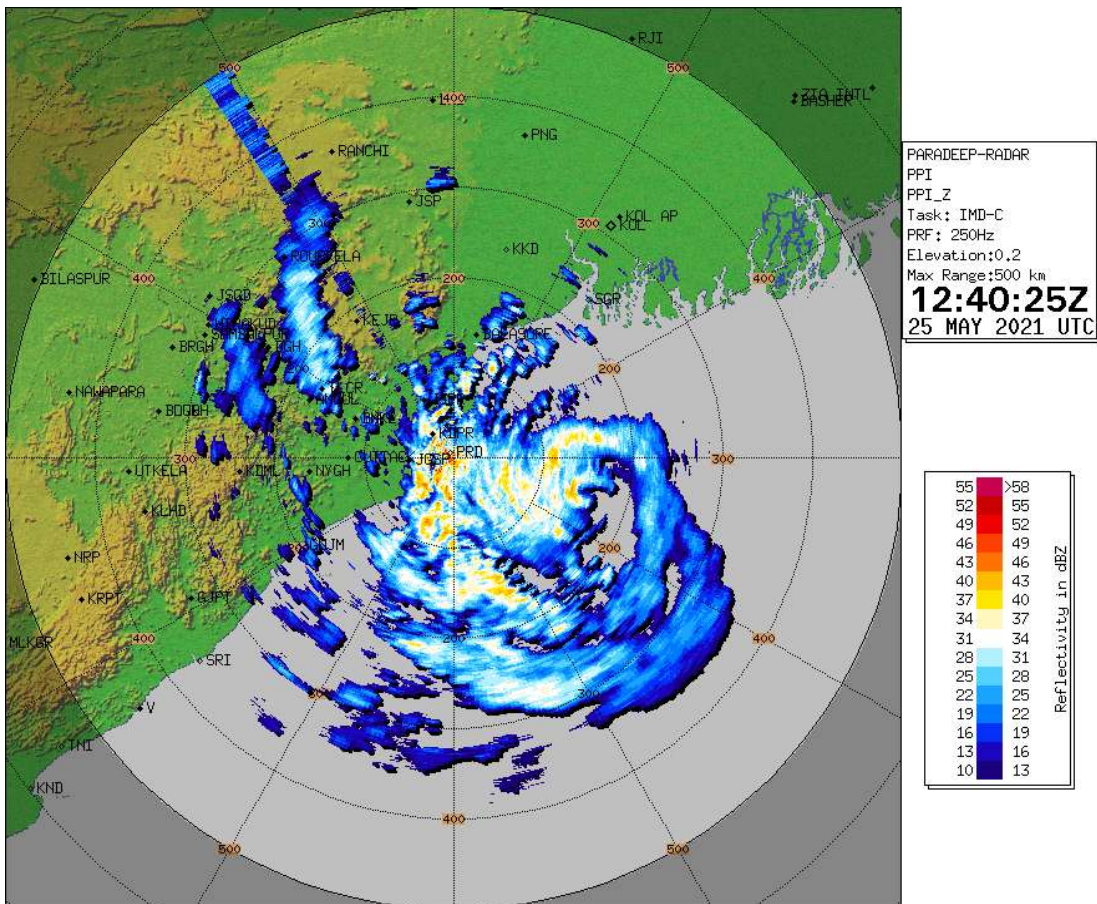
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#### PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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.

