



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 30.09.2021

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 30.09.2021 BASED ON 0000 UTC OF 30.09.2021.

SUB: DEPRESSION OVER NORTHEAST ARABIAN SEA & ADJOINING KUTCH

LATEST SATELITE & RADAR IMAGERIES AND METEOROLOGICAL OBSERVATIONS INDICATE THAT YESTERDAY'S WELL MARKED LOW PRESSURE AREA OVER SOUTH GUJARAT REGION & ADJOINING GULF OF KHAMBHAT MOVED WEST-NORTHWESTWARDS AND EMERGED INTO GULF OF KUTCH, CONCENTRATED INTO A DEPRESSION AND LAY CENTRED AT 0000 UTC OF TODAY, THE 30TH SEPTEMBER, 2021, OVER NORTHEAST ARABIAN SEA & ADJOINING KUTCH, NEAR LATITUDE 22.7°N AND LONGITUDE 69.5°E, ABOUT 50 KM EAST-NORTHEAST OF DEVBHOOMI DWARKA (42731), 90 KM EAST-SOUTHEAST OF NALIYA (42631) AND 340 KM EAST-SOUTHEAST OF KARACHI (41780).

IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND INTENSIFY INTO A DEEP DEPRESSION OVER NORTHEAST ARABIAN SEA OFF NORTH GUJARAT COAST DURING NEXT 12 HOURS. THEN IT IS VERY LIKELY TO MOVE FURTHER WEST-NORTHWESTWARDS AND INTENSIFY INTO A CYCLONIC STORM DURING THE SUBSEQUENT 24 HOURS. THEREAFTER IT IS LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS TOWARDS PAKISTAN – MAKRAN COASTS, MOVING AWAY FROM THE INDIAN COAST.

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
30.09.21/0000	22.7/69.5	45-55 gusting to 65	Depression
30.09.21/1200	23.0/67.6	50-60 gusting to 70	Deep Depression
01.10.21/0000	23.3/66.4	60-70 gusting to 80	Cyclonic Storm
01.10.21/1200	23.7/64.9	80-90 gusting to 100	Cyclonic Storm
02.10.21/0000	24.2/63.6	90-100 gusting to 110	Severe Cyclonic Storm

REMARKS:

AS PER INSAT 3D IMAGERY AT 0000 UTC, ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93°C. INTENSITY OF THE SYSTEM IS CATEGORISED AS T 1.5. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER WEST GUJARAT, GULF OF KUTCH, NORTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 30 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM AREA. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

SEA SURFACE TEMPERATURE (SST) OF ABOUT 28-29°C OVER NORTHEAST AND EASTCENTRAL ARABIAN SEA WITH DECREASING TREND TOWARDS WEST. SIMILARLY, TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 80-90 KJ/CM² OVER NORTHEAST ARABIAN SEA WITH DECREASING TREND TOWARDS THE NORTHWEST & WESTCENTRAL ARABIAN SEA. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF 20 X10⁻⁵S⁻¹ TO THE SOUTH OF THE SYSTEM CENTER. POSITIVE UPPER LEVEL DIVERGENCE OF 30 X10⁻⁵S⁻¹ IS ALSO SEEN TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTER. LOW VERTICAL WIND SHEAR (VWS) ABOUT (15-20 KTS) IS PREVAILING AROUND THE SYSTEM CENTER.

SATELLITE DERIVED TOTAL PRECIPITABLE WATER VAPOUR IMAGERY INDICATES THAT THE SYSTEM IS UNDER FAVOURABLE ENVIRONMENT OF WARM MOIST AIR. ALSO OTHER DYNAMIC & THERMODYNAMIC PARAMETERS ARE INCLUDING THE OCEAN THERMAL ENERGY ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM. THE EASTERLY WINDS IN THE MID & UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM WESTWARDS.

MOST THE MODELS ARE INDICATING THAT THE SYSTEM WOULD INTENSIFY FURTHER WHILE MOVING WEST-NORTHWESTWARDS ACROSS NORTH ARABIAN SEA. HOWEVER, THERE IS LARGE VARIATION W.R.T. THE INTENSITY AS WELL AS THE LANDFALL OF SYSTEM. SOME OF THE MODELS ARE INDICATING THAT THE SYSTEM WOULD CROSS MAKRAN COAST AS A CYCLONIC STORM WITH SUBSEQUENT RAPID WEAKENING, WHILE A FEW MODELS ARE INDICATING THE SYSTEM TO GRACE PAKISTAN – MAKRAN COASTS AND MOVE INTO GULF OF OMAN AND WEAKEN THERE AROUND 5TH OCTOBER.

