



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY BULLETIN NO. 10

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. 10 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 25.05.2021 BASED ON 0300 UTC OF 25.05.2021.

SUB: THE SEVERE CYCLONIC STORM 'YAAS' (PRONOUNCED AS 'YASS') OVER WESTCENTRAL AND ADJOINING EASTCENTRAL & NORTH BAY OF BENGAL- **(CYCLONE WARNING FOR ODISHA – WEST BENGAL COASTS-ORANGE MESSAGE)**.

THE SEVERE CYCLONIC STORM 'YAAS' (PRONOUNCED AS 'YASS') OVER EASTCENTRAL & ADJOINING WESTCENTRAL BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 17 KMPH DURING PAST 6 HOURS, AND LAY CENTRED AT 0300 UTC OF TODAY, THE 25TH MAY, 2021 OVER WESTCENTRAL AND ADJOINING EASTCENTRAL & NORTH BAY OF BENGAL NEAR LATITUDE 18.3°N AND LONGITUDE 88.3°E, ABOUT 280 KM SOUTH-SOUTHEAST OF PARADIP (42976), 380 KM SOUTH-SOUTHEAST OF BALASORE (42895), 370 KM SOUTH-SOUTHEAST OF DIGHA (42901), 370 KMS SOUTH-SOUTHWEST OF SAGAR ISLANDS (42903) AND 450 KM SOUTH-SOUTHWEST OF KHEPUPARA (41984).

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER INTO A **VERY SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS. IT WOULD CONTINUE TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER AND REACH NORTHWEST BAY OF BENGAL NEAR NORTH ODISHA AND WEST BENGAL COASTS VERY CLOSE TO CHANDBALI-DHAMRA PORT BY THE EARLY MORNING OF WEDNESDAY, THE 26TH 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 OF WEDNESDAY, THE 26TH MAY AS A VERY SEVERE CYCLONIC STORM.

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
25.05.21/0300	18.3/88.3	100-110 gusting to 120	Severe Cyclonic Storm
25.05.21/0600	18.7/88.0	105-115 gusting to 125	Severe Cyclonic Storm
25.05.21/1200	19.5/87.8	125-135 gusting to 150	Very Severe Cyclonic Storm
25.05.21/1800	20.1/87.6	145-155 gusting to 170	Very Severe Cyclonic Storm
26.05.21/0000	20.7/87.3	155-165 gusting to 185	Very Severe Cyclonic Storm
26.05.21/1200	21.8/86.3	115-125 gusting to 140	Very Severe Cyclonic Storm
27.05.21/0000	22.5/85.6	60-70 gusting to 80	Cyclonic Storm
27.05.21/1200	23.2/84.7	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 55 KNOTS GUSTING TO 65 KNOTS AROUND SYSTEM CENTRE. SEA CONDITION IS ROUGH TO VERY ROUGH. THE ESTIMATED CENTRAL PRESSURE IS 982 HPA.

AT 0300 UTC, A BUOY (23093) NEAR 16.3°N/88.0°E REPORTED MAXIMUM SUSTAINED WIND OF 270°/37 KTS AND MEAN SEA LEVEL PRESSURE OF 997 HPA.

AS PER SATELLITE IMAGERY BASED ON 0300 UTC OF THE 25TH MAY, THE CLOUDS ARE ORGANISED IN CENTRAL DENSE OVERCAST PATTERN. INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 3.5. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER THE BAY OF BENGAL BETWEEN LATITUDE 14.5°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/CM² 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 $300 \times 10^{-6} \text{ S}^{-1}$ AROUND SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE NOW IS (ABOUT $60 \times 10^{-5} \text{ S}^{-1}$) TO THE SOUTHWEST OF SYSTEM CENTRE. THE POSITIVE UPPER LEVEL DIVERGENCE IS $30 \times 10^{-5} \text{ S}^{-1}$ 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. THE SEA CONDITIONS AND EXISTING ENVIRONMENTAL FEATURES LIKE ENHANCED LOW LEVEL VORTICITY, LOWER LEVEL CONVERGENCE, ENHANCED EQUATORWARD & POLEWARD OUTFLOW ARE CONDUCIVE FOR FURTHER INTENSIFICATION OF THE SYSTEM INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 24.0°N TO THE NORTHEAST OF SYSTEM CENTRE. THE SYSTEM IS TRACKING NORTH-NORTHWESTWARDS ALONG THE WESTERN PERIPHERY OF THE SUB TROPICAL RIDGE TO THE NORTHEAST OF SYSTEM CENTRE.

