



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
TROPICAL CYCLONE ADVISORY NO. 19**

**DEMS-RSMCSPECIAL TROPICAL CYCLONES NEW DELHI DATED 25.10.2024**

**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.19 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0800 UTC OF 25.10.2024 BASED ON 0600 UTC OF 25.10.2024**

**SUB: CYCLONIC STORM “DANA” OVER NORTH COASTAL ODISHA**

THE CYCLONIC STORM “DANA” (PRONOUNCED AS DANA) MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 7 KMPH OVER NORTH COASTAL ODISHA AND LAY CENTRED NEAR LATITUDE 21.40°N AND LONGITUDE 86.60°E AT 0600 UTC OF TODAY, THE 25TH OCTOBER, ABOUT 40 KM NORTH-NORTHEAST OF BHADRAK (ODISHA) AND 70 KM NORTH-NORTHWEST OF DHAMARA (ODISHA).

IT IS LIKELY TO MOVE NEARLY WESTWARDS ACROSS NORTH ODISHA AND WEAKEN GRADUALLY INTO A DEEP DEPRESSION DURING NEXT 06 HOURS.

THE SYSTEM IS UNDER CONTINUOUS SURVEILLANCE OF THE DOPPLER WEATHER RADAR AT PARADIP.

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
25.10.24/0600	21.4/86.6	65-75 GUSTING TO 85	CYCLONIC STORM
25.10.24/1200	21.5/86.3	50-60 GUSTING TO 70	DEEP DEPRESSION
25.10.24/1800	21.4/85.9	30-40 GUSTING TO 50	DEPRESSION

AS PER THE SATELLITE IMAGERY, THE ASSOCIATED SCATTERED TO BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHEAST ODISHA. MINIMUM CTT IS MINUS 75-90°C. MODERATE TO INTENSE CONVECTION OVER GANGETIC WEST BENGAL, SOUTHEAST JHARKHAND AND NORTH BAY OF BENGAL.

ESTIMATED CENTRAL PRESSURE IS 997 HPA AND MAXIMUM SUSTAINED WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. SEA CONDITION IS HIGH OVER NORTHWEST BAY OF BENGAL.

**UNDER IT'S INFLUENCE:**

**(I) WIND WARNING:**

**NORTHWEST BAY OF BENGAL:** GALE WIND SPEED REACHING 65-75 GUSTING TO 85 KMPH IS PREVAILING AND WOULD GRADUALLY DECREASE BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH FROM 1200 UTC OF 25<sup>TH</sup> OCTOBER 2024.

**ALONG & OFF ODISHA-WEST BENGAL COASTS AND INTERIOR DISTRICTS:** GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH WOULD PREVAIL OVER BALASORE, MAYURBHANJ, KEONJHAR, BHADRAK, KENDRAPARA DISTRICTS OF ODISHA AND EAST MEDNIPUR DISTRICT OF WEST BENGAL TILL 1200 UTC OF 25<sup>TH</sup> OCTOBER 2024 AND DECREASE THEREAFTER.

SQUALLY WIND SPEED REACHING 40-60 KMPH GUSTING TO 70 KMPH WOULD PREVAIL OVER JAGATSINGHPUR, CUTTACK, DHENKANAL, ANGUL & ADJOINING AREAS OF SUNDARGARH & KHORDA DISTRICTS OF ODISHA AND SOUTH 24 PARAGANAS, WEST MEDNIPUR & JHARGRAM DISTRICTS OF WEST BENGAL TILL 1200 UTC OF 25<sup>TH</sup> OCTOBER AND DECREASE THEREAFTER.

**SOUTH JHARKHAND:** SQUALLY WIND SPEED REACHING 40-50 GUSTING TO 60 KMPH IS VERY LIKELY TO PREVAIL FROM 0000 UTC OF 25<sup>TH</sup> TILL 1200 UTC OF 26<sup>TH</sup> OCTOBER.

