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)
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YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
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IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 18 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0500 UTC OF 10.05.2022 BASED ON 0300 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 WEST-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0300 UTC OF TODAY, THE 10TH MAY, OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.0°N AND LONGITUDE 83.7°E, 260 KM SOUTHEAST OF KAKINADA (43189), 300 KM SOUTH OF VISAKHAPATNAM (43149), 490 KM SOUTH-SOUTHWEST OF GOPALPUR (43049) AND 570 KM SOUTH-SOUTHWEST OF PURI (43053).

IT IS VERY LIKELY TO MOVE NEARLY NORTHWESTWARDS TILL 10TH MAY NIGHT AND REACH WESTCENTRAL BAY OF BENGAL OFF NORTH ANDHRA PRADESH COAST. THEREAFTER, IT IS VERY LIKELY TO RECURVE NORTH-NORTHEASTWARDS AND MOVE TOWARDS 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 11TH MAY.

THE SYSTEM IS UNDER SURVEILLANCE OF DOPPLER WEATHER RADAR MACHILIPATNAM.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
10.05.22/0300	15.0/83.7	100-110 gusting to 120	Severe Cyclonic Storm
10.05.22/0600	15.3/83.3	95-105 gusting to 115	Severe Cyclonic Storm
10.05.22/1200	15.8/83.0	90-100 gusting to 110	Severe Cyclonic Storm
10.05.22/1800	16.3/82.8	80-90 gusting to 100	Cyclonic Storm
11.05.22/0000	16.8/82.9	75-85 gusting to 95	Cyclonic Storm
11.05.22/1200	17.5/83.6	65-75 gusting to 85	Cyclonic Storm
12.05.22/0000	18.3/84.7	55-65 gusting to 75	Deep Depression
12.05.22/1200	18.9/85.5	45-55 gusting to 65	Depression

THE INTENSITY OF THE SYSTEM IS T3.5. CLOUDS ARE ORGANISED IN CDO PATTERN. INSAT-3D IMAGERY INDICATES BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 10.0N & 16.0N AND LONGITUDE 80.0E & 85.0E. THE SATELLITE IMAGERY INDICATES INTENSE CONVECTION TO THE SOUTHWEST OF SYSTEM CENTRE OVER SOUTH ANDHRA PRADESH AND ADJOINING NORTHEAST TAMILNADU. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 0000 UTC, A BUOY($13^0$17'N/$84^0$14'E) REPORTED MAXIMUM SUSTAINED WIND SPEED OF 240^0/31KT AND MEAN SEA LEVEL PRESSURE 995.8 HPA.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. THE SEA CONDITION IS VERY HIGH OVER WESTCENTRAL BAY OF BENGAL. THE ESTIMATED CENTRAL PRESSURE IS 989 HPA.

REMARKS:
THE MADDEN JULIAN OSCILLATION INDEX (MJO) CURRENTLY LIES IN PHASE 5 WITH AMPLITUDE LESS THAN 1. IT WOULD CONTINUE IN SAME PHASE 5 DURING NEXT 2 DAYS WITH AMPLITUDE BECOMING MORE THAN 1. HENCE, MJO WILL SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE BAY OF BENGAL (BOB) DURING NEXT 3-4 DAYS.

SEA SURFACE TEMPERATURE (SST) IS AROUND 30-31^0C OVER ENTIRE BOB. IT DECREASES GRADUALLY TOWARDS THE ANDHRA PRADESH & ODISHA COASTS BECOMING 28^0C. THE OCEAN HEAT CONTENT (OHC) IS >100 KJ/CM^2 OVER WESTCENTRAL & SOUTH BAY OF BENGAL (BOB) BECOMING 50-70 KJ/CM^2 OVER NORTHWEST BOB & ALONG & OFF ANDHRA PRADESH & ODISHA COASTS AND ADJOINING WESTCENTRAL BOB.

