



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 10.05.2023

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2030 UTC OF 10.05.2023 BASED ON 1800 UTC OF 10.05.2023.

BAY OF BENGAL:

SUB: DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL

THE DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1800 UTC OF 10TH MAY 2023 OVER THE SAME REGION NEAR LATITUDE 10.8°N AND LONGITUDE 88.2°E, ABOUT 500 KM WEST-SOUTHWEST OF PORT BLAIR (INDIA, 43333), 1250 KM SOUTH-SOUTHWEST OF COX'S BAZAR (BANGLADESH, 41992) AND 1150KM SOUTH-SOUTHWEST OF SITTWE (MYANMAR, 48062).

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND INTENSIFY GRADUALLY INTO A CYCLONIC STORM OVER THE SAME REGION AROUND 0000 UTC OF 11TH MAY. THEN CONTINUING TO MOVE NORTH-NORTHWESTWARDS, IT WILL GRADUALLY INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM AROUND 1800 UTC OF 11TH MAY AND VERY SEVERE CYCLONIC STORM AROUND 0600 UTC OF 12TH MAY OVER CENTRAL BAY OF BENGAL. THEREAFTER, IT IS LIKELY TO RECURVE GRADUALLY, AND MOVE NORTH-NORTHEASTWARDS FROM 0000 UTC OF 12TH MAY. IT IS LIKELY TO WEAKEN SLIGHTLY FROM 1200 UTC OF 13TH MAY AND CROSS SOUTHEAST BANGLADESH AND NORTH MYANMAR COASTS BETWEEN COX'S BAZAR (BANGLADESH) AND KYAUKPYU (MYANMAR) DURING 0300 TO 0600 UTC OF 14TH MAY, 2023 WITH MAXIMUM SUSTAINED WIND SPEED OF 120-130 KMPH GUSTING TO 145 KMPH.

FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:

DATE/TIME (UTC)	POSITION LAT. °N/ LONG. °E	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
10.05.23/1800	10.8/88.2	55-65 GUSTING TO 75	DEEP DEPRESSION
11.05.23/0000	11.4/88.0	60-70 GUSTING TO 80	CYCLONIC STORM
11.05.23/0600	11.9/87.9	70-80 GUSTING TO 90	CYCLONIC STORM
11.05.23/1200	12.4/87.8	80-90 GUSTING TO 100	CYCLONIC STORM
11.05.23/1800	12.9/87.9	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
12.05.23/0600	13.7/88.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
12.05.23/1800	15.1/88.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
13.05.23/0600	16.6/89.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
13.05.23/1800	18.4/91.3	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
14.05.23/0600	20.3/93.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
14.05.23/1800	23.5/95.7	55-65 GUSTING TO 75	DEEP DEPRESSION

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 MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH OVER SOUTHEAST BAY OF BENGAL AND ADJOINING AREAS OF ANDAMAN SEA.

AS PER SATELLITE IMAGERY INTENSITY OF THE SYSTEM IS CHARACTERISED AS T2.0. ASSOCIATED BROKEN LOW/MED CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 6.0N TO 14.0N AND LONG 80.0E TO 93.0E. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93 DEG CELSIUS. INTENSE TO VERY INTENSE CONVECTION LIES OVER SOUTH SECTOR OF THE SYSTEM CENTRE.

AT 1800 UTC, A BUOY NEAR 10.6°N/93.7°E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.8 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 160⁰/15.6 KTS. ANOTHER BUOY NEAR 14.0°N/87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.6 HPA.

STORM SURGE GUIDANCE (GRAPHICS ATTACHED) FOR NORTH MYANMAR AND ADJOINING SOUTHEAST BANGLADESH COASTS:

STORM SURGE WITH HEIGHT OF ABOUT 1.5-2.0 M ABOVE THE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF NORTH MYANMAR AND ADJOINING SOUTHEAST BANGLADESH COASTS DURING THE TIME OF LANDFALL.