(R K JENAMANI)  
SCIENTIST-F, RSMC NEWDELHI



Latest imagery from Doppler Weather RADAR Paradip

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

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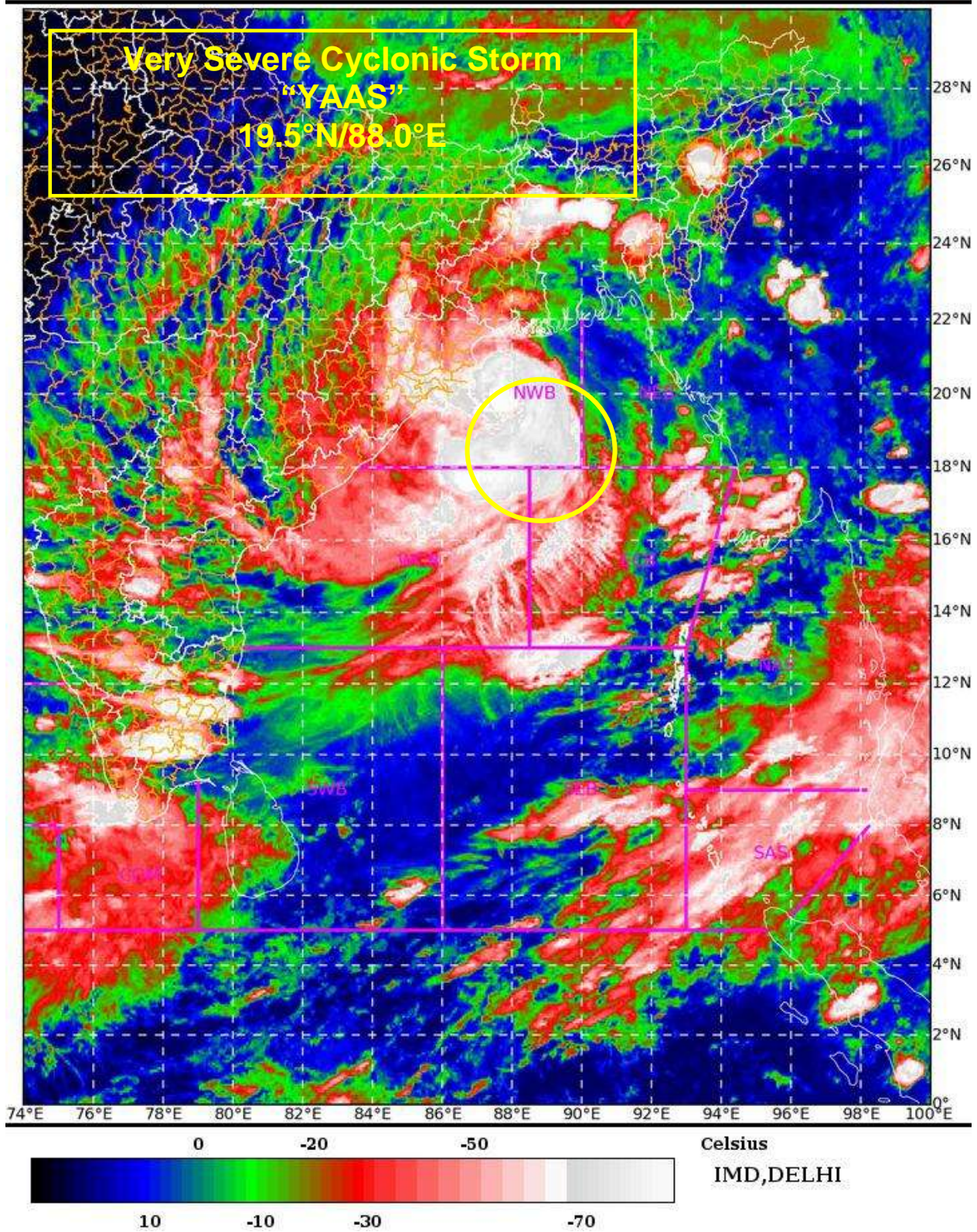
SAT : INSAT-3D IMG

