



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
TROPICAL CYCLONE ADVISORY NO. 04**

**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 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. 04 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1800 UTC OF 30.08.2024 BASED ON 1500 UTC OF 30.08.2024**

**SUB: (A) CYCLONIC STORM “ASNA” (PRONOUNCED AS AS-NA) OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST AND (B) WELL MARKED LOW PRESSURE AREA OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL**

**(A) CYCLONIC STORM “ASNA” (PRONOUNCED AS AS-NA) OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST**

**THE CYCLONIC STORM “ASNA” (PRONOUNCED AS AS-NA) OVER NORTHEAST ARABIAN SEA OFF KACHCHH AND ADJOINING PAKISTAN MOVED WESTWARDS WITH A SPEED OF 8 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1500 UTC OF 30<sup>TH</sup> AUGUST, 2024 OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST NEAR LATITUDE 23.5°N AND LONGITUDE 67.0°E, 190 KM WEST OF NALIYA (GUJARAT),150 KM SOUTH OF KARACHI (PAKISTAN) AND 400KM EAST-SOUTHEAST OF PASNI (PAKISTAN)**

**IT IS LIKELY TO CONTINUE TO MOVE NEARLY WEST-NORTHWESTWARDS OVER NORTHEAST ARABIAN SEA AWAY FROM INDIAN COAST DURING NEXT 24 HOURS AND WEST-SOUTHWEST WARDS SUBSEQUENTLY.**

AS PER INSAT 3DR IMAGERY, AT 1500 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 LAY OVER NORTHEAST ARABIAN SEA, (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 90°C). MODERATE TO INTENSE CONVECTION OVER KUTCHH AND ADJOINING SOUTH PAKISTAN & SAURASHTRA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 35 KTS GUSTING TO 45 KTS. ESTIMATED CENTRAL PRESSURE IS 991 HPA. AT 1500 UTC, NALIYA REPORTED MEAN SEA LEVEL PRESSURE OF 1000.8 HPA WITH MEAN WIND SPEED 160<sup>0</sup>/02 KT, AND KARACHI REPORTED 998.4 HPA WITH MEAN WIND SPEED 70<sup>0</sup>/20KT.

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
30.08.24/1500	23.5/67.0	65-75 GUSTING TO 85	CYCLONIC STORM
30.08.24/1800	23.5/66.5	65-75 GUSTING TO 85	CYCLONIC STORM
31.08.24/0000	23.6/65.6	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/0600	23.7/64.8	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/1200	23.8/64.0	60-70 GUSTING TO 80	CYCLONIC STORM
01.09.24/0000	23.6/62.5	50-60 GUSTING TO 70	DEEP DEPRESSION
01.09.24/1200	23.3/61.1	40-50 GUSTING TO 60	DEPRESSION
02.09.24/0000	23.0/59.6	30-40 GUSTING TO 50	WELL MARKED LOW PRESSURE AREA

### 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 01<sup>ST</sup> SEPTEMBER:**

### **WIND WARNING:**

- GALE WIND SPEED REACHING 65-75 KMPH GUSTING TO 80 KMPH IS PREVAILING ALONG & OFF PAKISTAN AND ADJOINING SAURASHTRA & KACHCHH COASTS. IT IS LIKELY TO DECREASE BECOMING SQUALLY WIND SPEED REACHING 55-65 KMPH GUSTING TO 75 KMPH FROM 31<sup>ST</sup> MORNING AND 40-50 KMPH GUSTING TO 60 KMPH FROM 31<sup>ST</sup> AUGUST NIGHT. IT WILL FURTHER DECREASE THEREAFTER.
- GALE WIND SPEED REACHING 65-75 KMPH GUSTING TO 80 KMPH IS PREVAILING OVER NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA. IT IS LIKELY TO INCREASE BECOMING 70-80 KMPH GUSTING TO 90 KMPH OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST FROM MORNING TO EVENING OF 31<sup>ST</sup> AUGUST AND DECREASE GRADUALLY BECOMING SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 50 KMPH FROM MORNING OF 1<sup>ST</sup> SEPTEMBER.
- SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH IS LIKELY TO PREVAIL OVER NORTHWEST ARABIAN SEA OFF PAKISTAN COAST FROM NIGHT OF 30<sup>TH</sup> AUGUST AND INCREASE GRADUALLY BECOMING GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH FROM 0000 UTC OF 31<sup>ST</sup> AUGUST MORNING. THEREAFTER, THE WINDS WOULD GRADUALLY DECREASE BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH FROM 0000 UTC AND 40-50 KMPH GUSTING TO 60 KMPH BY 1200 UTC OF 1<sup>ST</sup> SEPTEMBER.

- SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY ALONG & OFF PAKISTAN COAST TILL 1<sup>ST</sup> SEPTEMBER.
- STRONG WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO PREVAIL ADJOINING CENTRAL ARABIAN SEA TILL 2<sup>ND</sup> SEPTEMBER 0000 UTC AND ALONG AND OFF GUJARAT & NORTH MAHARASHTRA COASTS TILL 31<sup>ST</sup> 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 31<sup>ST</sup> AUGUST.
- SQUALLY WEATHER WITH ROUGH SEA CONDITIONS IS LIKELY ALONG & OFF PAKISTAN COAST TILL 1<sup>ST</sup> SEPTEMBER.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST DURING 30<sup>TH</sup> TO 31<sup>ST</sup> AUGUST AND IMPROVE THEREAFTER.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTHWEST ARABIAN SEA OFF PAKISTAN AND SOUTHEAST IRAN COASTS FROM 31<sup>ST</sup> AUGUST TILL 1<sup>ST</sup> SEPTEMBER, ROUGH SEA CONDITION ON 2<sup>ND</sup> SEPTEMBER AND IMPROVE THEREAFTER.

**FISHERMEN WARNING:**

FISHERMEN ARE ADVISED NOT VENTURE INTO

- NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA AND ALONG & OFF GUJARAT & ADJOINING NORTH MAHARASHTRA COASTS TILL 31<sup>ST</sup> AUGUST.
- NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA OFF GUJARAT COAST AND ALONG & OFF PAKISTAN COASTS DURING 30<sup>TH</sup> AUGUST TO 1<sup>ST</sup> SEPTEMBER.
- NORTHWEST & ADJOINING WESTCENTRAL ARABIAN SEA AND ALONG & OFF PAKISTAN COAST FROM 31<sup>ST</sup> AUGUST TILL 2<sup>ND</sup> SEPTEMBER.

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

THE WELL MARKED LOW PRESSURE AREA OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL OFF NORTH ANDHRA PRADESH & SOUTH ODISHA PERSISTED AND LAY OVER THE SAME REGION AT 1200 UTC OF 30<sup>TH</sup> 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.

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<sup>OC</sup>).

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

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

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

**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 30<sup>TH</sup> BECOMING 45-55 KMPH GUSTING TO 65 KMPH ON 31<sup>ST</sup> 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 31<sup>ST</sup> AUGUST.

### **SEA CONDITION:**

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

### **REMARKS:**

THE MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 4 AND WOULD MOVE TO PHASE 5 FROM 31<sup>TH</sup> 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.

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 AND ARABIAN SEA IS 28-30°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/CM<sup>2</sup>) OVER CENTRAL BOB AND LESS (<50 KJ/CM<sup>2</sup>) OVER NORTH & ADJOINING CENTRAL AS. SEA CONDITIONS INDICATE THAT THE CYCLONE ASNA 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  $200 \times 10^{-5} \text{ S}^{-1}$  NEAR SYSTEM AREA OVER NORTHEAT ARABIAN SEA. LOW LEVEL CONVERGENCE IS  $20 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE

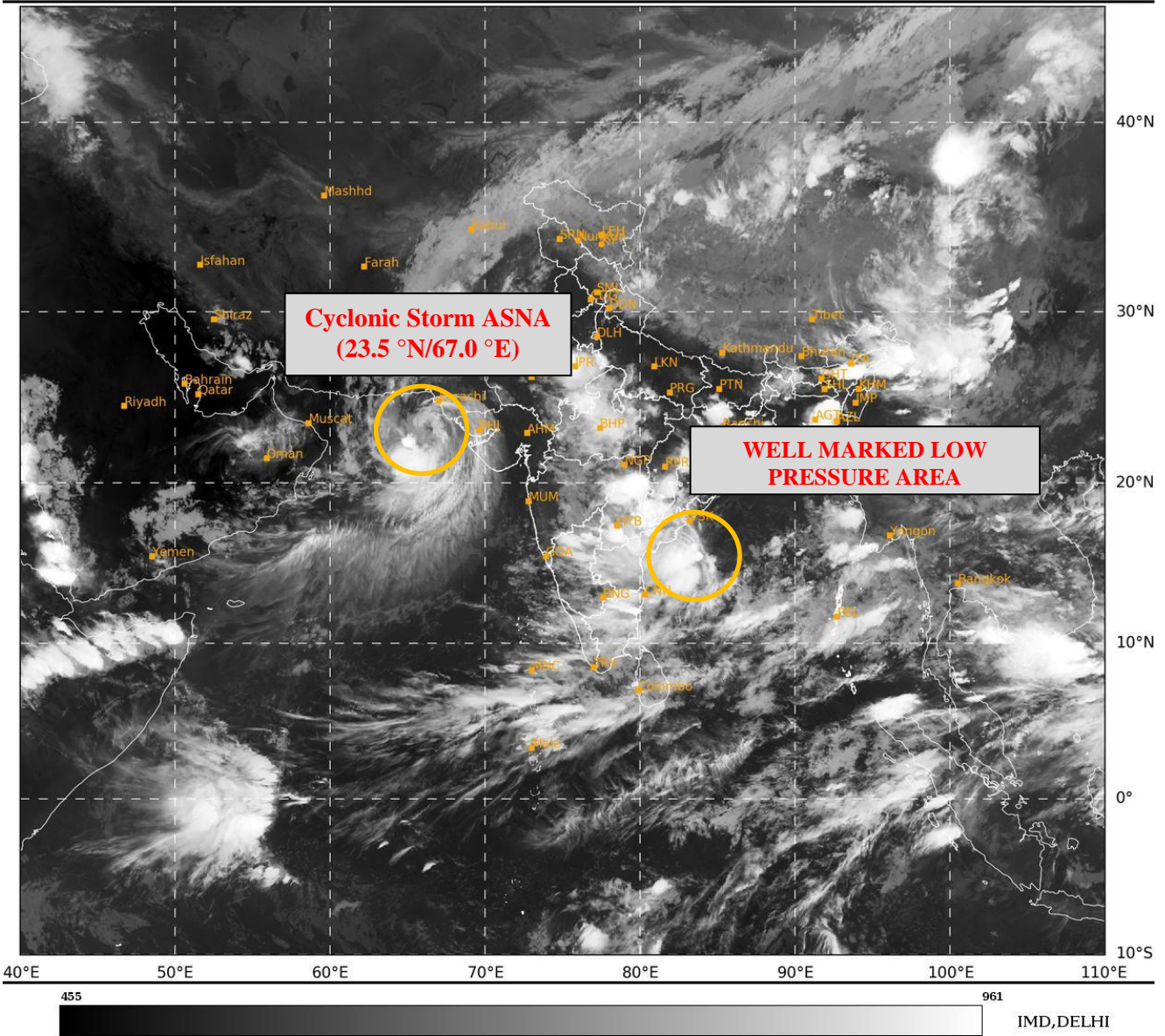
AND UPPER LEVEL DIVERGENCE IS ALSO  $20 \times 10^{-5} \text{ S}^{-1}$  OVER SOUTH-WEST OF THE SYSTEM CENTRE EXTENDING UPTO WESTCENTRAL ARABIAN SEA. WIND SHEAR IS LOW TO MODERATE OVER SAURASHTRA & KACHCHH AND ADJOINING NORTHEAST AS. THESE FEATURES INDICATE THAT THE CYCLONIC STORM ASNA OVER NORTHEAST ARABIAN SEA & ADJOINING AREAS OF PAKISTAN COAST IS IN A FAVOURABLE ENVIRONMENT TO MAINTAIN ITS INTENSIFICATION. THE UPPER TROPOSPHERIC RIDGE IS NEAR  $30^{\circ}\text{N}$ . A WESTERLY TROUGH IS APPROACHING THE INDIAN REGION AND IS CURRENTLY EXTENDING UPTO  $28^{\circ} \text{N}$  ALONG  $62^{\circ} \text{E}$ . THE SYSTEM IS TRACKING WESTWARDS UNDER THE INFLUENCE OF EASTERLIES PREVAILING TO THE SOUTH OF RIDGE.