MOST OF THE NUMERICAL MODELS INCLUDING IMD GFS, NCEP GFS, ECMWF AND NCUM ARE UNANIMOUSLY INDICATING NORTH-NORTHWESTWARD MOVEMENT TOWARDS NORTH ODISHA AND WEST BENGAL COASTS. MODELS ARE ALSO INDICATING RAPID 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 CHANDBALI & DHAMRA PORT BY 26TH MAY EARLY MORNING (0000 UTC OF 26TH) AND CROSS COAST CLOSE TO NORTH OF DHAMRA & SOUTH OF BALASORE AROUND NOON (0500-0700 UTC) OF 26TH MAY.

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER INTO A **VERY SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS. IT WOULD CONTINUE TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER AND REACH NORTHWEST BAY OF BENGAL NEAR NORTH ODISHA AND WEST BENGAL COASTS VERY CLOSE TO CHANDBALI-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 (0500-0700 UTC) OF WEDNESDAY, THE 26TH MAY AS A VERY SEVERE CYCLONIC STORM.

(R K JENAMANI)
SCIENTIST-F, RSMC NEWDELHI

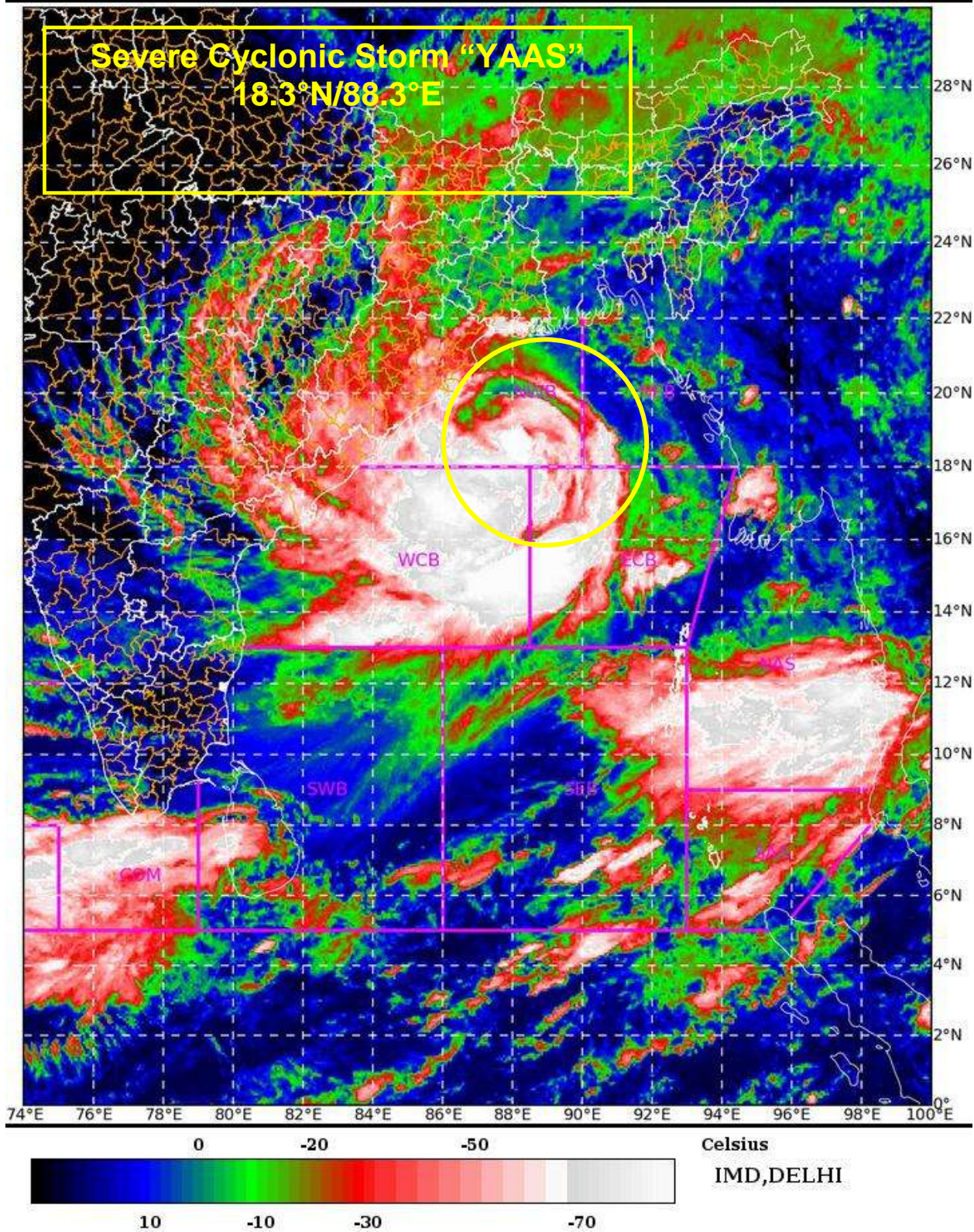
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

