



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 23.05.2021

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0930 UTC OF 23.05.2021 BASED ON 0600 UTC OF 23.05.2021.

BAY OF BENGAL:

LATEST SATELLITE IMAGERIES AND OCEAN BUOY OBSERVATIONS INDICATE THAT YESTERDAY'S LOW PRESSURE AREA WHICH BECAME WELL MARKED OVER EASTCENTRAL BAY OF BENGAL IN THE SAME EVENING HAS CONCENTRATED INTO A **DEPRESSION** OVER EAST-CENTRAL BAY OF BENGAL AND LAY CENTRED AT 0600 UTC OF TODAY, THE 23RD MAY, 2021 NEAR LATITUDE 16.1°N AND LONGITUDE 90.2°E, ABOUT 560 KM NORTH-NORTHWEST OF PORT BLAIR (43333), 590 KM EAST-SOUTHEAST OF PARADIP (42976), 690 KM SOUTH-SOUTHEAST OF BALASORE (42895) AND 670 KM SOUTH-SOUTHEAST OF DIGHA (42901).

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND INTENSIFY INTO A **CYCLONIC STORM** BY 24TH MAY MORNING (AROUND 0000 UTC) AND FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING THE SUBSEQUENT 24 HOURS. IT WOULD CONTINUE TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER AND REACH NORTHWEST BAY OF BENGAL NEAR WEST BENGAL AND NORTH ODISHA COASTS BY 26TH MAY MORNING (AROUND 0000 UTC). IT IS VERY LIKELY TO CROSS NORTH ODISHA - WEST BENGAL BETWEEN PARADIP AND SAGAR ISLANDS BY EVENING (AROUND 1200 UTC) OF 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
23.05.21/0600	16.1/90.2	45-55 gusting to 65	Depression
23.05.21/1800	16.6/89.8	55-65 gusting to 75	Deep Depression
24.05.21/0600	17.3/89.6	70-80 gusting to 90	Cyclonic Storm
24.05.21/1880	17.6/89.3	90-100 gusting to 110	Severe Cyclonic Storm
25.05.21/0600	18.2/88.7	120-130 gusting to 145	Very Severe Cyclonic Storm
25.05.21/1800	19.7/88.1	145-155 gusting to 170	Very Severe Cyclonic Storm
26.05.21/0600	21.2/87.4	155-165 gusting to 185	Very Severe Cyclonic Storm
26.05.21/1800	22.0/86.9	100-110 gusting to 120	Severe Cyclonic Storm
27.05.21/0600	23.1/86.0	45-55 gusting to 65	Depression

THE MAXIMUM SUSTAINED WIND SPEED IS 20-25 KNOTS GUSTING TO 35 KNOTS AROUND SYSTEM CENTRE. SEA CONDITION IS ROUGH TO VERY ROUGH. THE ESTIMATED CENTRAL PRESSURE IS 1000 HPA.

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

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AS PER SATELLITE IMAGERY BASED ON 0600 UTC OF TODAY, THE 23RD MAY, THE SYSTEM SHOWS CURVED BAND PATTERN. INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 1.5. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL BAY OF BENGAL (BOB) AND ANDAMAN SEA and NEIGHBOURHOOD. MINIMUM CLOUD TOP TEMPERATURE IS 93°CELCIUS.

REMARKS:

