



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 23.10.2022

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0630 UTC OF 23.10.2022 BASED ON 0300 UTC OF 23.10.2022.

SUBJECT: DEEP DEPRESSION OVER WESTCENTRAL & ADJOINING EASTCENTRAL BAY OF BENGAL (CYCLONE ALERT: WEST BENGAL COAST)

THE DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0300 UTC OF TODAY, THE 23RD OCTOBER OVER THE WESTCENTRAL & ADJOINING EASTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.6°N AND LONGITUDE 88.4°E, ABOUT 640 KM NORTHWEST OF PORT BLAIR (43333), 670 KM SOUTH OF SAGAR ISLAND (42903) AND 820 KM SOUTH-SOUTHWEST OF BARISAL (41950).

IT IS VERY LIKELY TO MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND INTENSIFY INTO A **CYCLONIC STORM** OVER CENTRAL BAY OF BENGAL. THEREAFTER, IT WOULD RECURVE & MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP, CLOSE TO BARISAL (41964) AROUND 25TH OCTOBER EARLY MORNING (0000 UTC).

FORECAST TRACK & INTENSITY IS GIVEN BELOW:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
23.10.22/0300	15.6/88.4	50-60 gusting to 70	Deep Depression
23.10.22/0600	16.2/87.9	55-65 gusting to 75	Deep Depression
23.10.22/1200	16.9/87.7	60-70 gusting to 80	Cyclonic Storm
23.10.22/1800	17.7/88.0	65-75 gusting to 85	Cyclonic Storm
24.10.22/0000	18.6/88.5	80-90 gusting to 100	Cyclonic Storm
24.10.22/1200	20.4/89.5	85-95 gusting to 105	Severe Cyclonic Storm
25.10.22/0000	22.3/90.6	90-100 gusting to 110	Severe Cyclonic Storm
25.10.22/1200	24.0/91.7	45-55 gusting to 65	Depression
26.10.22/0000	25.8/92.9	30-40 gusting to 50	Well Marked Low Pressure Area

THE CLOUDS ARE ORGANISED IN SHEAR PATTERN. LOW LEVEL CYCLONIC CIRCULATION IS LYING TO THE SOUTH-SOUTHEAST OF SYSTEM CENTRE. INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 2.0. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BAY OF BENGAL BETWEEN LATITUDE 12.0°N TO 20.0°N LONGITUDE 85.5°E TO 93.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEGREE CELSIUS.

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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ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IS ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND SYSTEM AREA. ESTIMATED CENTRAL PRESSURE IS 1004 HPA. SEA CONDITION IS LIKELY TO BE VERY ROUGH OVER CENTRAL & ADJOINING SOUTHEAST BAY OF BENGAL BECOMING HIGH FROM 23RD/1200 UTC ONWARDS.

STORM SURGE WARNING:

- (I) TIDAL WAVE OF ABOUT 2.0 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.
- (III) ASTRONOMICAL TIDE OF ABOUT 5-6 M HEIGHT IS LIKELY ALONG & OFF WEST BENGAL – BANGLADESH COASTS ON 25TH OCTOBER

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.