OVER THE BOB, THE LOW LEVEL VORTICITY IS POSITIVE AND IS AROUND  $100 \times 10^{-5} \text{ S}^{-1}$  OVER CENTRAL BOB WITH EXTENSION UPTO MID TROPOSPHERIC LEVELS. LOW LEVEL CONVERGENCE IS  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF LOW PRESSURE AREA AND UPPER LEVEL DIVERGENCE IS ALSO  $10\text{-}20 \times 10^{-5} \text{ S}^{-1}$  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.

CONSIDERING ALL THE ABOVE, IT IS INFERRED THAT:

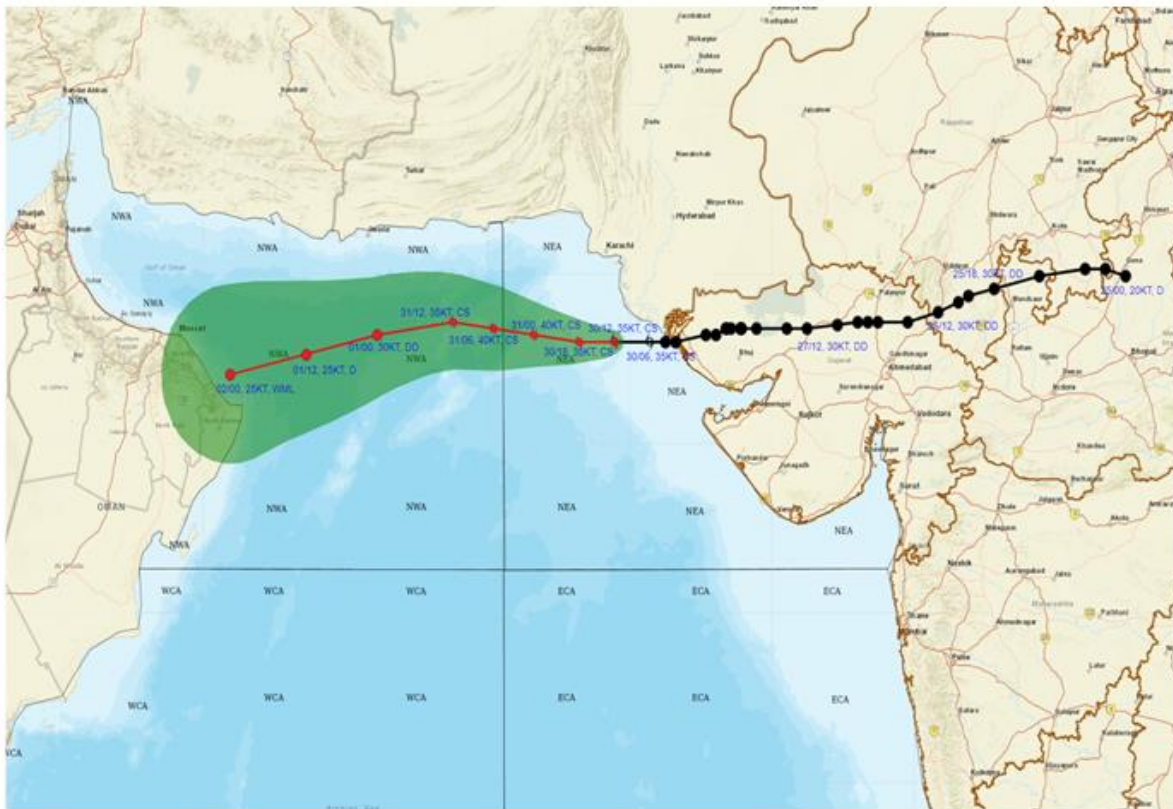
- (1) CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA) OVER **NORTHEAST ARABIAN SEA OFF PAKISTAN COAST** IS LIKELY TO CONTINUE TO MOVE TO MOVE NEARLY WEST-NORTHWESTWARDS OVER NORTHEAST ARABIAN SEA AWAY FROM INDIAN COAST DURING NEXT 24 HOURS AND WEST-SOUTHWEST WARDS SUBSEQUENTLY.
- (2) WELL MARKED LOW PRESSURE 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.

