



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**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. 21 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1530 UTC OF 10.05.2022 BASED ON 1200 UTC OF 10.05.2022**

**SUB: SEVERE CYCLONIC STORM 'ASANI' OVER WESTCENTRAL BAY OF BENGAL**

THE SEVERE CYCLONIC STORM 'ASANI' (PRONOUNCED AS ASANI) OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF 06 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1200 UTC OF TODAY, THE 10<sup>TH</sup> MAY, OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.2°N AND LONGITUDE 82.2°E, 190 KM SOUTH OF KAKINADA (43189), 300 KM SOUTHWEST OF VISAKHAPATNAM (43149), 530 KM SOUTHWEST OF GOPALPUR (43049) AND 630 KM SOUTHWEST OF PURI (43053).

IT IS VERY LIKELY TO MOVE NEARLY NORTHWESTWARDS AND REACH WESTCENTRAL BAY OF BENGAL CLOSE TO ANDHRA PRADESH COASTS BY 0000 UTC OF 11<sup>TH</sup> MAY. THEREAFTER, IT IS VERY LIKELY TO RECURVE SLOWLY NORTH-NORTHEASTWARDS AND MOVE ALONG YANAM, KAKINADA & VISAKHAPATNAM COAST AND EMERGE INTO WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL OFF NORTH ANDHRA PRADESH AND ODISHA COASTS. IT IS LIKELY TO WEAKEN GRADUALLY INTO A CYCLONIC STORM BY 0000 UTC OF 11<sup>TH</sup> MAY AND INTO A DEPRESSION BY 1200 UTC OF 12<sup>TH</sup> MAY.

THE CYCLONIC STORM IS UNDER THE CONTINUOUS SURVEILLANCE OF DOPPLER WEATHER RADAR (DWR) AT MACHILIPATNAM (ANDHRA PRADESH).

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

<b>DATE/TIME(UTC)</b>	<b>POSITION (LAT. °N/ LONG. °E)</b>	<b>AXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)</b>	<b>CATEGORY OF CYCLONIC DISTURBANCE</b>
10.05.22/1200	15.2/82.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
10.05.22/1800	15.6/81.9	85-95 GUSTING TO 105	SEVERE CYCLONIC STORM
11.05.22/0000	16.2/81.9	80-90 GUSTING TO 100	CYCLONIC STORM
11.05.22/0600	16.7/82.3	75-85 GUSTING TO 95	CYCLONIC STORM
11.05.22/1200	17.0/82.6	60-70 GUSTING TO 80	CYCLONIC STORM
12.05.22/0000	17.4/83.3	55-65 GUSTING TO 75	DEEP DEPRESSION
12.05.22/1200	17.8/84.1	45-55 GUSTING TO 65	DEPRESSION

THE INTENSITY OF THE SYSTEM IS T3.5. INSAT-3D IMAGERY INDICATES BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 11.0N & 16.0N AND LONGITUDE 79.0E & 83.0E, SOUTH COASTAL ANDHRA PRADESH & ADJOINING NORTHEAST TAMILNADU. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. THE SEA CONDITION IS VERY HIGH OVER WESTCENTRAL BAY OF BENGAL. THE ESTIMATED CENTRAL PRESSURE IS 990 HPA.

**STORM SURGE GUIDANCE:** STORM SURGE OF HEIGHT ABOUT 0.5 M ABOVE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF KRISHNA, EAST & WEST GODAVARI AND VISHAKHAPATNAM DISTRICTS OF ANDHRA PRADESH.

**REMARKS:**

THE MADDEN JULIAN OSCILLATION INDEX (MJO) CURRENTLY LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1. IT WOULD MOVE TO PHASE 6 ON 12TH MAY. HENCE, MJO WILL SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE BAY OF BENGAL (BOB) DURING NEXT 1-2 DAYS.