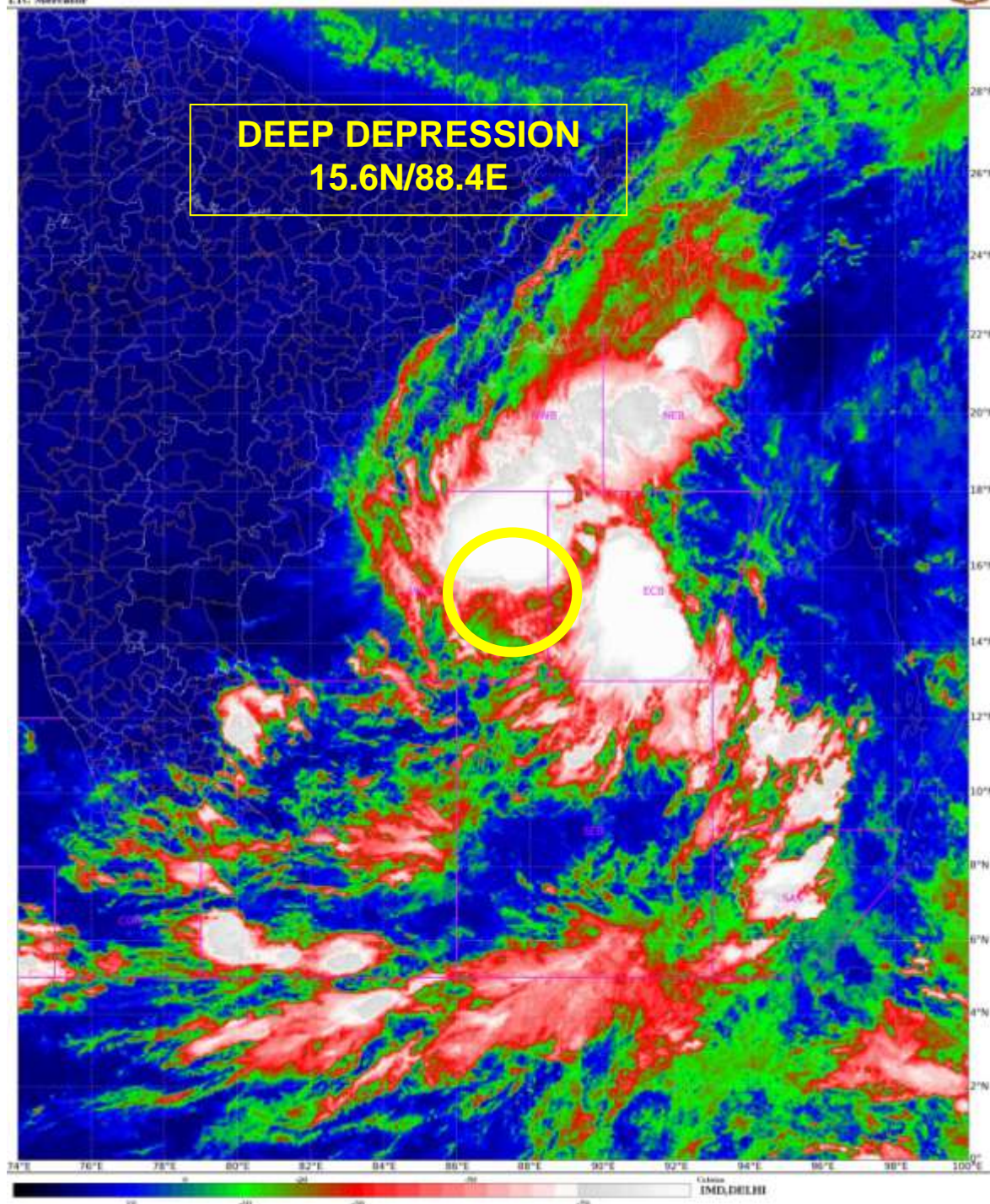
SEA SURFACE TEMPERATURE (SST) IS AROUND 29-30⁰C OVER CENTRAL & NORTH BOB. THE OCEAN HEAT CONTENT (OHC) IS AROUND 120 KJ/CM² OVER THE SAME REGION.

LOW LEVEL VORTICITY IS ABOUT 120 X10⁻⁶ S⁻¹ TO THE SOUTH OF SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE HAS INCREASED AND IS AROUND 40 X10⁻⁵ S⁻¹ TO THE NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS INCREASED AND IS AROUND 40 X10⁻⁵ S⁻¹ TO THE NORTHEAST OF SYSTEM CENTRE. STRONG POLEWARD OUTFLOW IS SEEN IN UPPER LEVELS. WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND THE SYSTEM CENTER AND IS HIGH TO THE NORTH OF 15°N. CURRENTLY, THE SYSTEM IS IN A FAVOURABLE ENVIRONMENT FOR FURTHER INTENSIFICATION INTO A CYCLONIC STORM OR A MARGINALLY SEVERE CYCLONIC STORM. UPPER TROPOSPHERIC RIDGE ROUGHLY RUNS ALONG 18°N OVER BAY OF BENGAL. A TROUGH IN MID-LATITUDE WESTERLIES ROUGHLY RUNNING ALONG 82°E UPTO 20°N. THE SYSTEM IS CURRENTLY TRACKING NORTHWESTWARDS UNDER THE INFLUENCE OF THE SOUTHEASTERLY WINDS IN ASSOCIATION WITH RIDGE ALONG LAT. 18 DEG. N. IT WOULD CONTINUE TO MOVE SO TILL 12 UTC OF 23RD. THEREAFTER COMING UNDER THE INFLUENCE OF THE TROUGH IN MID-LATITUDE WESTERLIES IN MIDDLE AND UPPER TROPOSPHERIC LEVELS AS MENTIONED ABOVE, IT WOULD RECURVE NORTH-NORTHEASTWARDS AND MOVE TOWARDS BANGLADESH COAST.

