



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 10**

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. 10 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1230 UTC OF 31.08.2024 BASED ON 0900 UTC OF 31.08.2024

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

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

THE CYCLONIC STORM “ASNA” (PRONOUNCED AS AS-NA) OVER NORTHEAST & ADJOINING NORTHWEST ARABIAN SEA MOVED WESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0900 UTC OF 31ST AUGUST, 2024 OVER THE SAME REGION NEAR LATITUDE 23.6°N AND LONGITUDE 64.4°E, 460 KM WEST OF NALIYA (42631), 310 KM WEST-SOUTHWEST OF KARACHI (41780), 210 KM SOUTH-SOUTHEAST OF PASNI (41759) AND 620 KM EAST OF MUSCAT (41256).

IT IS LIKELY TO CONTINUE TO MOVE NEARLY WESTWARDS OVER NORTHEAST & NORTHWEST 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.

AS PER INSAT 3DR IMAGERY, AT 0900 UTC OF 31TH 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 AND ADJOINING NORTHWEST ARABIAN SEA, (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 90°C). MODERATE TO INTENSE CONVECTION LAY OVER CENTRAL ARABIAN SEA AND WEST PARTS OF KUTCH & SOUTH PAKISTAN. TOTAL PRECIPITABLE WATER IMAGERY STILL INDICATE WARM MOIST AIR INCURSION INTO THE CORE OF THE STSEM.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 40 KTS GUSTING TO 50 KTS. ESTIMATED CENTRAL PRESSURE IS 990 HPA. AT 0900 UTC, PASNI REPORTED MEAN SEA LEVEL PRESSURE OF 1002.4 HPA, AND JIWANI REPORTED 1002.8 HPA.

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
31.08.24/0900	23.6/64.4	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/1200	23.6/64.2	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/1800	23.6/63.4	65-75 GUSTING TO 85	CYCLONIC STORM
01.09.24/0000	23.5/62.5	60-70 GUSTING TO 80	CYCLONIC STORM
01.09.24/0600	23.2/61.8	50-60 GUSTING TO 70	DEEP DEPRESSION
01.09.24/1800	22.6/61.1	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 02ST SEPTEMBER:

WIND WARNING:

- SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS PREVAILING ALONG & OFF PAKISTAN COASTS ON 31ST AUGUST AND 1ST SEPTEMBER.
- SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 OVER ADJOINING SAURASHTRA & KACHCHH COASTS ON 31ST AUGUST AND 1ST SEPTEMBER.
- GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH PREVAILING OVER NORTHEAST ARABIAN SEA, IS LIKELY TO CONTINUE FROM MORNING TO EVENING OF 31ST AUGUST AND DECREASE GRADUALLY THEREAFTER BECOMING SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH BY 0000 UTC OF 1ST SEPTEMBER. IT WILL FURTHER DECREASE THEREAFTER.
- GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH PREVAILING OVER ADJOINING NORTHWEST ARABIAN SEA OFF PAKISTAN COAST. THEREAFTER, THE WINDS WOULD GRADUALLY DECREASE BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH BY 1200 UTC OF 1ST SEPTEMBER AND IMPROVE THEREAFTER GRADUALLY.
- SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS LIKELY TO PREVAIL OVER ADJOINING CENTRAL ARABIAN SEA TILL 2ND SEPTEMBER 0000 UTC AND IMPROVE THEREAFTER GRADUALLY.
- STRONG WIND SPEED REACHING 30-40 KMPH GUSTING TO 50 KMPH LIKELY ALONG AND OFF GUJARAT, MAHARASHTRA & KARNATAKA COASTS ON 31ST AUGUST & 1ST SEPTEMBER.