SEA SURFACE TEMPERATURE (SST) IS AROUND 30-31°C OVER ENTIRE BOB. IT DECREASES GRADUALLY TOWARDS THE ANDHRA PRADESH & ODISHA COASTS BECOMING 28°C. THE OCEAN HEAT CONTENT (OHC) IS >100 KJ/CM<sup>2</sup> OVER WESTCENTRAL & SOUTH BAY OF BENGAL (BOB) BECOMING 50-70 KJ/CM<sup>2</sup> OVER NORTHWEST BOB & ALONG & OFF ANDHRA PRADESH & ODISHA COASTS AND ADJOINING WESTCENTRAL BOB.

LOW LEVEL VORTICITY IS ABOUT 250 X10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTH OF SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 200 HPA LEVEL. VORTICITY FIELD IS EAST-WEST ORIENTED INDICATING GRADUAL WESTWARDS VORTICITY ADVECTION. LOW LEVEL CONVERGENCE IS AROUND 10 X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 05-10 X10<sup>-5</sup> S<sup>-1</sup> TO THE NORTHEAST OF THE SYSTEM CENTRE. WIND SHEAR IS LOW (10-15 KNOTS) AROUND THE SYSTEM AREA AND ALSO ALONG THE FORECAST TRACK. AS THE SYSTEM MOVES FURTHER NORTHWARDS, IT WILL ENCOUNTER LOWER SST & OHC AND HENCE WILL SHOW GRADUAL WEAKENING. THERE WILL BE DRY AIR INCURSION REACHING INTO THE CORE AREA FROM INDIAN LANDMASS AS THE SYSTEM MOVES FURTHER NORTHWARDS. IT WILL HELP IN WEAKENING OF THE SYSTEM. IT IS LIKELY TO RECURVE NORTHEASTWARDS FROM 11TH MORNING WHILE MOVING ALONG THE PERIPHERY OF SUB-TROPICAL RIDGE ASSOCIATED WITH ANTICYCLONIC CIRCULATION OVER THE EASTCENTRAL BOB.

MOST OF THE NUMERICAL MODELS ARE IN GOOD AGREEMENT THAT IT IS VERY LIKELY TO RECURVE NORTH-NORTHEASTWARDS, MOVE TOWARDS WESTCENTRAL BAY OF BENGAL OFF NORTH ANDHRA PRADESH AND ODISHA COASTS. IT IS LIKELY TO WEAKEN GRADUALLY INTO A CYCLONIC STORM BY 0000 UTC OF 11TH MAY AND INTO A DEPRESSION BY 0600 UTC OF 12TH MAY.

HENCE, IT IS VERY LIKELY TO MOVE NEARLY NORTHWESTWARDS AND REACH WESTCENTRAL BAY OF BENGAL CLOSE TO KAKINADA-VISHAKHAPATNAM COASTS BY 0000 UTC OF 11<sup>TH</sup> MAY. THEREAFTER, IT IS VERY LIKELY TO RECURVE SLOWLY NORTH-NORTHEASTWARDS AND MOVE ALONG ANDHRA PRADESH COAST BETWEEN KAKINADA AND VISAKHAPATNAM AND THEN EMERGE INTO WESTCENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL OFF NORTH ANDHRA PRADESH AND ODISHA COASTS. IT IS LIKELY TO WEAKEN GRADUALLY INTO A CYCLONIC STORM BY 0000 UTC OF 11<sup>TH</sup> MAY AND INTO A DEPRESSION BY 1200 UTC OF 12<sup>TH</sup> MAY.