MOST OF THE MODELS ARE INDICATING LIKELY INTENSIFICATION INTO CYCLONIC STORM DURING NEXT 12 HOURS. THE MODELS ARE ALSO INDICATING GRADUAL NORTH-NORTHEASTWARD RECURVATURE OF THE SYSTEM FROM 23RD EVENING TOWARDS BANGLADESH COAST.

CONSIDERING ALL THE ABOVE, THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL IS LIKELY TO MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND INTENSIFY INTO A **CYCLONIC STORM** OVER CENTRAL BAY OF BENGAL. THEREAFTER, IT WOULD RECURVE & MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP, CLOSE TO BARISAL (41964) AROUND 25TH OCTOBER EARLY MORNING (0000 UTC).

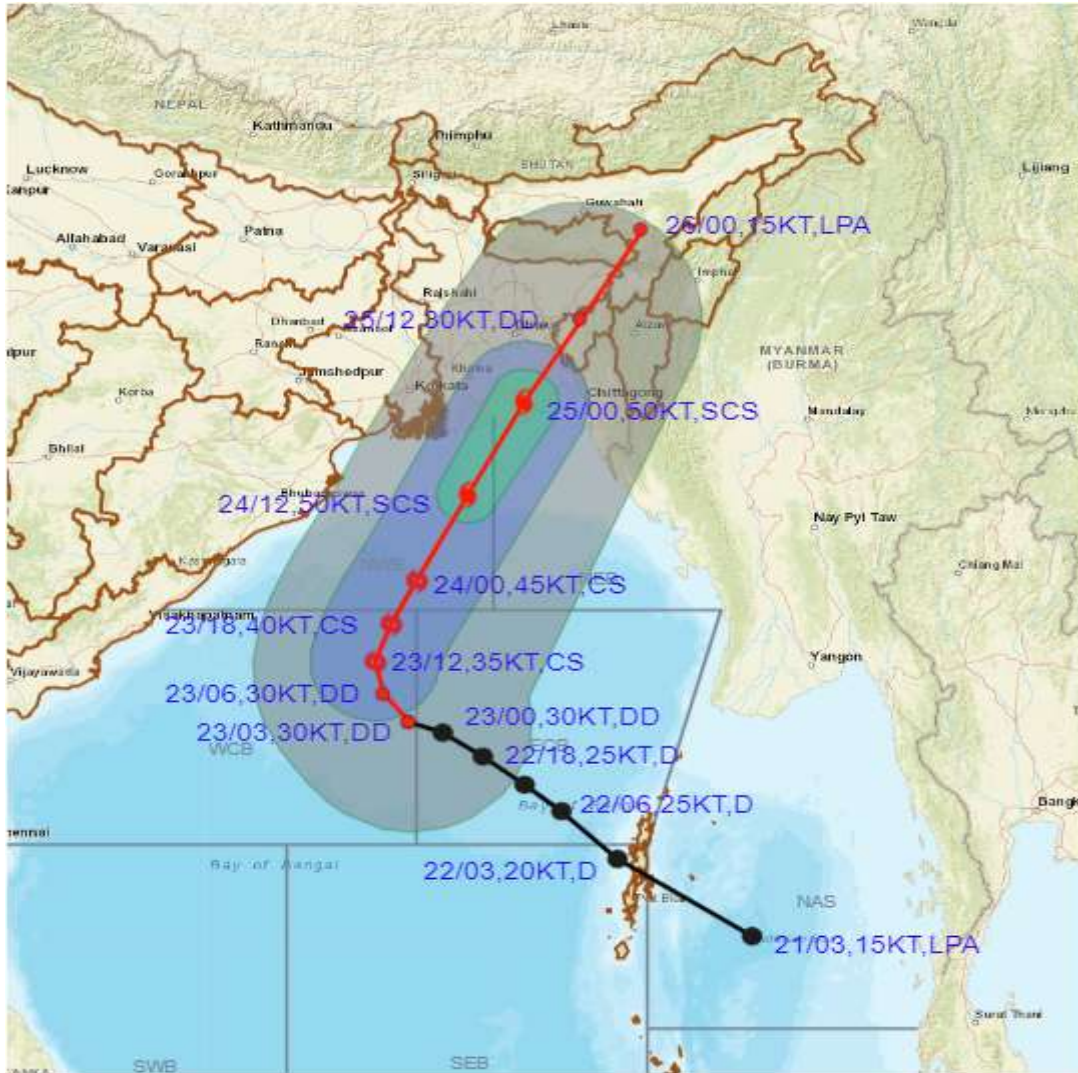
(M. SHARMA)
RSMC NEW DELHI



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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER WESTCENTRAL & ADJOINING EASTCENTRAL BAY OF BENGAL BASED ON 0300 UTC OF 23rd OCTOBER, 2022