LOW LEVEL VORTICITY IS ABOUT 300 $X10^{-6}$ S^{-1} TO THE SOUTH OF SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 200 HPA LEVEL. VORTICITY FIELD IS ORIENTED SOUTH-NORTH INDICATING NORTHWARDS VORTICITY ADVECTION. LOW LEVEL CONVERGENCE IS AROUND 20 $X10^{-5}$ S^{-1} TO THE WEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS DECREASED SLIGHTLY AND IS AROUND 5-10 $X10^{-5}$ S^{-1} TO THE SOUTHWEST AND ANOTHER ZONE OF 5-10 $X10^{-5}$ S^{-1} TO THE SOUTHEAST OF THE SYSTEM CENTRE. WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND THE SYSTEM AREA. IT IS LIKELY TO BECOME LOW TO MODERATE (10-15 KNOTS) ALONG THE FORECAST TRACK OVER WESTCENTRAL & NORTHWEST BOB. THIS WILL HELP SYSTEM MAINTAIN IT'S INTENSITY FOR SOME TIME. 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. FURTHER IT IS EXPECTED TO TRACK NORTHWESTWARDS FOR SOME TIME AND THEN RECURVE NORTHEASTWARDS FROM 10^{TH} NIGHT WHILE MOVING ALONG THE PERIPHERY OF SUB-TROPICAL RIDGE ASSOCIATED WITH ANTICYCLONIC CIRCULATION OVER THE EASTCENTRAL BOB.

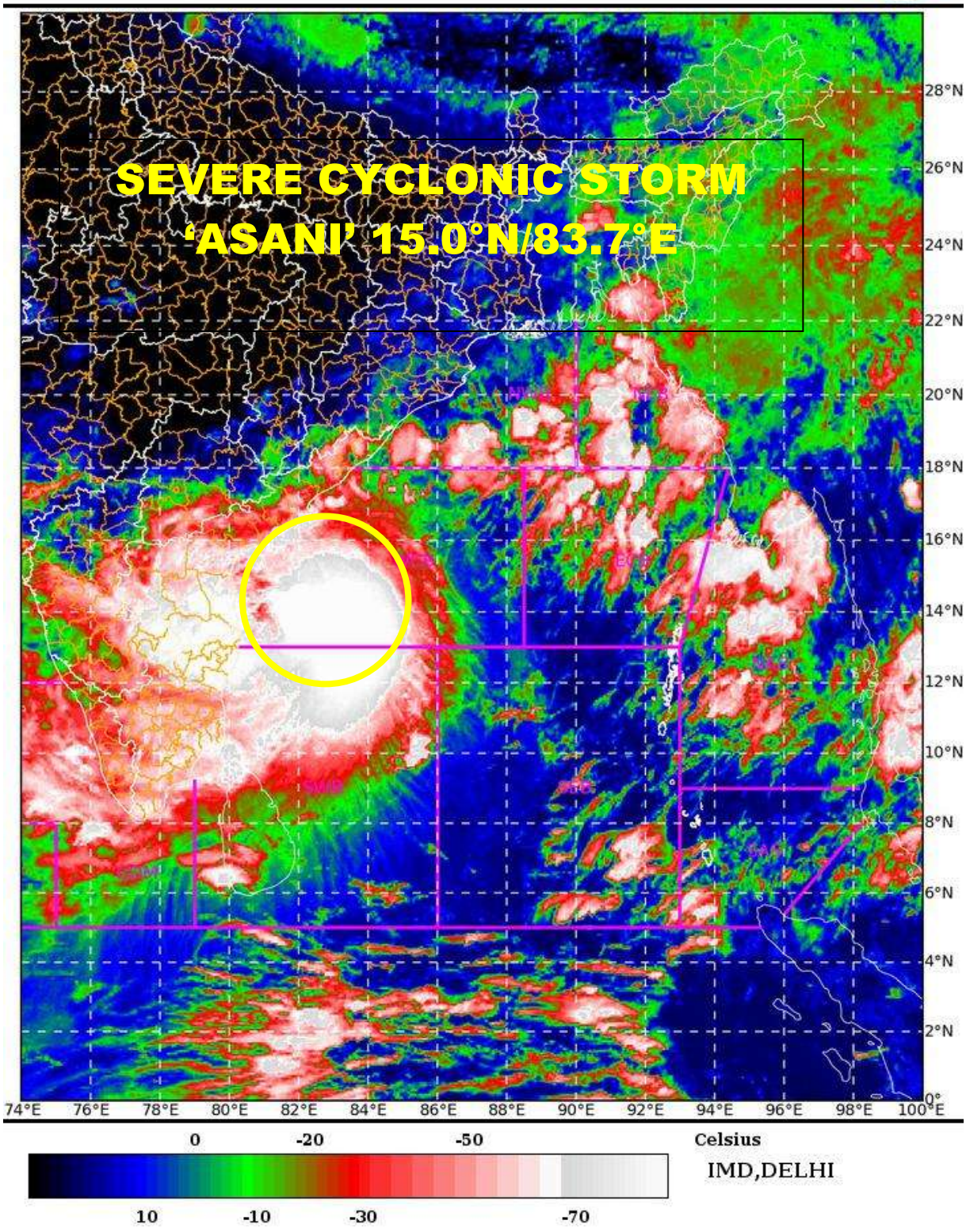
MOST OF THE NUMERICAL MODELS ARE IN GOOD AGREEMENT THAT THE SYSTEM WOULD MOVE NORTHWESTWARDS TILL 1800 UTC OF 10TH MAY AND REACH WESTCENTRAL BAY OF BENGAL OFF NORTH ANDHRA PRADESH AND ADJOINING ODISHA COASTS. THEREAFTER, IT IS VERY LIKELY TO RECURVE NORTH-NORTHEASTWARDS AND MOVE TOWARDS NORTHWEST BAY OF BENGAL OFF NORTH ANDHRA PRADESH AND ODISHA COASTS. IT IS LIKELY TO WEAKEN GRADUALLY INTO A CYCLONIC STORM DURING NEXT 24 HOURS.