25-05-2021/(1300 to 1326) GMT

IMG\_TIR1\_TEMP 10.8 um

25-05-2021/(1830 to 1856) IST

L1C Mercator

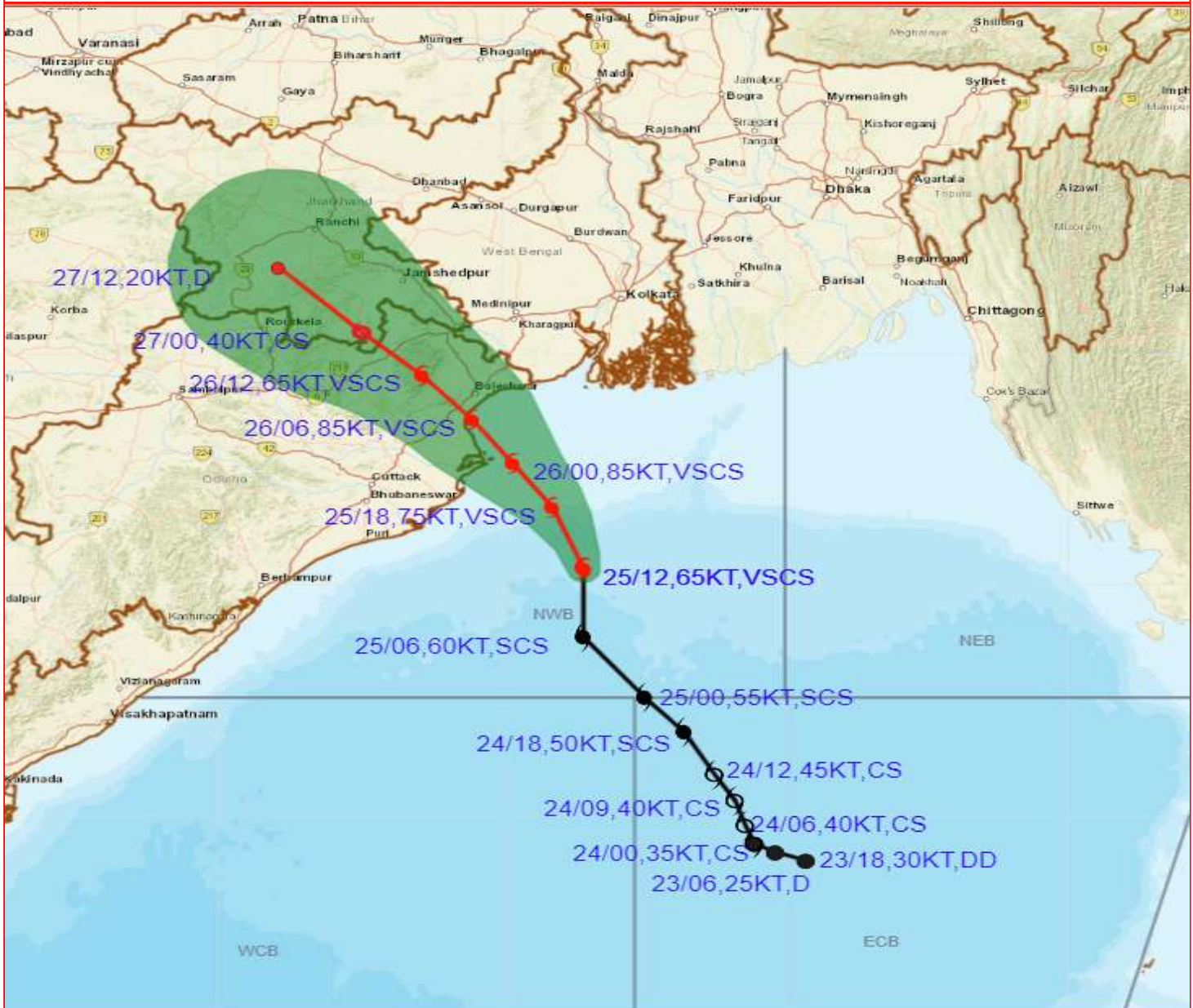


**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**



# OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM "YAAS" OVER NORTHWEST BAY OF BENGAL BASED ON 1200 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 ( $\geq$  120 KT)

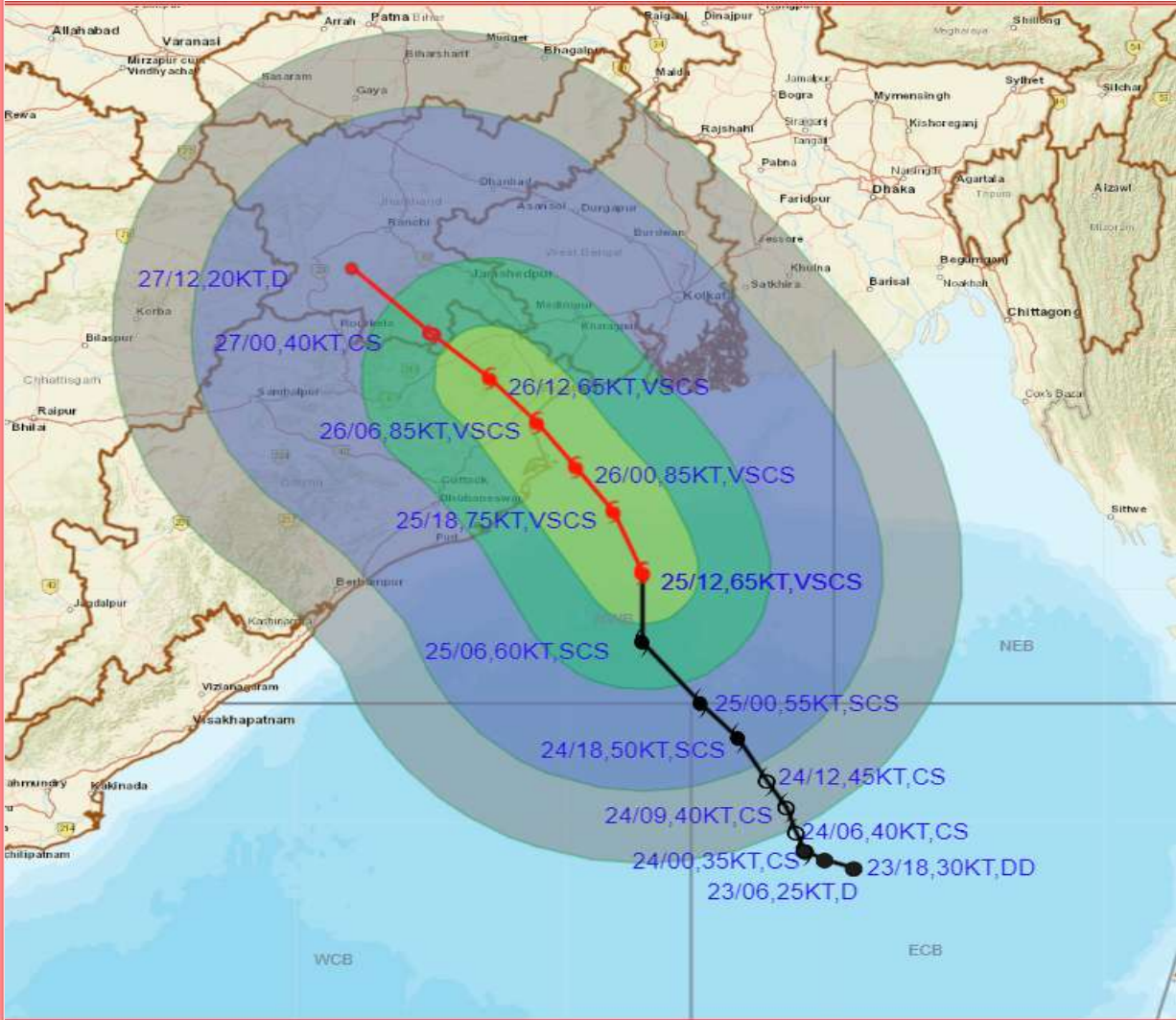
- LESS THAN 34 KT
- 34-47 KT
- $\geq$  48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

