



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 13**

DEMS-RSMCSPECIAL TROPICAL CYCLONES NEW DELHI DATED 31.08.2024

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. 13 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2100 UTC OF 31.08.2024 BASED ON 1800 UTC OF 31.08.2024

SUB: (A) CYCLONIC STORM “ASNA” (PRONOUNCED AS AS-NA) OVER NORTHWEST AND ADJOINING NORTHEAST ARABIAN SEA AND (B) DEPRESSION OVER NORTH ANDHRA PRADESH COAST, CLOSE TO SOUTHWEST OF KALINGAPATNAM

(A) CYCLONIC STORM “ASNA” (PRONOUNCED AS AS-NA) OVER NORTHWEST AND ADJOINING NORTHEAST ARABIAN SEA

THE CYCLONIC STORM “ASNA” (PRONOUNCED AS AS-NA) OVER CENTRAL PARTS OF NORTH ARABIAN SEA MOVED WESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 UTC OF 31ST AUGUST, 2024 OVER NORTHWEST AND ADJOINING NORTHEAST ARABIAN SEA NEAR LATITUDE 23.5°N AND LONGITUDE 63.7°E, 200 KM SOUTH OF PASNI (41759), 380 KM WEST-SOUTHWEST OF KARACHI (41780), 570 KM WEST OF NALIYA (42631) AND 510 KM EAST OF MUSCAT (41256).

IT IS LIKELY TO CONTINUE TO MOVE NEARLY WESTWARDS OVER NORTH ARABIAN SEA AND MAINTAIN ITS INTENSITY TILL 0000 UTC OF 1ST SEPTEMBER. THEREAFTER, IT IS LIKELY TO MOVE WEST-SOUTHWESTWARDS FOR SUBSEQUENT 24 HOURS AND WEAKEN GRADUALLY INTO A DEPRESSION OVER NORTHWEST ARABIAN SEA BY 0000 UTC OF 2ND SEPTEMBER 2024.

**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%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins**

AS PER INSAT 3DR IMAGERY, AT 1800 UTC OF 31ST 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 NORTHWEST ARABIAN SEA, (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93⁰C). MODERATE TO INTENSE CONVECTION LAY OVER SOUTH PAKISTAN AND NORTHEAST ARABIAN SEA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 40 KTS GUSTING TO 50 KTS. ESTIMATED CENTRAL PRESSURE (MSLP) IS 990 HPA. AT 1200 UTC, PASNI REPORTED MEAN SEA LEVEL PRESSURE OF 1001.7 HPA & WINDS AS 90⁰/ 12 KT AND JIWANI REPORTED 1000.9 HPA & WINDS AS 90⁰/ 12 KT. A SHIP NEAR 21.0/61.9 REPORTED MSLP OF 1002 HPA AND WINDS AS 270⁰/ 15KT.

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
31.08.24/1800	23.5/63.3	70-80 GUSTING TO 90	CYCLONIC STORM
01.09.24/0000	23.4/62.6	65-75 GUSTING TO 85	CYCLONIC STORM
01.09.24/0600	23.2/62.0	60-70 GUSTING TO 80	CYCLONIC STORM
01.09.24/1200	23.0/61.5	50-60 GUSTING TO 70	DEEP DEPRESSION
01.09.24/1800	22.6/61.0	40-50 GUSTING TO 60	DEPRESSION
02.09.24/0600	21.7/60.1	20-30 GUSTING TO 40	WELL MARKED LOW

WARNINGS:

SEA CONDITION AND ADVISORY FOR FISHERMEN IN ASSOCIATION WITH CYCLONIC STORM ASNA OVER CENTRAL PARTS OF NORTH ARABIAN SEA:

WIND WARNING:

- SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS LIKELY TO PREVAIL ALONG & OFF PAKISTAN DURING NEXT 24 HOURS.
- SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO PREVAIL OVER CENTRAL PARTS OF NORTH ARABIAN SEA DURING NEXT 12 HOURS. IT WILL FURTHER DECREASE THEREAFTER.
- GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH PREVAILING OVER NORTHWEST ARABIAN SEA. IT WOULD GRADUALLY DECREASE BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH BY EVENING OF 1ST SEPTEMBER AND IMPROVE THEREAFTER.
- SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS LIKELY TO PREVAIL OVER CENTRAL ARABIAN SEA TILL 2ND SEPTEMBER MORNING AND IMPROVE GRADUALLY THEREAFTER.
- STRONG WIND SPEED REACHING 30-40 KMPH GUSTING TO 50 KMPH IS LIKELY ALONG AND OFF GUJARAT, MAHARASHTRA AND KARNATAKA COAST DURING NEXT 24 HOURS.