**(II) STORM SURGE WARNING:**

STORM SURGE OF UPTO 1.0 M HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF BALASORE DISTRICTS OF ODISHA AND 0.5 TO 1.0 M OVER BHADRAK DISTRICT OF ODISHA AND EAST MEDINIPUR DISTRICTS OF WEST BENGAL DURING NEXT 3 HOURS.

STORM SURGE OF UPTO 0.5 M HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF SOUTH 24-PARGANAS DISTRICT OF WEST BENGAL DURING NEXT 3 HOURS.

### **(III) SEA CONDITION:**

**NORTHWEST BAY OF BENGAL AND ALONG & OFF ODISHA-WEST BENGAL COASTS:** SEA CONDITION IS LIKELY TO BE **HIGH TO VERY ROUGH** TILL 25<sup>TH</sup> EVENING AND IMPROVE GRADUALLY THEREAFTER.

### **(IV) FISHERMEN WARNING:**

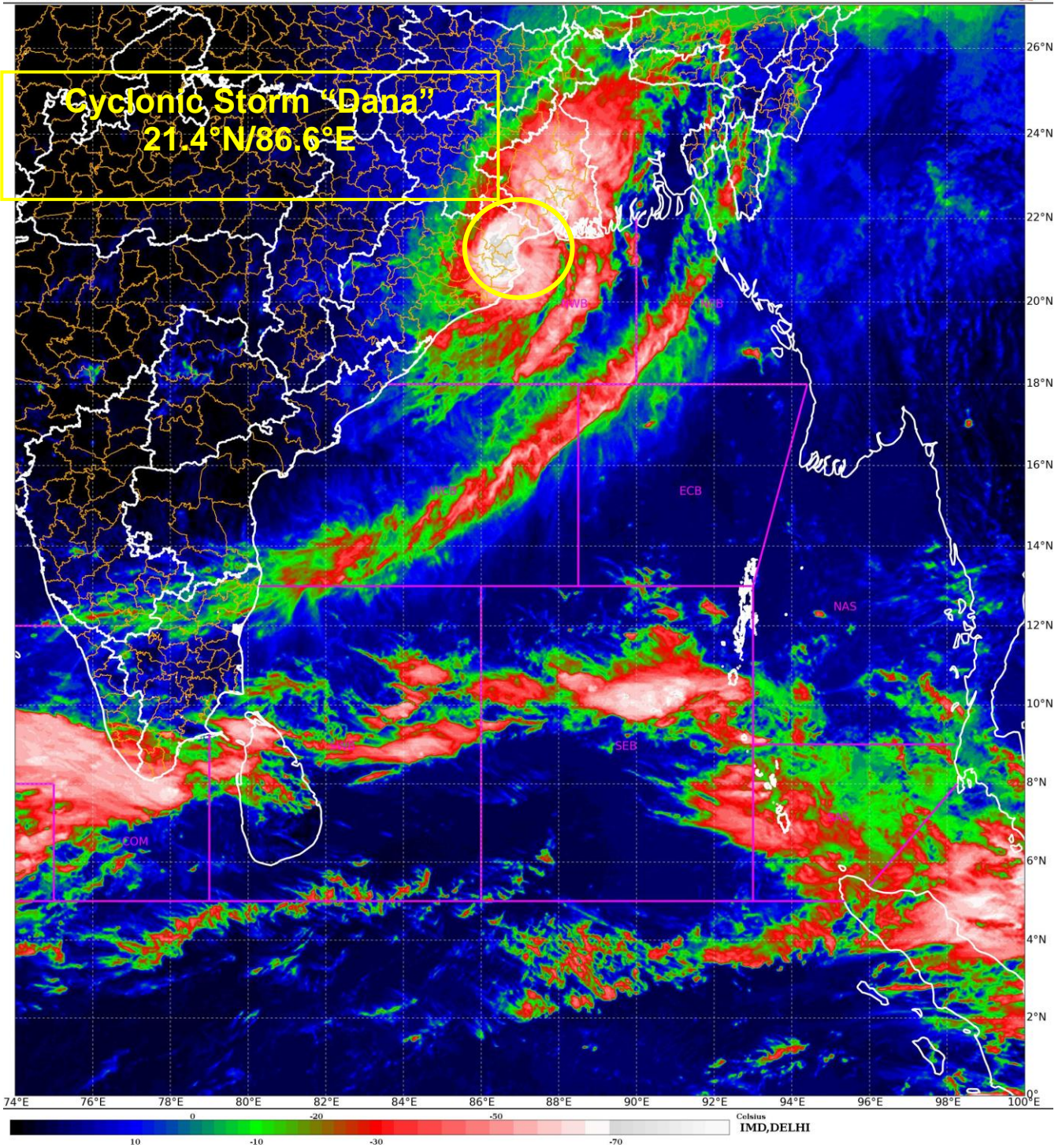
- ❖ TOTAL SUSPENSION OF FISHING OPERATIONS OVER NORTHWEST BAY OF BENGAL TILL 25<sup>TH</sup> OCTOBER AFTERNOON.
- ❖ FISHERMEN ARE ADVISED NOT TO VENTURE INTO NORTHWEST BAY OF BENGAL AND ALONG & OFF ODISHA AND WEST BENGAL COASTS ON 25<sup>TH</sup> OCTOBER.

