



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 4

FROM: RSMC TROPICAL CYCLONES NEW DELHI DATED 23.10.2022

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)

SUBJECT: CYCLONIC STORM “SITRANG” (PRONOUNCED AS “SI-TRANG”) OVER WESTCENTRAL & ADJOINING EASTCENTRAL BAY OF BENGAL (CYCLONE WARNING FOR WEST BENGAL COAST: ORANGE MESSAGE)

TROPICAL CYCLONE ADVISORY NO.4 BASED ON 2100 UTC OF 23RD OCTOBER 2022:

THE CYCLONIC STORM “SITRANG” **PRONOUNCED AS “SI-TRANG”** OVER WESTCENTRAL & ADJOINING EASTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 2100 HOURS IST OF YESTERDAY, THE 23RD OCTOBER OVER THE SAME REGION NEAR LATITUDE 17.2⁰N AND LONGITUDE 88.4⁰E, ABOUT 770 KM NORTHWEST OF PORT BLAIR (43333), 500 KM SOUTH OF SAGAR ISLAND (42903) AND 650 KM SOUTH-SOUTHWEST OF BARISAL (41950).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. CONTINUING TO MOVE NORTH-NORTHEASTWARDS THEREAFTER, IT IS VERY LIKELY TO CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP CLOSE TO BARISAL AROUND 25TH OCTOBER EARLY MORNING.

FORECAST TRACK & INTENSITY IS GIVEN BELOW:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
23.10.22/2100	17.2/88.4	70-80 GUSTING to 90	CYCLONIC STORM
24.10.22/0000	17.9/88.7	75-85 GUSTING to 95	CYCLONIC STORM
24.10.22/0600	19.4/89.1	85-95 GUSTING to 105	SEVERE CYCLONIC STORM
24.10.22/1200	20.7/89.7	90-100 GUSTING to 110	SEVERE CYCLONIC STORM
24.10.22/1800	21.4/90.1	85-95 GUSTING to 105	SEVERE CYCLONIC STORM
25.10.22/0600	23.0/91.0	50-60 GUSTING to 70	DEEP DEPRESSION
25.10.22/1800	24.7/92.1	25-35 GUSTING to 45	WELL MARKED LOW PRESSURE AREA

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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THE CONVECTION OVER WEST CENTRAL BAY OF BENGAL & NEIGHBOURHOOD HAS INTENSIFIED. INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 2.5/2.5. THE SYSTEM SHOWS SHEAR PATTERN AND MAXIMUM CONVECTION IS SHEARED TOWARDS NORTH OF SYSTEM CENTER. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BAY OF BENGAL BET LATITUDE 13.0⁰N TO 22.0⁰N LONGITUDE 85.0⁰E TO 92.5⁰E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEGREE CELSIUS.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IS ABOUT 40 KNOTS GUSTING TO 50 KNOTS AROUND SYSTEM CENTER. ESTIMATED CENTRAL PRESSURE IS 996 HPA. SEA CONDITION IS LIKELY TO BE VERY ROUGH TO HIGH OVER CENTRAL BAY OF BENGAL.

STORM SURGE WARNING:

- (I) TIDAL WAVE OF ABOUT 2.4 M HEIGHT ABOVE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF BANGLADESH COAST NEAR THE LANDFALL AREA AROUND THE TIME OF LANDFALL.
- (II) TIDAL WAVE OF ABOUT 1.0 M HEIGHT ABOVE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF WEST BENGAL (NORTH & SOUTH 24 PARGANAS) AROUND THE TIME OF LANDFALL.

REMARKS:

THE MADDEN JULIAN OSCILLATION INDEX (MJO) CURRENTLY LIES IN PHASE 6 WITH AMPLITUDE GREATER THAN 1. IT WOULD CONTINUE IN SAME PHASE DURING NEXT 5 DAYS WITH GRADUALLY INCREASING AMPLITUDE.

SEA SURFACE TEMPERATURE (SST) IS AROUND 29-30⁰C OVER CENTRAL & NORTH BOB. THE OCEAN HEAT CONTENT (OHC) IS AROUND 120 KJ/CM² OVER THE SAME REGION.