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/1200 UTC.
- SQUALLY WEATHER WITH ROUGH SEA TO VERY ROUGH SEA CONDITIONS IS LIKELY ALONG & OFF PAKISTAN COAST TILL 1ST SEPTEMBER/0000 UTC.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST DURING 31ST AUGUST AND IMPROVE THEREAFTER BECOMING ROUGH SEA CONDITION BY 0000 UTC OF 1ST SEPTEMBER AND IMPROVE THEREAFTER.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTHWEST ARABIAN SEA OFF PAKISTAN AND SOUTHEAST IRAN COASTS FROM 31ST AUGUST TILL 1ST SEPTEMBER, ROUGH SEA CONDITION ON 2ND 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 31ST AUGUST.
- NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA OFF GUJARAT COAST AND ALONG & OFF PAKISTAN COASTS DURING 31ST AUGUST TO 1ST SEPTEMBER.
- NORTHWEST & ADJOINING WESTCENTRAL ARABIAN SEA AND ALONG & OFF PAKISTAN COAST FROM 31ST AUGUST TILL 2ND SEPTEMBER.

(B) DEPRESSION OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL

THE DEPRESSION OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL OFF NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 08 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0900 UTC OF TODAY, THE 31ST AUGUST, 2024 OVER THE SAME REGION NEAR LATITUDE 18.1°N AND LONGITUDE 84.1°E, ABOUT 30 KM SOUTH OF KALINGAPATNAM (ANDHRA PRADESH, 43105), 90 KM EAST-NORTHEAST OF VISAKHAPATNAM (ANDHRA PRADESH; 43150) AND 150 KM SOUTH-SOUTHWEST OF GOPALPUR (ODISHA; 43049).

IT IS LIKELY TO MOVE NORTHWESTWARDS AND CROSS NORTH ANDHRA PRADESH AND ADJOINING SOUTH ODISHA COASTS BETWEEN VISAKHAPATNAM AND GOPALPUR CLOSE TO KALINGAPATNAM AROUND 1500 UTC OF TODAY, THE 31ST AUGUST 2024.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 20-25 KTS GUSTING TO 35 KTS. ESTIMATED CENTRAL PRESSURE IS 998 HPA. AT 0900 UTC, VISAKHAPATNAM (43150) REPORTED MEAN SEA LEVEL PRESSURE OF 997.7 HPA, 24 HR PRESSURE CHANGE OF -2.6 AND GOPALPUR (43049) REPORTED 998.4 HPA.

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 45-55 KMPH GUSTING TO 65 KMPH LIKELY OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL 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.

- 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 31ST AUGUST.

SEA CONDITION:

- ROUGH TO VERY ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL ON 31ST AUGUST AND 1ST SEPTEMBER.
- ROUGH TO VERY ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL ALONG & OFF NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS ON 31ST AUGUST AND 1ST SEPTEMBER

FISHERMEN WARNING:

- FISHERMEN ARE ADVISED NOT VENTURE INTO WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL TILL 1ST SEPTEMBER 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 IS 28-29⁰C. IT IS COLDER (<26⁰C) OVER WESTCENTRAL AS AND VERY WARM (>32⁰C) 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.

