REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 12

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. 12 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1130 UTC OF 25.05.2021 BASED ON 0900 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 AND ADJOINING EASTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 15 KMPH DURING PAST 6 HOURS, AND LAY CENTRED AT 0900 UTC OF TODAY, THE 25TH MAY, 2021 OVER NORTHWEST BAY OF BENGAL NEAR LATITUDE 19.1°N AND LONGITUDE 88.1°E, ABOUT 200 KM SOUTHEAST OF PARADIP (42976), 290 KM SOUTH-SOUTHEAST OF BALASORE (42895), 290 KM SOUTH-SOUTHEAST OF DIGHA (42901) AND 280 KM SOUTH OF SAGAR ISLANDS (42903) AND 390 KM SOUTH-SOUTHWEST OF KHEPUPARA (41984).

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER INTO A **VERY SEVERE CYCLONIC STORM** DURING NEXT 06 HOURS**.** IT WOULD CONTINUE 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 AND SAGAR ISLAND CLOSE TO NORTH OF DHAMRA AND SOUTH OF BALASORE, DURING NOON (0500-0900 UTC) 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. ^{0}N/ long. ^{0}E	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25.05.21/0900	19.1/88.1	110-120 gusting to 130	Severe Cyclonic Storm
25.05.21/1200	19.5/88.1	125-135 gusting to 150	Very Severe Cyclonic Storm
25.05.21/1800	20.2/87.8	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
26.05.21/0600	21.2/86.9	155-165 gusting to 185	Very Severe Cyclonic Storm
26.05.21/1800	21.9/86.1	90-100 gusting to 110	Severe Cyclonic Storm
27.05.21/0600	22.6/85.4	55-65 gusting to 75	Deep Depression
27.05.21/1800	23.3/84.6	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 60 KNOTS GUSTING TO 70 KNOTS AROUND SYSTEM CENTRE. SEA CONDITION IS VERY HIGH TO PHENOMENAL. THE ESTIMATED CENTRAL PRESSURE IS 982 HPA.

AT 0900 UTC, A BUOY (23091) NEAR 17.9°N/89.4°E REPORTED MAXIMUM SUSTAINED WIND OF 180°/46.7 KTS AND MEAN SEA LEVEL PRESSURE OF 985.9 HPA.

AS PER SATELLITE IMAGERY BASED ON 0900 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 14.0°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^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 HAS INCREASED AND IS AROUND 300 X10^{-6} S^{-1} TO THE SOUTH OF SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE NOW IS (ABOUT 40 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. 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 06 HOURS. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 24.0^{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 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 26TH) AND CROSS COAST CLOSE TO NORTH OF DHAMRA & SOUTH OF BALASORE IN THE AFTERNOON OF 26TH MAY.

CONSIDERING ALL THE ABOVE, SEVERE CYCLONIC STORM “YASS” IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 06 HOURS. IT WOULD CONTINUE 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 (0500-0900 UTC) OF WEDNESDAY, THE 26TH MAY AS A VERY SEVERE CYCLONIC STORM.

