



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 01.10.2021

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 01.10.2021 BASED ON 0300 UTC OF 01.10.2021.

SUB: CYCLONIC STORM 'SHAHEEN' OVER CENTRAL PARTS OF NORTH ARABIAN SEA

THE CYCLONIC STORM 'SHAHEEN' OVER NORTHEAST ARABIAN SEA AND NEIGHBOURHOOD MOVED WEST-NORTHWESTWARDS WITH A SPEED OF ABOUT 20 KMPH, DURING PAST 6 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 01ST OCTOBER, 2021 OVER CENTRAL PARTS OF NORTH ARABIAN SEA, NEAR LATITUDE 23.2°N AND LONGITUDE 64.9°E, ABOUT 440 KM WEST-NORTHWEST OF DEVBHOOI DWARKA (42731), 490 KM EAST-SOUTHEAST OF CHABAHAR PORT (IRAN) AND 660 KM EAST-SOUTHEAST OF MUSCAT (OMAN).

IT IS VERY LIKELY TO FURTHER INTENSIFY INTO A SEVERE CYCLONIC STORM DURING THE NEXT 12 HOURS AND MOVE WEST-NORTHWESTWARDS SKIRTING MAKRAN COAST DURING NEXT 36 HOURS. THEREAFTER, IT IS LIKELY TO RE-CURVE WEST-SOUTHWESTWARDS, MOVE TOWARDS OMAN COAST ACROSS GULF OF OMAN AND WEAKEN GRADUALLY.

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
01.10.21/0300	23.2/64.9	75-85 GUSTING TO 95	CYCLONIC STORM
01.10.21/0600	23.3/64.3	80-90 GUSTING TO 100	CYCLONIC STORM
01.10.21/1200	23.4/63.7	85-95 GUSTING TO 105	SEVERE CYCLONIC STORM
01.10.21/1800	23.6/63.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
02.10.21/0000	23.8/62.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02.10.21/1200	24.1/61.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03.10.21/0000	24.3/59.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
03.10.21/1200	24.2/57.9	80-90 GUSTING TO 100	CYCLONIC STORM
04.10.21/0000	23.8/56.5	70-80 GUSTING TO 90	CYCLONIC STORM

AS PER INSAT 3D IMAGERY AT 0300 UTC, INTENSE CONVECTION IS SEEN OVER CENTRAL PARTS NORTHEAST ARABIAN SEA AROUND THE SYSTEM AREA. CLOUD MASS HAS FURTHER ORGANIZED. SPIRAL BANDS ARE SEEN WRAPPING THE OSCURED LOW LEVEL CYCLONIC CIRCULATION. ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93°C. INTENSITY OF THE SYSTEM IS CATEGORISED AS T2.5. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY AREA BETWEEN LATITUDE 19.0N & 25.0N AND LONGITUDE 62.0E & 67.5E.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 40 KNOTS GUSTING TO 50 KNOTS. THE SEA CONDITION IS HIGH AROUND THE SYSTEM AREA. THE ESTIMATED CENTRAL PRESSURE IS 994 HPA.

REMARKS:

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 ARABIAN SEA. POSITIVE VORTICITY HAS INCREASED AND IS ABOUT 250 X10⁻⁶S⁻¹ LAY OVER NORTHEAST ARABIAN SEA WITH VERTICAL EXTENSION UPTO 200 HPA. AN ELONGATED ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF 20 X10⁻⁵S⁻¹ IS SEEN OVER NORTHEAST ARABIAN SEA AROUND THE SYSTEM CENTRE. POSITIVE CONVERGENCE ZONE IS EXTENDING UPTO GULF OF OMAN. POSITIVE UPPER LEVEL DIVERGENCE HAS INCREASED OVER THE SYSTEM AREA AND IS ABOUT 30 X10⁻⁵S⁻¹. EQUATORWARD OUTFLOW IS SEEN IN THE UPPER LEVEL. LOW VERTICAL WIND SHEAR (VWS) ABOUT (5-10 KTS) IS PREVAILING AROUND THE SYSTEM CENTER AND ALONG THE FORECAST TRACK UPTO GULF OF OMAN.

