





# REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI TROPICAL CYCLONE ADVISORY NO. 07

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. 07 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 31.08.2024 BASED ON 0000 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 ARABIAN SEA OFF PAKISTAN COAST

THE **CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA)** OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST MOVED WESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0000 UTC OF 31<sup>TH</sup> AUGUST, 2024 OVER THE SAME REGION NEAR LATITUDE 23.6°N AND LONGITUDE 65.8°E, 310 KM WEST OF NALIYA (GUJARAT, 42631),200 KM SOUTHWEST OF KARACHI (PAKISTAN, 41780), 300 KM SOUTHEAST OF PASNI (PAKISTAN, 41759) AND 760 KM EAST OF MUSCAT (OMAN, 41256)

IT IS LIKELY TO CONTINUE TO MOVE NEARLY WEST-NORTHWESTWARDS OVER NORTHEAST & NORTHWEST ARABIAN SEA AWAY FROM INDIAN COAST 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 BY 0000 UTC OF 2ND SEPTEMBER 2024.

AS PER INSAT 3DR IMAGERY, AT 0000 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 NORTH AND ADJOINING CENTRAL ARABIAN SEA, (MINIMUM CLOUD TOP TEMPERATURE IS MINUS  $90^{\circ}$ C). MODERATE TO INTENSE CONVECTION OVER WEST PART OF KUTCHH AND ADJOINING SOUTH PAKISTAN.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 40 KTS GUSTING TO 50 KTS. ESTIMATED CENTRAL PRESSURE IS 990 HPA. AT 0000 UTC, PANSI REPORTED MEAN SEA LEVEL PRESSURE OF 998.2 HPA, AND KARACHI REPORTED 1001.3 HPA WITH MEAN WIND SPEED  $70^{\circ}/10$ KT.

### FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
31.08.24/0000	23.6/65.8	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/0600	23.7/65.0	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/1200	23.8/64.3	70-80 GUSTING TO 90	CYCLONIC STORM
31.08.24/1800	23.7/63.4	65-75 GUSTING TO 85	CYCLONIC STORM
01.09.24/0000	23.6/62.5	60-70 GUSTING TO 80	CYCLONIC STORM
01.09.24/1200	23.0/61.5	50-60 GUSTING TO 70	DEEP DEPRESSION
02.09.24/0000	22.3/60.7	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 02<sup>ST</sup> SEPTEMBER:

### WIND WARNING:

- SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS PREVAILING ALONG & OFF PAKISTAN COASTS ON 31<sup>ST</sup> AUGUST AND 1<sup>ST</sup> SEPTEMBER.
- SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 OVER ADJOINING SAURASHTRA & KACHCHH COASTS ON 31<sup>ST</sup> AUGUST AND 1<sup>ST</sup> SEPTEMBER.
- GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH PREVAILING OVER NORTHEAST ARABIAN SEA, IS LIKELY TO CONTINUE FROM 0000 UTC TO 1200 UTC OF 31<sup>ST</sup> AUGUST AND DECREASE GRADUALLY THEREAFTER BECOMING SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH BY 0000 UTC OF 1<sup>ST</sup> SEPTEMBER. IT WILL FURTHER DECREASE THEREAFTER.
- GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH PREVAILING OVER NORTHWEST ARABIAN SEA OFF PAKISTAN COAST IS LIKELY TO INCREASE GRADUALLY BECOMING 70-80 KMPH GUSTING TO 90 KMPH FROM 0000 UTC OF 31<sup>ST</sup> AUGUST TILL 0000 UTC OF 1<sup>ST</sup> SEPTEMBER. THEREAFTER, THE WINDS WOULD GRADUALLY DECREASE BECOMING SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH BY 1200 UTC OF 1<sup>ST</sup> SEPTEMBER.
- STRONG WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO PREVAIL
  OVER ADJOINING CENTRAL ARABIAN SEA TILL 0000 UTC OF 2<sup>ND</sup> SEPTEMBER 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 1200 UTC OF 31<sup>ST</sup> AUGUST.
- SQUALLY WEATHER WITH ROUGH SEA TO VERY ROUGH SEA CONDITIONS IS LIKELY ALONG & OFF PAKISTAN COAST TILL 0000 UTC OF 1<sup>ST</sup> SEPTEMBER.
- VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST DURING 31<sup>ST</sup> AUGUST AND IMPROVE THEREAFTER BECOMING ROUGH SEA CONDITION BY 0000 UTC OF 1<sup>ST</sup> 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 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 31<sup>ST</sup> AUGUST TO 1<sup>ST</sup> SEPTEMBER.
- $\circ$  NORTHWEST & ADJOINING WESTCENTRAL ARABIAN SEA AND ALONG & OFF PAKISTAN COAST FROM 31  $^{\rm ST}$  AUGUST TILL 2  $^{\rm ND}$  SEPTEMBER.

# (B) DEPRESSION 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 COASTS MOVED WEST-NORTHWESTWARDS, INTENSIFIED INTO A DEPRESSIOM AND LAY CENTERED AT 0000 UTC OF 31<sup>ST</sup> AUGUST 2024 OVER THE SAME REGION NEAR LATITUDE 17.5°N AN LONGITUDE 84.5°E.

IT 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 1800 UTC 31<sup>ST</sup> AUGUST 2024.

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

# 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 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.

 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 31<sup>ST</sup> AUGUST.

### **SEA CONDITION:**

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

#### FISHERMEN WARNING:

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

### **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 (3-5 MPS) 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 28-29°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 AS. SEA CONDITIONS INDICATE THAT THE CYCLONE ASNA OVER NORTHEAST ARABIAN SEA AND ADJOINING AREAS OF PAKISTAN COAST WILL ENCOUNTER COLDER SEA CONDITIONS IN AS AND HENCE WOULD NOT INTENSIFY SIGNIFICANTLY.