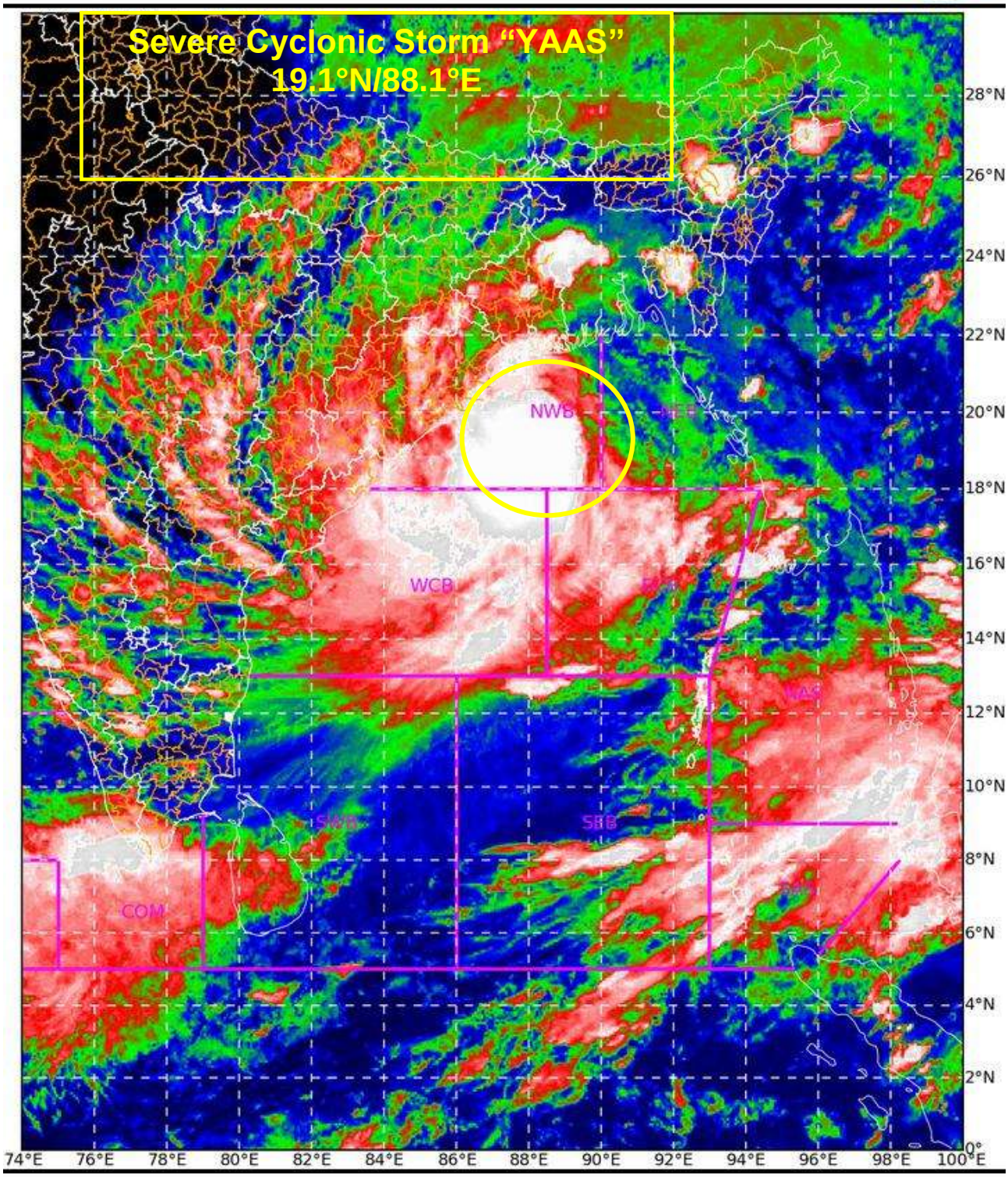
(R K JENAMANI)
SCIENTIST-F, RSMC NEWDELHI

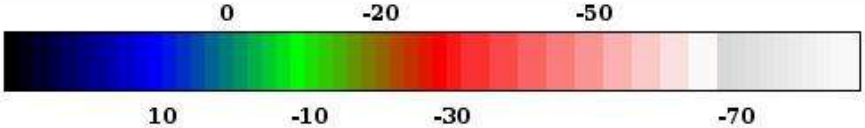
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

