





REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI TROPICAL CYCLONE ADVISORY NO. 03

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. 03 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 30.08.2024 BASED ON 1200 UTC OF 30.08.2024

SUB: (A) CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA) OVER NORTHEAST ARABIAN SEA OFF KACHCHH AND ADJOINING PAKISTAN COASTS 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 KACHCHH AND PAKISTAN COASTS

THE CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA) OVER NORTHEAST ARABIAN SEA OFF KACHCHH AND ADJOINING PAKISTAN MOVED WESTWARDS WITH A SPEED OF 17 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1200 UTC OF 30TH AUGUST, 2024 OVER THE SAME REGION NEAR LATITUDE 23.5°N AND LONGITUDE 67.2°E, 170 KM WEST OF NALIYA (GUJARAT),160 KM SOUTH OF KARACHI (PAKISTAN) AND 430KM 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 1200 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, 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 991 HPA. AT 1200 UTC, NALIYA REPORTED MEAN SEA LEVEL PRESSURE OF 998.8 HPA. REPORTED MEAN WIND SPEED IS 200°/05 KT.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME	POSITION	MAXIMUM SUSTAINED	CATEGORY OF	
(UTC)	(LAT. ⁰N/ LONG. ºE)	SURFACE	CYCLONIC	
		WIND SPEED (KMPH)	DISTURBANCE	
30.08.24/1200	23.5/67.2	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 01ST SEPTEMBER:

WIND WARNING:

- SQUALLY WIND SPEED REACHING 65-75 KMPH GUSTING TO 80 KMPH IS PREVAILING OVER NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA ALONG & OFF PAKISTAN AND ADJOINING SAURASHTRA & KACHCHH COASTS. IT IS LIKELY TO INCREASE BECOMING 70-80 KMPH GUSTING TO 90 KMPH OVER NORTHEAST ARABIAN SEA OFF PAKISTAN COAST DURING 0000-1200 UTC OF 31ST AUGUST AND DECREASE GRADUALLY BECOMING SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 50 KMPH FROM 0000 UTC OF 1ST 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 30TH AUGUST AND INCREASE GRADUALLY BECOMING GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH FROM 0000 UTC OF 31ST 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 1ST SEPTEMBER.
- SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY ALONG & OFF PAKISTAN COAST TILL 1ST SEPTEMBER.
- STRONG WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO PREVAIL ADJOINING CENTRAL ARABIAN SEA TILL 2ND SEPTEMBER 0000 UTC AND ALONG AND OFF GUJARAT & NORTH MAHARASHTRA COASTS TILL 31ST AUGUST.

SEA CONDITION:

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

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

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.

REMARKS:

THE MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 4 AND WOULD MOVE TO PHASE 5 FROM 30^{TH} 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 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/CM²) OVER CENTRAL BOB AND LESS (<50 KJ/CM²) 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 200X10⁻⁵ S⁻¹ NEAR SYSTEM AREA OVER THE SAURASHTRA & KACHCHH REGION. LOW LEVEL CONVERGENCE IS 20X10⁻⁵ S⁻¹ OVER SOUTH-WEST OF THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS ALSO 20X10⁻⁵ S⁻¹ OVER SOUTH-WEST OF THE SYSTEM CENTRE EXTENDING UPTO WESTCENTRAL AS. WIND SHEAR IS LOW TO MODERATE OVER SAURASHTRA & KACHCHH AND ADJOINING

NORTHEAST AS. THESE FEATURES INDICATE THAT THE CYCLONIC STORM ASNA OVER KACHCHH COAST & ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA 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..

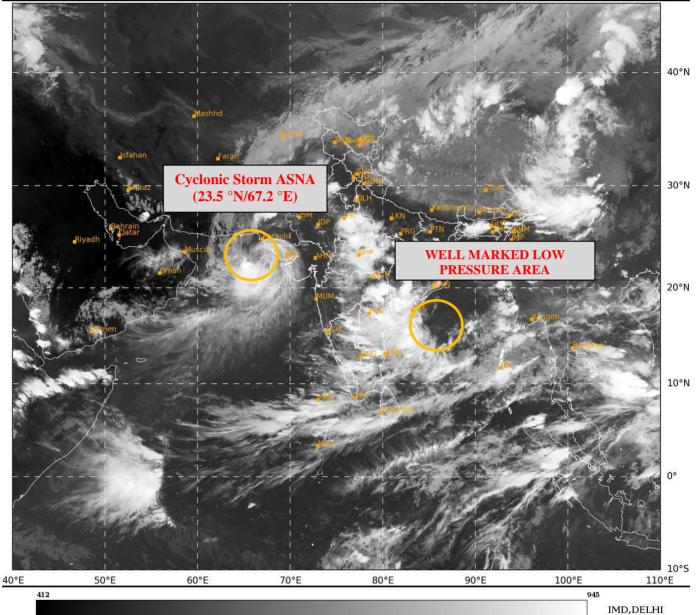
OVER THE BOB, THE LOW LEVEL VORTICITY IS POSITIVE AND IS AROUND 100X10⁻⁵ S⁻¹ OVER CENTRAL BOB WITH EXTENSION UPTO MID TROPOSPHERIC LEVELS. LOW LEVEL CONVERGENCE IS 20X10⁻⁵ S⁻¹ TO THE SOUTH OF LOW PRESSURE AREA AND UPPER LEVEL DIVERGENCE IS ALSO 10-20X10⁻⁵ S⁻¹ TO THE SOUTHWEST OF SYSTEM AREA EXTENDING 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.

CONSIDERING ALL THE ABOVE, IT IS INFERRED THAT:

- (1) CYCLONIC STORM "ASNA" (PRONOUNCED AS AS-NA) OVER **NORTHEAST ARABIAN SEA OFF PAKISTAN & KACHCHH COASTS** 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 D. R. PATTANAIK) SCIENTIST-F 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 30TH AUGUST, 2024.