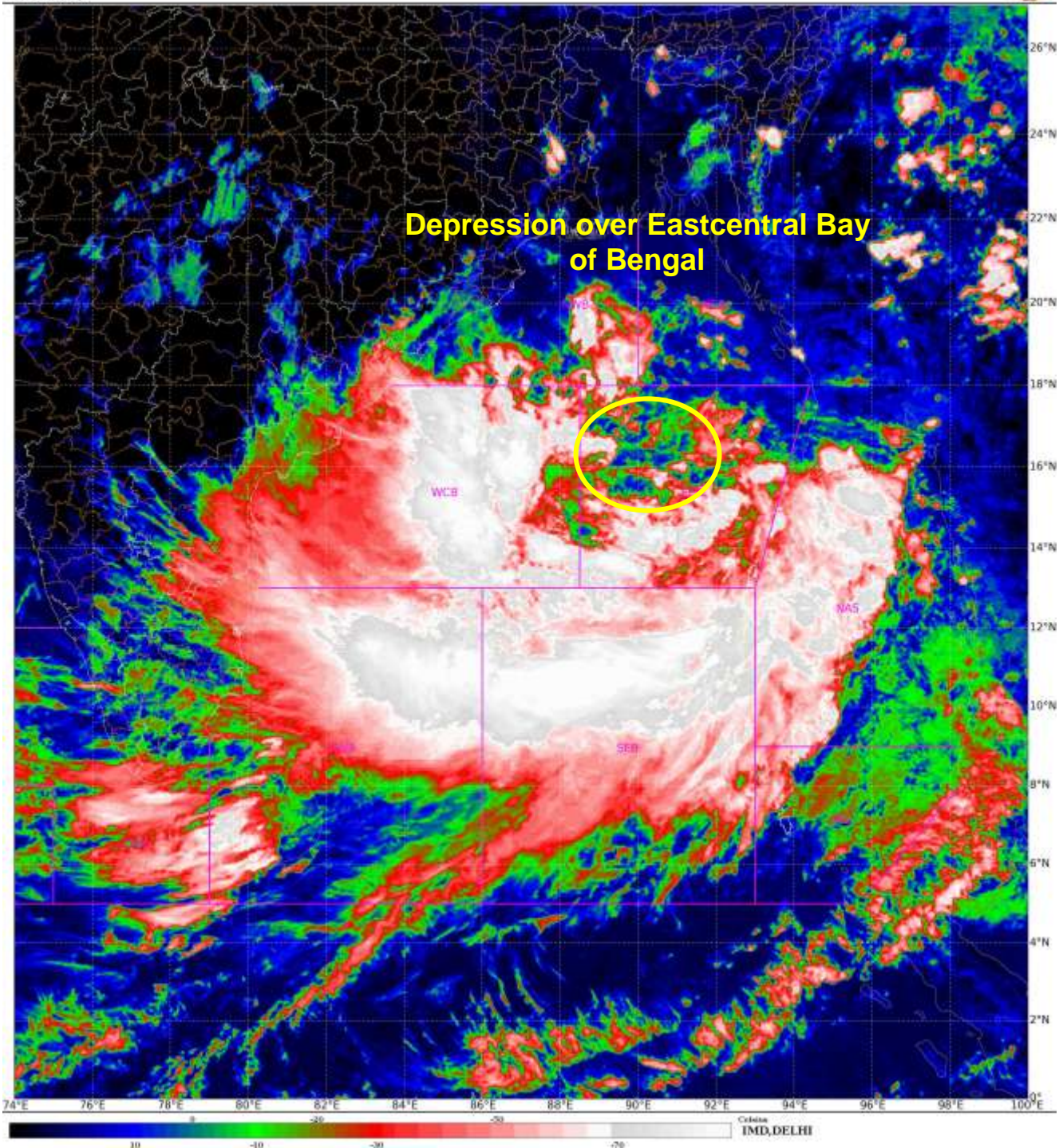
THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1 AND WILL CONTINUE IN SAME PHASE TILL 24TH MAY. THUS, MJO IS CONDUCIVE FOR ENHANCED CONVECTION OVER THE BAY OF BENGAL (BOB) DURING NEXT 2 DAYS. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 100 KJ/CM² OVER MAJOR 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 30-31⁰C OVER MAJOR PARTS OF BOB.