REMARKS:

THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 100 KJ/CM² OVER MAJOR PARTS OF SOUTHEAST AND CENTRAL BAY OF BENGAL (BOB). IT IS INDICATING DECREASING TENDENCY ABOUT 60-70 KJ/CM² ALONG MYANMAR COAST. SEA SURFACE TEMPERATURE (SST) IS AROUND 30°C OVER SOUTHEAST BOB. IT IS SLIGHTLY HIGHER OVER EASTCENTRAL BOB AROUND 31°C AND LESS OFF MYANMAR COAST. THE SEA CONDITIONS OVER BOB ARE ALSO CONDUCIVE FOR FURTHER INTENSIFICATION OF SYSTEM OVER EASTCENTRAL BOB. TOTAL PRECIPITABLE WATER IMAGERY (TPW) INDICATES WARM MOIST AIR INCURSION INTO THE SYSTEM AREA FROM SOUTH.

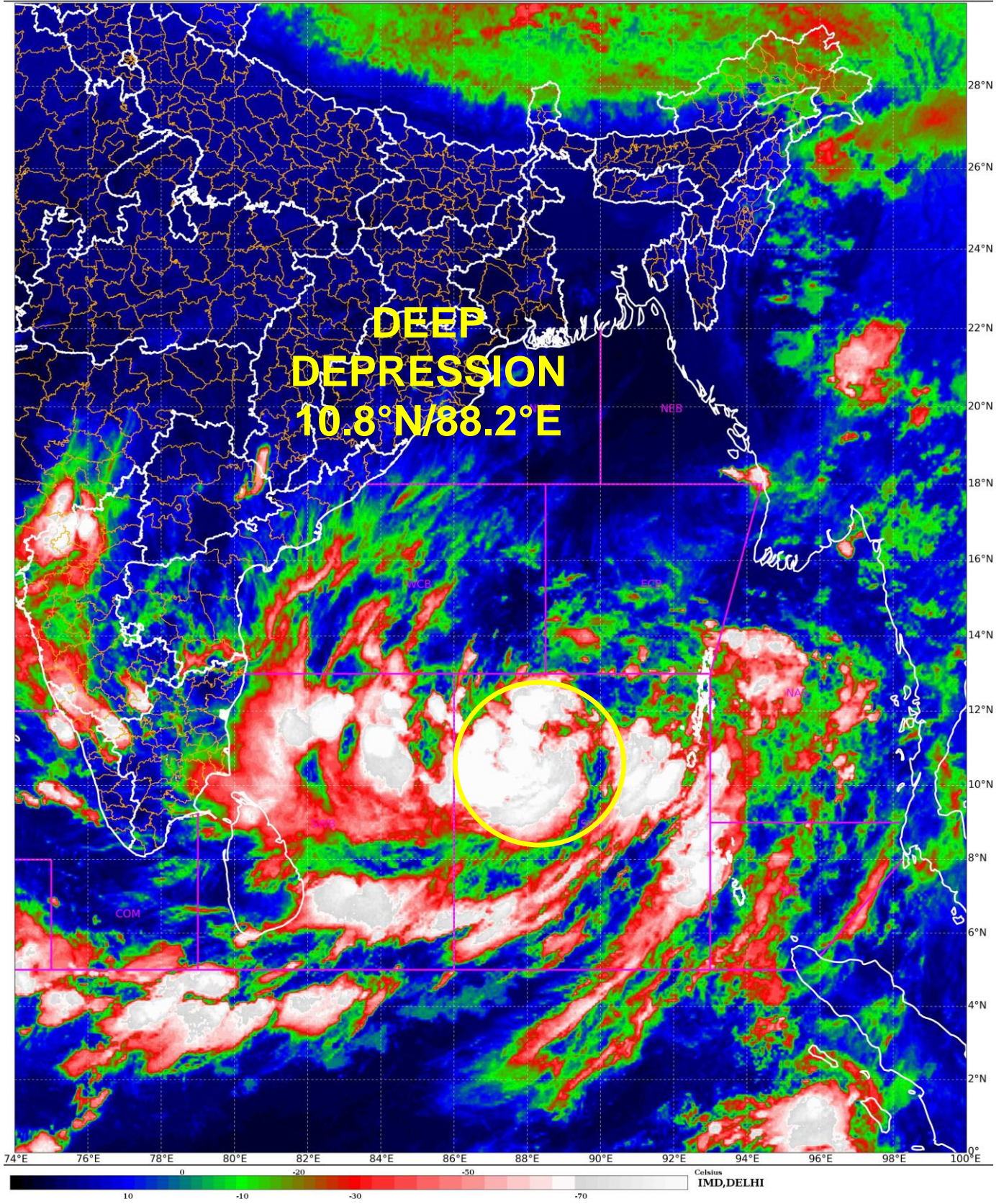
CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE LOW LEVEL VORTICITY AT 850 HPA HAS NOT CHANGED AND REMAINS SAME DURING PAST 6 HOURS WITH VALUE AROUND 200X10⁻⁶S⁻¹ TO THE SOUTH WEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 20 X10⁻⁵ S⁻¹ TO THE EAST AND WEST OF THE SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS ABOUT 20X10⁻⁵S⁻¹ TO THE WEST. THE VERTICAL WIND SHEAR IS LOW (10-15 KNOTS) OVER THE SYSTEM AREA AND LOW TO MODRATE (10-20) ALONG THE EXPECTED TRACK OVER CENTRAL BOB. THE SEA CONDITIONS AND ENVIRONMENTAL FEATURES INDICATE FAVOURABLE ENVIRONMENT FOR FURTHER INTENSIFICATION OVER THE REGION. THE SYSTEM IS LYING IN THE PERIPHERY OF UPPER TROPOSPHERIC RIDGE NEAR 15.0N IN ASSOCIATION WITH ANTI CYCLONIC CIRCULATION OVER ESATCENTRAL BOB. THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS ALONG IT'S PERIPHERY. ONCE IT CROSSES 15.0N, IT WILL GRADUALLY RECURVE NORTH-NORTHEASTWARDS, TOWARDS MYANMAR-BANGLADESH COASTS.

