





REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI TROPICAL CYCLONE ADVISORY NO. 01

DEMS-RSMCSPECIAL TROPICAL CYCLONES NEW DELHI DATED 30.08.2024

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 MÈTEOROLOGICAL 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. 1 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 30.08.2024 BASED ON 0600 UTC OF 26.05.2024

SUB: (A) DEEP DEPRESSION INTENSIFIED INTO A CYCLONIC STORM 'ASNA' OVER KACHCHH COAST AND ADJOINING AREAS OF PAKISTAN & NORTHEAST ARABIAN SEA AND (B) WELL MARKED LOW PRESSURE AREA OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL

(I) ARABIAN SEA:

- (A) DEEP DEPRESSION OVER KACHCHH COAST AND ADJOINING AREAS OF PAKISTAN & NORTHEAST ARABIAN SEA
- (A) CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA) OVER KACHCHH COAST AND ADJOINING AREAS OF PAKISTAN & NORTHEAST ARABIAN SEA

THE DEEP DEPRESSION OVER KACHCHH COAST AND ADJOINING AREAS OF PAKISTAN & NORTHEAST ARABIAN SEA MOVED WESTWARDS WITH A SPEED OF 6 KMPH DURING PAST 6 HOURS, INTENSIFIED INTO A **CYCLONIC STORM "ASNA"** (**PRONOUNCED AS AS-NA**) AND LAY CENTERED AT 0600 UTC OF 30TH AUGUST, 2024 OVER THE SAME REGION NEAR LATITUDE 23.5°N AND LONGITUDE 67.9°E, 190 KM

WEST-NORTHWEST OF BHUJ (42364), 100 KM WEST-NORTHWEST OF NALIYA (42631) AND 170 KM SOUTHEAST OF KARACHI (41780).

IT IS LIKELY TO CONTINUE TO MOVE NEARLY WEST-NORTHWESTWARDS OVER NORTHEAST ARABIAN SEA AWAY FROM INDIAN COAST DURING SUBSEQUENT 2 DAYS.

CLOUDS OVER ARABIAN SEA: INSAT 3DR IMAGERY, AT 0600 UTC OF 30TH AUGUST INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 2.5. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER NORTHEAST ARABIAN SEA, KUTCH AND GULF OF KUTCH (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 90°C. MODERATE TO INTENSE CONVECTION OVER SOUTH PAKISTAN AND SAURASHTRA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 35 KTS GUSTING TO 45 KTS. ESTIMATED CENTRAL PRESSURE IS 992 HPA. AT 0600 UTC, NALIYA REPORTED MEAN SEA LEVEL PRESSURE OF 996.7 HPA, AND 24 HOUR PRESSURE CHANGE IN PAST 24 HOURS AS 1.4 HPA. REPORTED MEAN WIND SPEED IS 200°/17 KT.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME		MAXIMUM SUSTAINED SURFAC	CATEGORY OF
(UTC)	(LAT. ⁰ N/ LONG. ⁰ E)	WIND SPEED (KMPH)	CYCLONIC
			DISTURBANCE
30.08.24/0600	23.5/67.9	60-70 GUSTING TO 80	CYCLONIC STORM
30.08.24/1200	23.5/67.5	65-75 GUSTING TO 85	CYCLONIC STORM
30.08.24/1800	23.6/66.8	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/0000	23.7/65.9	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/0600	23.8/65.1	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/1800	23.7/63.3	60-70 GUSTING TO 80	CYCLONIC STORM
01.09.24/0600	23.6/61.7	50-60 GUSTING TO 70	DEEP DEPRESSION
01.09.24/1800	23.0/60.5	40-50 GUSTING TO 60	DEPRESSION

Warnings:

SEA CONDITION AND ADVISORY FOR FISHERMEN IN ASSOCIATION WITH THE MOVEMENT OF THE SYSTEM OVER SAURASHTRA & KUTCH AND ADJOINING PAKISTAN AND NORTHEAST ARABIAN SEA FROM INDIA TILL 01ST SEPTEMBER:

WIND WARNING:

- \bullet SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS LIKELY OVER THE INTERIOR DISTRICTS OF SOUTH GUJARAT REGION AND SAURASHTRA & KUTCH ON THE $30^{\rm TH}$ AUGUST.
- SQUALLY WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH IS PREVAILING ALONG & OFF GUJARAT COASTS & ADJOINING PAKISTAN COASTS AND OVER NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA. IT IS LIKELY TO INCREASE BECOMING 70-80 KMPH GUSTING TO 90 KMPH OVER NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA FROM 1500 UTC OF 30TH AUGUST TILL 1ST SEPTEMBER 0000 UTC AND DECREASE GRADUALLY THEREAFTER.
- GALE WIND SPEED REACHING 65-75 KMPH GUSTING TO 85 KMPH IS LIKELY TO PREVAIL OVER NORTHWEST AND ADJOINING WESTCENTRAL ARABIAN SEA OFF PAKISTAN AND SOUTHEAST IRAN COASTS FROM 0000 UTC OF 31ST AUGUST TILL 0000 UTC OF 1ST SEPTEMBER. THEREAFTER, THE WINDS WOULD GRADUALLY DECREASE GRADUALLY BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH

- GUSTING TO 70 KMPH BY 1200 UTC OF 1^{ST} SEPTEMBER AND 40-50 KMPH GUSTING TO 60 KMPH BY 0000 UTC OF 2^{ND} SEPTEMBER.
- STRONG WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO PREVAIL ALONG AND OFF NORTH MAHARASHTRA COASTS DURING 30^{TH} TO 31^{ST} AUGUST.

SEA CONDITION:

- SQUALLY WEATHER WITH ROUGH TO VERY ROUGH SEA CONDITIONS IS VERY LIKELY TO PREVAIL ALONG & OFF GUJARAT & ADJOINING NORTH MAHARASHTRA COASTS TILL 31ST AUGUST.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTHEAST & ADJOINING EASTCENTRAL AND ARABIAN SEA OFF GUJARAT COAST AND ALONG & OFF PAKISTAN COASTS DURING 30TH AUGUST TO 1ST SEPTEMBER.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTHWEST AND ADJOINING WESTCENTRAL ARABIAN SEA OFF PAKISTAN AND SOUTHEAST IRAN COASTS FROM $31^{\rm ST}$ AUGUST TILL $2^{\rm ND}$ SEPTEMBER.

FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT VENTURE INTO

- ➤ NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA AND ALONG & OFF GUJARAT & ADJOINING NORTH MAHARASHTRA COASTS TILL 31ST AUGUST.
- ➤ NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA OFF GUJARAT COAST AND ALONG & OFF PAKISTAN COASTS DURING 30TH AUGUST TO 1ST SEPTEMBER.
- > NORTHWEST & ADJOINING WESTCENTRAL ARABIAN SEA AND ALONG & OFF PAKISTAN AND SOUTHEAST IRAN COASTS FROM $31^{\rm ST}$ AUGUST TILL $2^{\rm ND}$ SEPTEMBER.

*PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 H RS OVER ARABIAN SEA:

24	24-48	48-72	72-96	96-120	120-144	144-168
HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
HIGH	-	-	-	-	-	-

*NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY (-) INDICATES GENESIS HAS ALREADY OCCURRED.

(II) BAY OF BENGAL:

(B) WELL MARKED LOW PRESSURE AREA OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL

THE LOW PRESSURE AREA OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL OFF NORTH ANDHRA PRADESH & SOUTH ODISHA MOVED WEST-NORTHWESTWARDS, BECAME A WELL MARKED LOW PRESSURE AREA OVER THE SAME REGION AT 0300 UTC OF 30TH AUGUST, 2024.

IT IS LIKELY TO MOVE FURTHER WEST-NORTHWESTWARDS TOWARDS NORTH ANDHRA PRADESH AND ADJOINING SOUTH ODISHA COASTS, INTENSIFY INTO A DEPRESSION OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL DURING NEXT 36 HOURS.