SATELLITE DERIVED TOTAL PRECIPITABLE WATER VAPOUR IMAGERY INDICATES THAT THE SYSTEM IS UNDER FAVOURABLE ENVIRONMENT OF WARM MOIST AIR. ALSO OTHER DYNAMIC & THERMODYNAMIC PARAMETERS INCLUDING WARM SEA, HIGH OCEAN THERMAL ENERGY, LOW VERTICAL WIND SHEAR AND EQUATORWARD OUTFLOW ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. THE EAST-SOUTHEASTERLY WINDS IN THE MIDDLE & UPPER TROPOSPHERIC LEVELS WILL STEER THE SYSTEM WEST-NORTHWESTWARDS DURING NEXT 36 HOURS. THEREAFTER, THE SYSTEM WILL BE STEERED WEST-SOUTHWESTWARDS UNDER THE INFLUENCE OF EAST-NORTHEASTERLY WINDS IN THE PERIPHERY OF ANTICYCLONE OVER IRAN.

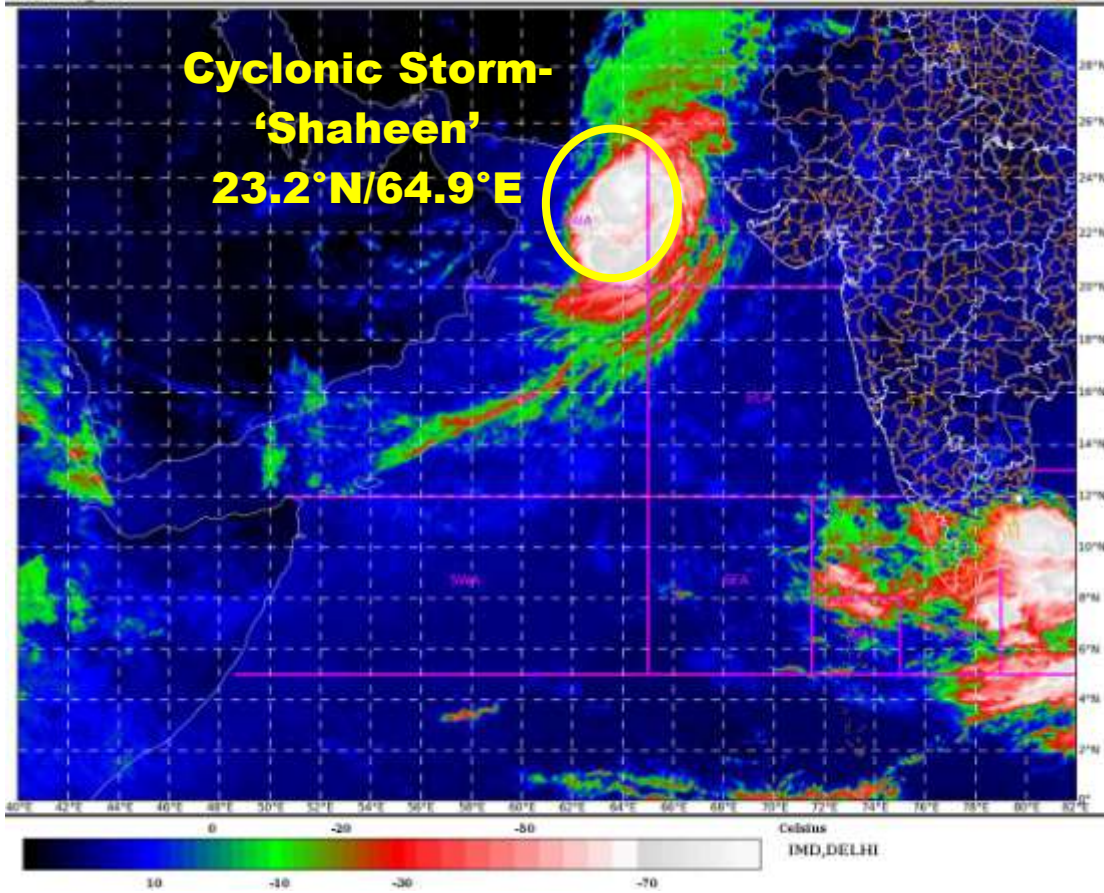
MOST THE MODELS ARE INDICATING THAT THE SYSEYEM WOULD INTENSIFY FURTHER WHILE MOVING WEST-NORTHWESTWARDS ACROSS NORTH ARABIAN SEA. HOWEVER, THERE IS LARGE VARIATION W.R.T. THE PEAK INTENSITY AS WELL AS THE LANDFALL OF SYSTEM. SOME OF THE MODELS ARE INDICATING THAT THE SYSTEM WOULD CROSS MAKRAN COAST AS A CYCLONIC STORM WITH SUBSEQUENT RAPID WEAKENING, WHILE A FEW MODELS ARE INDICATING THE SYSTEM WILL SKIRT ALONG PAKISTAN – MAKRAN COASTS, RECURVE WEST-SOUTHWESTWARDS, MOVE TOWARDS OMAN COAST.