GUIDANCE FROM VARIOUS NUMERICAL MODELS INCLUDING IMD GFS, NCEP GFS, ECMWF, NCUM, UKMO AND IMD MME ARE NOW CONSISTENT WRT TRACK AND LANDFALL POINT. HOWEVER, THERE IS VARIATION AMONG VARIOUS MODELS WRT LANDFALL TIME AND INTENSITY OF THE SYSTEM. BUT, THERE IS CONSENSUS AMONG VARIOUS MODELS WRT SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL. IMD GFS IS INDICATING LANDFALL AROUND 14/0600 UTC NEAR 20.1N/93.2E. ECMWF IS INDICATING LANDFALL AROUND 14/0300 UTC NEAR 20.4N/92.7E. IMD MME IS INDICATING LANDFALL AROUND

14/1000 UTC NEAR 20.15N/92.88E. PEAK INTENSITY BY VARIOUS MODELS IS VARYING BETWEEN 60 KT-110 KT. ACCORDINGLY, OPERATIONALLY THE PEAK INTENSITY HAS BEEN TAKEN AS 80 KTS BASED ON MME.

IT IS CONCLUDED THAT, THE DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND INTENSIFY GRADUALLY INTO A CYCLONIC STORM OVER THE SAME REGION AROUND 0000 UTC OF 11TH MAY. THEN CONTINUING TO MOVE NORTH-NORTHWESTWARDS, IT WILL GRADUALLY INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM AROUND 1800 UTC OF 11TH MAY AND VERY SEVERE CYCLONIC STORM AROUND 0600 UTC OF 12TH MAY OVER CENTRAL BAY OF BENGAL. THEREAFTER, IT IS LIKELY TO RECURVE GRADUALLY, AND MOVE NORTH-NORTHEASTWARDS FROM 0000 UTC OF 12TH MAY. IT IS LIKELY TO WEAKEN SLIGHTLY FROM 1200 UTC OF 13TH MAY AND CROSS SOUTHEAST BANGLADESH AND NORTH MYANMAR COASTS BETWEEN COX'S BAZAR (BANGLADESH) AND KYAUKPYU (MYANMAR) DURING 0300 TO 0600 UTC OF 14TH MAY, 2023 WITH MAXIMUM SUSTAINED WIND SPEED OF 120-130 KMPH GUSTING TO 145 KMPH.