LOW LEVEL VORTICITY HAS INCREASED AND IS ABOUT 150 X10⁻⁶ S⁻¹ CLOSE TO THE SOUTH-SOUTHEAST OF SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE IS AROUND 40 X10⁻⁵ S⁻¹ TO THE NORTH-NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND 50 X10⁻⁵ S⁻¹ TO THE NORTH-NORTHEAST OF SYSTEM CENTRE. STRONG POLEWARD OUTFLOW IS SEEN IN UPPER LEVELS AS EXHIBITED IN SATELLITE IMAGERY. WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND THE SYSTEM CENTER AND IS HIGH (20-30 KNOT) ALONG THE FORECAST TRACK.

A BUOY (23093) NEAR LAT. 16.4 DEG. N AND LONG. 88.0 DEG. E. REPORTED FALL IN PRESSURE BY 07 HPA DURING PAST 24 HOURS WITH MEAN SEA LEVE PRESSURE 1000.3 HPA AND WIND OF 330⁰/19.4 KNOT.

CURRENTLY, THE SYSTEM IS IN A FAVOURABLE ENVIRONMENT FOR FURTHER INTENSIFICATION INTO A MARGINALLY SEVERE CYCLONIC STORM. A TROUGH IN MID-LATITUDE WESTERLIES IS ROUGHLY RUNNING ALONG 83⁰E UPTO 20⁰N. THE SYSTEM HAS STARTED MOVING NORTH-NORTHEASTWARDS UNDER THE INFLUENCE OF THIS TROUGH IN MID-LATITUDE WESTERLIES IN MIDDLE AND UPPER TROPOSPHERIC LEVELS, THE ANTI CYCLONE TO THE EAST OF THE SYSTEM CENTRE AND THE SOUTHWESTERLY WINDS ASSOCIATED WITH THE RIDGE ALONG 18⁰N.

MOST OF THE MODELS ARE INDICATING LIKELY INTENSIFICATION INTO A MARGINALLY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. THE MODELS ARE ALSO INDICATING NORTH-NORTHEASTWARD MOVEMENT OF THE SYSTEM TOWARDS BANGLADESH COAST.