EASTERLY WINDS ARE PREVAILING IN THE UPPER LEVEL. UPPER TROPOSPHERIC RIDGE RUNS ALONG 22.0⁰N. AN NORTHEAST-SOUTHWEST ORIENTED POSITIVE VORTICITY ZONE 100-120 X 10⁻⁶ S⁻¹ IS PREVAILING TO THE SOUTH OF SYSTEM CENTRE OVER CENTRAL BOB WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. VORTICITY HAS INCREASED DURING PAST 24 HOURS. AN EAST-WEST ORIENTED POSITIVE CONVERGENCE ZONE HAS ALSO INCREASED DURING PAST 24 HOURS (30-40 X 10⁻⁵ S⁻¹) & LAY TO THE SOUTH OF SYSTEM CENTRE. AN EAST-WEST ORIENTED ZONE OF POSITIVE UPPER LEVEL DIVERGENCE (30-40 X 10⁻⁵ S⁻¹) LAY OVER CENTRAL BOB. IT HAS ALSO INCREASED DURING PAST 24 HOURS. MODERATE VERTICAL WIND SHEAR (VWS) (10-20 KTS) IS PREVAILING OVER CENTRAL & NORTH BOB TO THE NORTH OF 15°N AND IS DECREASING BECOMING LOW (5-10 KTS) OVER NORTH BAY OF BENGAL. THE SEA CONDITIONS AND EXISTING ENVIRONMENTAL FEATURES LIKE ENHANCED LOW LEVEL VORTICITY, LOWER LEVEL CONVERGENCE, EQUATORWARD & POLEWARD OUTFLOW, MODERATE VERTICAL WIND SHEAR LED TO INTENSIFICATION OF THE SYSTEM INTO A DEPRESSION AT 0600 UTC OF 23RD MAY.

MOST OF THE NUMERICAL MODELS INCLUDING IMD GFS, NCEP GFS, ECMWF AND NCMUM ARE UNANIMOUSLY INDICATING NORTH-NORTHWESTWARD MOVEMENT TOWARDS WEST BENGAL AND ADJOINING NORTH ODISHA COASTS. MODELS AND RAPID INTENSIFICATION OF SYSTEM UPTO VERY SEVERE CYCLONIC STORM CATEGORY. CONSIDERING THE MEAN MODEL GUIDANCE, THE SYSTEM IS EXPECTED TO REACH NORTH BAY OF BENGAL NEAR WEST BENGAL AND ADJOINING NORTH ODISHA & BANGLADESH COASTS AROUND 26TH MAY MORNING. IT IS VERY LIKELY TO CROSS WEST BENGAL AND ADJOINING NORTH ODISHA COASTS AROUND EVENING OF 26TH MAY.

IN VIEW OF ABOVE, IT IS INFERRED THAT THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND INTENSIFY INTO A **CYCLONIC STORM** BY 24TH MAY MORNING (AROUND 0000 UTC) AND FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING THE SUBSEQUENT 24 HOURS. IT WOULD CONTINUE TO MOVE NORTH-NORTHWESTWARDS, INTENSIFY FURTHER AND REACH NORTHWEST BAY OF BENGAL NEAR WEST BENGAL AND NORTH ODISHA COASTS BY 26TH MAY MORNING (AROUND 0000 UTC). IT IS VERY LIKELY TO CROSS NORTH ODISHA - WEST BENGAL BETWEEN PARADIP AND SAGAR ISLANDS BY EVENING (AROUND 1200 UTC) OF 26TH MAY AS A VERY SEVERE CYCLONIC STORM.