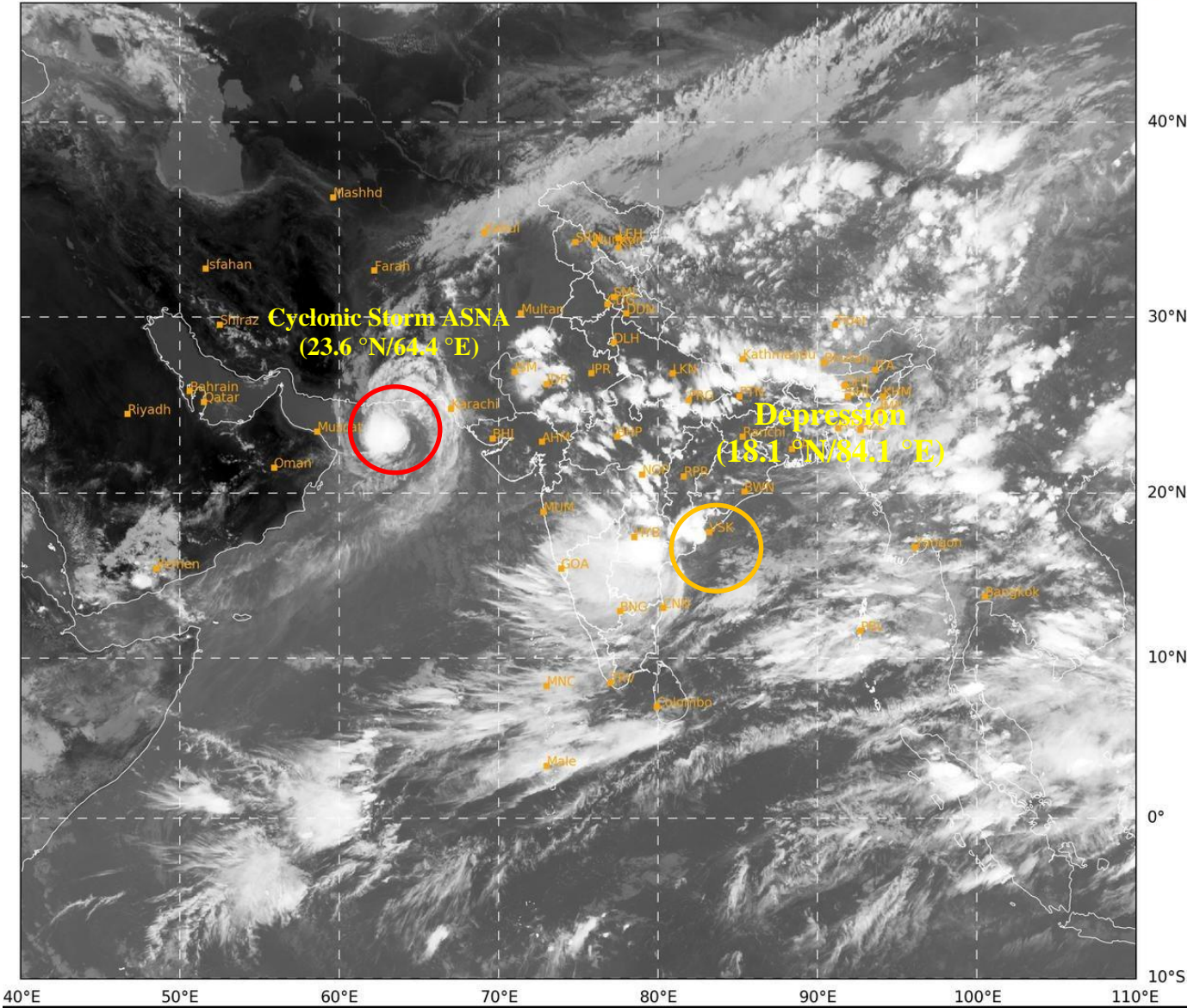
THE LOW LEVEL VORTICITY IS $150 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF THE SYSTEM AREA. LOW LEVEL CONVERGENCE IS $10 \times 10^{-5} \text{ S}^{-1}$ OVER THE SOUTH OF THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS ALSO $20 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. WIND SHEAR IS LOW TO MODERATE OVER NORTHEAST 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. THE UPPER TROPOSPHERIC RIDGE IS NEAR 30⁰N. A WESTERLY TROUGH IS APPROACHING THE INDIAN REGION AND IS CURRENTLY EXTENDING UPTO 28⁰ N ALONG 62⁰ 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 $150 \times 10^{-5} \text{ S}^{-1}$ 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 NORTHEAST ARABIAN SEA OFF PAKISTAN COAST IS LIKELY TO CONTINUE TO MOVE NEARLY WESTWARDS OVER NORTHEAST AND ADJOINING NORTHWEST ARABIAN SEA AWAY FROM INDIAN COAST DURING TILL 0000 UTC OF 1ST SEPTEMBER AND THEN WEST-SOUTHWEST WARDS FOR SUBSEQUENT 24 HOURS.
- (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 1500 UTC 31ST AUGUST 2024.