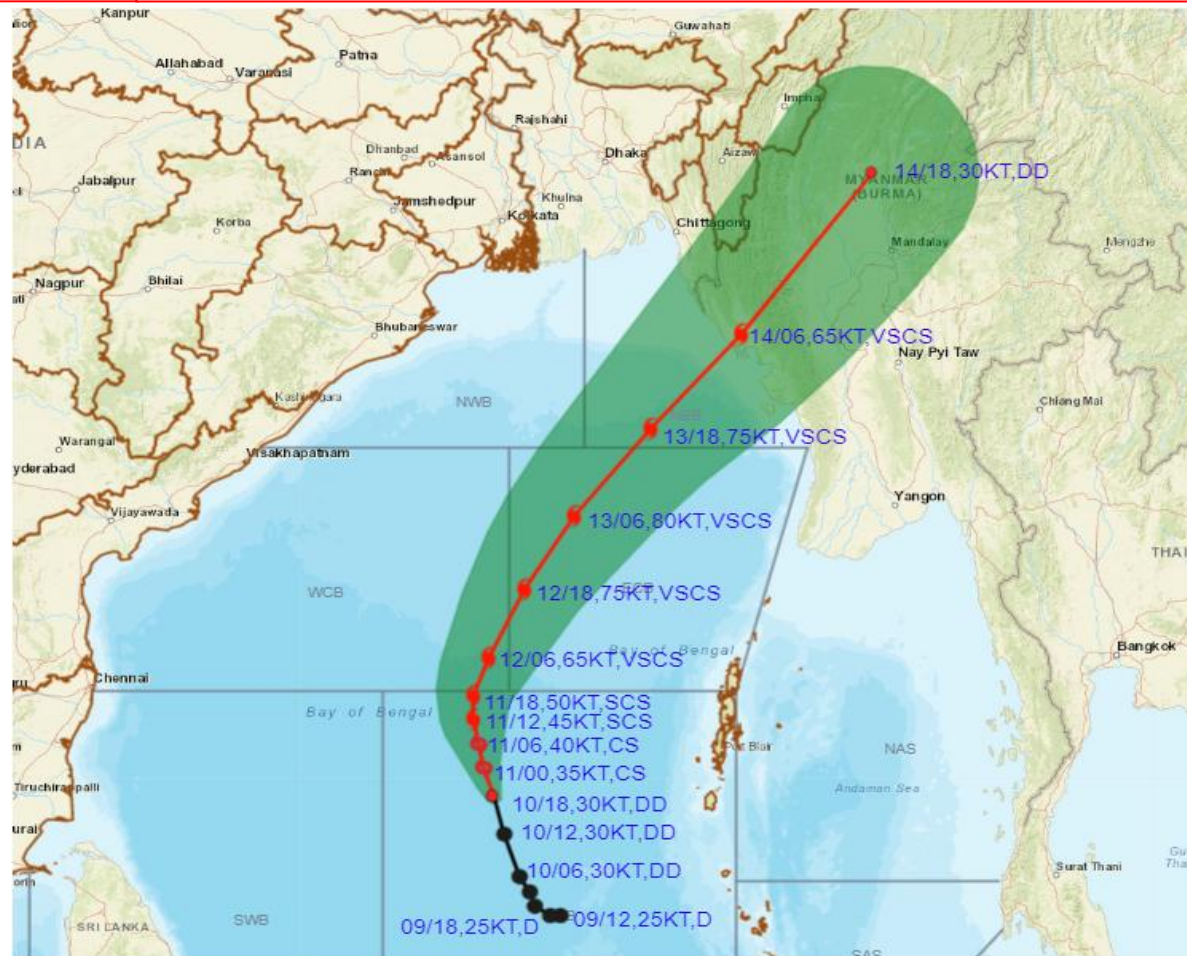
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RSMC NEW DELHI



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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 10TH MAY 2023



