



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

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 21.03.2022

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 21.03.2022 BASED ON 0600 UTC OF 21.03.2022.

SUB: DEEP DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL

THE DEEP DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL, MOVED NEARLY NORTHWARDS WITH A SPEED OF 13 KMPH DURING LAST 06 HOURS, AND LAY CENTERED AT 0600 UTC OF TODAY, 21ST MARCH, OVER THE SAME REGION, NEAR LATITUDE 12.6°N AND LONGITUDE 93.9°E, ABOUT 110 KM EAST-SOUTHEAST OF MAYABUNDAR (43309), 170 KM NORTHEAST OF PORT BLAIR (43333), 530 KM SOUTH-SOUTHWEST OF YANGON (48097) AND 650 KM SOUTH OF THANDWE (48080).

IT IS LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS. IT WOULD CONTINUE TO MOVE NEARLY NORTHWARDS ALONG & OFF ANDAMAN ISLANDS TOWARDS MYANMAR COAST DURING NEXT 48 HRS AND CROSS MYANMAR COAST BETWEEN LATITUDE 18°N & 19°N AROUND THANDWE (MYANMAR) AROUND 0000 UTC OF 23RD MARCH.

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
21.03.22/0600	12.6/93.9	55-65 GUSTING TO 75	DEEP DEPRESSION
21.03.22/1800	14.3/94.0	65-75 GUSTING TO 85	CYCLONIC STORM
22.03.22/0600	15.9/93.8	65-75 GUSTING TO 85	CYCLONIC STORM
22.03.22/1800	17.6/94.0	55-65 GUSTING TO 75	DEEP DEPRESSION
23.03.22/0600	19.5/94.7	35-45 GUSTING TO 55	WELL-MARKED LOW

AS PER INSAT 3D IMAGERY, 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 ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL BETWEEN LATITUDE 11.0N & 16N AND LONGITUDE 90.0E & 97.0E AND ANDAMAN & NICOBAR ISLANDS. MINIMUM CLOUD TOP TEMPERATURE IS AROUND MINUS 90 DEG C. THE CONVECTIVE CLOUD MASS HAS FURTHER ORGANISED DURING PAST 03 HOURS AND VISIBLE IMAGE OF INSAT-3D AT 0600 UTC INDICATES CENTER OF THE SYSTEM IS LOCATED UNDER THE LARGE DENSE OVERCAST.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH OVER ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL. THE ESTIMATED CENTRAL PRESSURE IS 1000 HPA.

REMARKS:

SEA SURFACE TEMPERATURE IS AROUND 29-30°C OVER ANDAMAN SEA, SOUTHEAST AND ADJOINING EASTCENTRAL BAY OF BENGAL (BOB). TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 60-80 KJ/CM² OVER THE SAME REGION BECOMING LESS THAN 50 KJ/CM² OVER NORTH BOB. THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 2 DAYS AND MOVE TO PHASE 4 WITH AMPLITUDE REMAINING MORE THAN 1. THE PHASE AND AMPLITUDE OF MJO IS CONDUCIVE FOR ENHANCED CONVECTION AND HENCE CYCLOGENESIS OVER THE BOB DURING NEXT 2 DAYS.