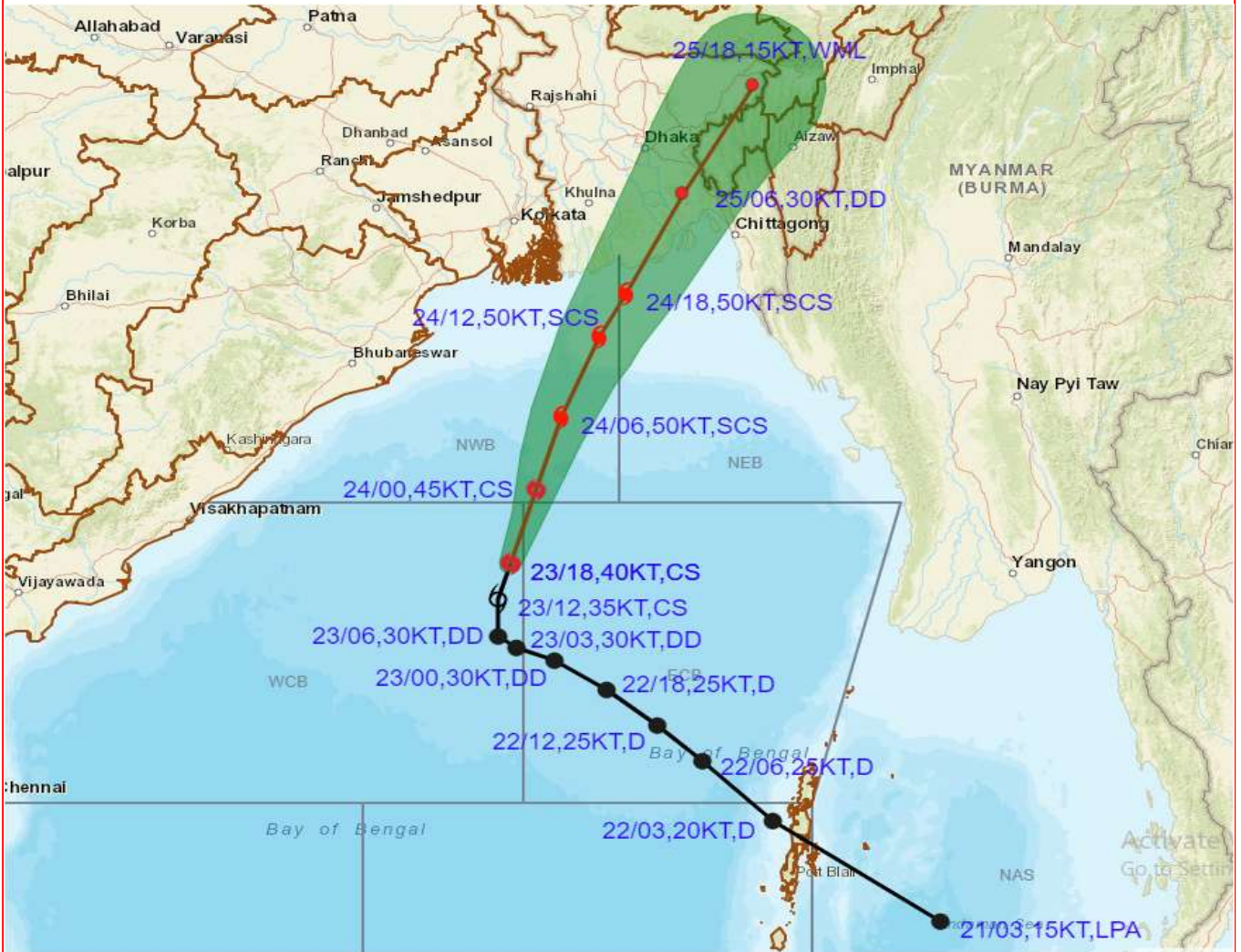
CONSIDERING ALL THE ABOVE, THE **CYCLONIC STORM "SITRANG"** OVER CENTRAL BAY OF BENGAL IS LIKELY TO MOVE NORTH-NORTHEASTWARD DURING NEXT 24 HOURS AND INTENSIFY INTO A **SEVERE CYCLONIC STORM** OVER NORTHWEST BAY OF BENGAL. THEREAFTER, IT WOULD CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP, CLOSE TO BARISAL (41964) AROUND 25TH OCTOBER EARLY MORNING (2100 UTC OF 24TH - 0000 UTC OF 25TH).

NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 24TH OCTOBER 2022.

(P.L.N. MURTY)
RSMC NEW DELHI



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM SITRANG OVER WESTCENTRAL AND ADJOINING EASTCENTRAL BAY OF BENGAL BASED ON 1800 UTC OF 23rd OCTOBER, 2022