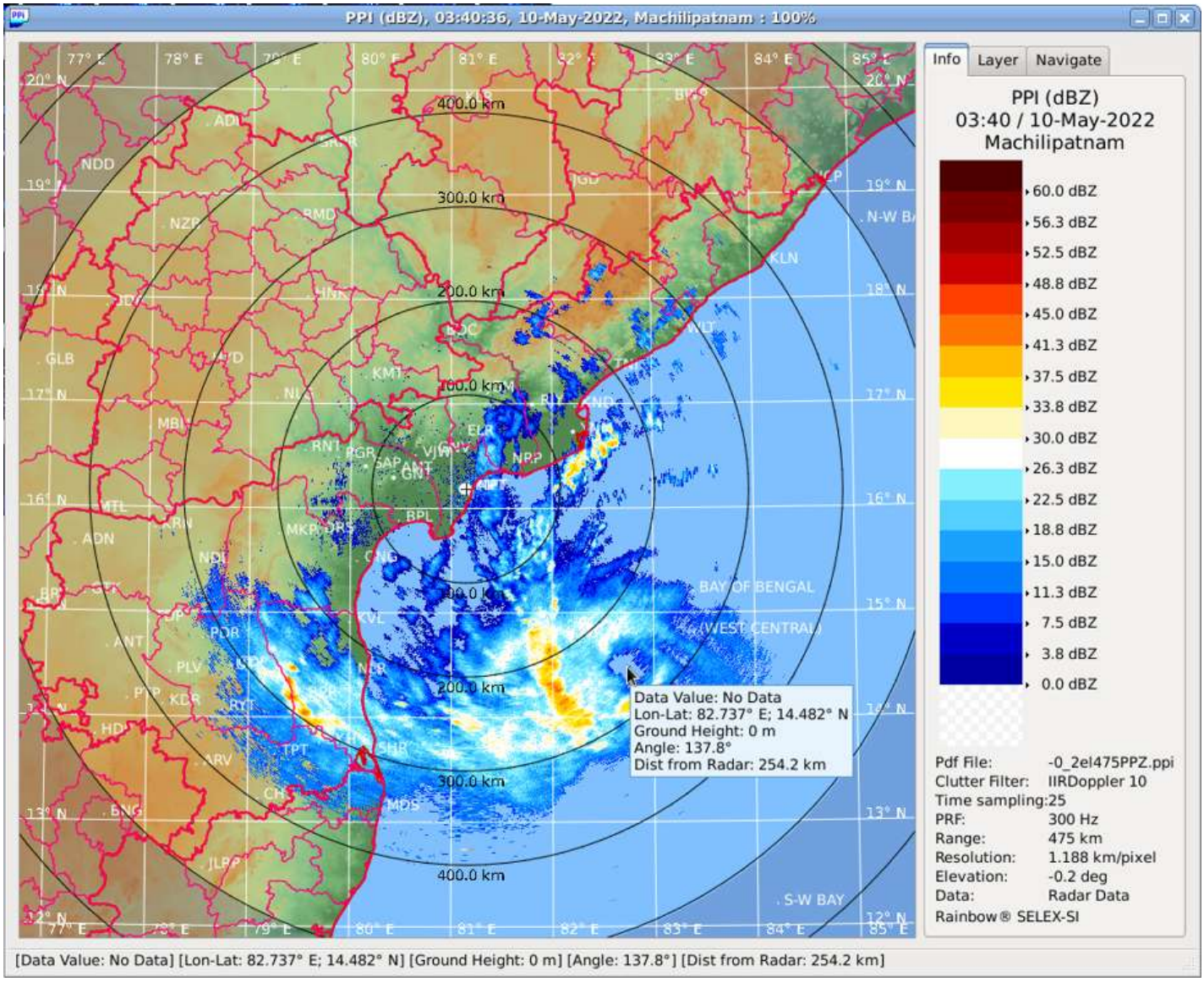
(MONICA SHARMA)
Scientist-D, RSMC, New Delhi