**(TRISANU BANIK)**  
**SCIENTIST-C, RSMC, NEW DELHI**

SAT : INSAT-3D IMG

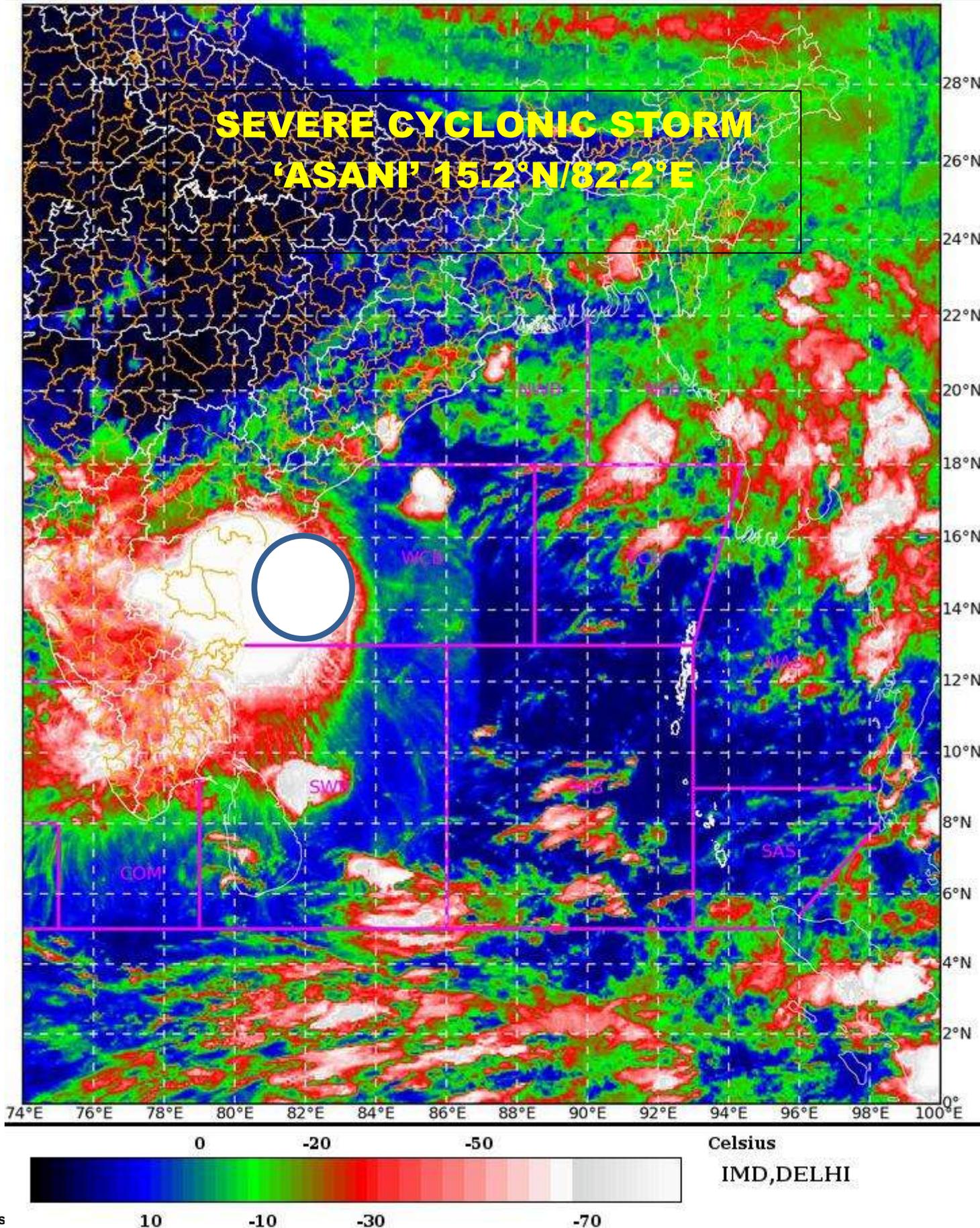
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