(SUNITHA DEVI S)
SCIENTIST-F, RSMC NEW DELHI

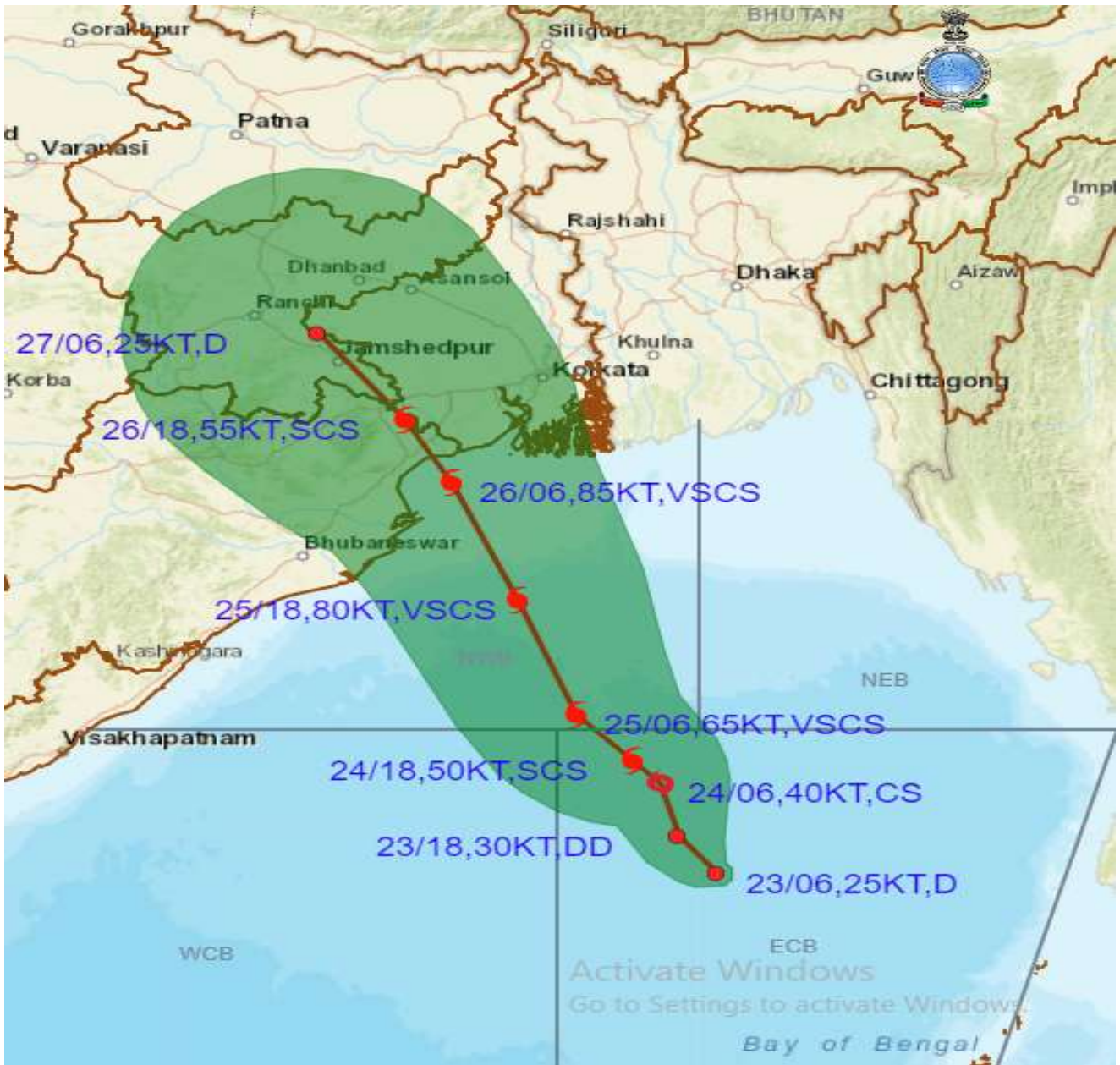


PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0600 UTC OF 23RD 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)