SEA CONDITION AND ADVISORY FOR FISHERMEN IN ASSOCIATION WITH THE MOVEMENT OF THE SYSTEM OVER THE BAY OF BENGAL

WIND WARNING:

- SQUALLY WEATHER WITH WIND SPEED REACHING 30-40 KMPH GUSTING TO 50 KMPH IS LIKELY TO PREVAIL OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL ON 30TH BECOMING 45-55 KMPH GUSTING TO 65 KMPH ON 31ST AUGUST.
- SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS LIKELY TO PREVAIL ALONG & OFF NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS ON 31ST AUGUST.

SEA CONDITION:

- ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL TILL 31ST AUGUST.
- ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL ALONG & OFF NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS ON 31 AUGUST.

FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT VENTURE INTO WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL TILL $31^{\rm ST}$ AUGUST AND ALONG & OFF SOUTH ODISHA AND NORTH ANDHRA PRADESH COASTS ON $31^{\rm ST}$ AUGUST.

ADVISORY FOR OFFSHORE/ONSHORE EXPLORATION AND PRODUCTION (E & P) OPERATORS:

THE SMALL SHIPS AND OFFSHORE -ONSHORE E & P OPERATORS, SHIPPING AND PORT AUTHORITIES ALONG & OFF GUJARAT & NORTH MAHARASHTRA COASTS AND NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA ARE ADVISED TO KEEP WATCH ON DEVELOPING WEATHER AND TAKE NECESSARY ACTIONS ON $30^{\rm TH}$ AUGUST.

ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER NORTH COASTAL ANDHRA PRADESH, CENTRAL AND ADJOINING NORTH BAY OF BENGAL (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C).

*PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS:

24	24-48	48-72	72-96	96-120	120-144	144-168
HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
LOW	LOW	MOD	-	-	-	

*NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY REMARKS:

THE MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 4 AND WOULD MOVE TO PHASE 5 FROM 30TH AUGUST WITH AMPLITUDE GREATER THAN 1. IT WILL MOVE ACROSS THE SAME PHASE DURING NEXT 2 WEEKS WITH AMPLITUDE REMAINING HIGHER THAN 1 THROUGHOUT. MJO PHASE AND AMPLITUDE IS HIGHLY FAVOURABLE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE BAY OF BENGAL.

THE NCICS FORECASTS INDICATE MJO WAVE MOVING EASTWARDS AND IS SEEN OVER ENTIRE SOUTH ARABIAN SEA (AS), SOUTHERN PENINSULAR INDIA AND SOUTH BAY OF BENGAL DURING WEEK 1. WESTERLY WINDS (1-3 MPS) OVER SOUTH AS AND HIGHER WINDS (3-5 MPS) OVER SOUTH BOB ALONGWITH STRONG EASTERLY WINDS (3-5 MPS) OVER NORTH BOB AND EASTERN STATES OF INDIA ARE ALSO SEEN DURING WEEK 1. OVER THE EASTERN PARTS OF INDIA ROSSBY ARE ALSO SEEN PROPAGATING WESTWARDS. THESE FEATURES INDICATE A CONDUCIVE ENVIRONMENT FOR CYCLOGENESIS OVER BOB. THE DEEP DEPRESSION OVER COASTAL KACHCHH & ADJOINING AREAS OF SAURASHTRA, NORTHEAST ARABIAN SEA AND PAKISTAN WILL

ALSO GET ENHANCED MOISTURE FEED BACK FROM ARABIAN SEA DURING WEEK 1.

DURING WEEK 2, SIMILAR FEATURES ARE SEEN OVER THE BOB. PRESENCE OF ROSSBY WAVES, MJO, STRONG WESTERLY WINDS (5-7 MPS) OVER SOUTH BOB AND EASTERLY WINDS (3-5MPS) OVER NORTH BOB AND ADJOINING EASTERN STATES OF INDIA. THESE FEATURES INDICATE FAVOURABLE ENVIRONMENT FOR CYCLOGENESIS OVER THE BOB DURING WEEK 2 AS WELL.