SAT : INSAT-3D IMG 25-05-2021/(1030 to 1056) GMT

IMG_TIR1_TEMP 10.8 um 25-05-2021/(1600 to 1626) IST

L1C Mercator





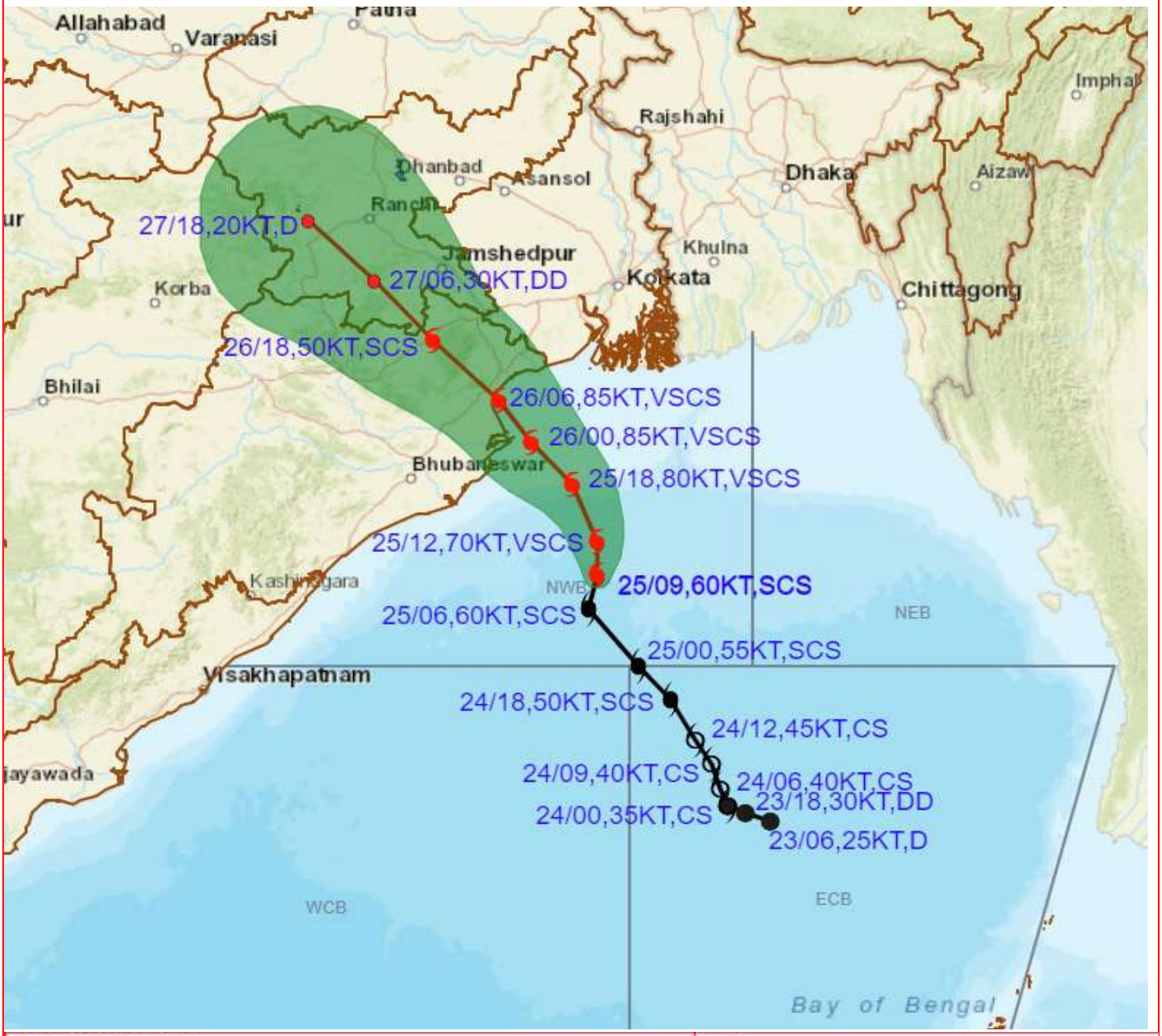
Celsius

IMD,DELHI

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 UNCERTAINITY OF SEVERE CYCLONIC STORM "YAAS" OVER NORTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 0900 UTC OF 25th MAY, 2021