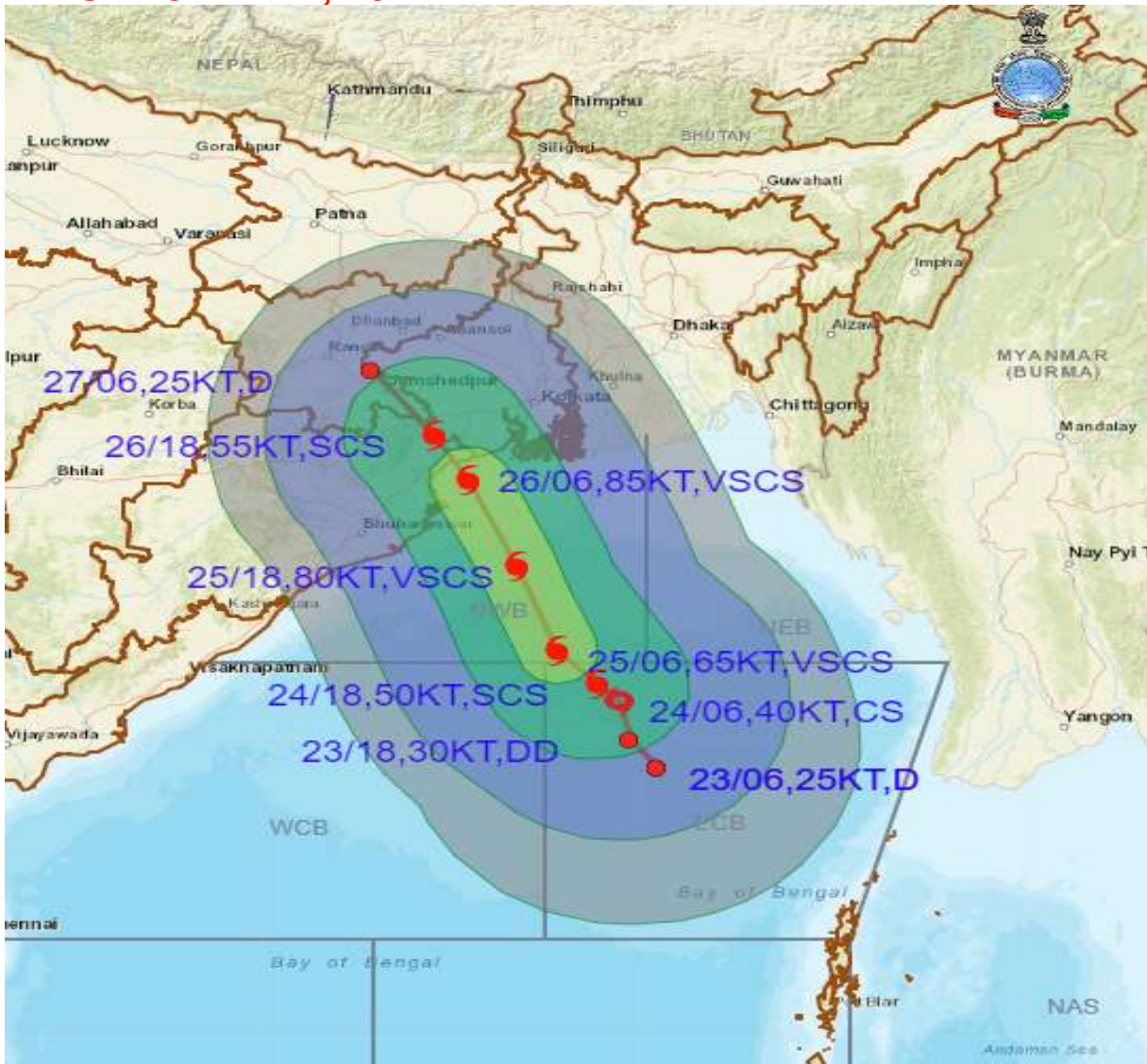
- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0600 UTC OF 23RD 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)

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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