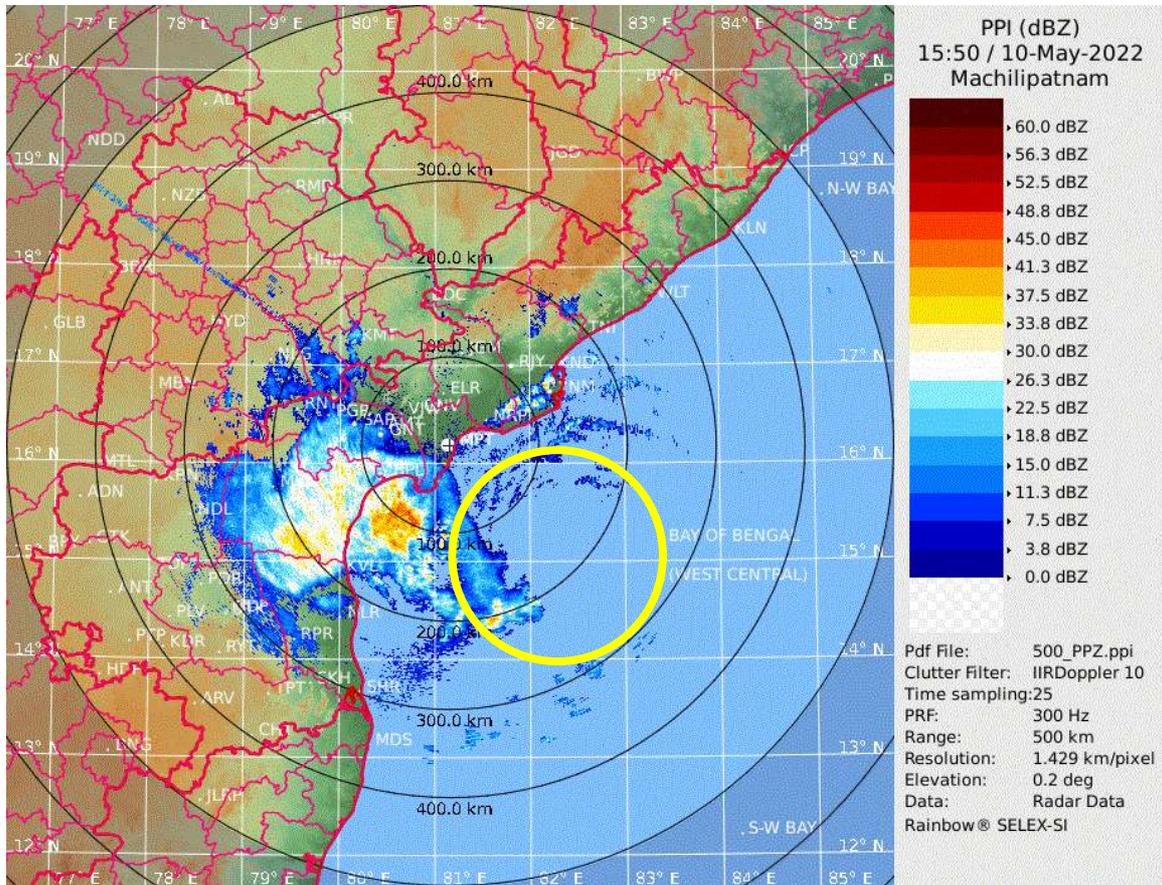
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10-05-2022/(2030 to 2056) IST