IT IS VERY LIKELY TO FURTHER INTENSIFY INTO A SEVERE CYCLONIC STORM DURING THE NEXT 12 HOURS AND MOVE WEST-NORTHWESTWARDS SKIRTING MAKRAN COAST DURING NEXT 36 HOURS. THEREAFTER, IT IS LIKELY TO RE-CURVE WEST-SOUTHWESTWARDS, MOVE TOWARDS OMAN COAST ACROSS GULF OF OMAN AND WEAKEN GRADUALLY.

(SUNITHA DEVL.S)
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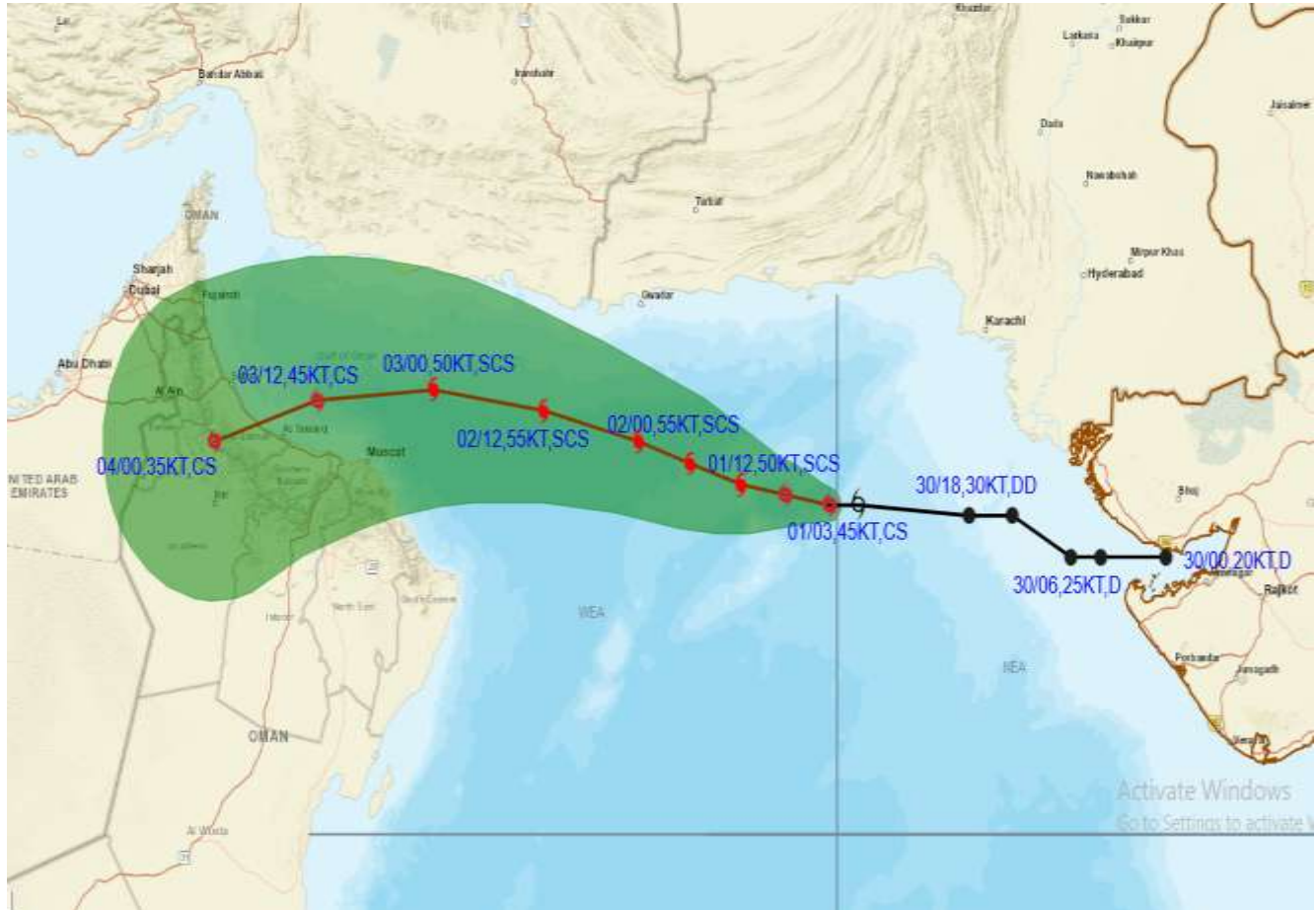
SAT : INSAT-3D IMG
IMG_TIR1_TEMP 10.8 um
ARABIAN SEA