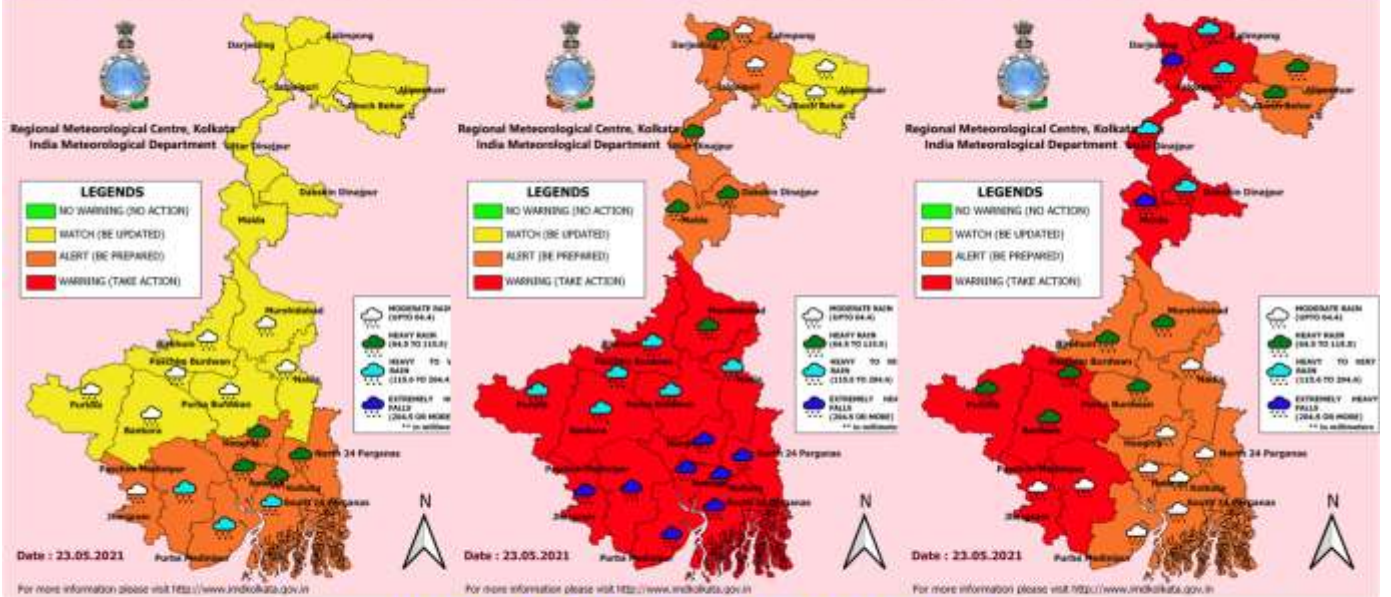
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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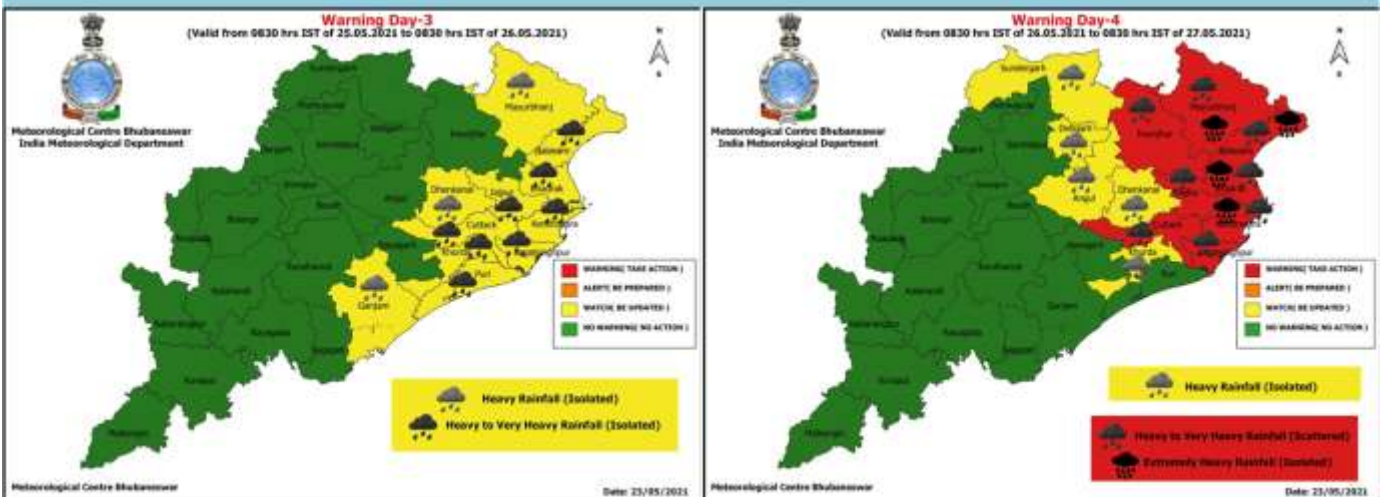
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Rainfall warning for West Bengal & Sikkim