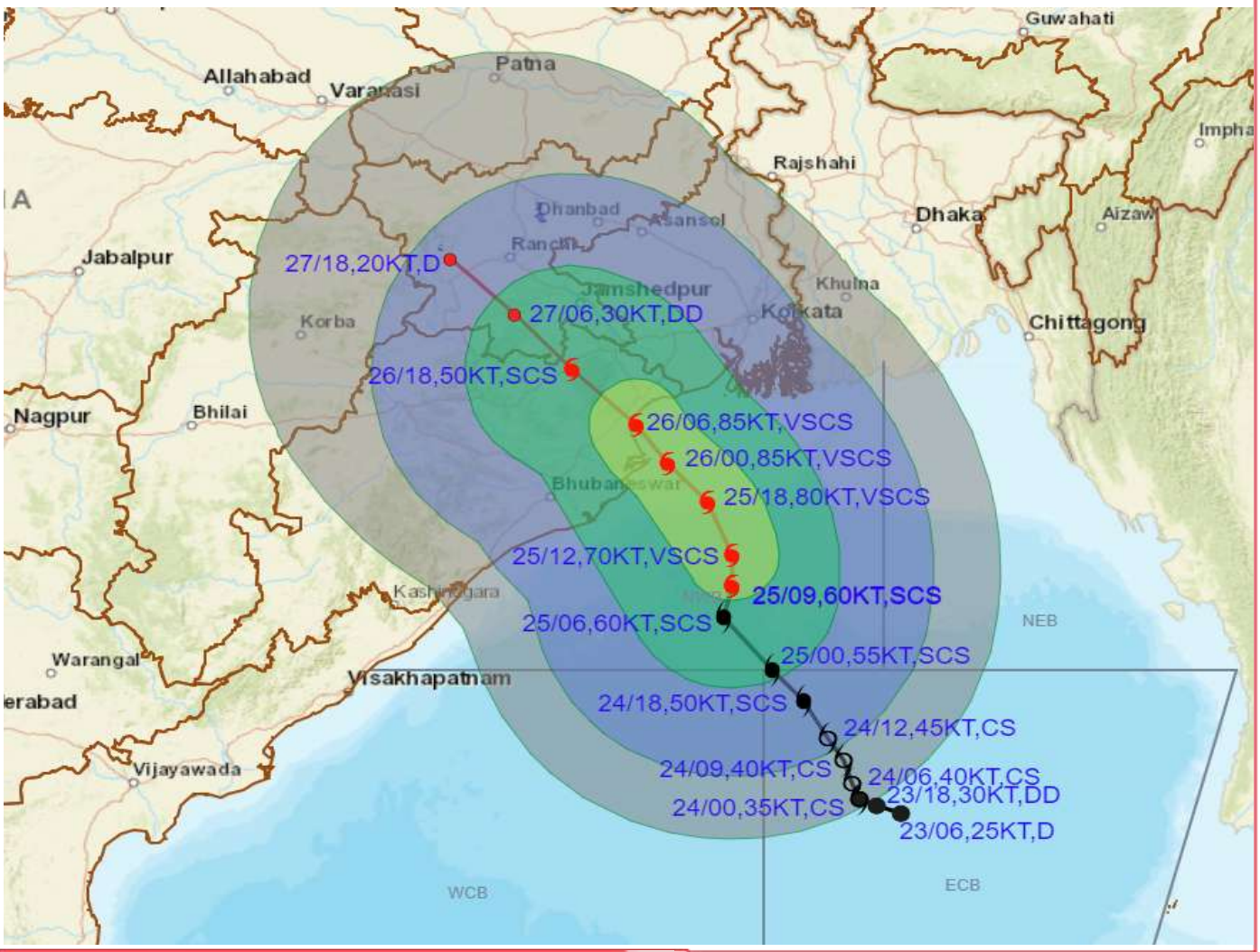


DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 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 SEVERE CYCLONIC STORM "YAAS" OVER NORTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 0900 UTC OF 25th MAY, 2021