(DR M. T. BUSHAIR)  
SCIENTIST-C  
RSMC NEW DELHI





**OBSERVED AND FORECAST TRACK OF CYCLONIC STORM ASNA OVER NORTHEAST ARABIAN SEA OFF KACHCHH AND PAKISTAN COAST BASED ON 1200 UTC (1730 IST) OF 30<sup>TH</sup> AUGUST, 2024.**

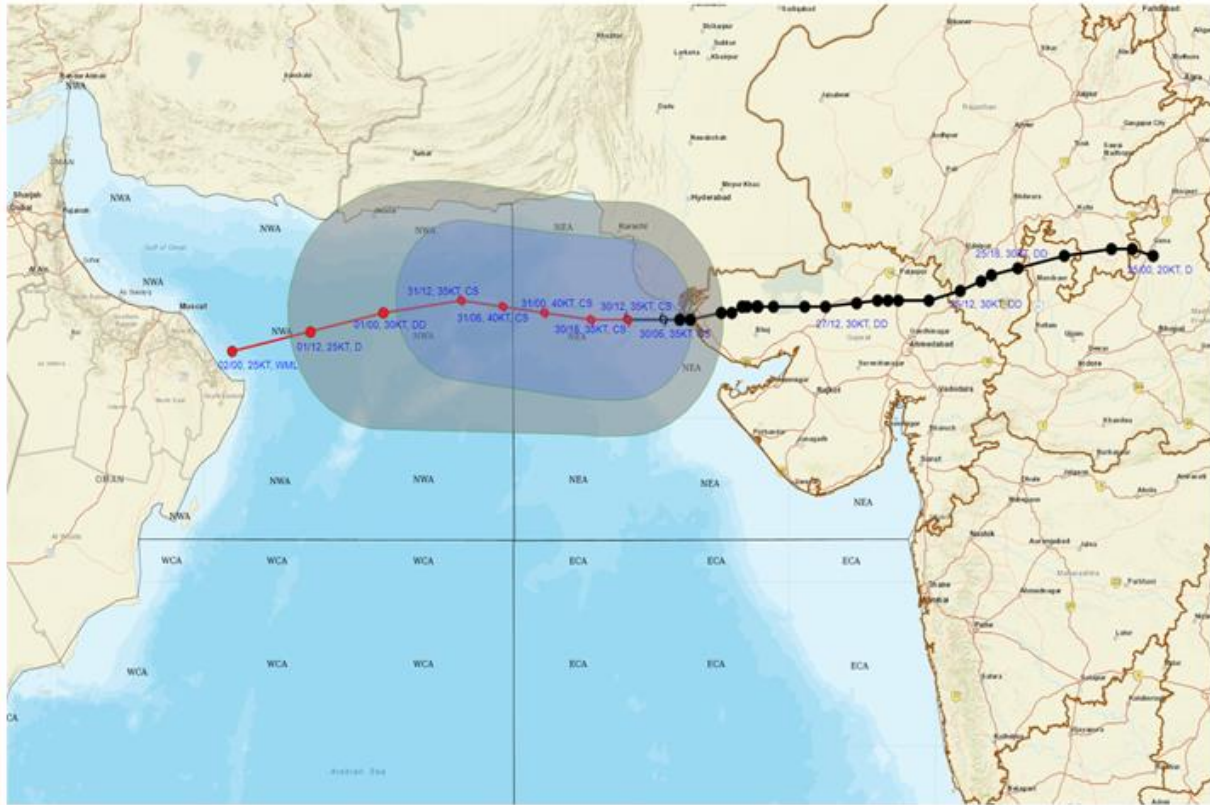


DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)  
 SuCS: SUPER CYCLONIC STORM ( $\geq$  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 CYCLONIC STORM ASNA OVER NORTHEAST ARABIAN SEA OFF KACHCHH AND PAKISTAN COAST BASED ON 1200 UTC (1730 IST) OF 30<sup>TH</sup> 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 (≥ 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

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C  
 PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%  
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### Fishermen Warning Graphics