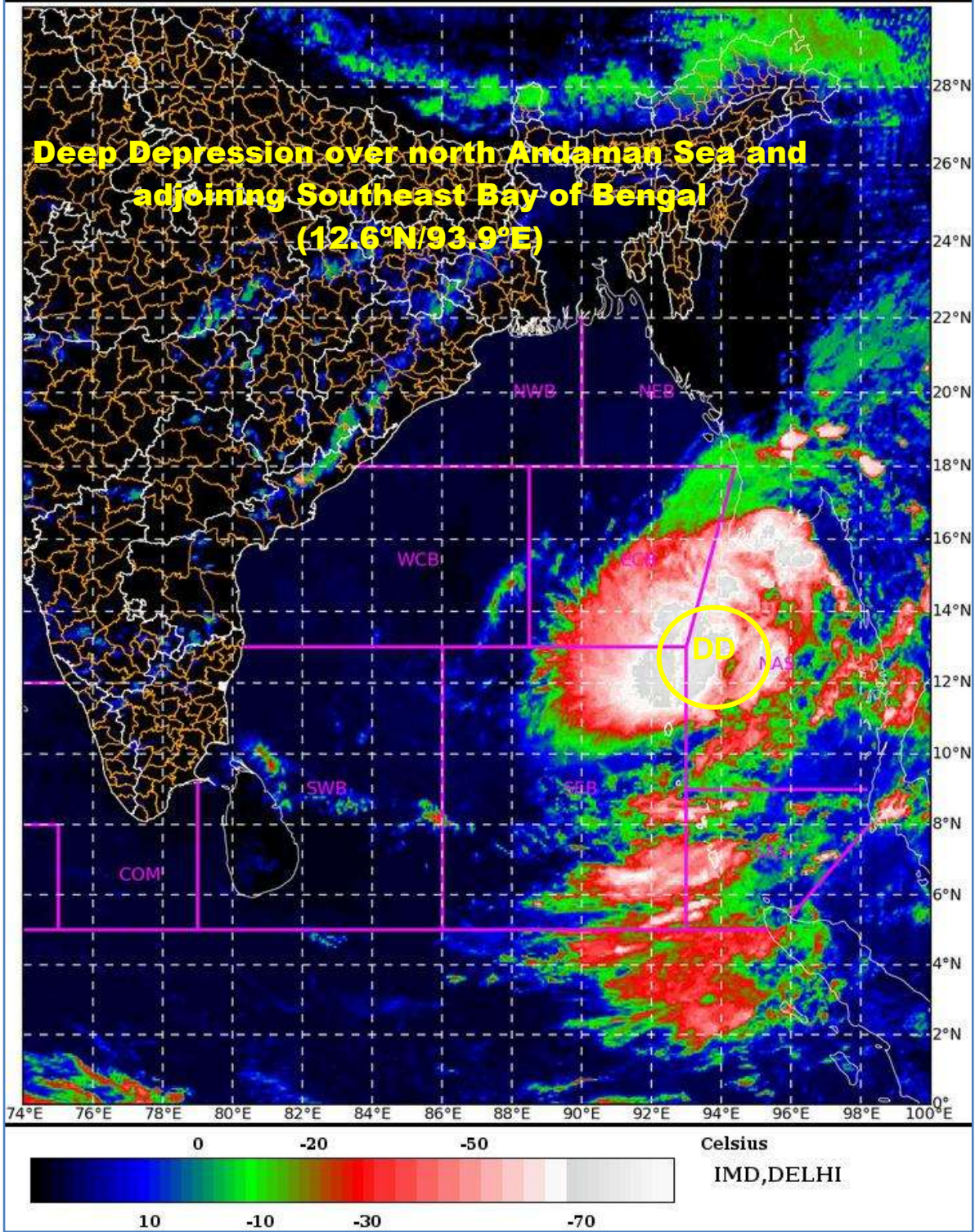
LOW LEVEL VORTICITY IS AROUND $150 \times 10^{-6} \text{ S}^{-1}$ NEAR SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS $15 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND $20 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND THE SYSTEM CENTRE WITH DECREASING TREND (BECOMING 10-15 KNOTS) ALONG THE EXPECTED TRACK OF THE SYSTEM. CURRENT CONDITIONS INDICATE THAT THE SYSTEM IS LYING IN FAVOURABLE ENVIRONMENT. POLEWARD OUTFLOW IS SEEN IN UPPER LEVELS. THE SYSTEM IS TRACKING NORTHWARDS ALONG THE PERIPHERY OF ANTICYCLONE LYING TO IT'S NORTHEAST OVER MYANMAR & ADJOINING THAILAND. UPPER TROPOSPHERIC RIDGE IS SEEN NEAR 17°N.

NUMERICAL MODELS INDICATE MARGINAL INTENSIFICATION OF THE SYSTEM DURING NEXT 48 HOURS. HOWEVER, MOST OF THE MODELS ARE UNANIMOUS REGARDING NORTHWARDS MOVEMENT OF THE SYSTEM TOWARDS MYANMAR COAST. HOWEVER, THERE IS DIVERGENCE WRT LANDFALL POINT.

IN VIEW OF ABOVE, THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HRS. IT IS LIKELY TO MOVE NEARLY NORTHWARDS ALONG & OFF ANDAMAN ISLANDS TOWARDS MYANMAR COAST DURING NEXT 48 HRS AND CROSS MYANMAR COAST AROUND 0000 UTC OF 23RD MARCH.