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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

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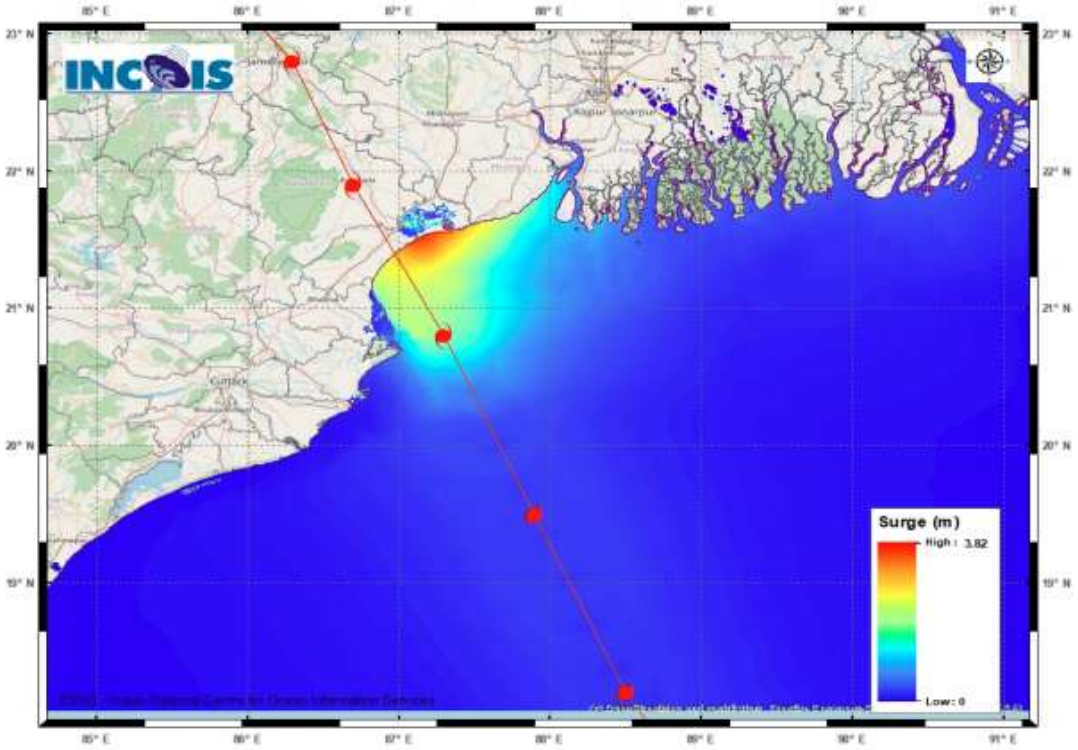
Storm Surge Forecast around the time of Landfall:



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	Kumbhirgari	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

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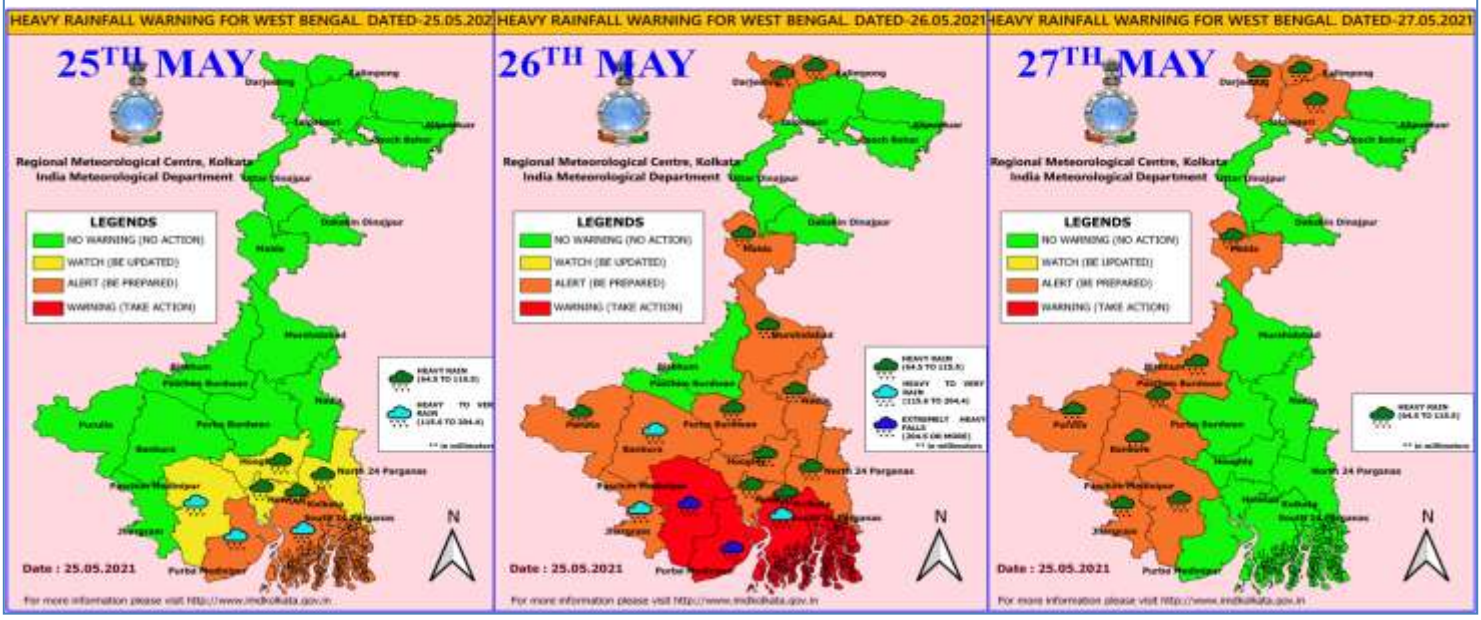
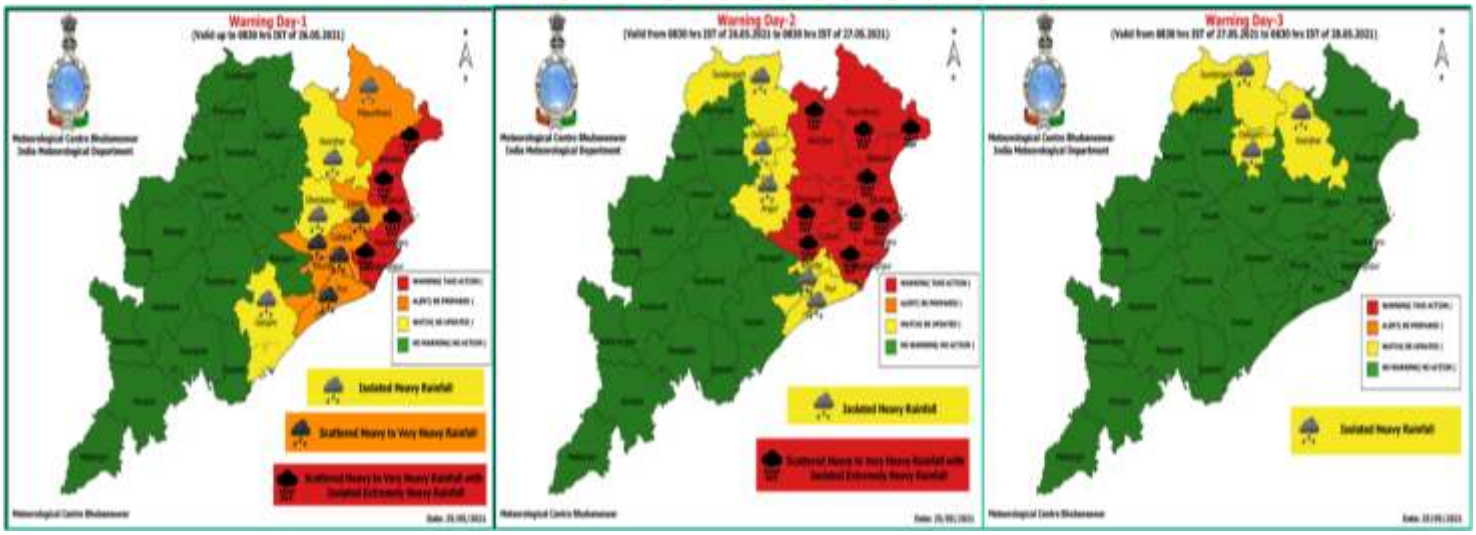
Rainfall warning for West Bengal & Sikkim