(DR. D. R. PATTANAİK)
SCIENTIST-F
RSMC NEW DELHI



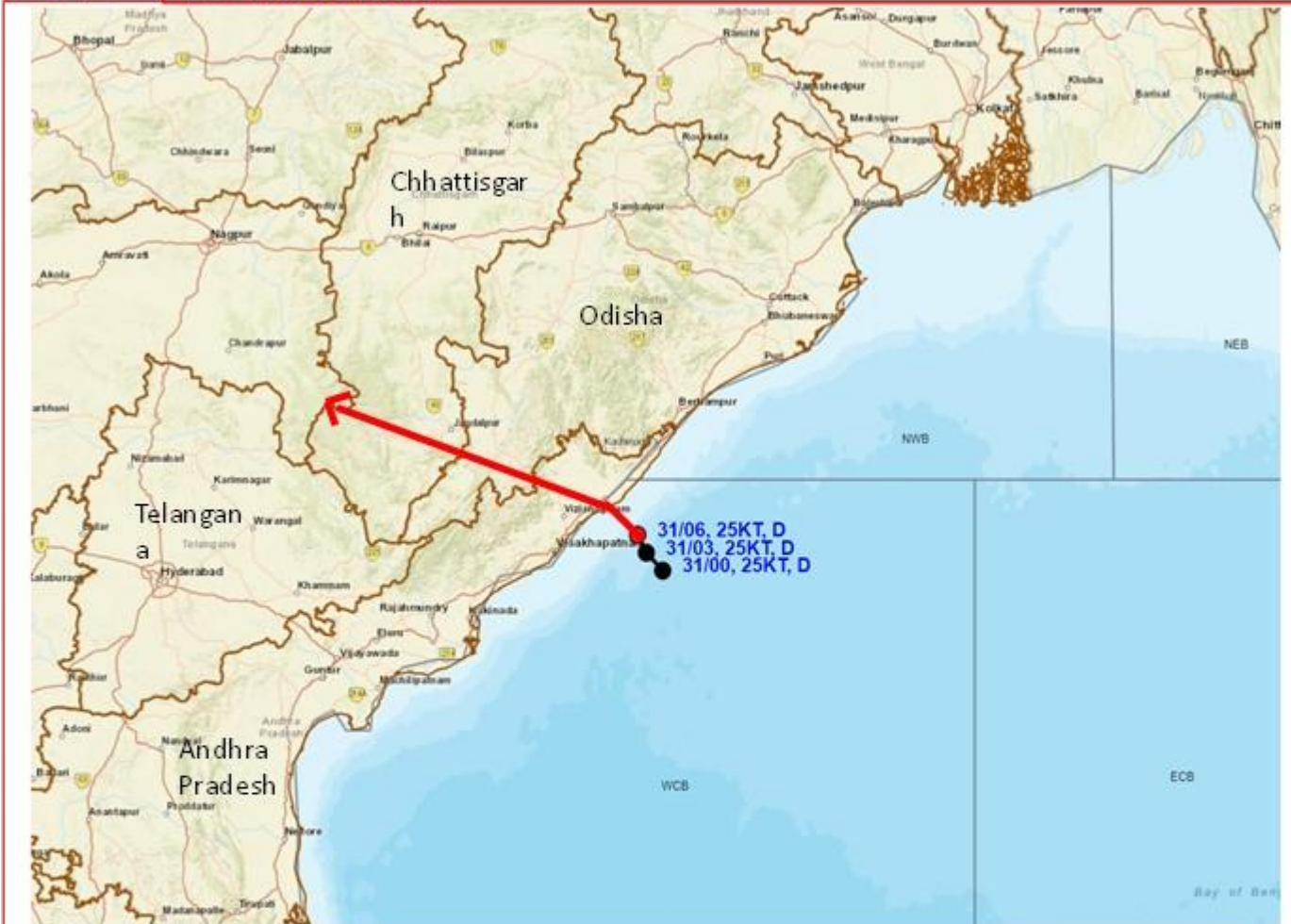
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IMD, DELHI



