



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI TROPICAL
CYCLONE ADVISORY BULLETIN NO. 5**

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH) NATIONAL
CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY NO. 05 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND
ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 01.10.2021 BASED ON 1200
UTC OF 01.10.2021.**

**SUB: CYCLONIC STORM 'SHAHEEN' INTENSIFIED INTO A SEVERE CYCLONIC
STORM OVER NORTHWEST & ADJOINING NORTHEAST ARABIAN SEA**

THE **CYCLONIC STORM 'SHAHEEN'** OVER CENTRAL PARTS OF NORTH ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF ABOUT 12 KMPH, DURING PAST 6 HOURS, **INTENSIFIED INTO A SEVERE CYCLONIC STORM** AND LAY CENTRED AT 1200 UTC OF TODAY, THE 01ST OCTOBER, 2021 OVER **NORTHWEST & ADJOINING NORTHEAST ARABIAN SEA**, NEAR LATITUDE 23.4°N AND LONGITUDE 63.7°E, ABOUT 570 KM WEST-NORTHWEST OF DEVBHOOMI DWARKA (42731), 370 KM EAST-SOUTHEAST OF CHABAHAR PORT (IRAN) AND 540 KM EAST-SOUTHEAST OF MUSCAT (OMAN).

IT IS VERY LIKELY TO INTENSIFY FURTHER 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. **IT IS LIKELY TO CROSS OMAN COAST BETWEEN LONG.56°E & 58°E, DURING 2100 UTC OF 3RD – 0000 UTC OF 4TH OCTOBER 2021, AS A CYCLONIC STORM.**

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
01.10.21/1200	23.4/63.7	95-105 gusting to 115	Severe Cyclonic Storm
01.10.21/1800	23.6/63.1	100-110 gusting to 120	Severe Cyclonic Storm
02.10.21/0000	23.9/62.4	110-120 gusting to 130	Severe Cyclonic Storm
02.10.21/0600	24.1/61.7	110-120 gusting to 130	Severe Cyclonic Storm
02.10.21/1200	24.3/61.0	110-120 gusting to 130	Severe Cyclonic Storm
03.10.21/0000	24.4/59.6	95-105 gusting to 115	Severe Cyclonic Storm
03.10.21/1200	24.2/58.2	80-90 gusting to 100	Cyclonic Storm

04.10.21/0000	23.8/57.0	50-60 gusting to 70	Deep Depression
04.10.21/1200	23.4/56.1	50-60 gusting to 70	Well Marked Low

AS PER INSAT 3D IMAGERY AT 1200 UTC, CLOUD MASS HAS FURTHER ORGANISED AND CURVED BAND PATTERN IS SEEN WRAPPING 0.80 ON LOGARITHMIC SPIRAL. MINIMUM CLOUD TOP TEMPERATURE IS -93°C. INTENSITY OF THE SYSTEM IS CATEGORISED AS T 3.5. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER AREA BETWEEN LATITUDE 21.0N & 25.0N AND LONGITUDE 60.5E & 66.5E.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH OVER THE SYSTEM AREA. THE ESTIMATED CENTRAL PRESSURE IS 988 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 IS ABOUT 250 X10⁻⁶S⁻¹ LAY OVER NORTHWEST AND ADJOINING NORTHEAST ARABIAN SEA WITH VERTICAL EXTENSION UPTO 200 HPA. POSITIVE LOWER LEVEL CONVERGENCE ZONE EXTENDS OVER THE ENTIRE NORTHWEST ARABIAN SEA AND IS ABOUT 20 X10⁻⁵S⁻¹ AROUND THE SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10⁻⁵S⁻¹ OVER SYSTEM CENTRE. 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 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.