### **REMARKS:**

THE SEA SURFACE TEMPERATURE (SST) IS 29-30°C OVER CENTRAL & NORTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS >100 KJ/CM<sup>2</sup> OVER WESTCENTRAL BOB, AROUND 70-80 KJ/CM<sup>2</sup> OVER NORTHWEST BOB. VORTICITY AT LOW LEVEL IS  $200 \times 10^{-6} \text{S}^{-1}$  AROUND SYSTEM AREA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW-LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-6} \text{S}^{-1}$  TO THE SYSTEM AREA. POSITIVE UPPER-LEVEL DIVERGENCE IS ALSO SAME AND IS  $20 \times 10^{-6} \text{S}^{-1}$  TO THE SYSTEM AREA AND EXTENDING WESTWARDS UPTO EASTCENTRAL BAY OF BENGAL. VERTICAL WIND SHEAR (VWS) IS LOW (05-10 KT) OVER SYSTEM AREA AND TO ITS WEST. THE UPPER TROPOSPHERIC RIDGE IS AROUND 20N AND AN ANTICYCLONIC CIRCULATION OVER CHHATTISGARH (INDIA).

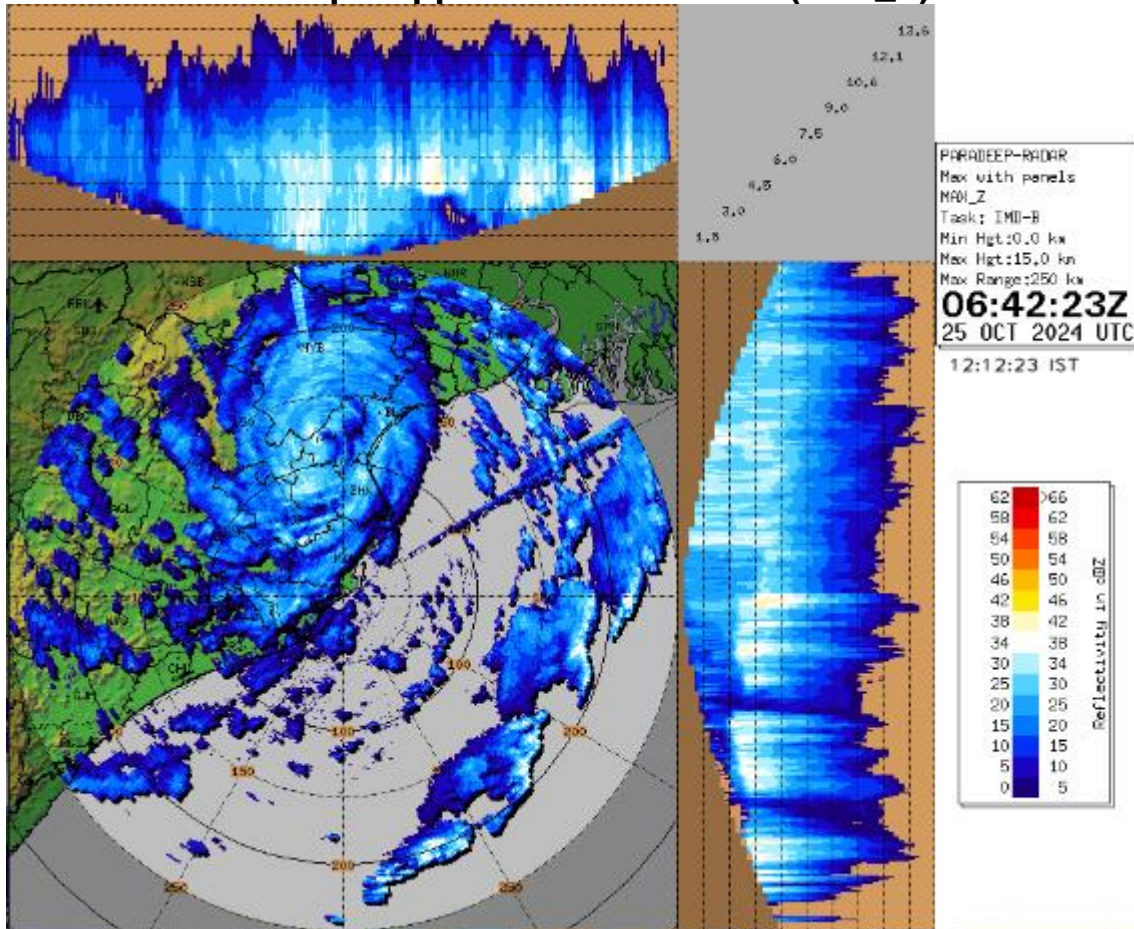
IT IS LIKELY TO MOVE NEARLY WESTWARDS ACROSS NORTH ODISHA AND WEAKEN GRADUALLY INTO A DEEP DEPRESSION DURING NEXT 06 HOURS.

(M. T. BUSHAIR)  
SCIENTIST-C  
RSMC NEW DELHI



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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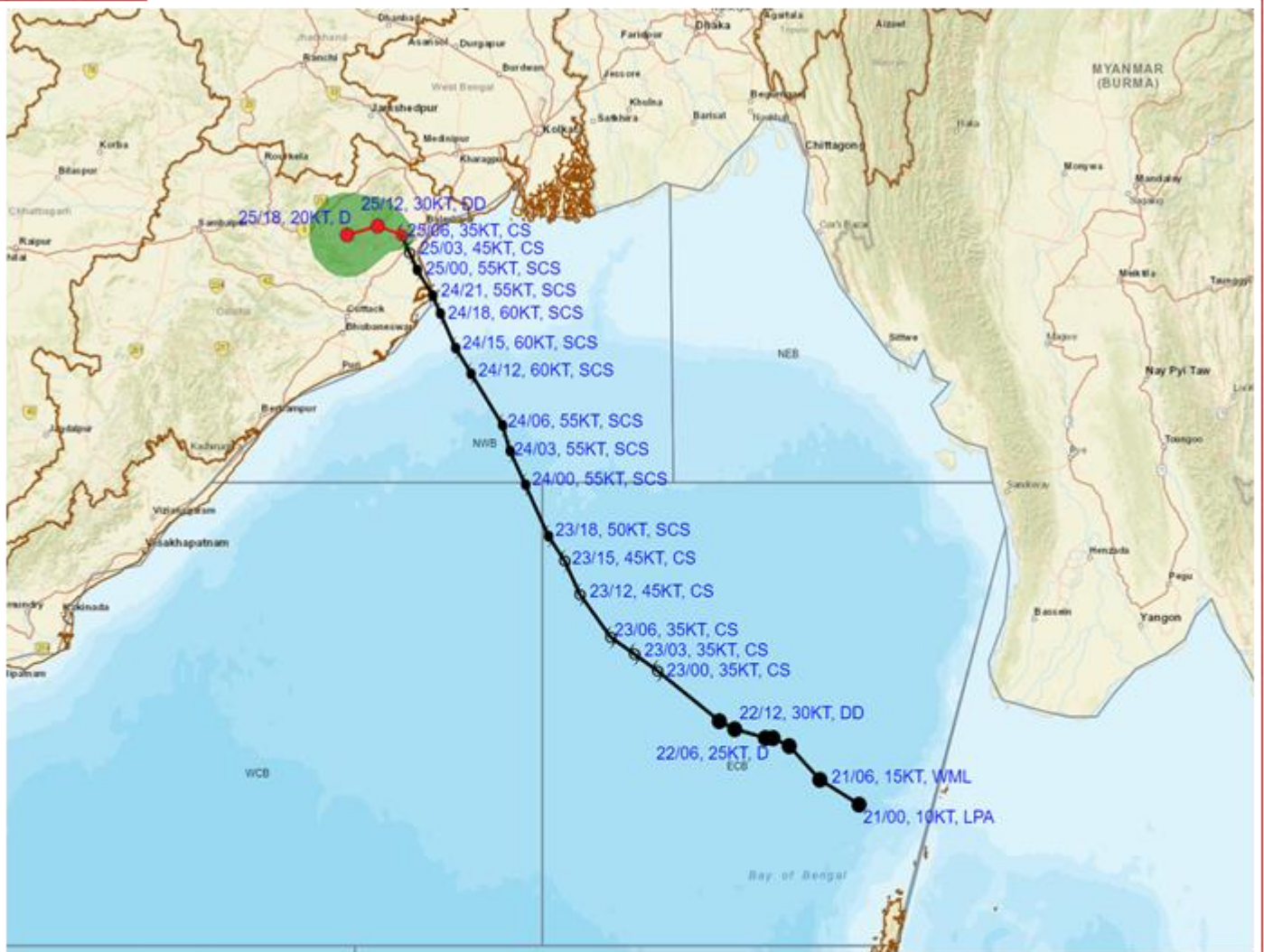
## Paradip Doppler Weather Radar (max\_Z)