SAT : INSAT-3D IMG 10-05-2022/(0330 to 0356) GMT

IMG_TIR1_TEMP 10.8 um 10-05-2022/(0900 to 0926) IST

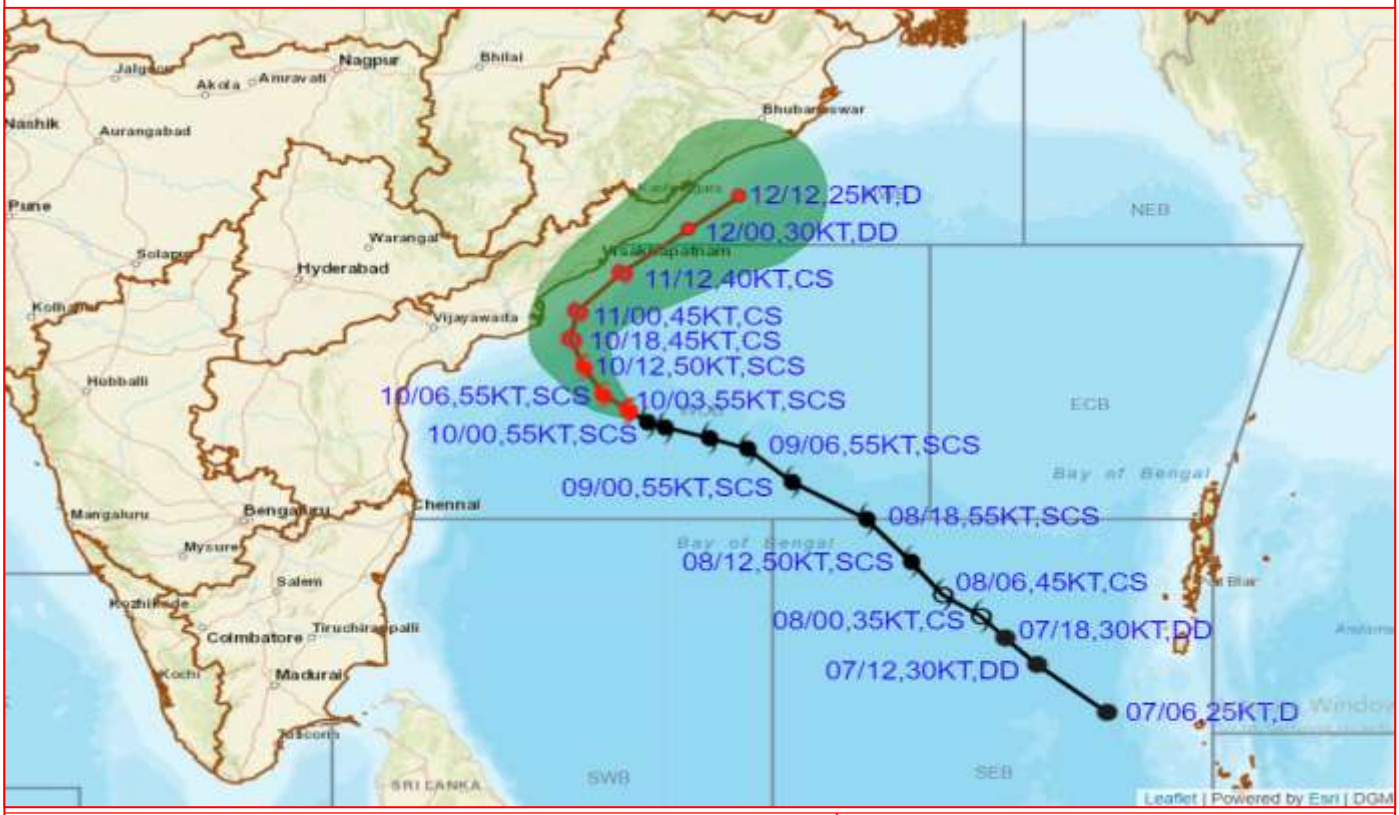
L1C Mercator





DOPPLER WEATHER RADAR IMAGERY FROM MACHILIPATNAM AT 0340 UTC OF 10TH MAY

FORECAST TRACK AND INTENSITY OF SEVERE CYCLONIC STORM 'ASANI' ALONGWITH CONE OF UNCERTAINTY OVER WESTCENTRAL BAY OF BENGAL BASED ON 0300 UTC OF 10TH 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

Forecast distance (km) and direction of the centre from nearest 5 coastal stations