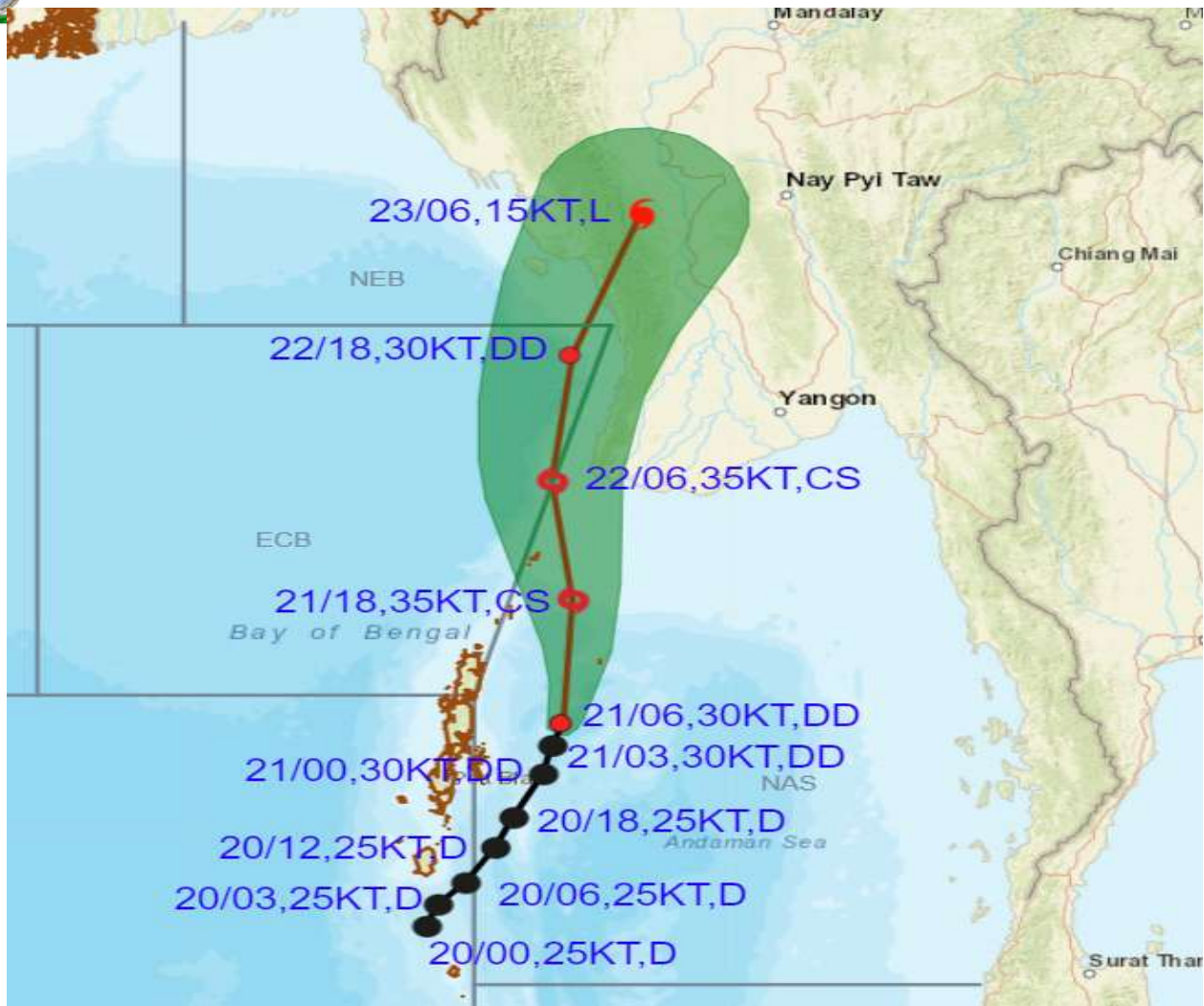
(A. K. DAS)
SCIENTIST-E
RSMC NEW DELHI

SAT : INSAT-3D IMG 21-03-2022/(0830 to 0857) GMT
IMG_TIR1_TEMP 10.8 um 21-03-2022/(1400 to 1427) IST
LIC Mercator



DD: Deep Depression

OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 21ST MARCH 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

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS		
	21.03.22/0600	22.03.22/0600	23.03.22/0600
Yangon	520,SSW	270,WSW	340,NNW
Thandwe	650,S	1050,ESE	1100,E
Hut bay	270,NNE	610,NNE	1020,NNE
Portblair	170,NE	490,NNE	900,NNE
Maya bundar	110,ESE	350,NNE	760,NNE