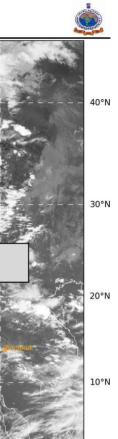
CONSIDERING THE EXISTING ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE OVER THE BOB IS 28-30°C AND OVER ARABIAN SEA SST IS AROUND 27-28°C. IT IS COLDER (<26°C) OVER WESTCENTRAL AS) AND VERY WARM (>32°C) OVER GULF OF ADEN. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS HIGH (>100 KJ/CM²) OVER CENTRAL BOB AND LESS (<50 KJ/CM²) OVER NORTH & ADJOINING CENTRAL AS. SEA CONDITIONS INDICATE THAT THE DEEP DEPRESSION OVER KACHCHH COAST & ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA WILL ENCOUNTER COLDER SEA CONDITIONS IN AS AND HENCE WOULD NOT INTENSIFY SIGNIFICANTLY.

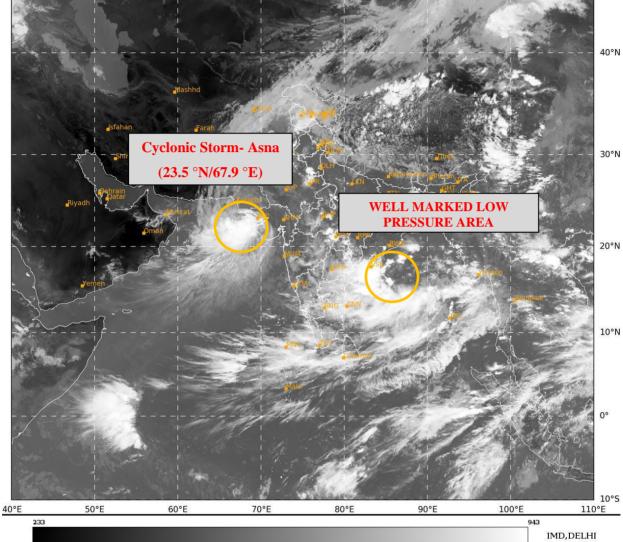
THE LOW LEVEL VORTICITY IS 250X10⁻⁵ S⁻¹ NEAR SYSTEM AREA OVER THE SAURASHTRA & KACHCHH REGION. LOW LEVEL CONVERGENCE IS 10X10⁻⁵ S⁻¹ OVER SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS ALSO 20X10⁻⁵ S⁻¹ OVER SYSTEM AREA EXTENDING UPTO WESTCENTRAL AS. WIND SHEAR IS LOW TO MODERATE OVER SAURASHTRA & KACHCHH AND ADJOINING NORTHEAST AS. THESE FEATURES INDICATE THAT THE DEEP DEPRESSION OVER KACHCHH COAST & ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA IS IN A FAVOURABLE ENVIRONMENT AND INTENSIFICATION OF THIS SYSTEM IS VERY LIKLEY. THE UPPER TROPOSPHERIC RIDGE IS NEAR 27⁰N IN ASSOCIATION WITH ANTICYCLONIC CIRCULATION OVER COASTAL IRAN. A WESTERLY TROUGH IS APPROACHING THE INDIAN REGION AND IS CURRENTLY EXTENDING UPTO 30⁰ N ALONG 62⁰ E. THE SYSTEM IS THUS TRACKING SLOWLY NEARLY WEST-SOUTHWESTWARDS.

OVER THE BOB, THE LOW LEVEL VORTICITY IS POSITIVE AND IS AROUND 100X10⁻⁵ S⁻¹ OVER CENTRAL BOB WITH EXTENSION UPTO MID TROPOSPHERIC LEVELS. LOW LEVEL CONVERGENCE IS 20X10⁻⁵ S⁻¹ TO THE SOUTH OF LOW PRESSURE AREA AND UPPER LEVEL DIVERGENCE IS ALSO 10-20X10⁻⁵ S⁻¹ TO THE SOUTHWEST OF SYSTEM AREA EXTENDING UPTO SOUTHWEST BOB. WIND SHEAR IS LOW TO MODERATE OVER CENTRAL AND NORTH BOB. LOWER LEVEL WINDS INDICATE BROADSCALE CIRCULATION DEVELOPING OVER THE CENTRAL BOB. THESE FEATURES INDICATE A HIGHLY FAVOURABLE ENVIRONMENT FOR DEVELOPMENT OF DEPRESSION OVER THE BOB. CONSIDERING ALL THE ABOVE, IT IS INFERRED THAT:

- (1) CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA) OVER KACHCHH COAST AND ADJOINING AREAS OF PAKISTAN & NORTHEAST ARABIAN SEA IS LIKELY TO CONTINUE TO MOVE NEARLY WEST-NORTHWESTWARDS OVER NORTHEAST ARABIAN SEA AWAY FROM INDIAN COAST DURING SUBSEQUENT 2 DAYS.
- (2) WELL MARKED LOW PRESSURE AREA OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL IS LIKELY TO MOVE FURTHER WEST-NORTHWESTWARDS TOWARDS NORTH ANDHRA PRADESH AND ADJOINING SOUTH ODISHA COASTS, INTENSIFY INTO A DEPRESSION OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL DURING NEXT 36 HOURS.

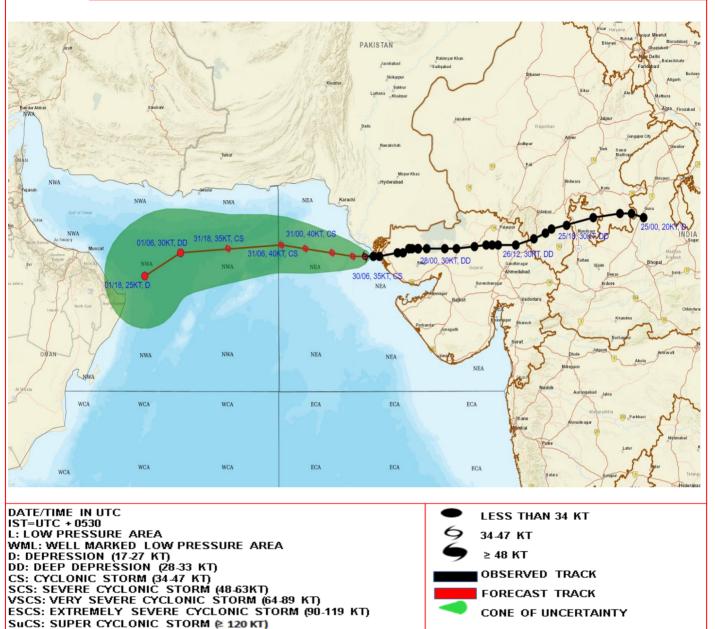
(MONICA SHARMA) SCIENTIST-D RSMC NEW DELHI





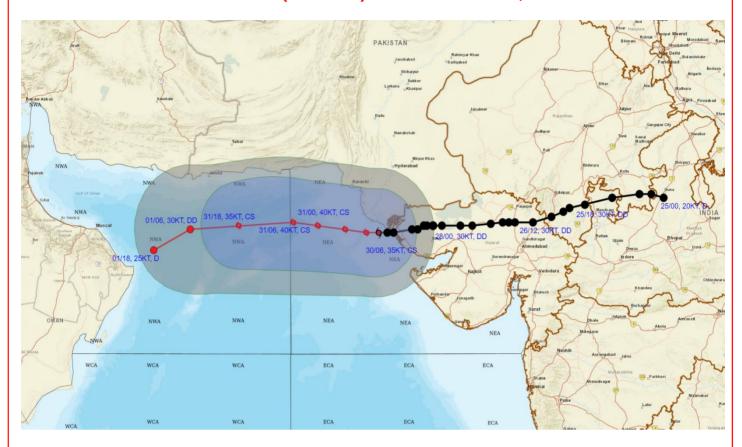


OBSERVED AND FORECAST TRACK OF CYCLONIC STORM ASNA OVER KACHCHH COAST AND ADJOINING AREAS OF PAKISTAN & NORTHEAST ARABIAN SEA BASED ON 0600 UTC (1130 IST) OF 30TH





OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM ASNA OVER KACHCHH COAST AND ADJOINING AREAS OF PAKISTAN & NORTHEAST ARABIAN SEA BASED ON 0600 UTC (1130 IST) OF 30TH AUGUST, 2024



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 (2 120 KT)

•	LESS THAN 34 KT
6	34.47 KT
9	≥ 48 KT
	OBSERVED TRACK
	FORECAST TRACK
	CONE OF UNCERTAINTY
AREA O	F 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	