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**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM 'DANA' OVER NORTH COASTAL ODISHA BASED ON 0600 UTC (1130 Hrs. IST) OF 25<sup>th</sup> OCTOBER 2024**



DATE/TIME : IN UTC  
 IST : UTC + 0530  
 KT : NAUTICAL MILE SHOUR = 1.85 KM/HOUR  
 LPA : 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 (48-63 KT)  
 VSCS : VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS : EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)  
 SuCS : SUPER CYCLONIC STORM ( $\geq 120$  KT)

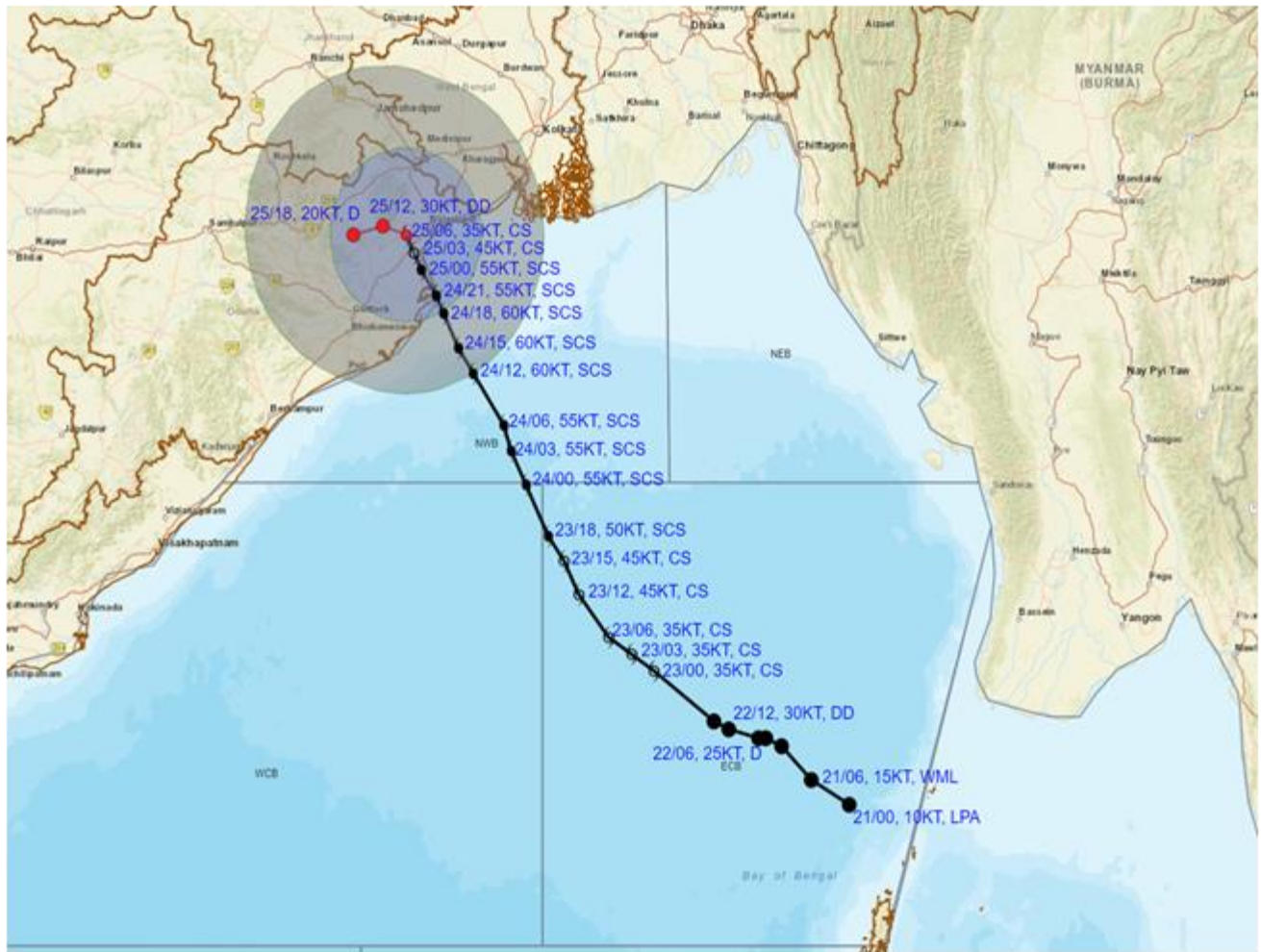
LESS THAN 34 KT  
 34-47 KT  
 $\geq 48$  KT  
 OBSERVED TRACK  
 FORECAST TRACK  
 CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS	
Date and Time (UTC)	BHADRAK	DHAMARA
25.10.24/0600	40, NNE	70, NNW

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  
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**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM 'DANA' OVER NORTH COASTAL ODISHA BASED ON 0600 UTC (1130 Hrs. IST) OF 25<sup>th</sup> OCTOBER 2024**