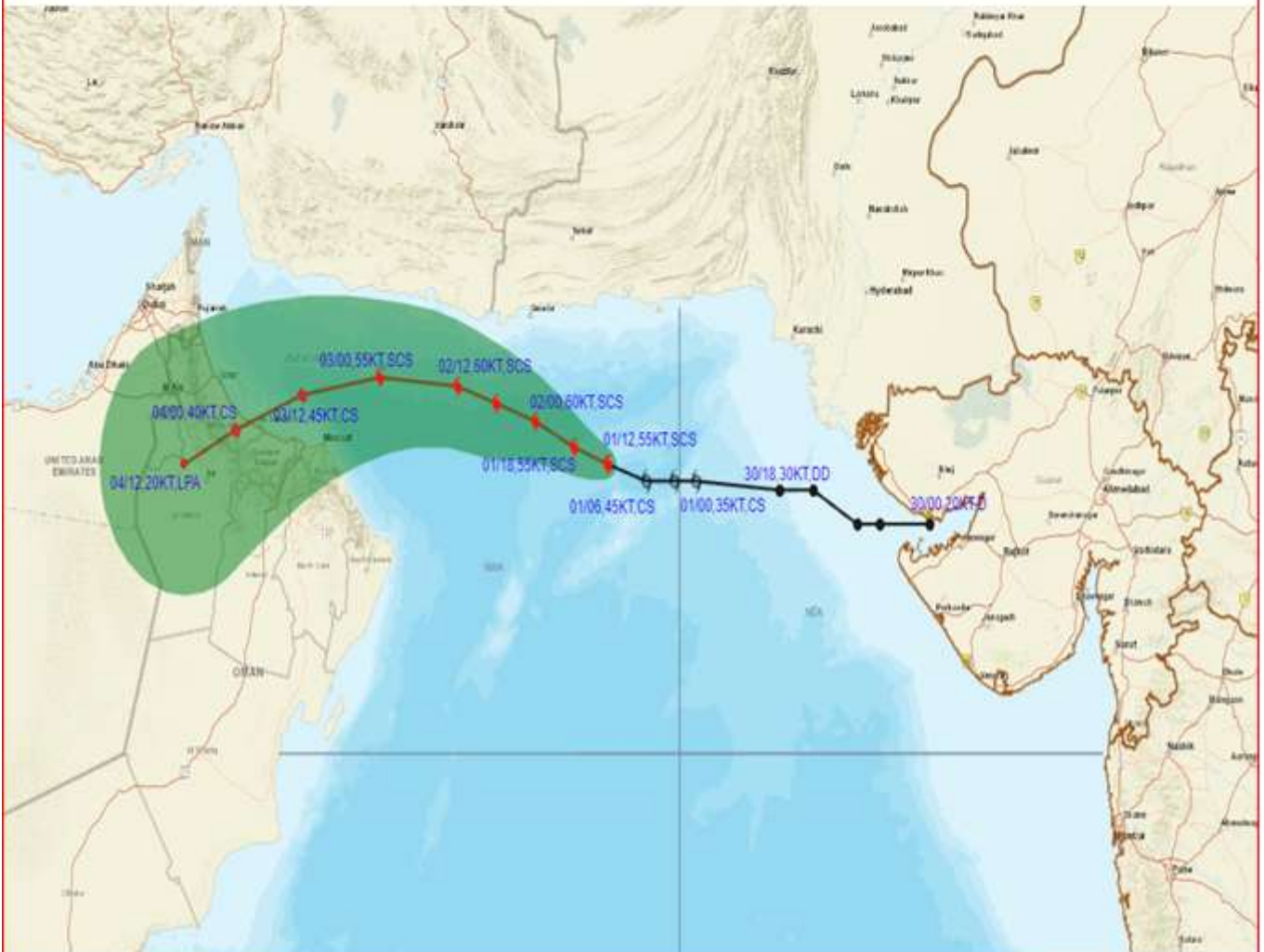
MOST OF THE MODELS ARE INDICATING THAT THE SYSEYEM WOULD INTENSIFY FURTHER DURING NEXT 12 HOURS WHILE MOVING WEST-NORTHWESTWARDS ACROSS NORTH ARABIAN SEA. MODELS ARE ALSO INDICATING THAT THE SYSTEM WOULD RECURVE WEST-SOUTHWESTWARDS AND CROSS NORTH OMAN COAST AROUND 4TH EARLY MORNING (0000 UTC).

HENCE IT IS CONCLUDED THAT, CYCLONIC STORM “SHAHEEN” WOULD FURTHER INTENSIFY FURTHER DURING 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.

(RK JENAMANI)
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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF SEVERE CYCLONIC STORM "SHAHEEN" OVER NORTHWEST & ADJOINING NORTHEAST ARABIAN SEA BASED ON 1200 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 (\geq 120 KT)

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

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL - 0% - LOW - 1-25% - FAIR - 26-50% - MODERATE - 51-75% - AND HIGH: 76-100%

This is a guidance Bu

OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF SEVERE CYCLONIC STORM "SHAHEEN" OVER NORTHWEST & ADJOINING NORTHEAST ARABIAN SEA

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