L1C Mercator

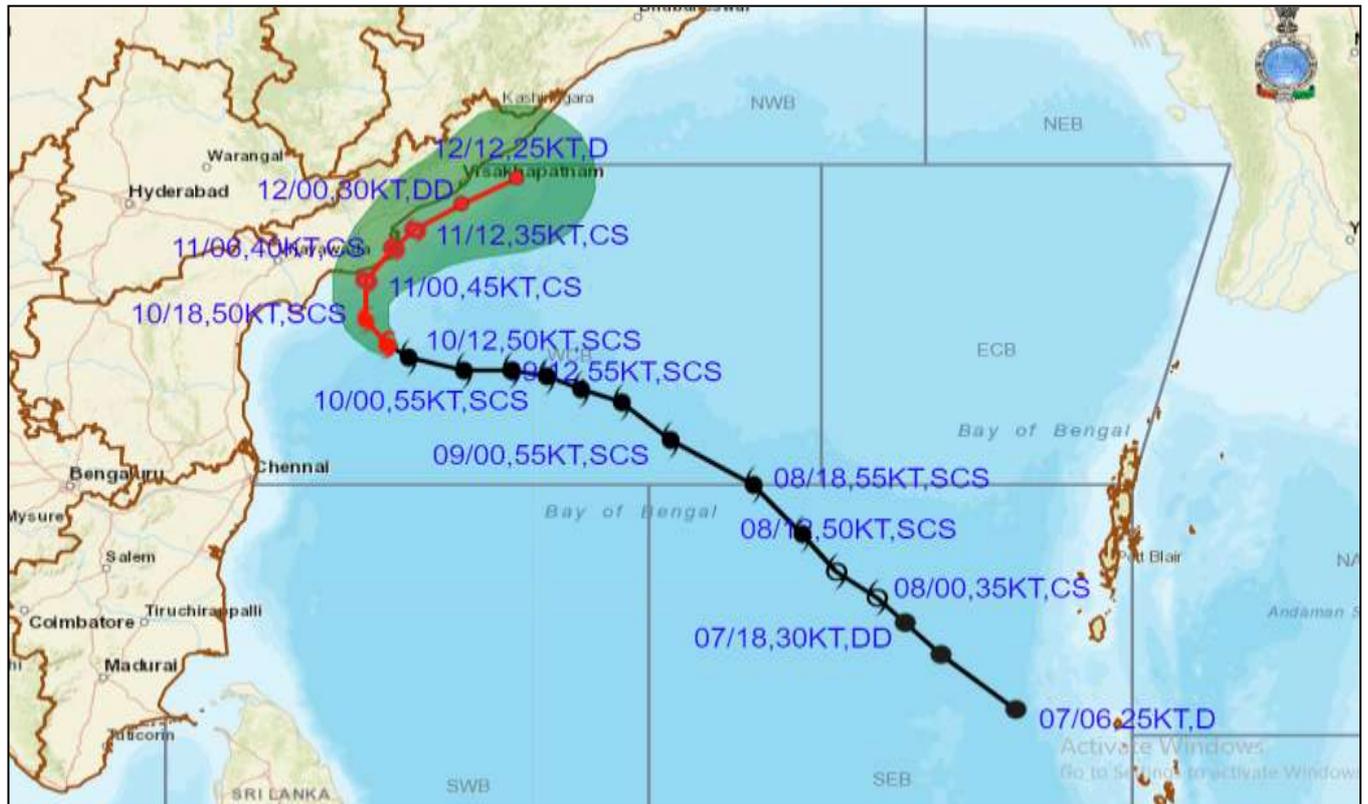




## DOPPLER WEATHER RADAR IMAGERY FROM MACHILIPATNAM (43185)



## FORECAST TRACK AND INTENSITY OF SEVERE CYCLONIC STORM 'ASANI' ALONGWITH CONE OF UNCERTAINTY OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 10<sup>TH</sup> MAY 2022



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

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS	
	11.05.22/1200	12.05.22/1200
KAKINADA	40,E	220,ENE
GOPALPUR	340,SW	180,SSW
VISHAKHAPATNAM	100,SW	90,E
PURI	460,SW	290,SW