Rainfall forecast Odisha



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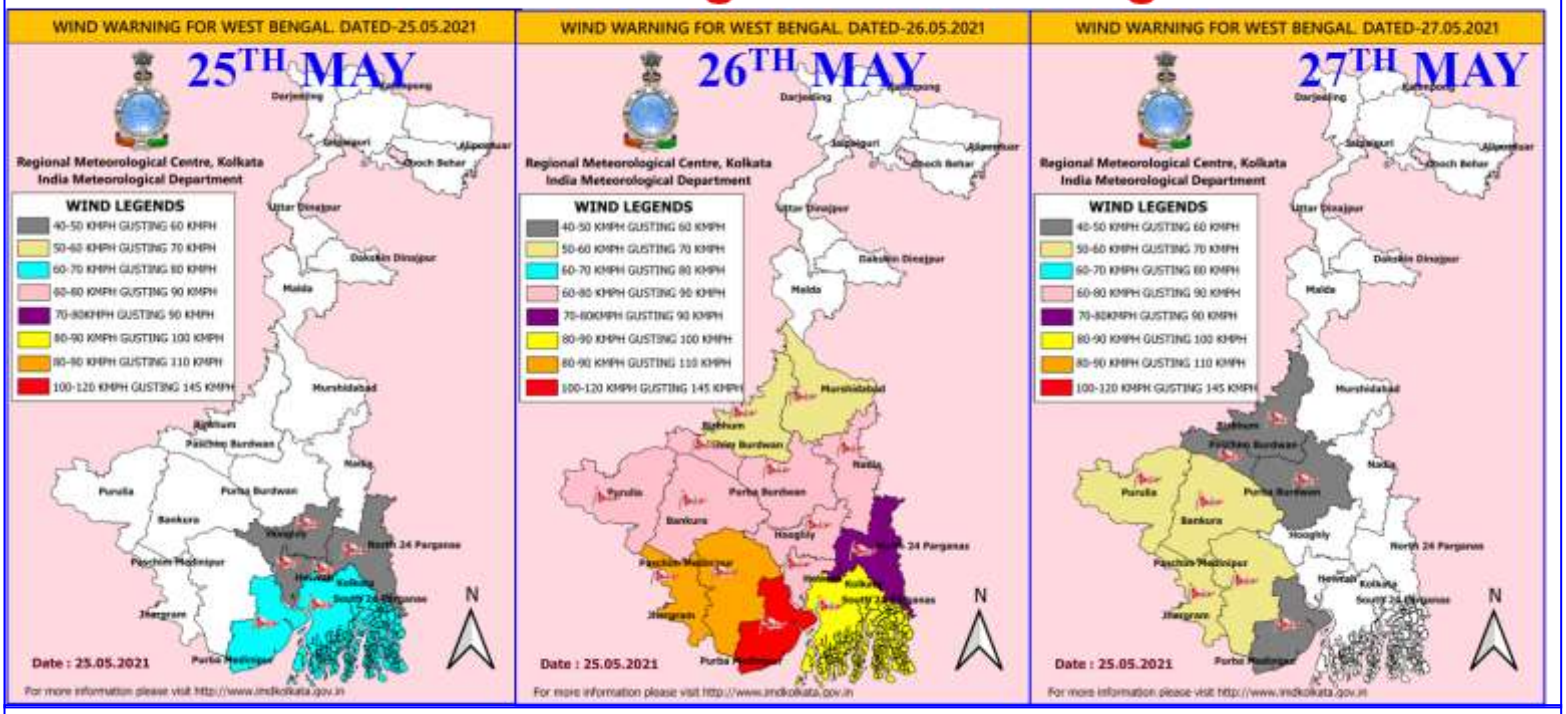
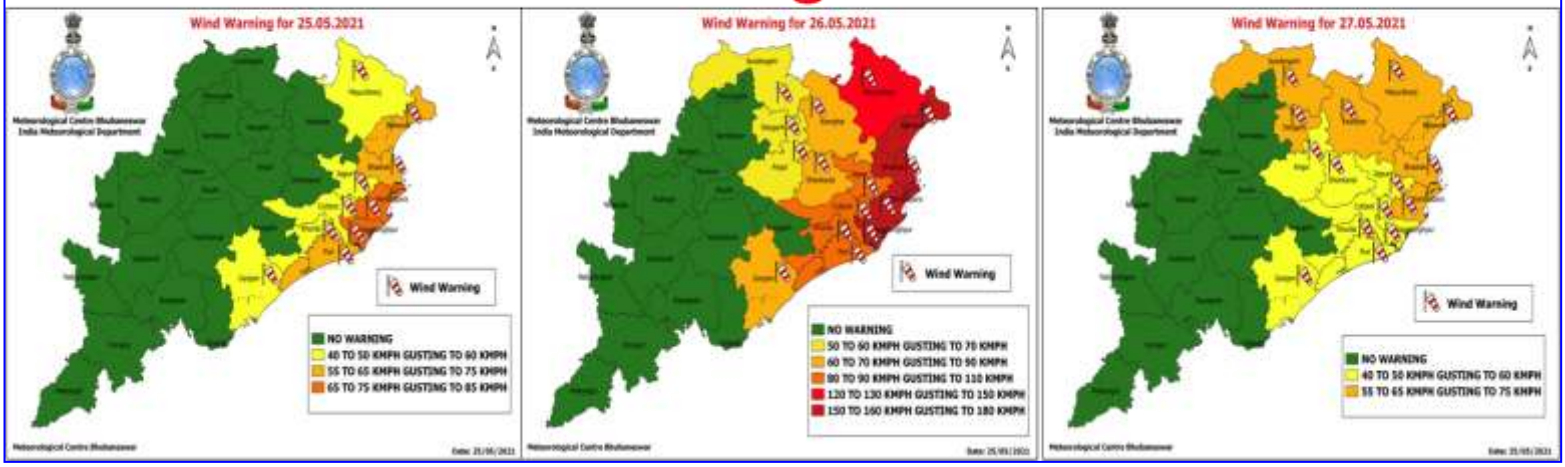
Wind warning for West Bengal



Wind warning for Odisha



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