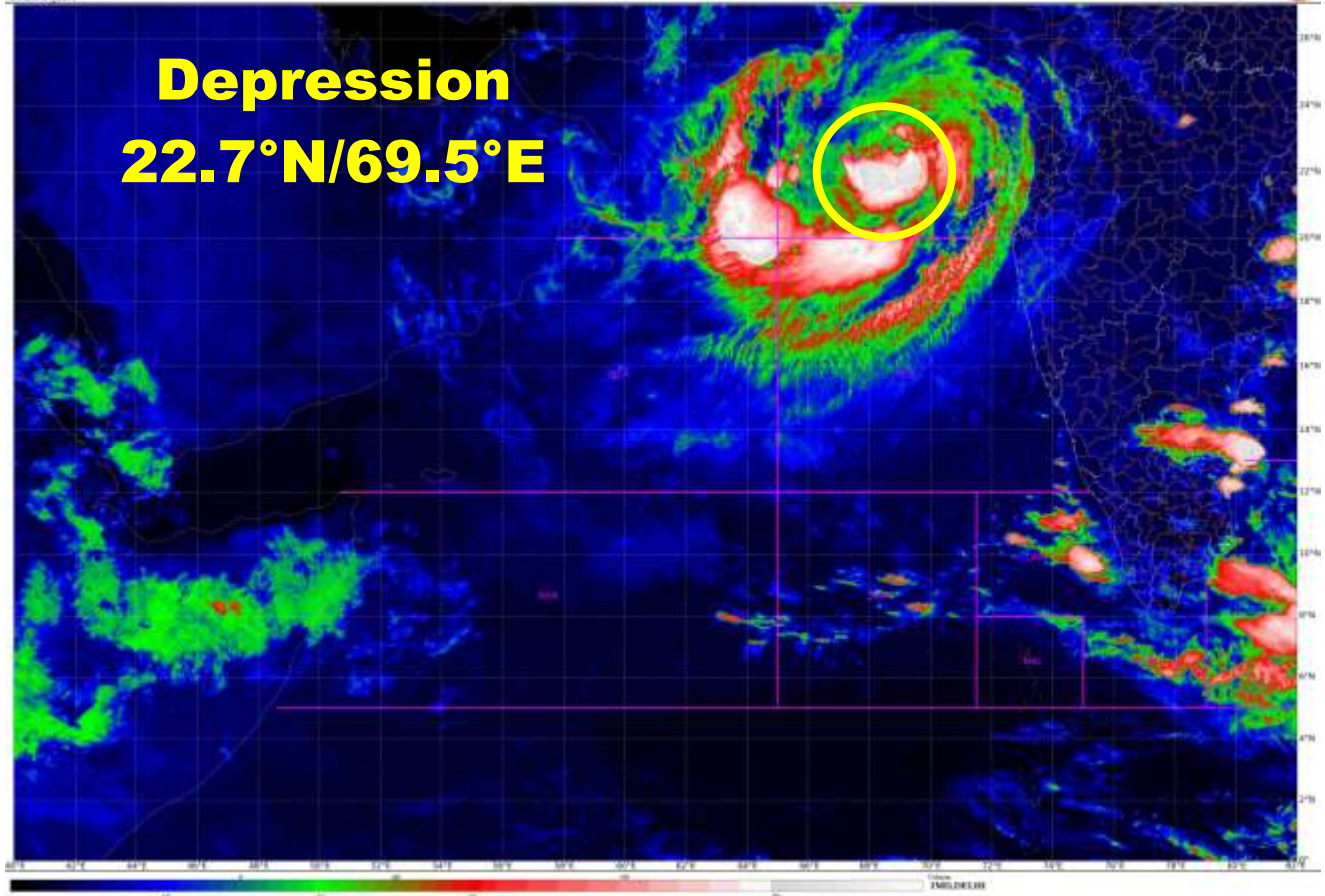
IT MAY BE CONCLUDED THAT THE SYSTEM IS LIKELY TO INTENSIFY GRADUALLY INTO A CYCLONIC STORM BY 0000 UTC OF 1ST OCTOBER AND MOVE WEST-NORTHWESTWARDS TOWARDS PAKISTAN – MAKRAN COASTS DURING THE SUBSEQUENT 24 HOURS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 30TH SEPTEMBER, 2021.