Forecast distance (km) and direction of the centre from nearest 5 coastal stations								
Forecast Date and Time	Lead Period	Lat	Lon	Station 1	Station 2	Station 3	Station 4	Station 5
10.05.22/1200	0	15.2	82.2	NARSAPUR (147,SSE)	MACHILIPATNAM/ FRANCHPET (158,SE)	NIDADAVOLE (193,SSE)	KAKINADA (195,S)	BAPATLA (202,ESE)
10.05.22/1800	6	15.6	81.9	NARSAPUR (95,SSE)	MACHILIPATNAM/ FRANCHPET (104,SE)	NIDADAVOLE (141,SSE)	KAKINADA (154,SSW)	VIJAYAWADA /GANNAVARAM (157,SE)
11.05.22/0000	12	16.2	81.9	NARSAPUR (34,SE)	NIDADAVOLE (78,SSE)	MACHILIPATNAM/ FRANCHPET (80,E)	KAKINADA (91,SSW)	VIJAYAWADA /GANNAVARAM (123,ESE)
11.05.22/0600	18	16.7	82.3	KAKINADA (29,SSE)	NARSAPUR (71,ENE)	TUNI (77,SSW)	NIDADAVOLE (78,E)	MACHILIPATNAM/ FRANCHPET (135,ENE)
11.05.22/1200	24	17.0	82.6	TUNI (39,S)	KAKINADA (39,E)	VISHAKHAPATNAM (109,SW)	NIDADAVOLE (110,E)	NARSAPUR (115,ENE)
12.05.22/0000	36	17.4	83.3	VISHAKHAPATNAM (35,S)	TUNI (80,E)	KAKINADA (124,ENE)	KALINGAPATAM (136,SW)	KORAPUT (169,SSE)
12.05.22/1200	48	17.8	84.1	KALINGAPATAM (59,S)	VISHAKHAPATNAM (85,E)	TUNI (172,ENE)	GOPALPUR (183,SSW)	KORAPUT (185,SE)

**N : NORTH NNE : NORTH-NORTHEAST NE : NORTHEAST ENE : EAST-NORTHEAST E : EAST  
 ESE : EAST-SOUTHEAST SE : SOUTHEAST SSE : SOUTH-SOUTHEAST S : SOUTH  
 SSW : SOUTH-SOUTHWEST SW : SOUTHWEST WSW : WEST-SOUTHWEST W : WEST  
 NNW : WEST-NORTHWEST NW : NORTHWEST NNW : NORTH-NORTHWEST**



## FORECAST TRACK AND INTENSITY ALONGWITH QUADRANT WIND DISTRIBUTION SEVERE CYCLONIC STORM 'ASANI' OVER WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 10<sup>TH</sup> MAY 2022



**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 (≥20 KT)

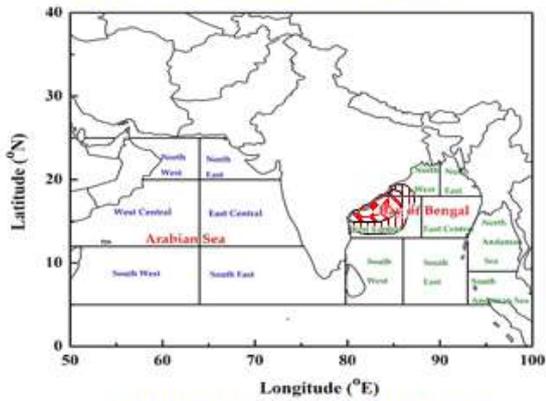
● LESS THAN 34 KT  
 ○ 34-47 KT  
 ● ≥ 48 KT  
 — OBSERVED TRACK  
 — FORECAST TRACK  
 ▲ CONE OF UNCERTAINTY  
**AREA OF MAXIMUM SUSTAINED WIND SPEED:**  
 ■ 28-33 KT (52-61 KMPH)  
 ■ 34-49 KT (62-91 KMPH)  
 ■ 50-63 KT (92-117 KMPH)  
 ■ ≥ 64 KT (≥118 KMPH)