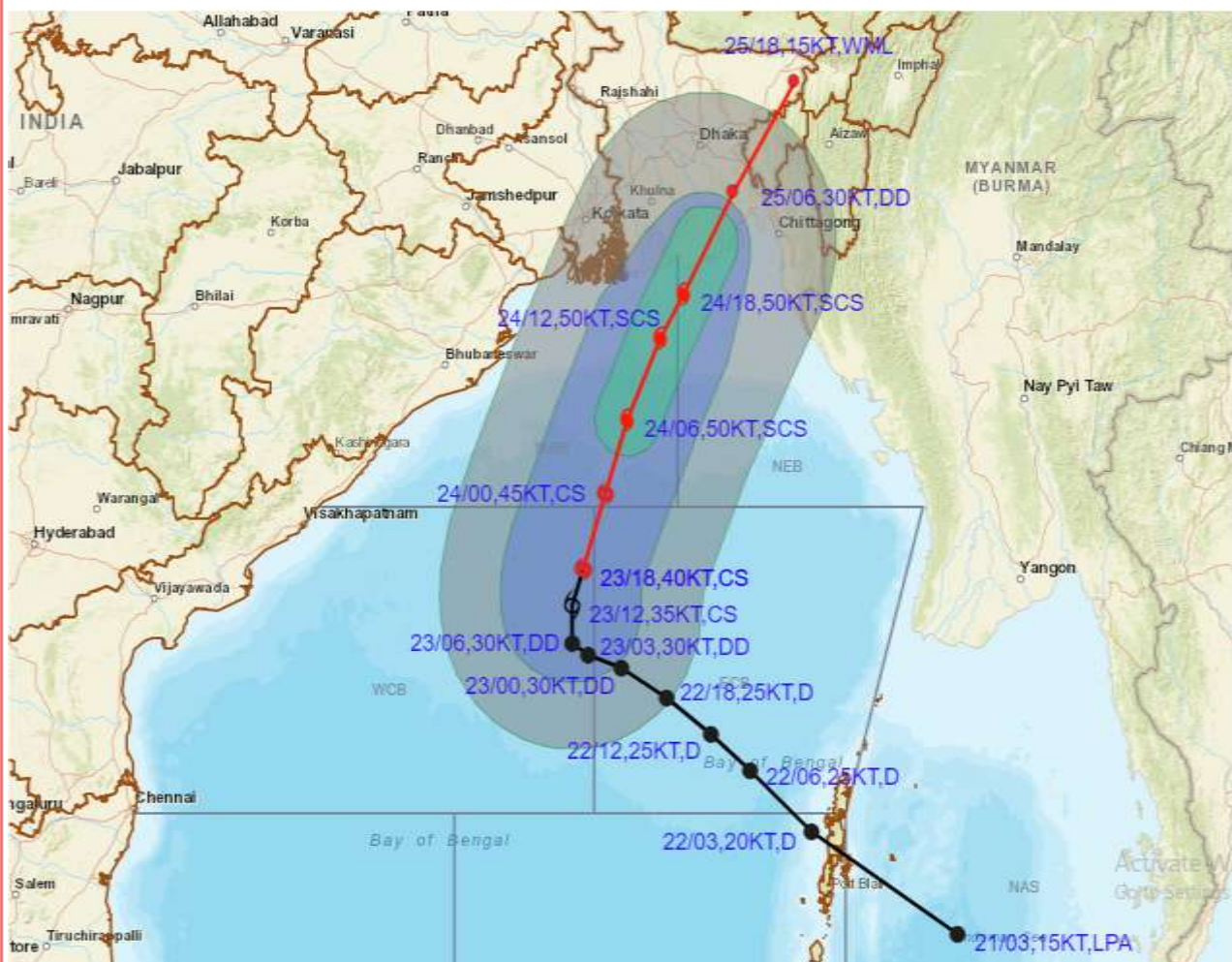
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM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

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
 PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM SITRANG OVER WESTCENTRAL AND ADJOINING EASTCENTRAL BAY OF BENGAL BASED ON 1800 UTC OF 23rd OCTOBER, 2022



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)