THE LOW LEVEL VORTICITY IS 150X10<sup>-5</sup> S<sup>-1</sup> OVER SOUTH OF THE SYSTEM AREA. LOW LEVEL CONVERGENCE IS 10X10<sup>-5</sup> S<sup>-1</sup> OVER THE SOUTH OF THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS ALSO 10X10<sup>-5</sup> S<sup>-1</sup> OVER SOUTH-WEST OF THE SYSTEM CENTRE EXTENDING UPTO WESTCENTRAL ARABIAN SEA. 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 IN A FAVOURABLE ENVIRONMENT TO MAINTAIN ITS INTENSIFICATION. THE UPPER TROPOSPHERIC RIDGE IS NEAR 30°N. A WESTERLY TROUGH IS APPROACHING THE INDIAN REGION AND IS CURRENTLY EXTENDING UPTO 28° N ALONG 62° E. THE SYSTEM IS TRACKING WESTWARDS UNDER THE INFLUENCE OF EASTERLIES PREVAILING TO THE SOUTH OF RIDGE.

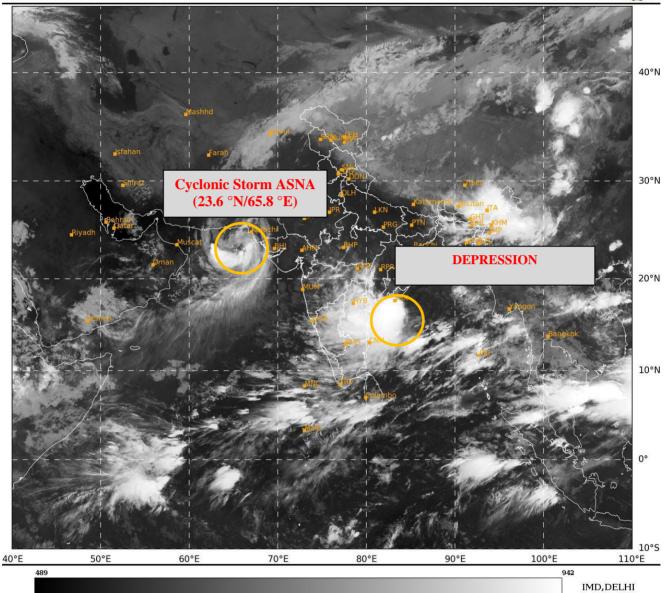
OVER THE BOB, THE LOW LEVEL VORTICITY IS POSITIVE AND IS AROUND 150X10<sup>-5</sup> S<sup>-1</sup> OVER CENTRAL BOB WITH EXTENSION UPTO MID TROPOSPHERIC LEVELS. LOW LEVEL CONVERGENCE IS 10X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF LOW PRESSURE AREA AND UPPER LEVEL DIVERGENCE IS ALSO 20X10<sup>-5</sup> S<sup>-1</sup> 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 WEST-NORTHWESTWARDS OVER NORTHEAST ARABIAN SEA AWAY FROM INDIAN COAST DURING NEXT 24 HOURS AND THEN WEST-SOUTHWEST WARDS FOR SUBSEQUENT 24 HOURS.
- (2) DEPRESION 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 1800 UTC 31<sup>ST</sup> AUGUST 2024.

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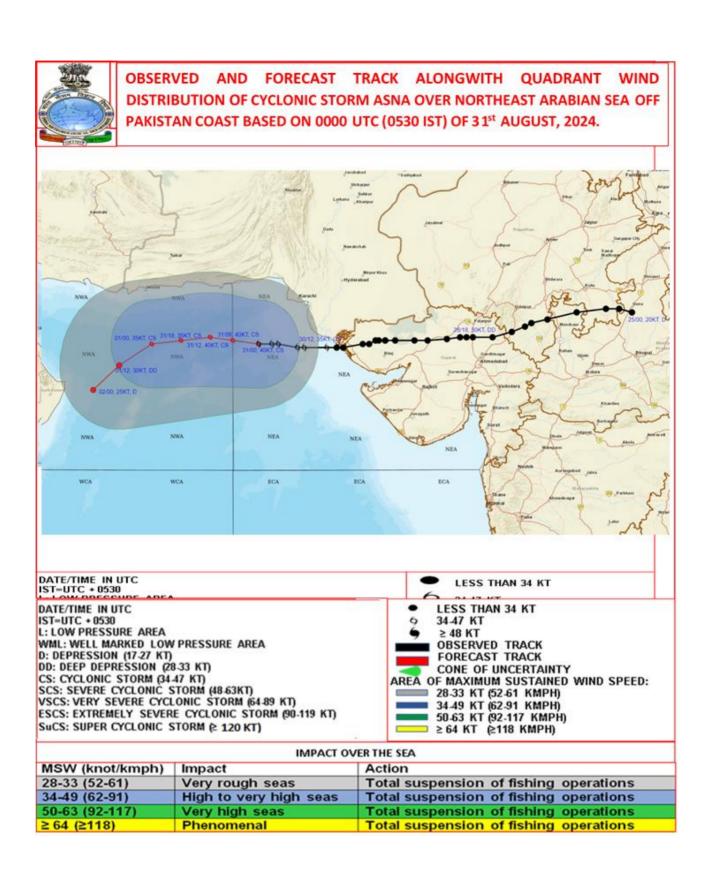






OBSERVED AND FORECAST TRACK OF CYCLONIC STORM ASNA OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST BASED ON 0000 UTC (0530 IST) OF 31st AUGUST, 2024.







# OBSERVED AND FORECAST TRACK OF DEPRESSION OVER WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL BASED ON 0000 UTC (0530 IST) OF 31<sup>st</sup> AUGUST, 2024.