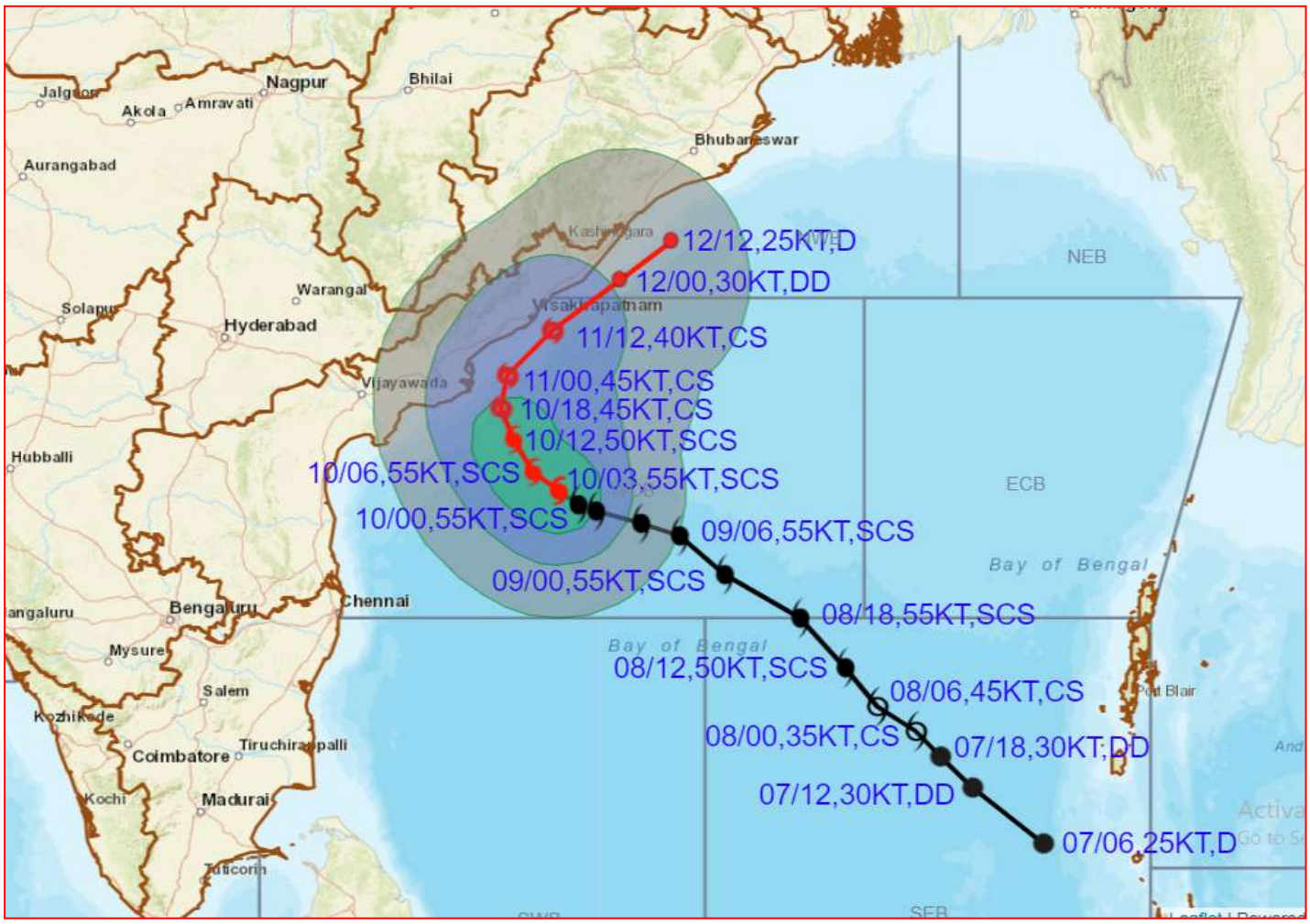
Forecast Date and Time	Lead Period	Lat	Lon	Station 1	Station 2	Station 3	Station 4	Station 5
10.05.22/0300	0	15.0	83.7	NARSAPUR (267,SE)	KAKINADA (268,SE)	TUNI (289,SSE)	MACHILIPATNAM/ FRANCHPET (304,ESE)	NIDADAVOLE (305,SE)
11.05.22/0000	21	16.8	82.9	TUNI (72,SSE)	KAKINADA (73,ESE)	VISHAKHAPATNAM (111,SSW)	NARSAPUR (134,ENE)	NIDADAVOLE (140,E)
12.05.22/0000	45	18.3	84.7	KALINGAPATAM (60,E)	GOPALPUR (109,S)	VISHAKHAPATNAM (162,ENE)	PURI (204,SW)	KORAPUT (217,ESE)
	69							