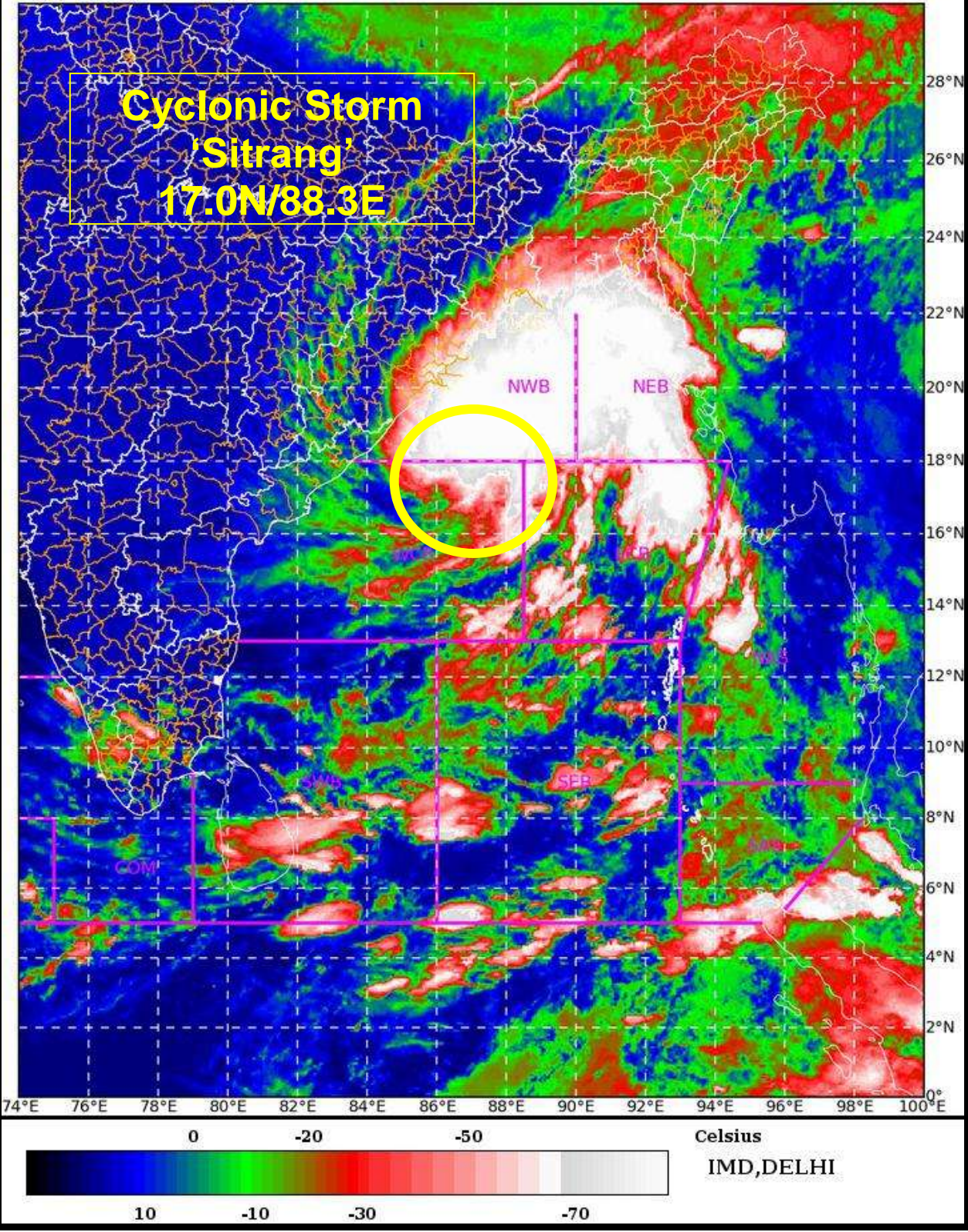
● LESS THAN 34 KT
 ○ 34-47 KT
 ⊙ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ○ CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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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SAT : INSAT-3D IMG 23-10-2022/(1630 to 1656) GMT
IMG_TIR1_TEMP 10.8 um 23-10-2022/(2200 to 2226) IST
L1C Mercator