### IMPACT OVER THE SEA

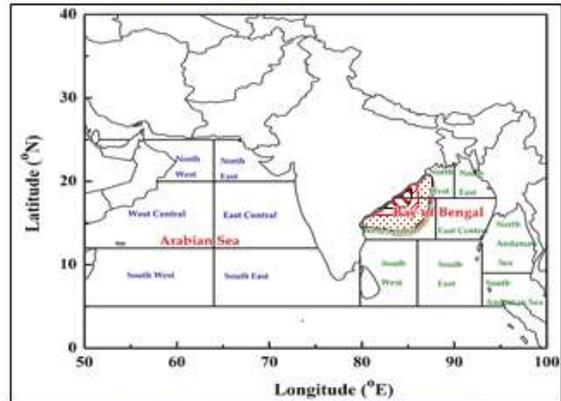
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

**INDIA METEOROLOGICAL DEPARTMENT  
FISHERMAN WARNING FOR BAY OF BENGAL AND ARABIAN SEA**

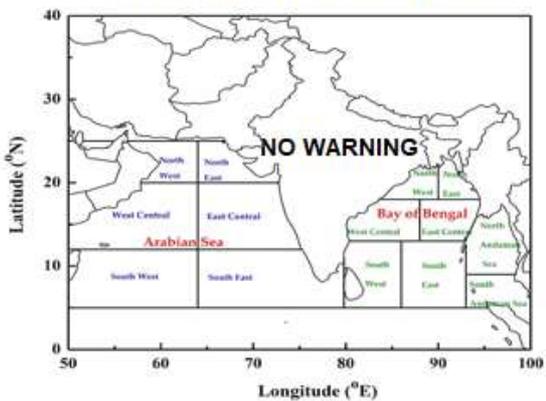
DAY-1: 10.05.2022/1800 UTC TO 11.05.2022/1800 UTC



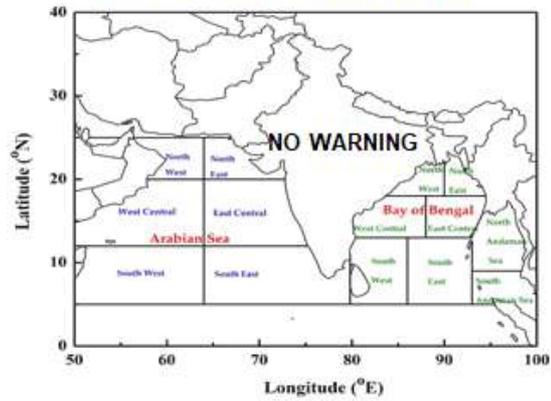
DAY-2: 11.05.2022/1800 UTC TO 12.05.2022/1800 UTC



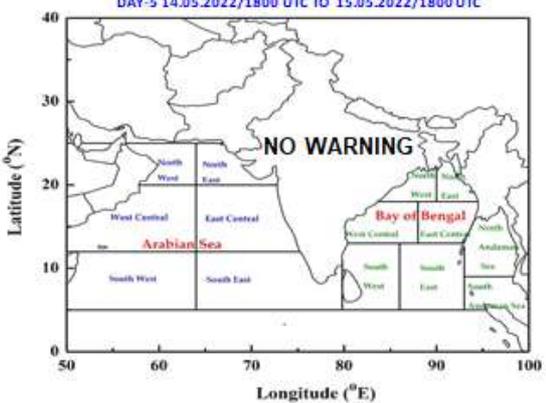
DAY-3: 12.05.2022/1800 UTC TO 13.05.2022/1800 UTC



DAY-4 13.05.2022/1800 UTC TO 14.05.2022/1800 UTC



DAY-5 14.05.2022/1800 UTC TO 15.05.2022/1800 UTC



**AREA UNDER FISHERMEN WARNING**

-  40-50 KMPH GUSTING TO 60 KMPH (SQUALLY WEATHER)
-  45-55 KMPH GUSTING TO 65 KMPH
-  50-60 KMPH GUSTING TO 70 KMPH
-  60-70 KMPH GUSTING TO 80 KMPH
-  70-80 KMPH GUSTING TO 90 KMPH
-  80-90 KMPH GUSTING TO 100 KMPH
-  90-100 KMPH GUSTING TO 110 KMPH