SAT : INSAT-3D IMG 25-05-2021/(0530 to 0557) GMT

IMG_TIR1_TEMP 10.8 um 25-05-2021/(1100 to 1127) IST

L1C Mercator

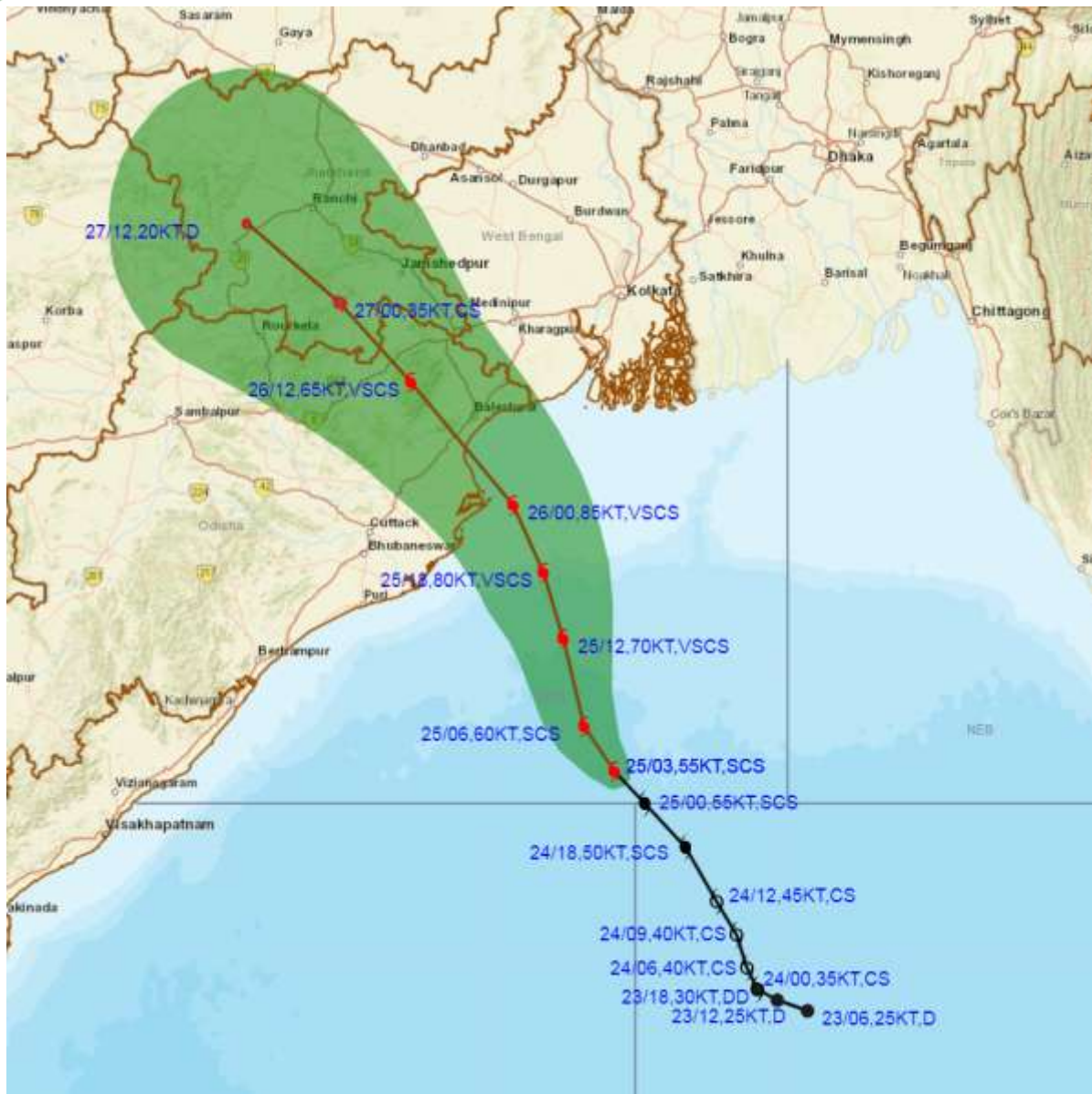


PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF SEVERE CYCLONIC STORM "YAAS" OVER WESTCENTRAL & ADJOINING EASTCENTRAL AND NORTH BAY OF BENGAL BASED ON 0300 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)

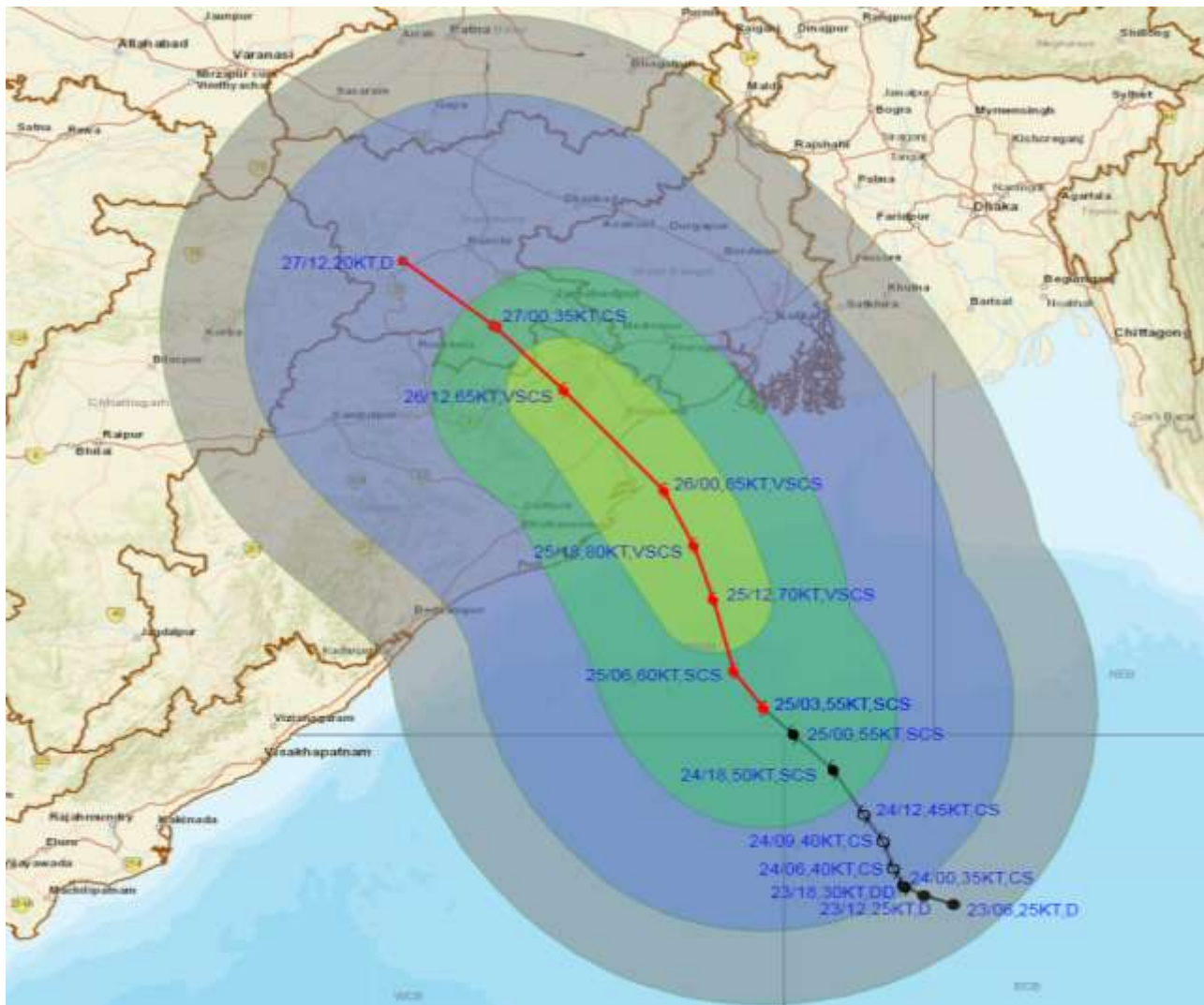
- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