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

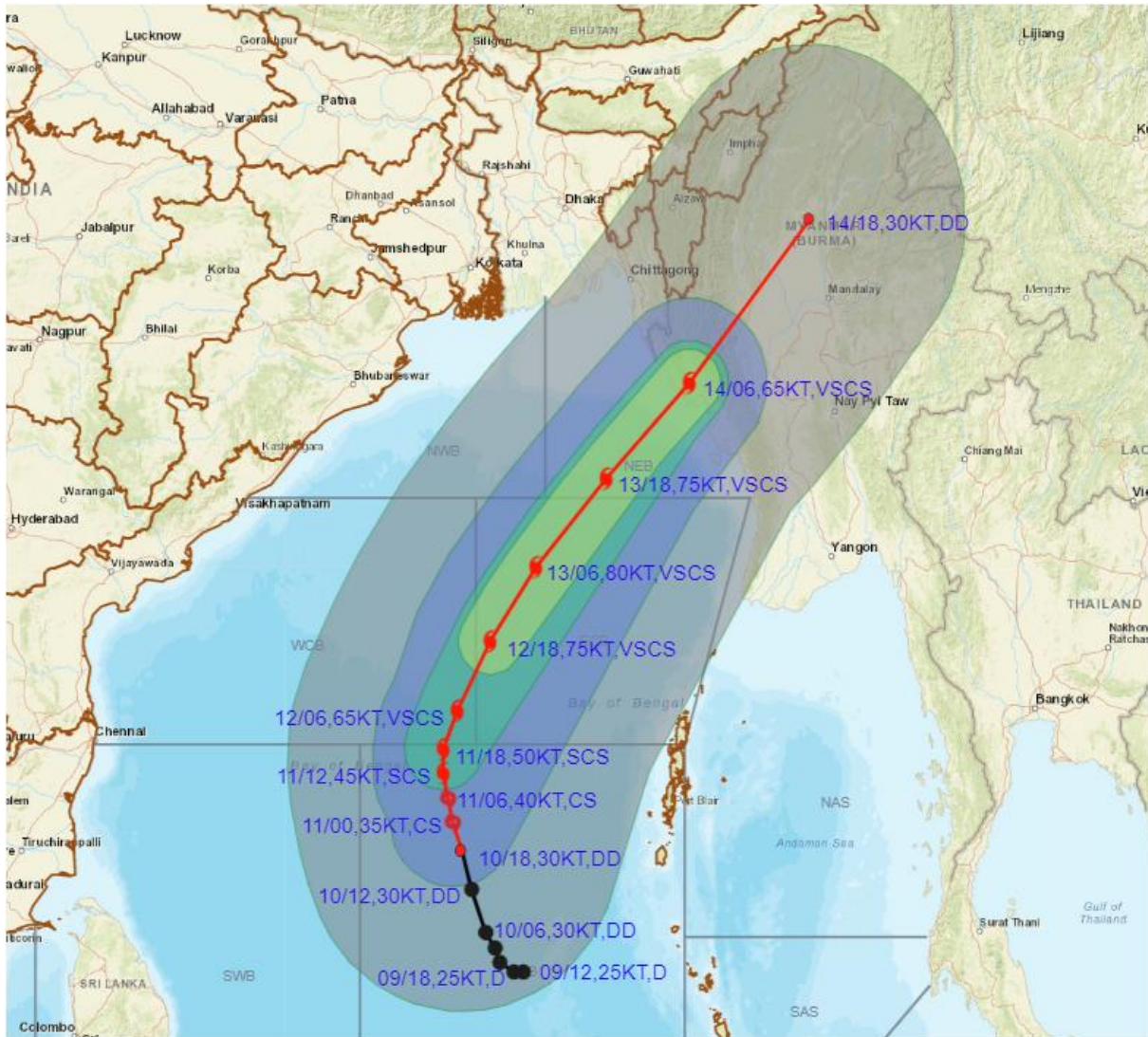
Forecast distance (km) and direction of the centre from nearest 5 coastal stations

Forecast Date and Time	Lead Period	Lat	Lon	Station 1	Station 2	Station 3	Station 4	Station 5
10.05.23/1800	0	10.8	88.2	HUT BAY (476,W)	PORT BLAIR (502,W)	CAR NICOBAR (540,WNW)	LONG ISLAND (547,WSW)	MAYA BANDAR (565,WSW)
11.05.23/0000	6	11.4	88.0	HUT BAY (505,W)	PORT BLAIR (515,W)	LONG ISLAND (549,WSW)	MAYA BANDAR (561,WSW)	CAR NICOBAR (585,WNW)
11.05.23/0600	12	11.9	87.9	PORT BLAIR (526,W)	HUT BAY (528,WNW)	LONG ISLAND (551,W)	MAYA BANDAR (557,W)	CAR NICOBAR (620,WNW)
11.05.23/1200	18	12.4	87.8	PORT BLAIR (541,W)	HUT BAY (556,WNW)	LONG ISLAND (558,W)	MAYA BANDAR (559,W)	COCO ISLAND (633,WSW)
11.05.23/1800	24	12.9	87.8	PORT BLAIR (552,WNW)	MAYA BANDAR (555,W)	LONG ISLAND (560,W)	HUT BAY (578,WNW)	COCO ISLAND (618,WSW)

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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 10TH MAY 2023.