SEA CONDITION:

- SQUALLY WEATHER WITH ROUGH TO VERY ROUGH SEA CONDITIONS IS LIKELY ALONG & OFF PAKISTAN COAST TILL DURING NEXT 12 HOURS.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER CENTRAL PARTS OF NORTH ARABIAN SEA DURING NEXT 12 HOURS AND BECOMING VERY ROUGH TO ROUGH SEA CONDITION FROM EVENING OF 1ST SEPTEMBER TILL MORNING OF 2ND SEPTEMBER AND IMPROVE THEREAFTER.

- ROUGH SEA CONDITION IS LIKELY OVER ADJOINING WESTCENTRAL ARABIAN SEA TILL 2ND SEPTEMBER.
- ROUGH SEA CONDITION IS LIKELY OVER ADJOINING WESTCENTRAL ARABIAN SEA TILL 2ND SEPTEMBER.

FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT VENTURE INTO

- NORTH ARABIAN SEA AND ALONG & OFF PAKISTAN COASTS TILL 1ST SEPTEMBER.
- ADJOINING WESTCENTRAL ARABIAN SEA TILL 2ND SEPTEMBER.

(B) DEPRESSION OVER NORTH ANDHRA PRADESH COAST, CLOSE TO SOUTHWEST OF KALINGAPATNAM

THE DEPRESSION OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL OFF NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS MOVED NORTHWESTWARDS WITH A SPEED OF 6 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 UTC OF THE 31ST AUGUST, 2024 OVER NORTH ANDHRA PRADESH COAST, CLOSE TO SOUTHWEST OF KALINGAPATNAM NEAR LATITUDE 18.2°N AND LONGITUDE 83.8°E, ABOUT 40 KM SOUTHWEST OF KALINGAPATNAM (ANDHRA PRADESH), 80 KM NORTHEAST OF VISAKHAPATNAM (ANDHRA PRADESH) AND 160 KM SOUTHWEST OF GOPALPUR (ODISHA).

IT IS LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS AND CROSS NORTH ANDHRA PRADESH AND ADJOINING SOUTH ODISHA COASTS BETWEEN VISAKHAPATNAM AND GOPALPUR CLOSE TO KALINGAPATNAM AROUND 2000 UTC OF THE 31ST AUGUST 2024.

ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH COASTAL ANDHRA PRADESH, TELANGANA, RAYALSEEMA, AND CHHATISGARH. MINIMUM CTT IS MINUS 93 DEG CELSIUS.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 20-25 KTS GUSTING TO 35 KTS. ESTIMATED CENTRAL PRESSURE IS 996 HPA. AT 1800 UTC, KALINGAPATNAM REPORTED MEAN SEA LEVEL PRESSURE OF 999.3 HPA, PRESSURE CHANGE IN 24 HOURS AS -0.8 HPA. VISAKHAPATNAM REPORTED MSLP OF 999.5 HPA, 24 HR PRESSURE CHANGE OF -1.2.

SEA CONDITION AND ADVISORY FOR FISHERMEN IN ASSOCIATION WITH DEPRESSION OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL OVER THE BAY OF BENGAL

WIND WARNING:

- SQUALLY WEATHER WITH WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH LIKELY OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL DURING NEXT 24 HOURS.
- SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS LIKELY TO PREVAIL ALONG & OFF NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS ON DURING NEXT 24 HOURS.
- SQUALLY WEATHER WITH WIND SPEED REACHING 35-45 KMPH GUSTING TO 55 KMPH IS LIKELY TO PREVAIL ALONG AND OFF NORTH ODISHA AND SOUTH ANDHRA PRADESH COASTS ON DURING NEXT 24 HOURS.

SEA CONDITION:

- ROUGH TO VERY ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL ON 1ST SEPTEMBER.
- ROUGH TO VERY ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL ALONG & OFF NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS ON 1ST SEPTEMBER

FISHERMEN WARNING:

- FISHERMEN ARE ADVISED NOT VENTURE INTO WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL AND ALONG & OFF SOUTH ODISHA AND NORTH ANDHRA PRADESH COASTS TILL 1ST SEPTEMBER.