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 SEVERE CYCLONIC STORM “YAAS” OVER WESTCENTRAL & ADJOINING EASTCENTRAL AND NORTH BAY OF BENGAL BASED ON 0300 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
- 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 (≥118)

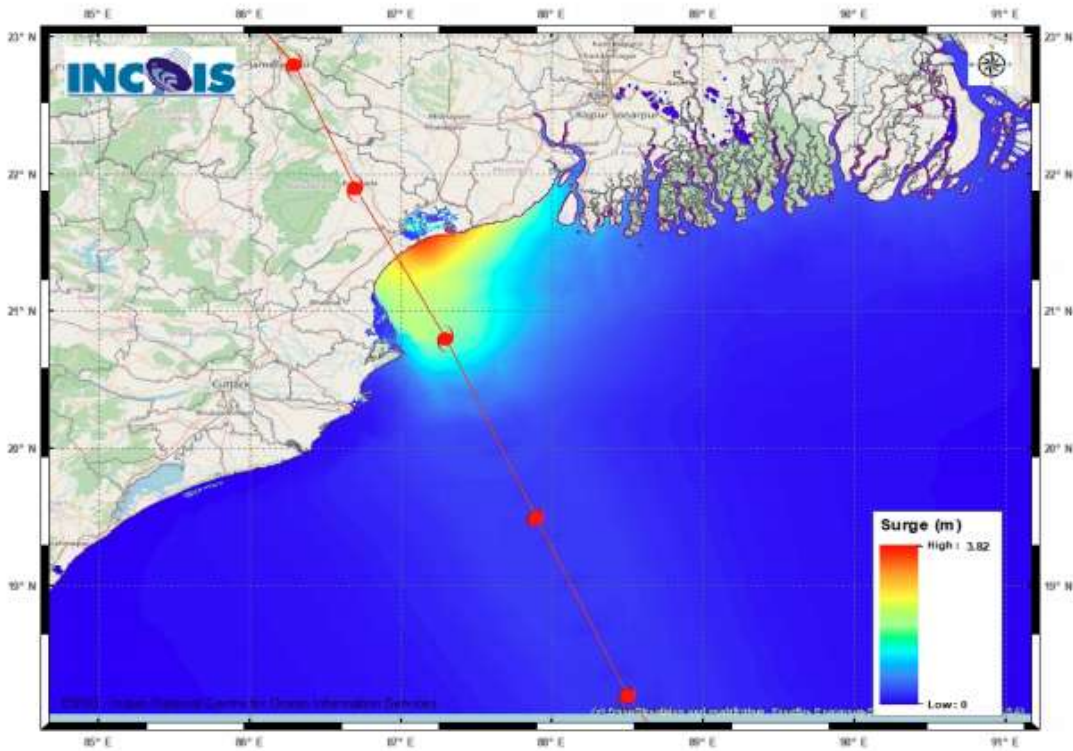
IMPACT OVER THE SEA

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%

Storm Surge Forecast around the time of Landfall:



STORM SURGE HEIGHT INFORMATION:

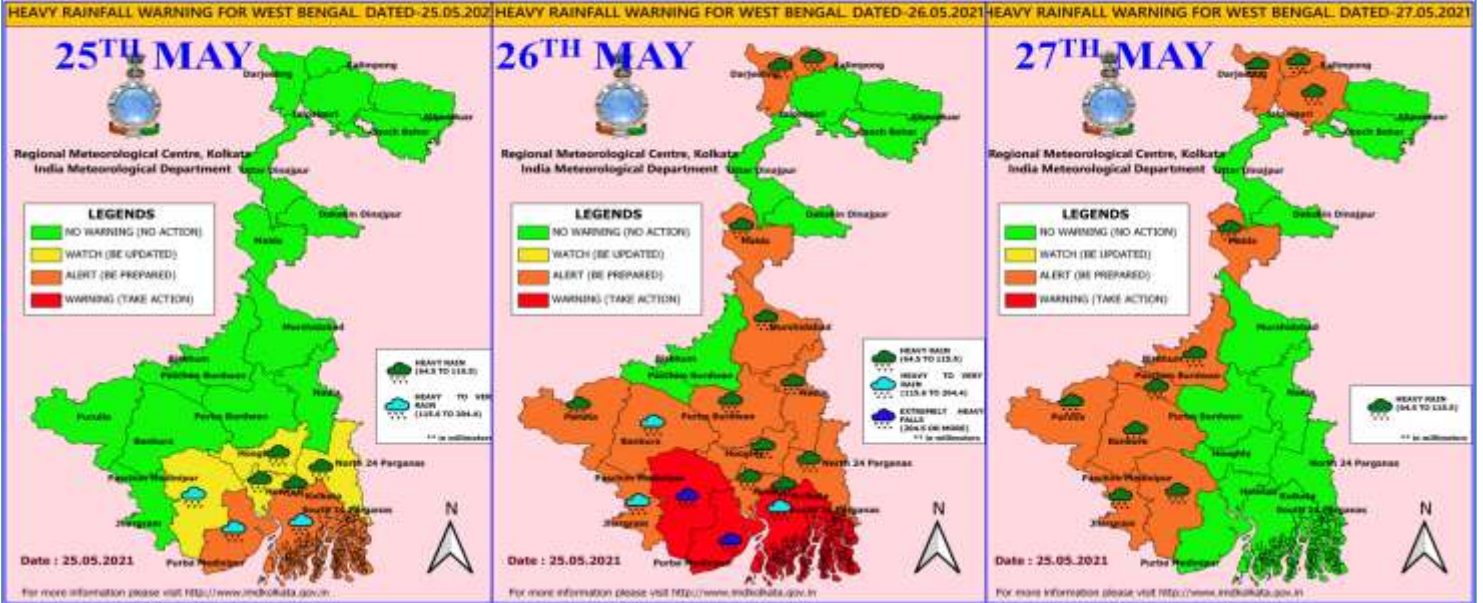
* The below listed surge heights are over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m) *	EXPECTED INUNDATION EXTENT (km)
Baleshwar	Baleshwar	Odisha	Kumbhargari	2.1-3.8	Upto 2.33
Basirhat	North 24 Parganas	West Bengal	Amlamethi	0.5-0.9	Upto 0.37
Bhadrak	Bhadrak	Odisha	Mohanpur	0.9-2.1	Upto 7.02
Diamond Harbour	South 24 Parganas	West Bengal	Pashchim Bhabanipur	0.5-1.1	Upto 0.78
Kanthi	Purba Medinipur	West Bengal	Safar Chata	0.5-2.9	Upto 1.50
Kendraparha	Kendrapara	Odisha	Tikayat Nagar	0.5-1.5	Upto 2.64
Tamluk	Purba Medinipur	West Bengal	Jamitta	0.5-1.3	Upto 0.42
Uluberiya	Haora	West Bengal	Orphuli	0.5-0.8	Upto 0.44