HEAVY RAINFALL WARNING FOR WEST BENGAL, DATED-25.05; HEAVY RAINFALL WARNING FOR WEST BENGAL, DATED-26.05; HEAVY RAINFALL WARNING FOR WEST BENGAL, DATED-27.05.2021



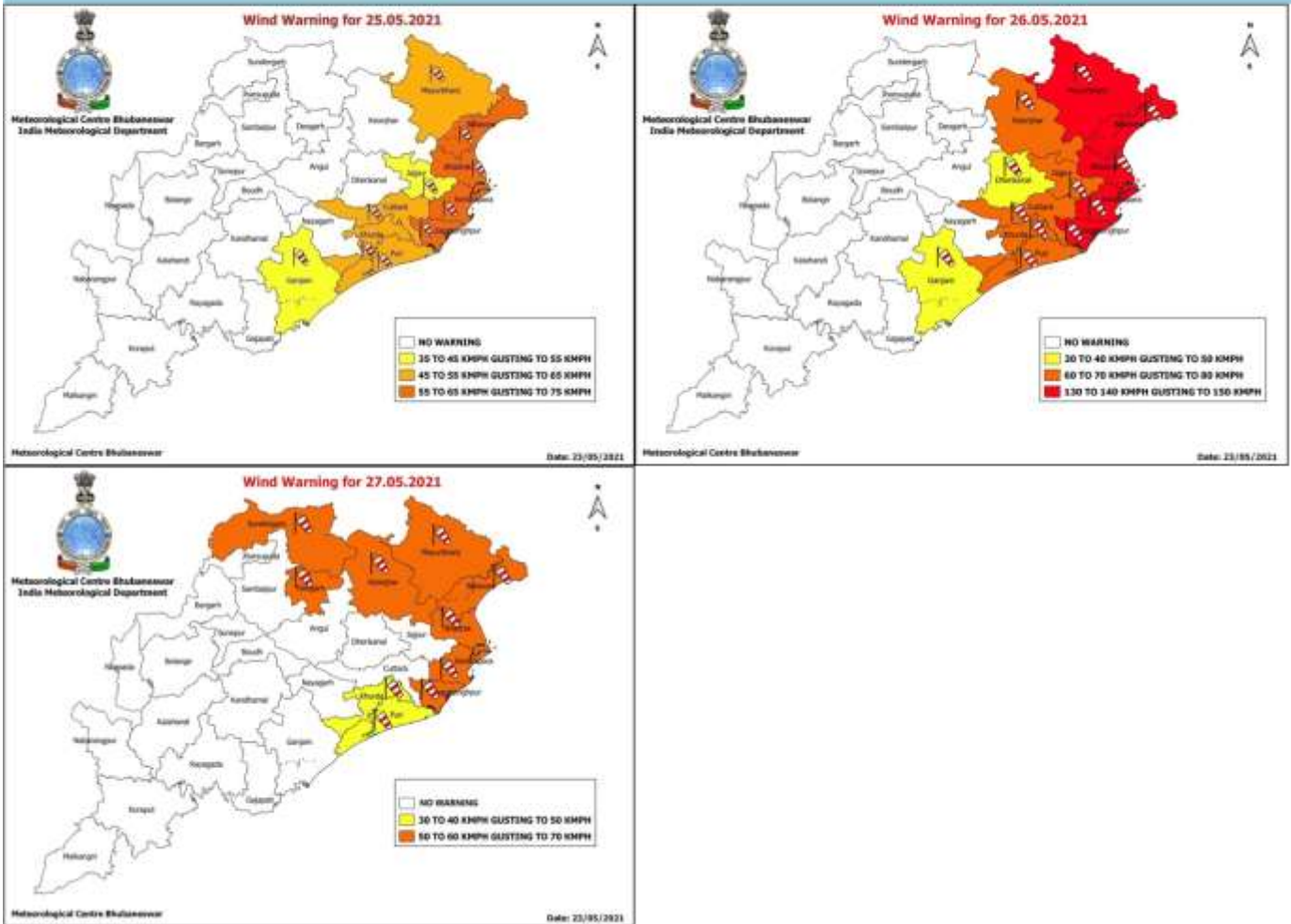
Rainfall forecast Odisha