OBSERVED AND FORECAST TRACK OF DEPRESSION OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL BASED ON 0600 UTC (1130 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 (\geq 120 KT)

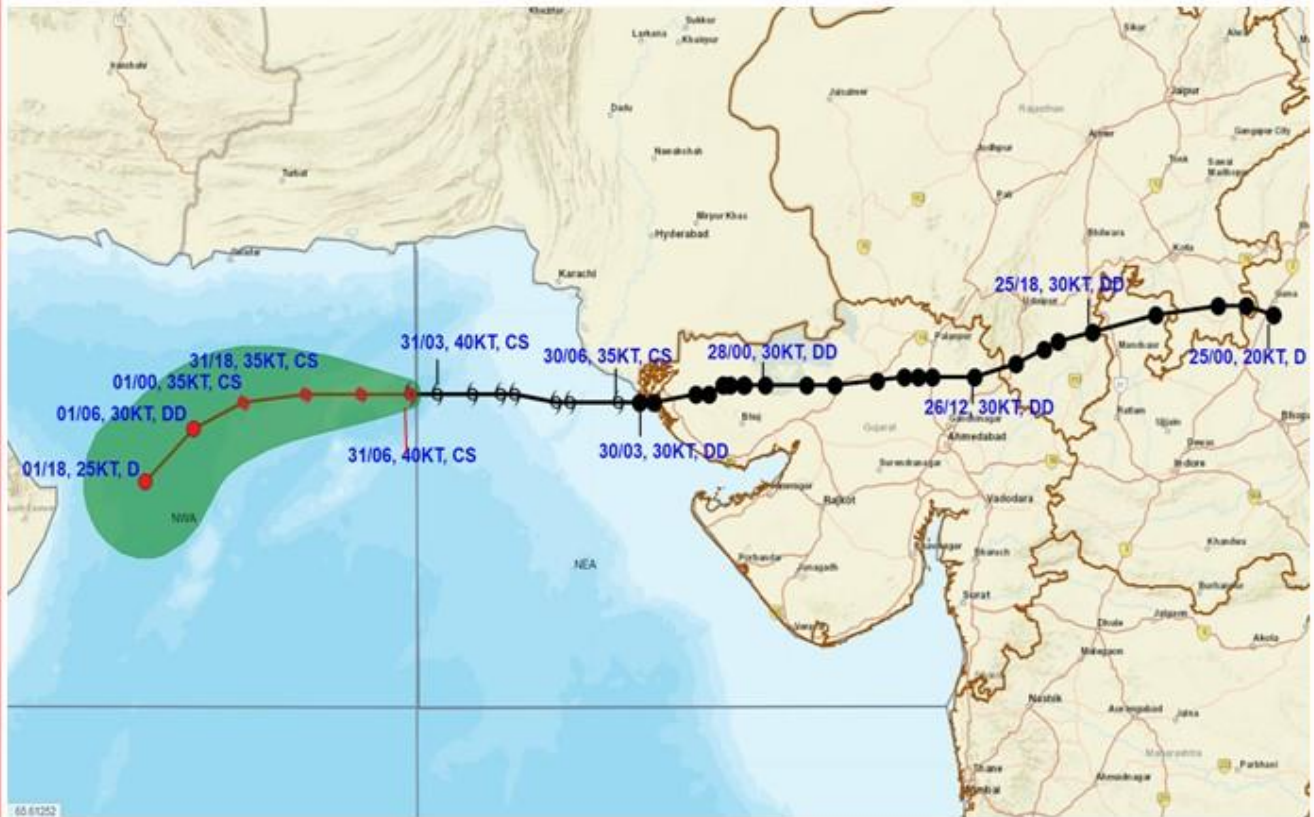
● LESS THAN 34 KT
 ⌀ 34-47 KT
 ⌀ \geq 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ▲ CONE OF UNCERTAINTY

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

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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OBSERVED AND FORECAST TRACK OF CYCLONIC STORM ASNA OVER NORTHEAST AND NORTHWEST ARABIAN SEA BASED ON 0600 UTC (1130 IST) OF 31ST AUGUST, 2024.