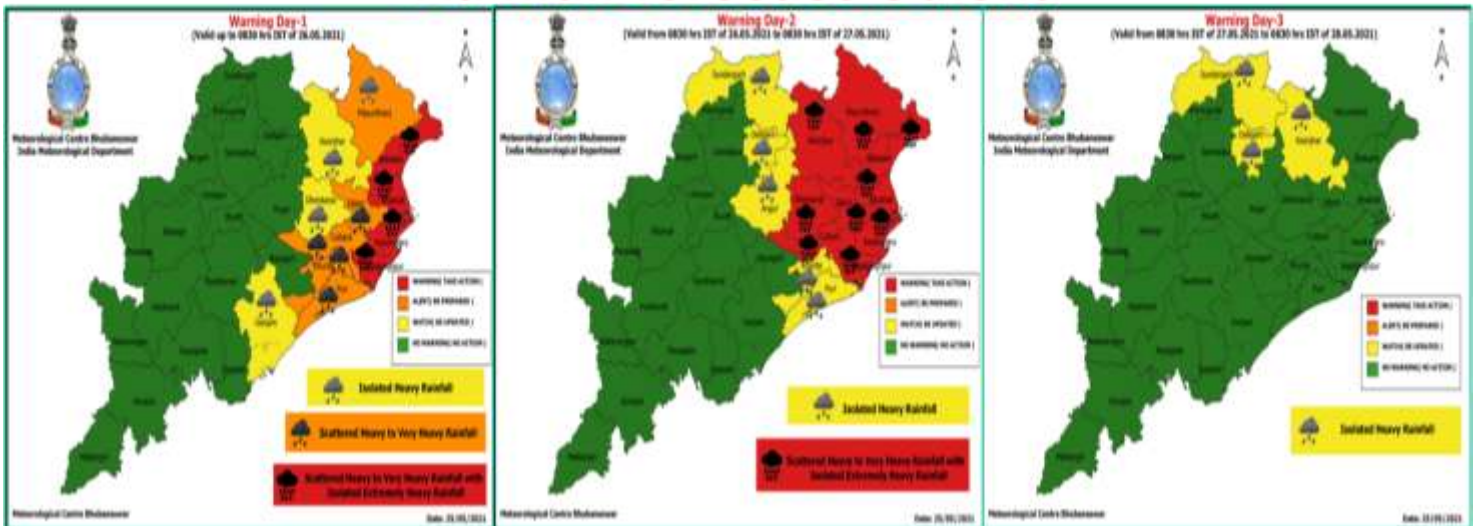
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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Rainfall warning for West Bengal & Sikkim