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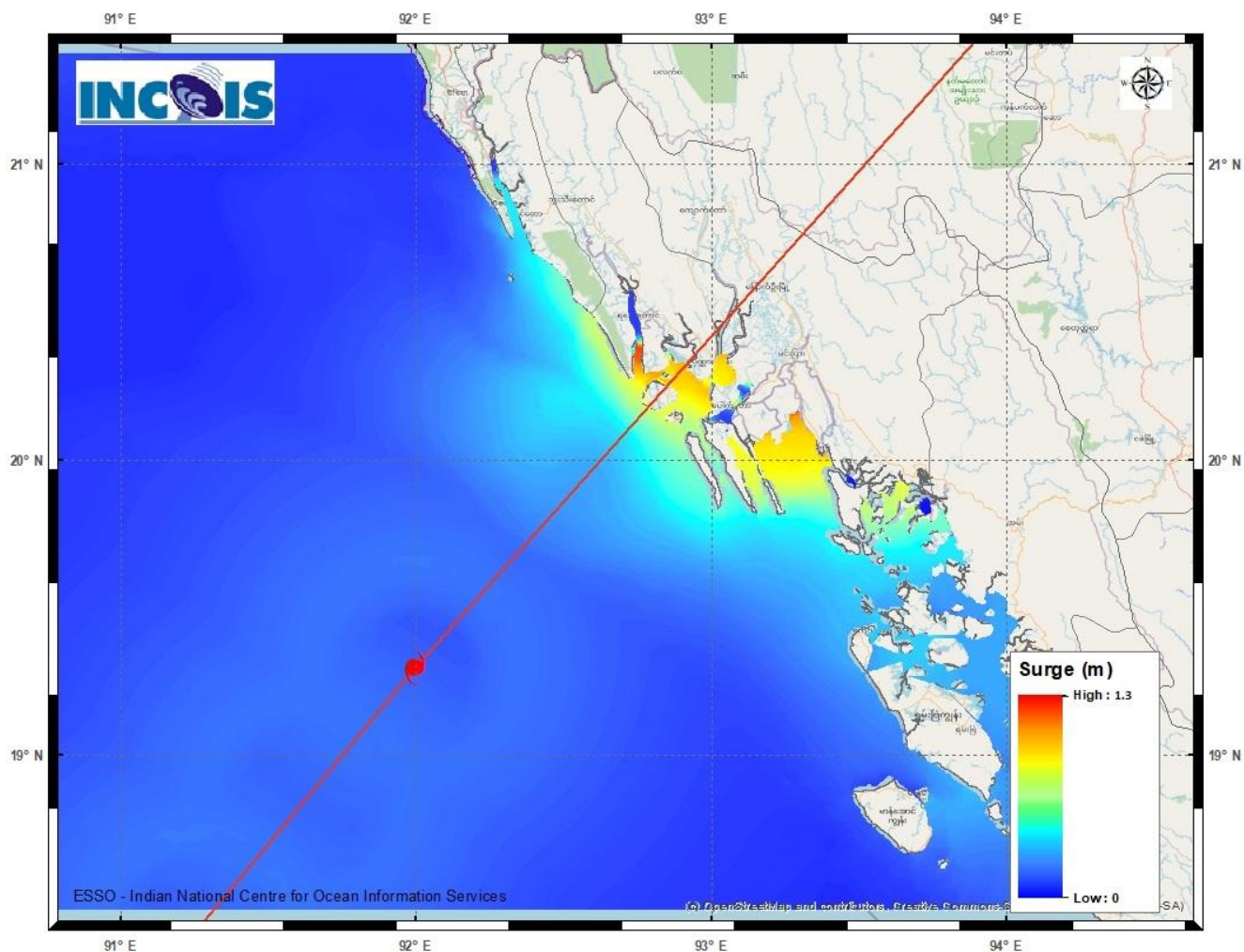
● LESS THAN 34 KT
 ○ 34-47 KT
 ⊙ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ■ CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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