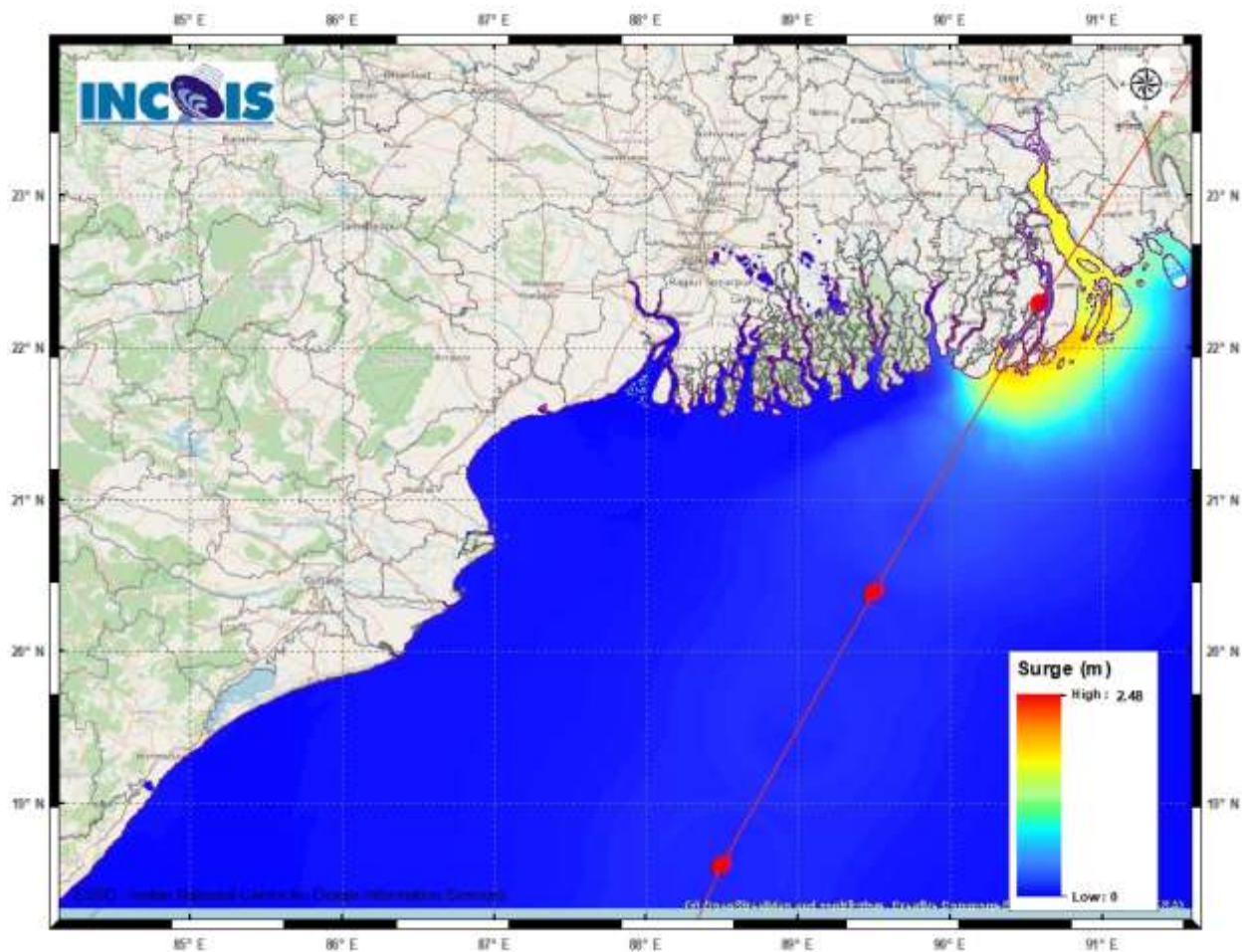
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

● LESS THAN 34 KT
 ○ 34-47 KT
 ● ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ▲ CONE OF UNCERTAINTY
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 GUIDANCE BASED ON 0000 UTC OF 23RD OCTOBER

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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.