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Fishermen warning graphics

Day 1: 23.10.2022/11:30AM to 24.10.2022/05:30AM



Day 2: 24.10.2022/05:30AM to 25.10.2022/05:30AM



Day 3: 25.10.2022/05:30AM to 26.10.2022/05:30AM



Day 4: 26.10.2022/05:30AM to 27.10.2022/05:30AM

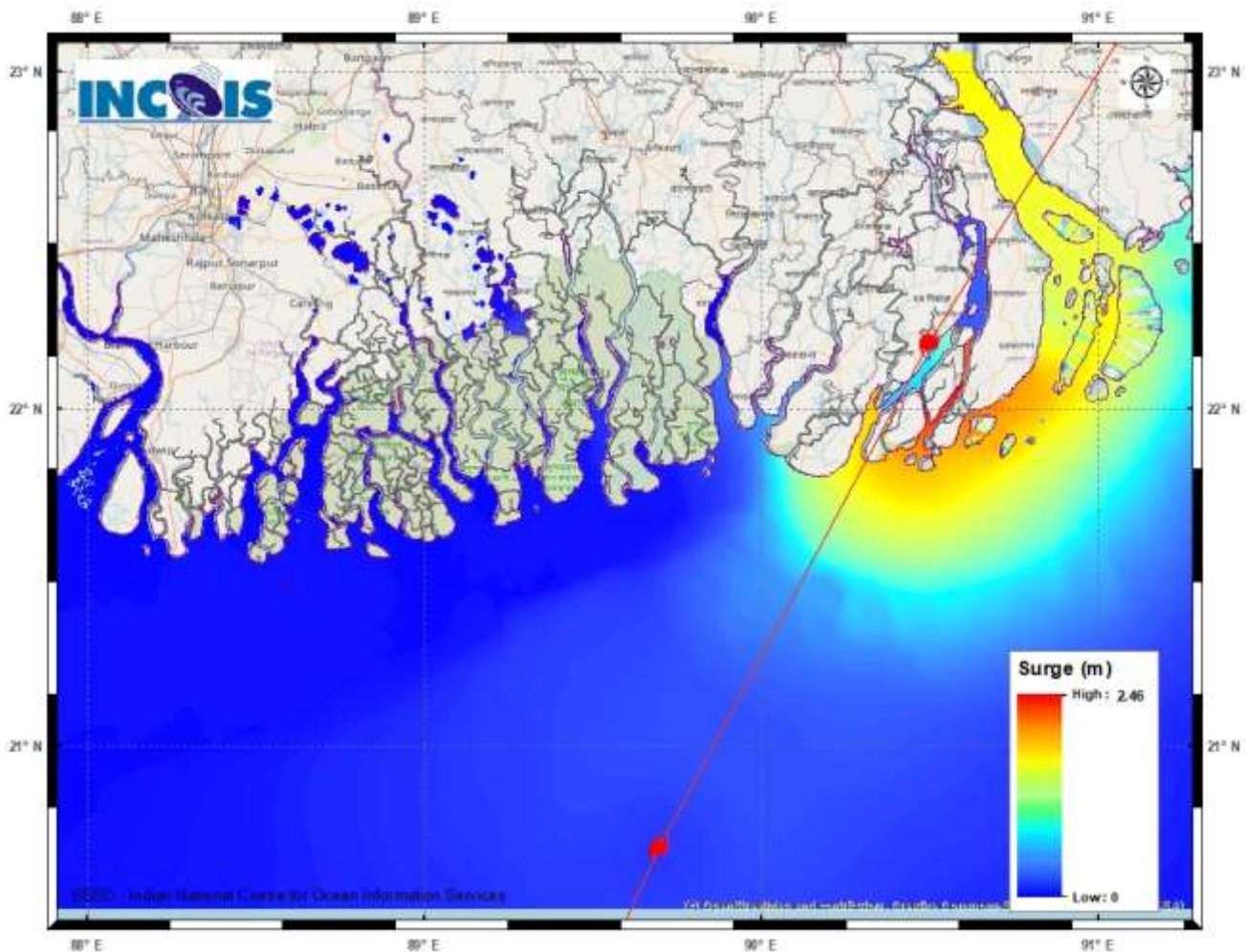


Day 5: 27.10.2022/05:30AM to 28.10.2022/05:30AM



	Squally WX with wind speed 40-45 kmph gusting to 55 kmph
	Squally WX with wind speed 45-55 kmph gusting to 65 kmph
	Squally wind speed with wind speed 45-55 kmph gusting to 65 kmph
	Squally wind speed with wind speed 55-65 kmph gusting to 75 kmph
	Gale wind speed with wind speed 65-75 kmph gusting to 85 kmph
	Gale wind speed with wind speed 80-90 kmph gusting to 100 kmph
	Gale wind speed with wind speed 90-100 kmph gusting to 110 kmph

Fishermen are advised not to venture into the marked areas.



Storm Surge Warning Graphics

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