DATE/TIME : IN UTC  
 IST : UTC + 0530  
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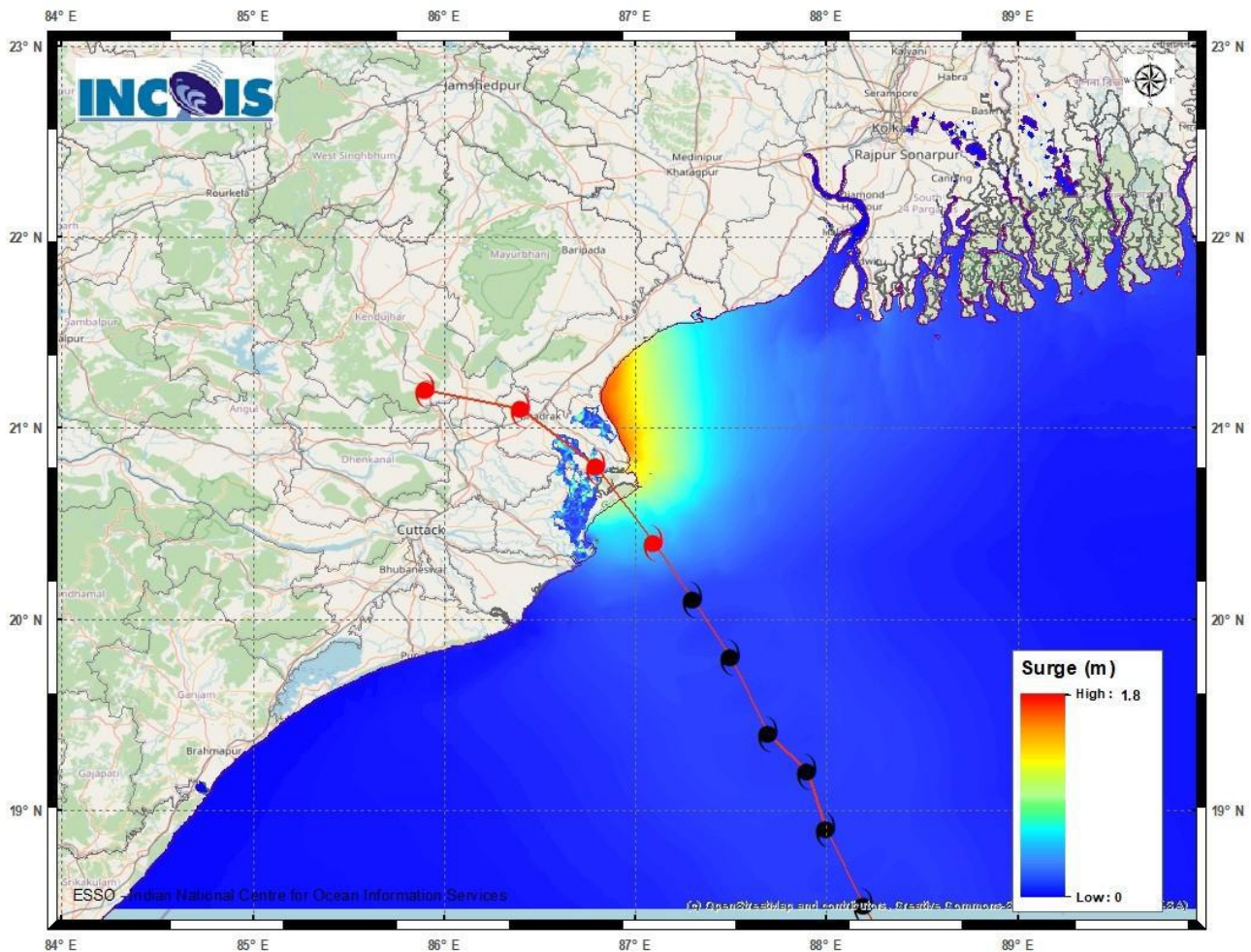
● LESS THAN 34 KT  
 ○ 34-47 KT  
 ●  $\geq 48$  KT  
 — OBSERVED TRACK  
 — FORECAST TRACK  
 ▲ CONE OF UNCERTAINTY  
 AREA OF MAXIMUM SUSTAINED WIND SPEED:  
 ■ 28-33 KT (52-61 KMPH)  
 ■ 34-49 KT (62-91 KMPH)  
 ■ 50-63 KT (92-117 KMPH)  
 ■  $\geq 64$  KT ( $\geq 118$  KMPH)

**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
$\geq 64$ ( $\geq 118$ )	Phenomenal	Total suspension of fishing operations

**Storm Surge warning graphics**

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DISTRICT	STATE/UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m)*	EXPECTED INUNDATION EXTENT (km)
Bhadrak	Odisha	Mohanpur	1.3-1.8	Upto 1.15
Baleswar	Odisha	Kumbhargari	0.4-1.6	Upto 1.08
Kendrapara	Odisha	Tikayat Nagar	0.2-1.3	Upto 3.01
Jagatsinghapur	Odisha	Musadia	0.2-0.5	Upto 2.91
Purba Medinipur	West Bengal	Dakshin Purushottampur	0.3-0.5	Upto 0.98

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### Fishermen Warning Graphics