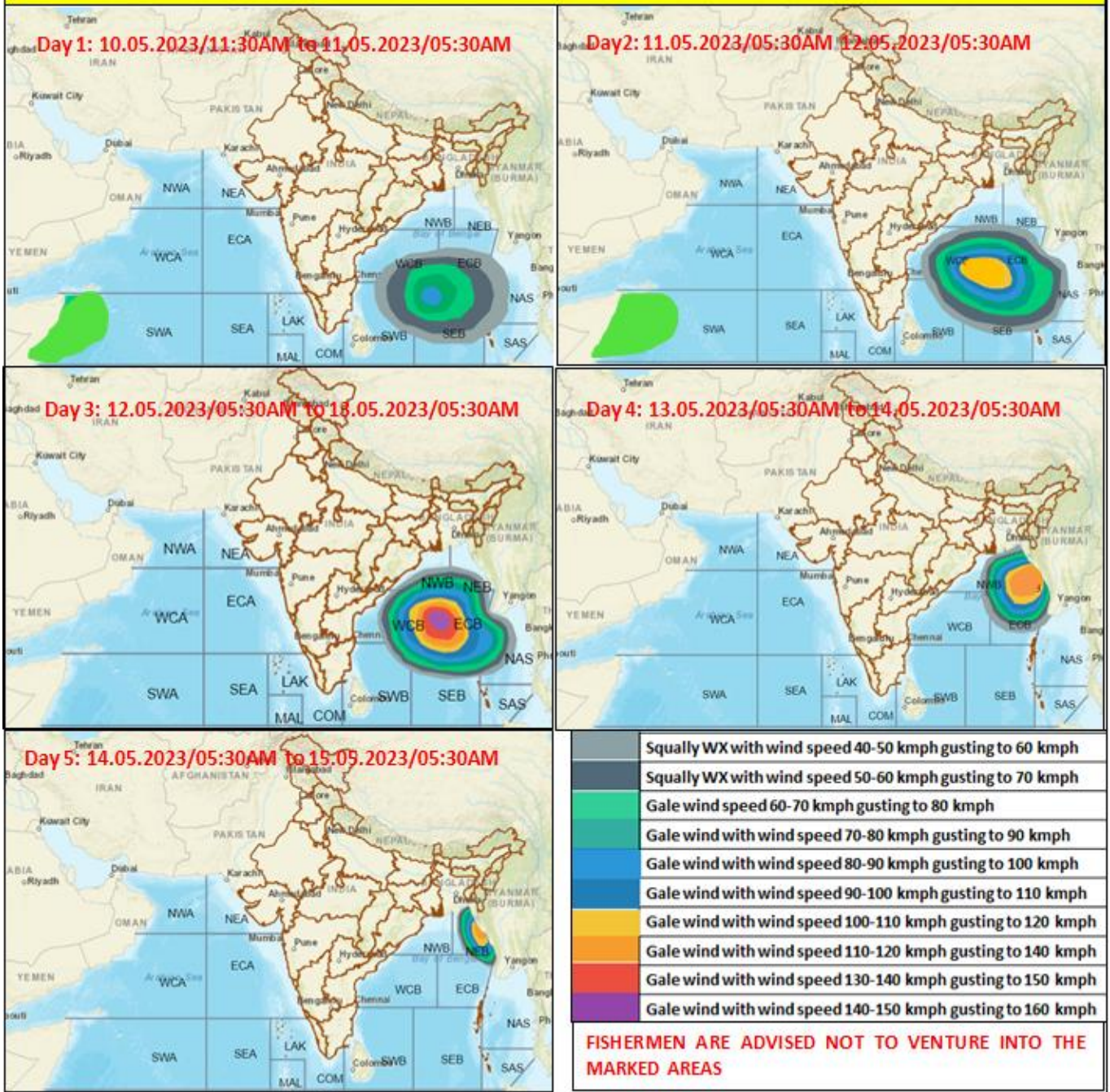
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Storm Surge Warning Graphics based on 1200 UTC Track OF IMD



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Fishermen warning graphics



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