REMARKS:

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

CONSIDERING THE EXISTING ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE OVER THE BOB AND ARABIAN SEA (AS) IS 28-29°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 ARABIAN SEA. SEA CONDITIONS INDICATE THAT THE CYCLONE ASNA OVER NORTHEAST & ADJOINING NORTHWEST ARABIAN SEA HAS ENTERED INTO AN AREA WITH TCHP LESS THAN 50 KJ/CM² AND THUS, MAY NOT INTENSIFY SIGNIFICANTLY.

THE LOW LEVEL VORTICITY IS $150 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF THE SYSTEM AREA. LOW LEVEL CONVERGENCE IS $15 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS ALSO $20 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. WIND SHEAR IS LOW TO MODERATE (15-20 KT) OVER CENTRAL PART OF NORTH AS. THESE FEATURES INDICATE THAT THE CYCLONIC STORM ASNA OVER NORTHEAST ARABIAN SEA & ADJOINING AREAS OF PAKISTAN COAST IS LIKELY TO MAINTAIN ITS INTENSITY OF CYCLONIC STORM DURING NEXT 24 HOURS. 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 $150 \times 10^{-5} \text{ S}^{-1}$ OVER CENTRAL BOB WITH EXTENSION UPTO MID TROPOSPHERIC LEVELS. LOW LEVEL CONVERGENCE IS $10 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF LOW PRESSURE AREA AND UPPER LEVEL DIVERGENCE IS ALSO $20 \times 10^{-5} \text{ S}^{-1}$ AROUND THE 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.

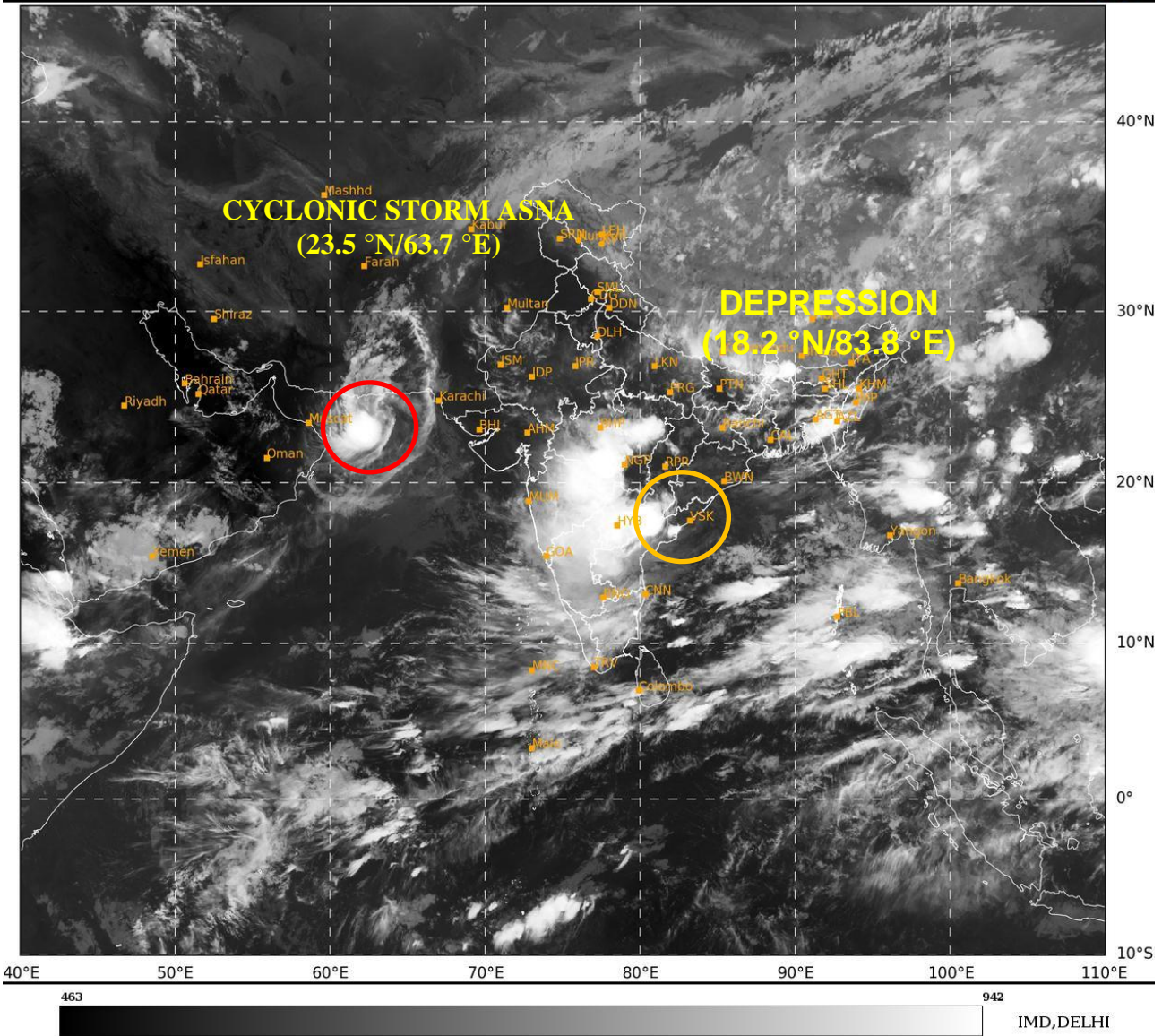
CONSIDERING ALL THE ABOVE, IT IS INFERRED THAT:

- (1)CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA) OVER CENTRAL PARTS OF NORTH ARABIAN SEA IS LIKELY TO CONTINUE TO MOVE NEARLY WESTWARDS OVER NORTH ARABIAN SEA AND MAINTAIN ITS INTENSITY TILL 0000 UTC OF 1ST SEPTEMBER. THEREAFTER, IT IS LIKELY TO MOVE WEST-SOUTHWESTWARDS FOR

SUBSEQUENT 24 HOURS AND WEAKEN GRADUALLY INTO A DEPRESSION OVER NORTHWEST ARABIAN SEA BY 0000 UTC OF 2ND SEPTEMBER 2024.

(2) DEPRESSION OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL IS LIKELY TO MOVE FURTHER WEST-NORTHWESTWARDS AND CROSS NORTH ANDHRA PRADESH AND ADJOINING SOUTH ODISHA COASTS BETWEEN VISHAKHAPATNAM AND GOPALPUR CLOSE TO KALINGAPATNAM AROUND 2100 UTC 31ST AUGUST 2024.

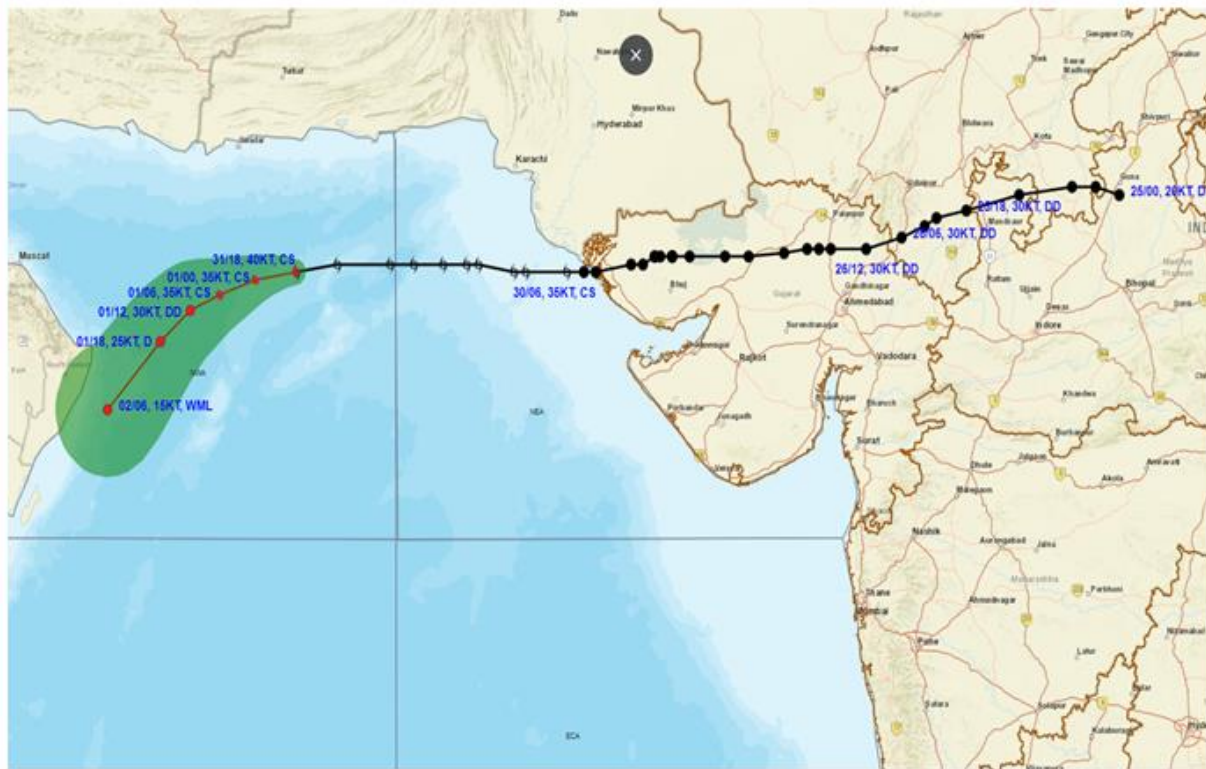
(SHIBIN B)
SCIENTIST-D
RSMC NEW DELHI