N:NORTH, NNE:NORTH-NORTHEAST, NE:NORTHEAST, ENE:EAST-NORTHEAST, E:EAST, SE:SOUTHEAST, SSE:SOUTH-SOUTHEAST, S:SOUTH, SSW:SOUTH-SOUTHWEST, SW:SOUTHWEST, WSW:WEST-SOUTHWEST, W:WEST, WNW:WEST-NORTHWEST, NW:NORTHWEST, NNW:NORTH-NORTHWEST



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 21st MARCH 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)

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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)

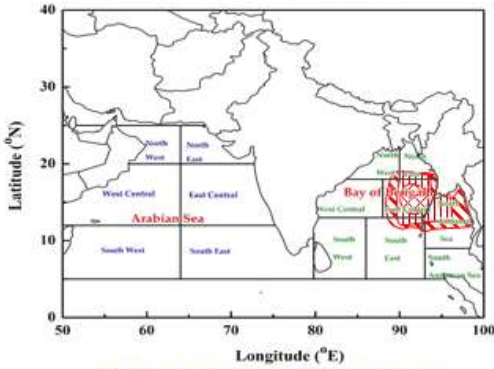
IMPACT OVER THE SEA

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

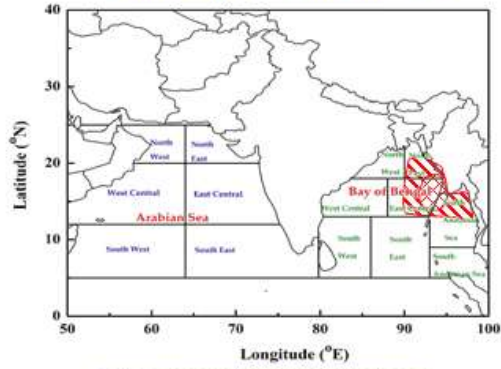
Fishermen warning Graphics

INDIA METEOROLOGICAL DEPARTMENT FISHERMAN WARNING FOR BAY OF BENGAL AND ARABIAN SEA

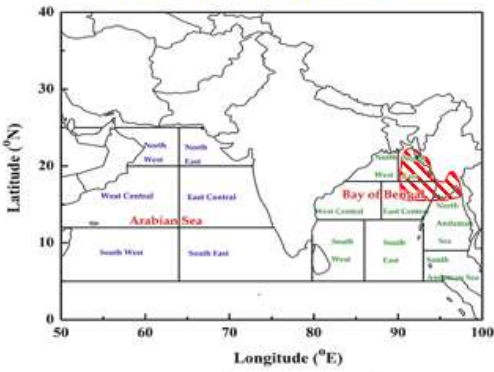
DAY-1: 21.03.2022/0600 UTC TO 22.03.2022/0600 UTC



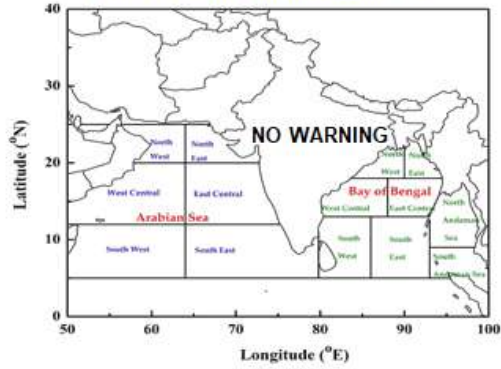
DAY-2: 22.03.2022/0600 UTC TO 23.03.2022/0600 UTC



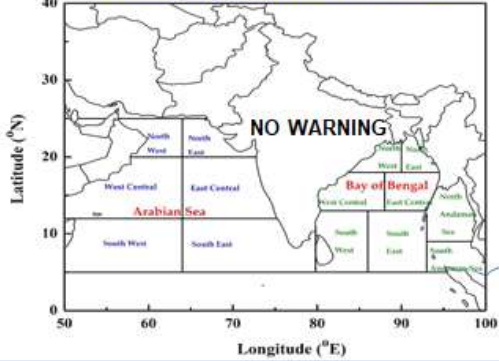
DAY-3: 23.03.2022/0600 UTC TO 24.03.2022/0600 UTC






DAY-4: 24.03.2022/0600 UTC TO 25.03.2022/0600 UTC



DAY-5: 25.03.2022/0600 UTC TO 26.03.2022/0600 UTC



AREA UNDER FISHERMEN WARNING

-  40-50 KMPH GUSTING TO 55 KMPH (SQUALLY WEATHER)
-  45-55 KMPH GUSTING TO 65 KMPH
-  55-65 KMPH GUSTING TO 70 KMPH
-  65-75 KMPH GUSTING TO 85 KMPH