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
10.05.22/0300	0	15.0	83.7	NARSAPUR (267,SE)	KAKINADA (268,SE)	TUNI (289,SSE)	MACHILIPATNAM/ FRANCHPET (304,ESE)	NIDADAVOLE (305,SE)
10.05.22/0600	3	15.3	83.3	NARSAPUR (213,SE)	KAKINADA (216,SSE)	TUNI (242,SSE)	NIDADAVOLE (251,SE)	MACHILIPATNAM/ FRANCHPET (251,ESE)
10.05.22/1200	9	15.8	83.0	KAKINADA (152,SSE)	NARSAPUR (156,ESE)	TUNI (179,SSE)	NIDADAVOLE (190,SE)	MACHILIPATNAM/ FRANCHPET (203,ESE)
10.05.22/1800	15	16.3	82.8	KAKINADA (94,SE)	NARSAPUR (118,E)	TUNI (120,SSE)	NIDADAVOLE (143,ESE)	VISHAKHAPATNAM (166,SSW)
11.05.22/0000	21	16.8	82.9	TUNI (72,SSE)	KAKINADA (73,ESE)	VISHAKHAPATNAM (111,SSW)	NARSAPUR (134,ENE)	NIDADAVOLE (140,E)
11.05.22/1200	33	17.5	83.6	VISHAKHAPATNAM (40,SE)	KALINGAPATAM (109,SSW)	TUNI (113,E)	KAKINADA (158,ENE)	KORAPUT (174,SSE)
12.05.22/0000	45	18.3	84.7	KALINGAPATAM (60,E)	GOPALPUR (109,S)	VISHAKHAPATNAM (162,ENE)	PURI (204,SW)	KORAPUT (217,ESE)
12.05.22/1200	57	18.9	85.5	GOPALPUR (77,ESE)	PURI (106,SSW)	BHUBANESHWAR (154,SSW)	KALINGAPATAM (157,ENE)	CUTTACK (180,SSW)

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 WNW : 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 0300 UTC OF 10TH MAY 2022



DATE/TIME IN UTC
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SuCS: SUPER CYCLONIC STORM (≥20 KT)

- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

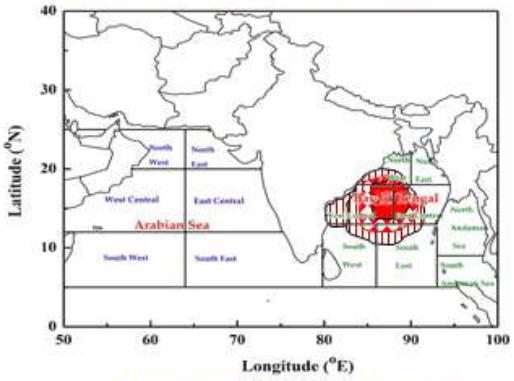
AREA OF MAXIMUM SUSTAINED WIND SPEED:
- 28-33 KT (52-61 KMPH)
- 34-49 KT (62-91 KMPH)
- 50-63 KT (92-117 KMPH)
- ≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA

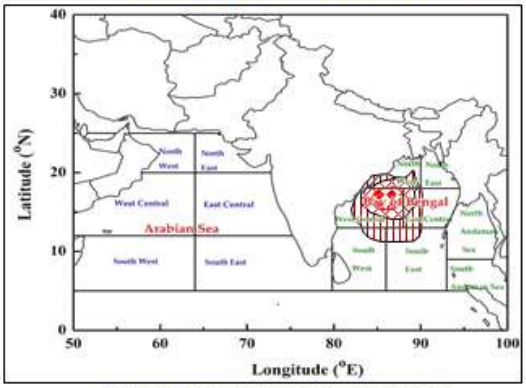
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

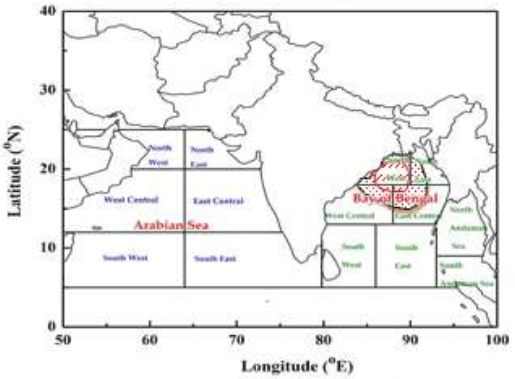
DAY-1: 10.05.2022/0000 UTC TO 11.05.2022/0000 UTC



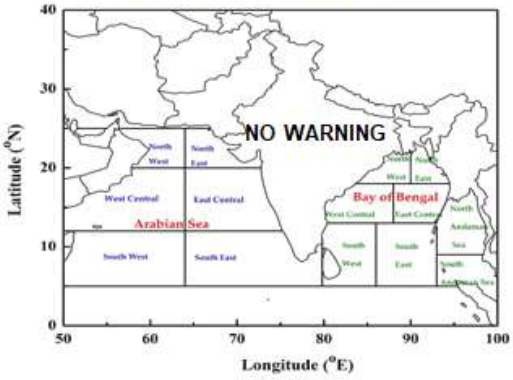
DAY-2: 11.05.2022/0000 UTC TO 12.05.2022/0000 UTC



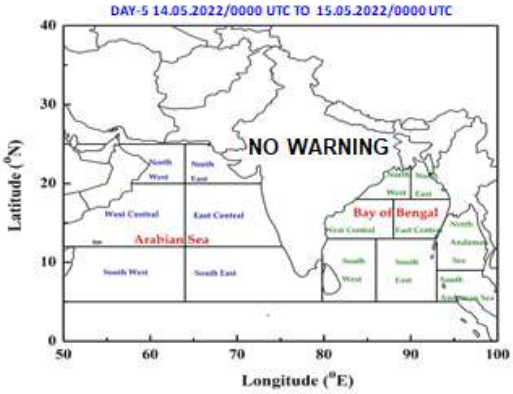
DAY-3-: 12.05.2022/0000 UTC TO 13.05.2022/0000 UTC



DAY-4 13.05.2022/0000 UTC TO 14.05.2022/0000 UTC



DAY-5 14.05.2022/0000 UTC TO 15.05.2022/0000 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
- 75-85 KMPH GUSTING TO 95 KMPH
- 90-100 KMPH GUSTING TO 110 KMPH