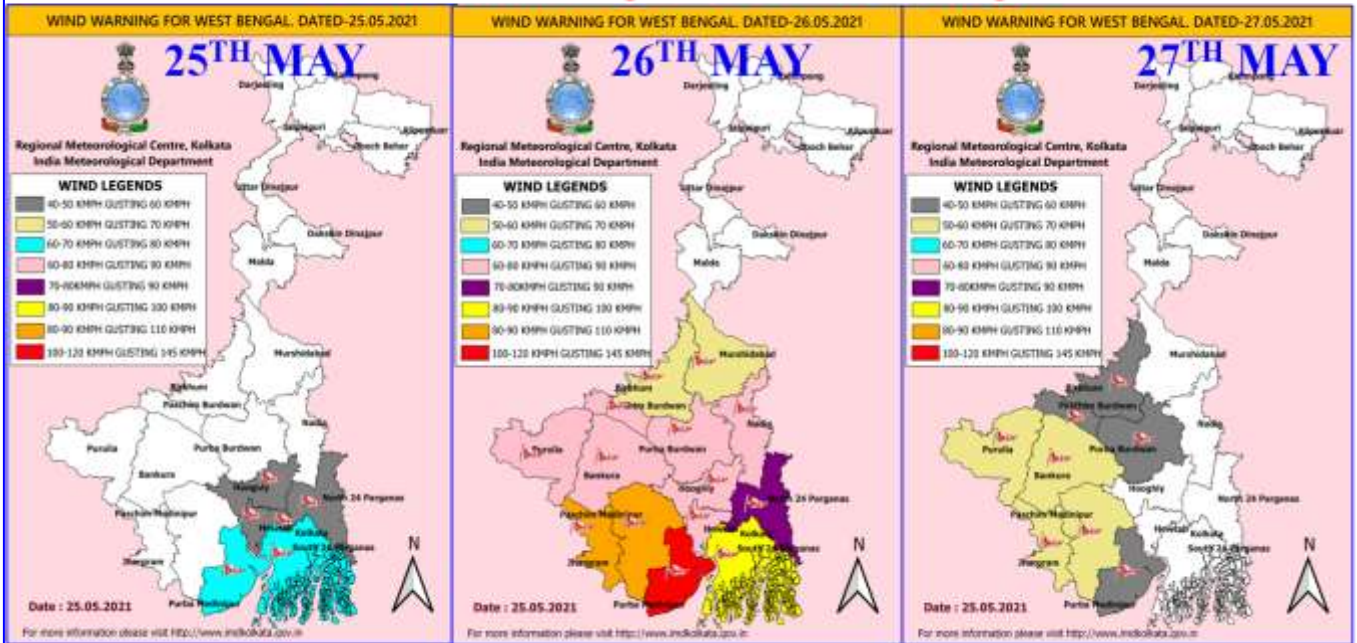
Rainfall forecast Odisha



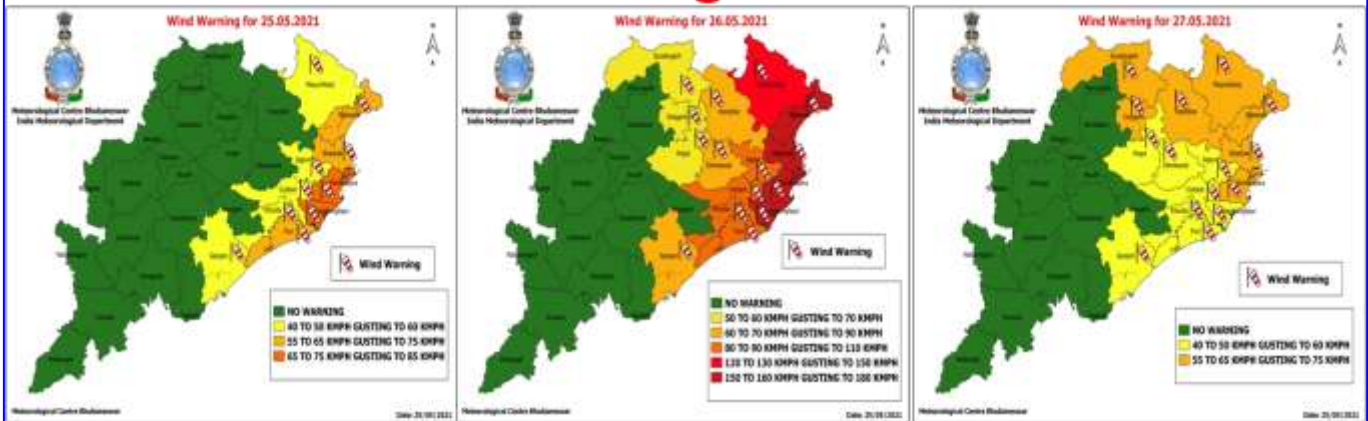
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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Wind warning for West Bengal



Wind warning for Odisha



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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