**STORM SURGE HEIGHT INFORMATION:**

\* The below listed surge heights are over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m) *	EXPECTED INUNDATION EXTENT (km)
Kakinada	East Godavari	Andhra Pradesh	Polekurru	0.3-0.6	Upto 0.11
Yanam	Yanam	Puducherry	Yanam	0.3-0.5	Upto 0.16
Amalapuram	East Godavari	Andhra Pradesh	Nimmakayala Kothapalle	0.3-0.4	Upto 0.15

Pithapuram	East Godavari	Andhra Pradesh	Ponnada	0.3-0.4	Upto 0.15
Tuni	East Godavari	Andhra Pradesh	Kona Forest	0.3-0.4	Nil

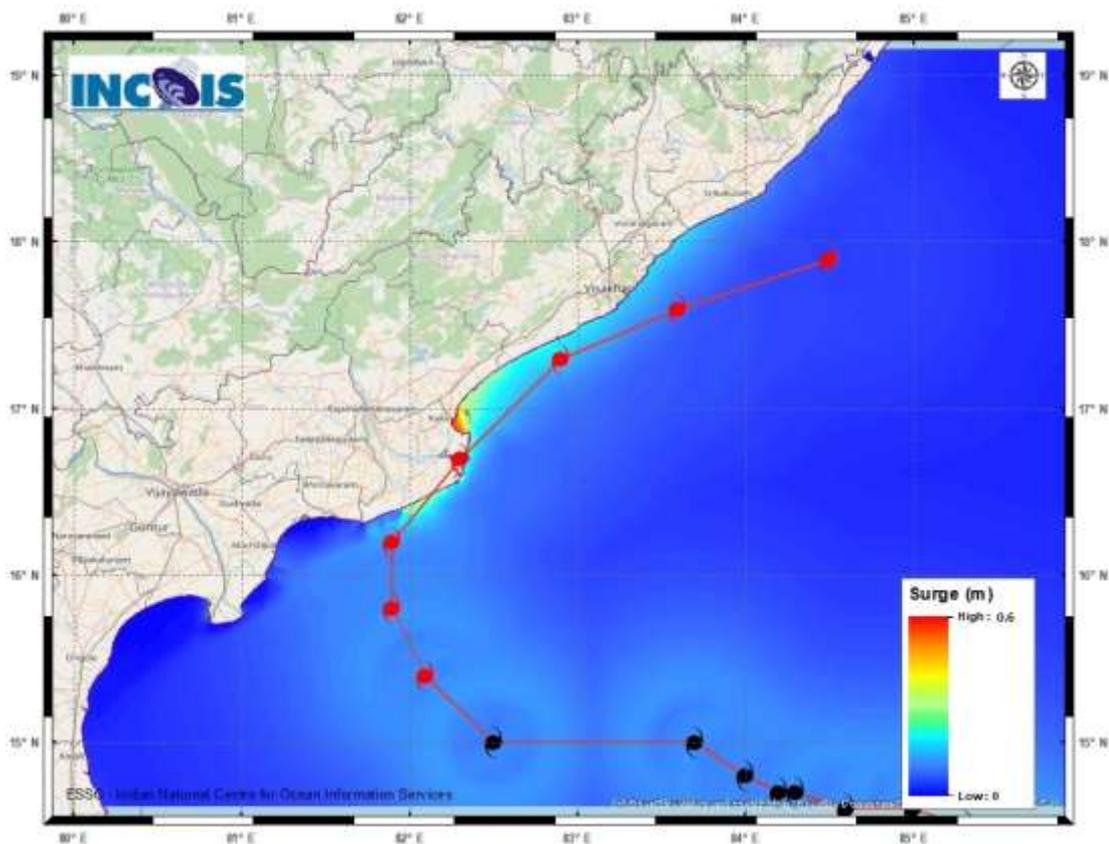


Figure: Storm Surge Guidance based on 0600 UTC of 10<sup>th</sup> May