### 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 1200 IITC OF 25<sup>th</sup> 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)

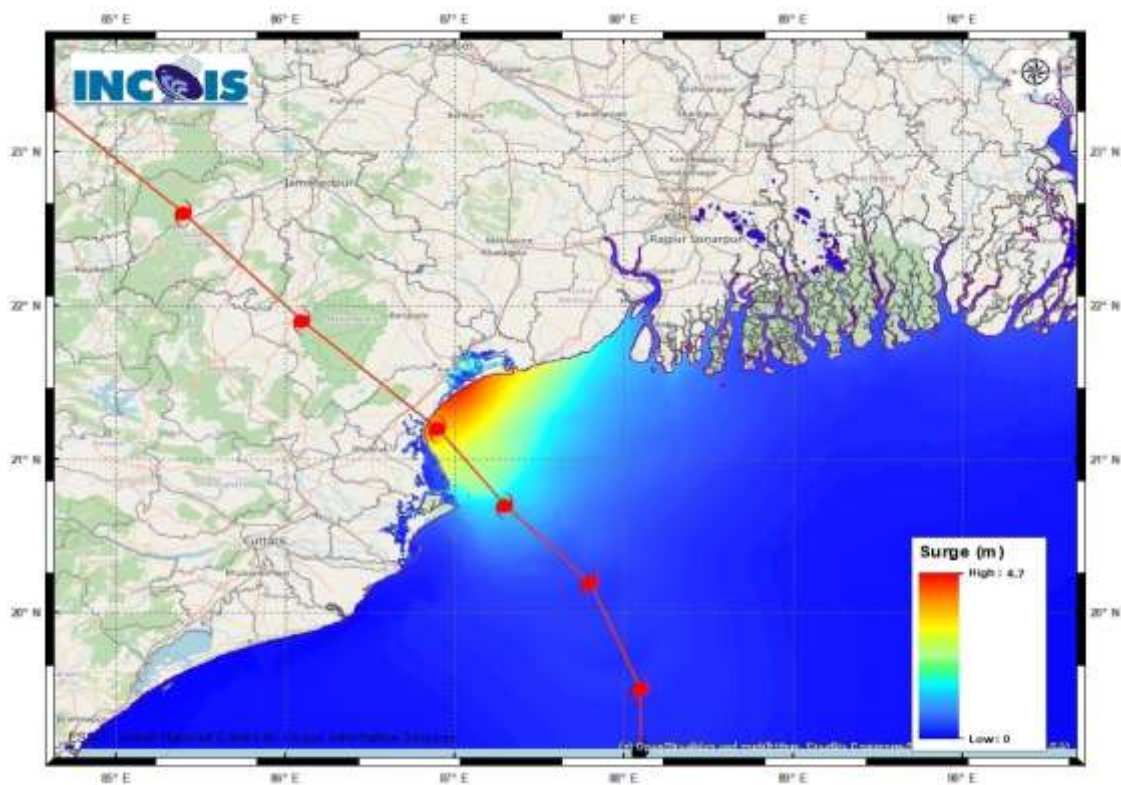
- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY
- AREA OF MAXIMUM SUSTAINED WIND SPEED:
- 28-33 KT (52-61 KMPH)
- 34-49 KT (62-91 KMPH)
- 50-63 KT (92-117 KMPH)
- ≥ 64 KT (≥118 KMPH)

### 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%



MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m) *	EXPECTED INUNDATION EXTENT (km)
Baleswar	Baleswar	Odisha	Kumbhargari	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

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

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