01-10-2021(0530 to 0557) GMT
01-10-2021(1100 to 1127) IST





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM "SHAHEEN" OVER NORTHEAST ARABIAN SEA BASED ON 0300 UTC OF 1ST OCTOBER, 2021

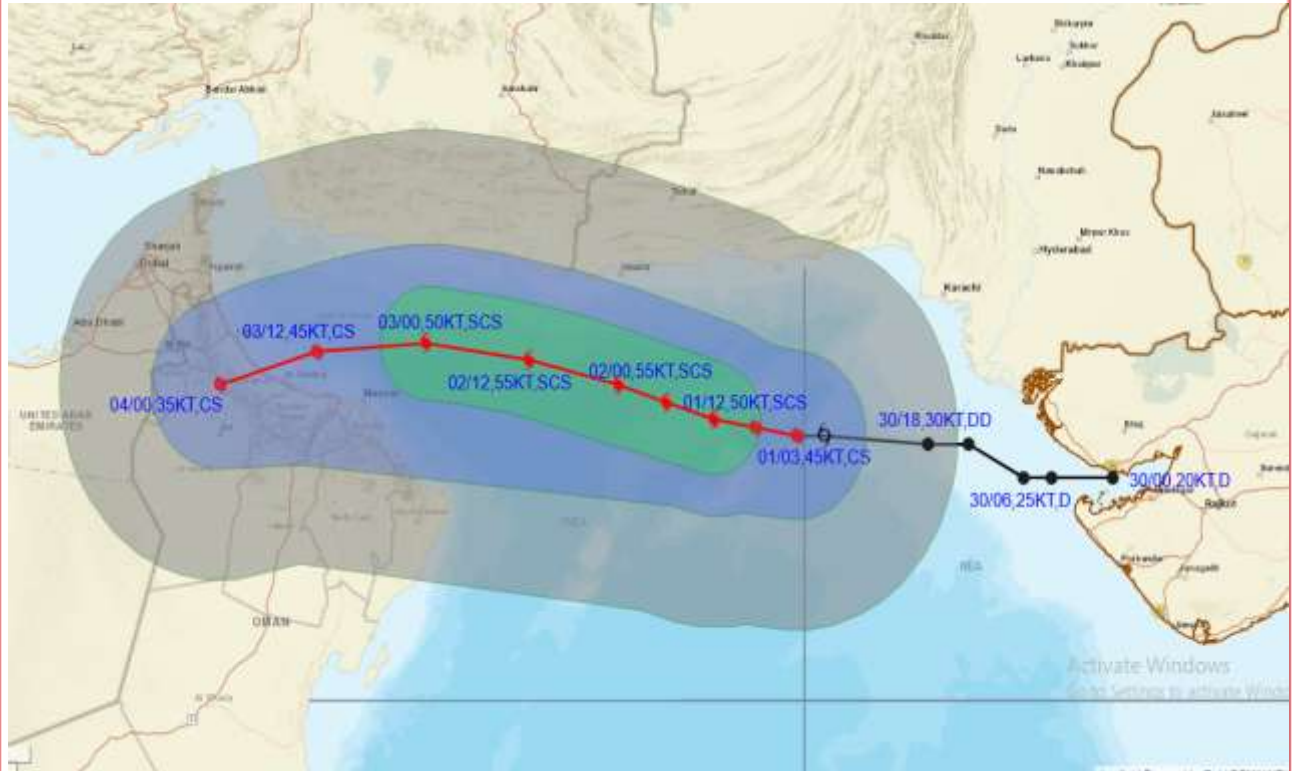


DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥20 KT)

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



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "SHAHEEN" OVER NORTHEAST ARABIAN SEA BASED ON 0300 UTC OF 1ST OCTOBER, 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