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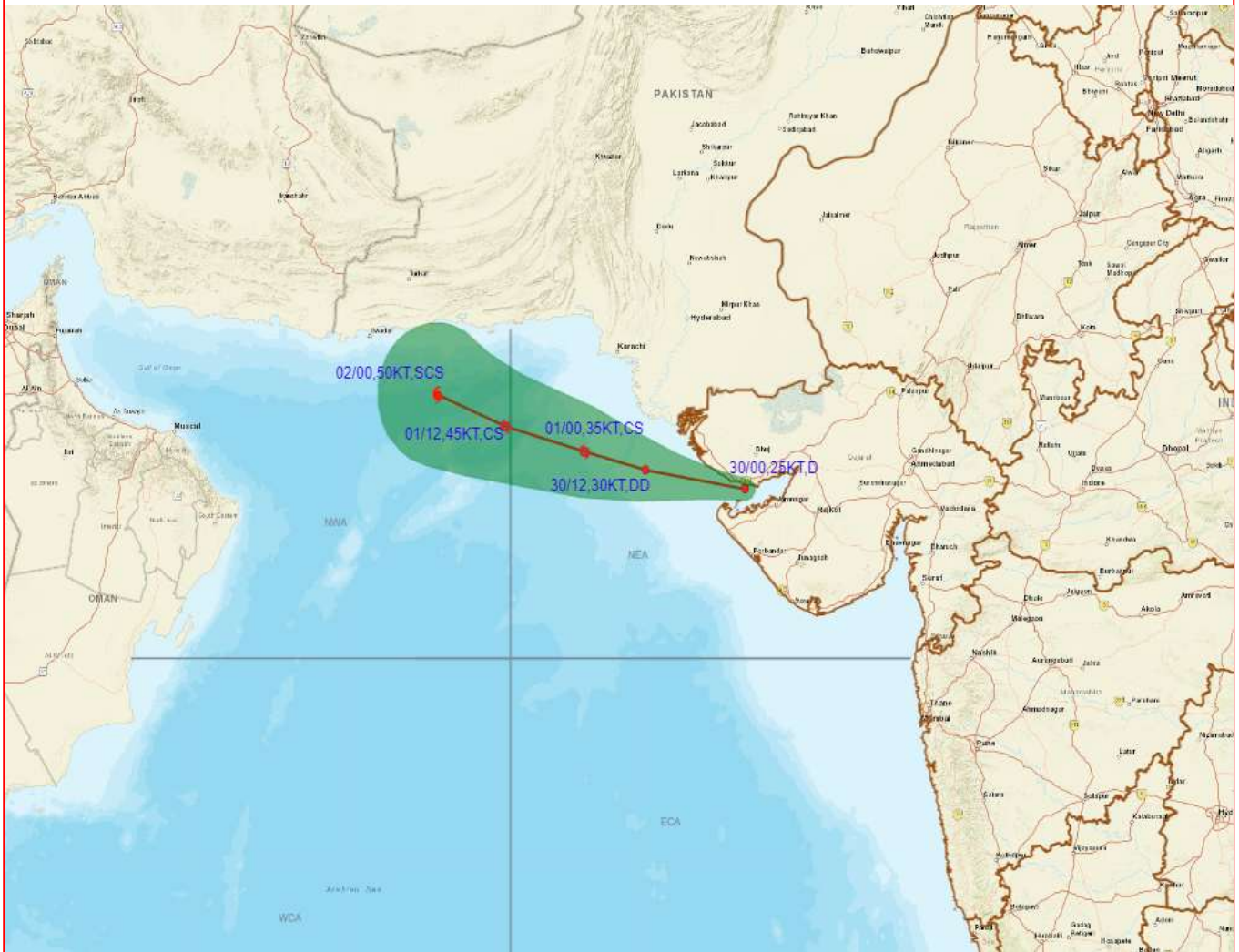


Depression
22.7°N/69.5°E





OBSERVED AND FORECAST TRACK OF DEPRESSION OVER NORTHEAST ARABIAN SEA ADJOINING KUTCH BASED ON 0000 UTC OF 30TH SEPTEMBER, 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 (48-63 KT)
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



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER NORTHEAST ARABIAN SEA ADJOINING KUTCH BASED ON 0000 UTC OF 30TH SEPTEMBER, 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 (≥ 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