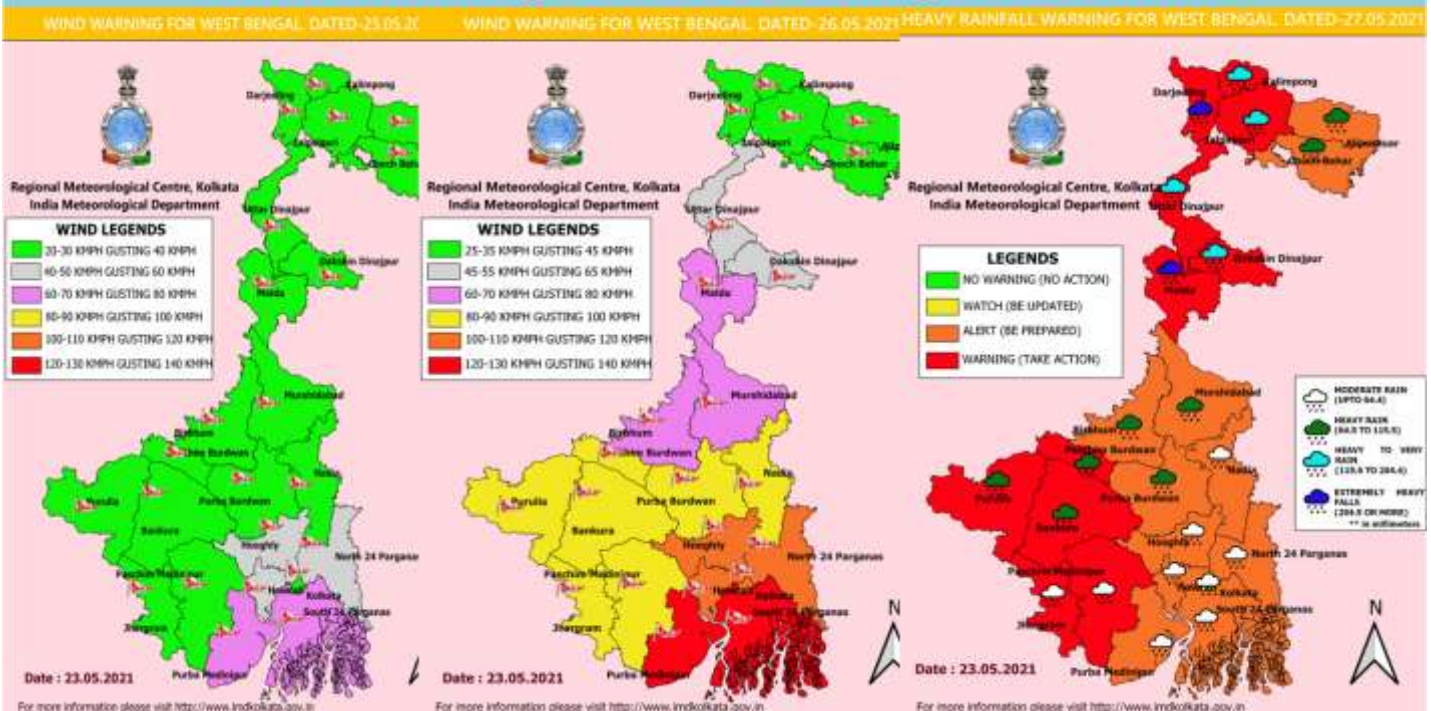
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Wind warning for Odisha



Wind warning for West Bengal & Sikkim



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