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%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK OF CYCLONIC STORM ASNA OVER NORTHWEST AND ADJOINING NORTHEAST ARABIAN SEA BASED ON 1800 UTC (2330 IST) OF 31st AUGUST, 2024.

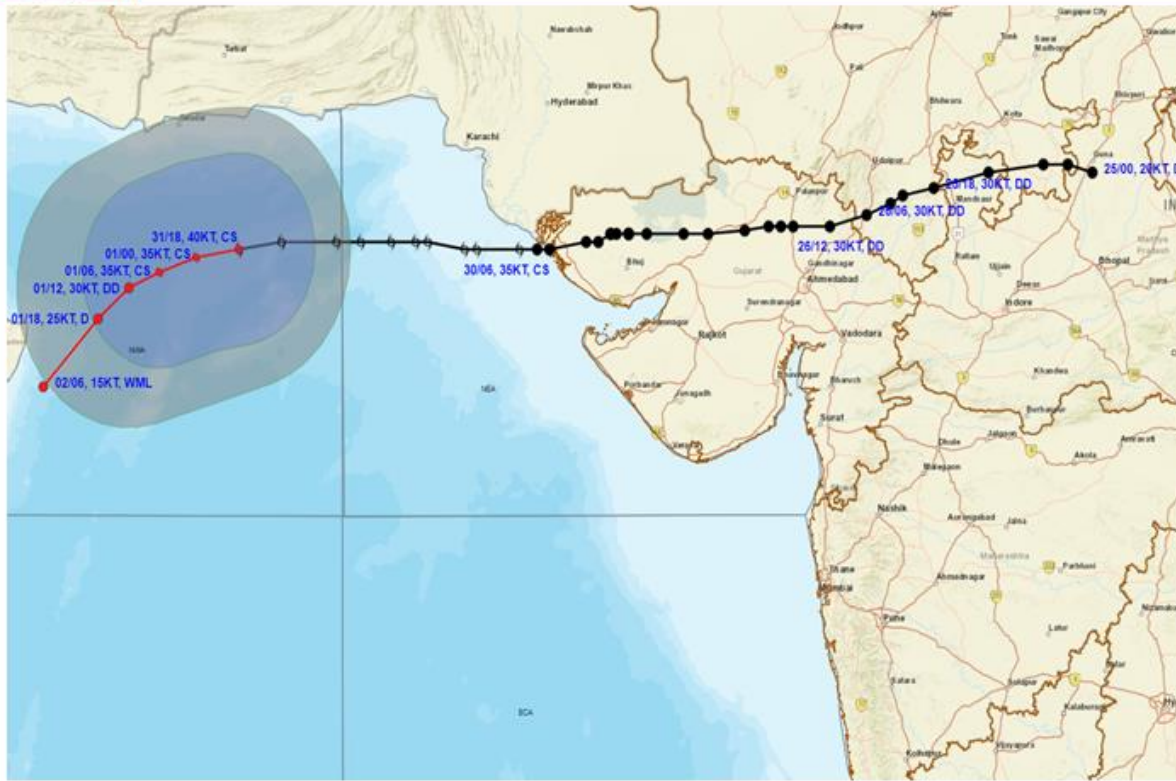


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM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



OBSERVED AND FORECAST TRACK OF CYCLONIC STORM ASNA OVER NORTHWEST AND ADJOINING NORTHEAST ARABIAN SEA BASED ON 1800 UTC (2330 IST) OF 31ST 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%
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK OF DEPRESSION OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 31ST 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

WCB: WESTCENTRAL BAY OF BENGAL
 ECB: EASTCENTRAL BAY OF BENGAL
 NWB:NORTHWEST BAY OF BENGAL

Fishermen Warning Graphics