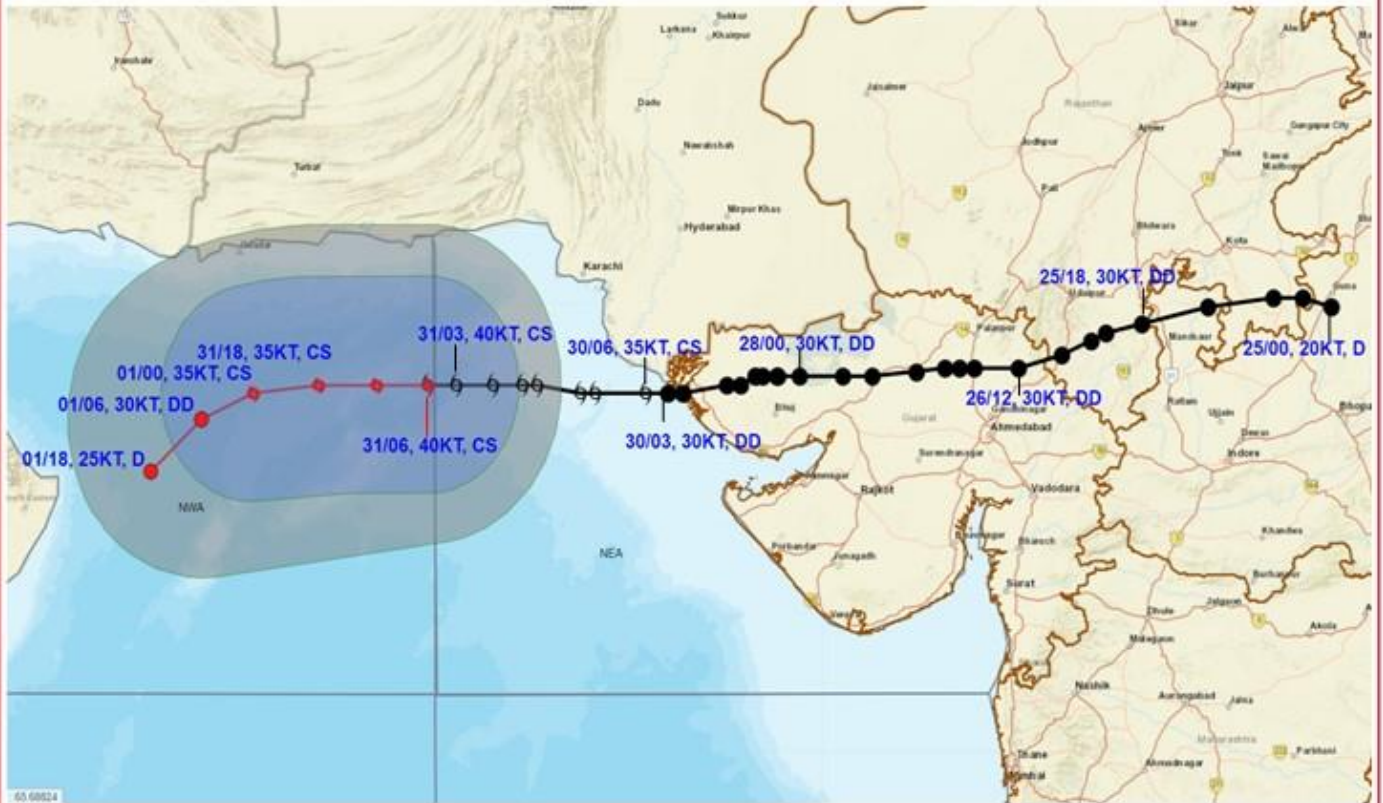


DATE/TIME IN UTC
 IST-UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (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 NORTHEAST AND NORTHWEST ARABIAN SEA BASED ON 0600 UTC (1130 IST) OF 31st AUGUST, 2024.



DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
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 SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

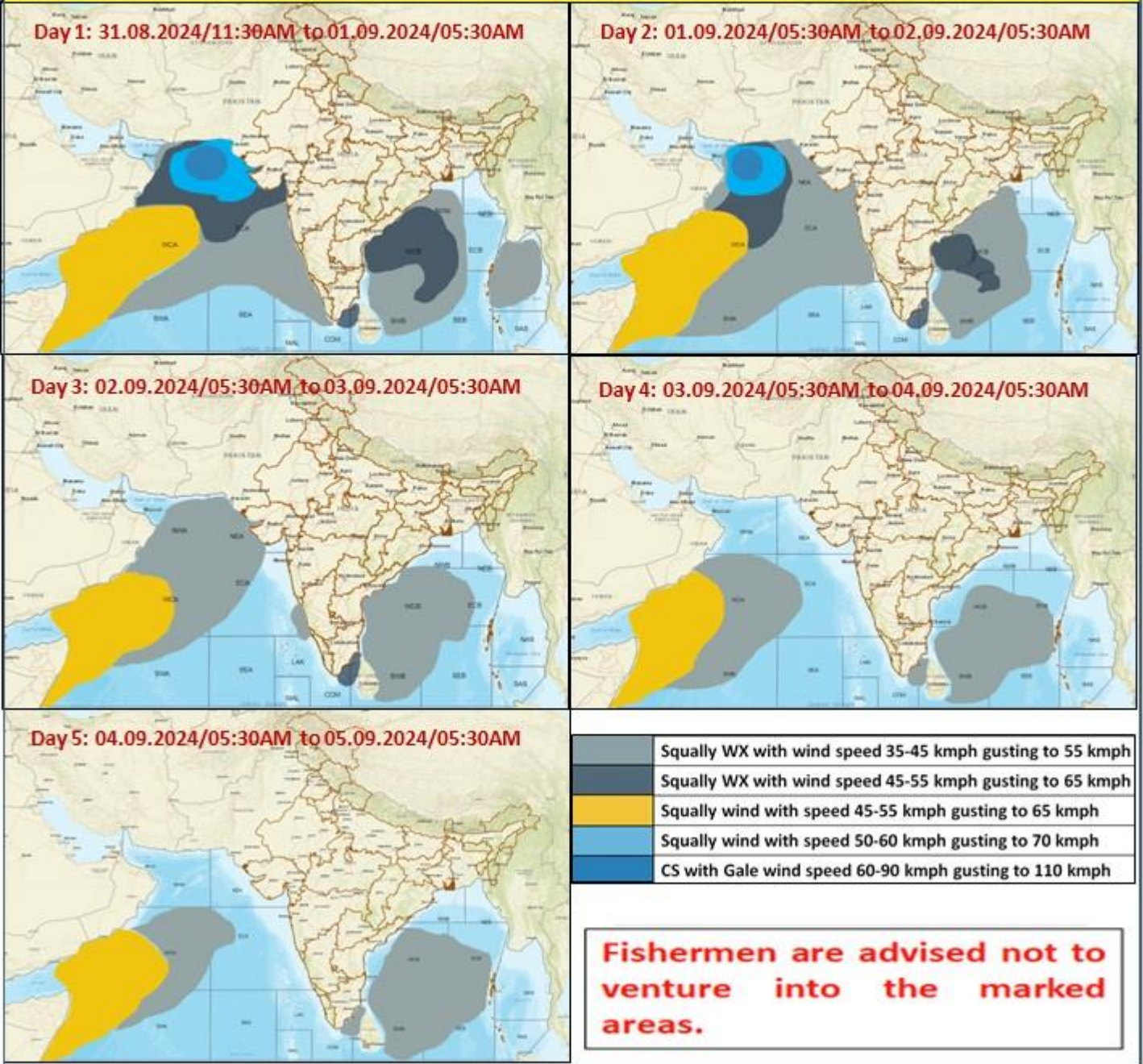
● LESS THAN 34 KT
 ○ 34.47 KT
 ● ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 — CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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



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