



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
TROPICAL CYCLONE ADVISORY NO. 17**

**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.17 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 25.10.2024 BASED ON 0000 UTC OF 25.10.2024**

**SUB: SEVERE CYCLONIC STORM “DANA” OVER NORTH ODISHA COAST**

THE SEVERE CYCLONIC STORM “DANA” (PRONOUNCED AS DANA) OVER NORTH COASTAL ODISHA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 10 KMPH AND LAY CENTRED AT 0000 UTC OF TODAY, THE 25TH OCTOBER, OVER THE SAME REGION NEAR LATITUDE 21.0° N AND LONGITUDE 86.8°E, ABOUT 20 KM NORTH-NORTHWEST OF DHAMARA, 30 KM EAST OF BHADRAK (ODISHA) AND 40 KM NORTH-NORTHWEST OF HABALIKHATI NATURE CAMP (BHITARKANIKA, ODISHA).

IT IS LIKELY TO MOVE NEARLY NORTHWESTWARDS ACROSS NORTH ODISHA AND WEAKEN GRADUALLY INTO A CYCLONIC STORM BY 0600 UTC OF TODAY, THE 25<sup>TH</sup> OCTOBER.

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
25.10.24/0530	21.0/86.8	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
25.10.24/1130	21.3/86.5	80-90 GUSTING TO 100	CYCLONIC STORM
25.10.24/1730	21.5/86.1	50-60 GUSTING TO 70	DEEP DEPRESSION
25.10.24/2330	21.7/85.6	30-40 GUSTING TO 50	DEPRESSION

CURRENT INTENSITY IS CHARACTERISED AS T3.5. ASSOCIATED SCATTERED TO BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHWEST. MINIMUM CTT IS MINUS 93°C. MODERATE TO INTENSE CONVECTION OVER EASTERN ODISHA, SOUTH GANGETIC WEST BENGAL (MINIMUM CTT MINUS 70-80 DEG CEL) MODERATE TO INTENSE CONVECTION OVER SOUTH BANGLADESH.

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

**UNDER IT'S INFLUENCE:**

**(I) WIND WARNING:**

**NORTHWEST BAY OF BENGAL:** GALE WIND SPEED REACHING 95-105 GUSTING TO 115 KMPH IS LIKELY TO PREVAIL TILL 0600 UTC OF 25<sup>TH</sup> OCTOBER.

**ADJOINING AREAS OF CENTRAL BAY OF BENGAL:** SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS PREVAILING AND LIKELY TO CONTINUE TILL 25<sup>TH</sup> OCT 0600 UTC. IT IS LIKELY TO DECREASE GRADUALLY THEREAFTER.

**ALONG & OFF ODISHA-WEST BENGAL COASTS:** GALE WIND SPEED REACHING 80-90 KMPH GUSTING TO 100 KMPH ALONG & OFF NORTH ODISHA (BHADRAK AND BALASORE DISTRICTS) AND EAST MEDINIPUR DISTRICT OF WEST BENGAL IS LIKELY TILL 0600 UTC OF 25<sup>TH</sup> OCTOBER AND DECREASE GRADUALLY THEREAFTER.

GALE WIND SPEED REACHING 60-80 KMPH GUSTING TO 90 KMPH ALONG & OFF SOUTH ODISHA (KENDRAPARA, CUTTACK, JAJPUR, DHENKANAL, KEONJHAR AND MAYURBHANJ DISTRICTS) IS LIKELY TILL 25<sup>TH</sup> OCT 0600 UTC AND DECREASE GRADUALLY THEREAFTER.

**ADJOINING AREAS OF NORTHEAST BAY OF BENGAL:** SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH IS LIKELY TO PREVAIL TILL 25<sup>TH</sup> 0600 UTC AND DECREASE GRADUALLY THEREAFTER.

**(III) STORM SURGE WARNING:**

STORM SURGE OF 1.0 TO 2.0 M HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BHADRAK & BALASORE DISTRICTS OF ODISHA AND EAST MEDINIPUR DISTRICTS OF WEST BENGAL DURING THE TIME OF LANDFALL.

STORM SURGE OF 0.5 TO 1.0 M HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY

LIKELY TO INUNDATE LOW LYING AREAS OF SOUTH 24-PARGANAS DISTRICT OF WEST BENGAL AND JAGATSINGHPUR DISTRICT OF ODISHA DURING THE TIME OF LANDFALL.

**(IV) SEA CONDITION:**

**NORTHWEST BAY OF BENGAL:** SEA CONDITION IS LIKELY TO BE **VERY HIGH** TILL 25<sup>TH</sup> 0600 UTC AND IMPROVE GRADUALLY THEREAFTER.

**ALONG & OFF ODISHA-WEST BENGAL COASTS:** **HIGH TO VERY HIGH** TILL 25<sup>TH</sup> OCT UTC AND IMPROVE GRADUALLY THEREAFTER.

**ADJOINING AREAS OF CENTRAL BAY OF BENGAL:** SEA CONDITION IS LIKELY TO BE **VERY ROUGH** TILL 25<sup>TH</sup> OCTOBER UTC. IT IS LIKELY TO IMPROVE GRADUALLY THEREAFTER.

**ADJOINING AREAS OF NORTHEAST BAY OF BENGAL:** SEA CONDITION IS LIKELY TO BE **ROUGH TO VERY ROUGH** TILL 25<sup>TH</sup> UTC AND IMPROVE GRADUALLY THEREAFTER.

**(V) FISHERMEN WARNING:**

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

**REMARKS:**

THE SEA SURFACE TEMPERATURE (SST) IS 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 200X 10<sup>-6</sup>S<sup>-1</sup> AROUND SYSTEM AREA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW-LEVEL CONVERGENCE IS 20 X10<sup>-6</sup>S<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM AREA. POSITIVE UPPER-LEVEL DIVERGENCE IS ALSO SAME AND IS 10X10<sup>-6</sup>S<sup>-1</sup> TO THE EAST OF SYSTEM AREA AND EXTENDING WESTWARDS UPTO EASTCENTRAL BAY OF BENGAL. VERTICAL WIND SHEAR (VWS) IS MODERATE (10-20 KT) OVER SYSTEM AREA AND TO ITS WEST. THE UPPER TROPOSPHERIC RIDGE IS AROUND 20N AND AN ANTICYCLONIC CIRCULATION OVER CHHATTISGARH (INDIA).

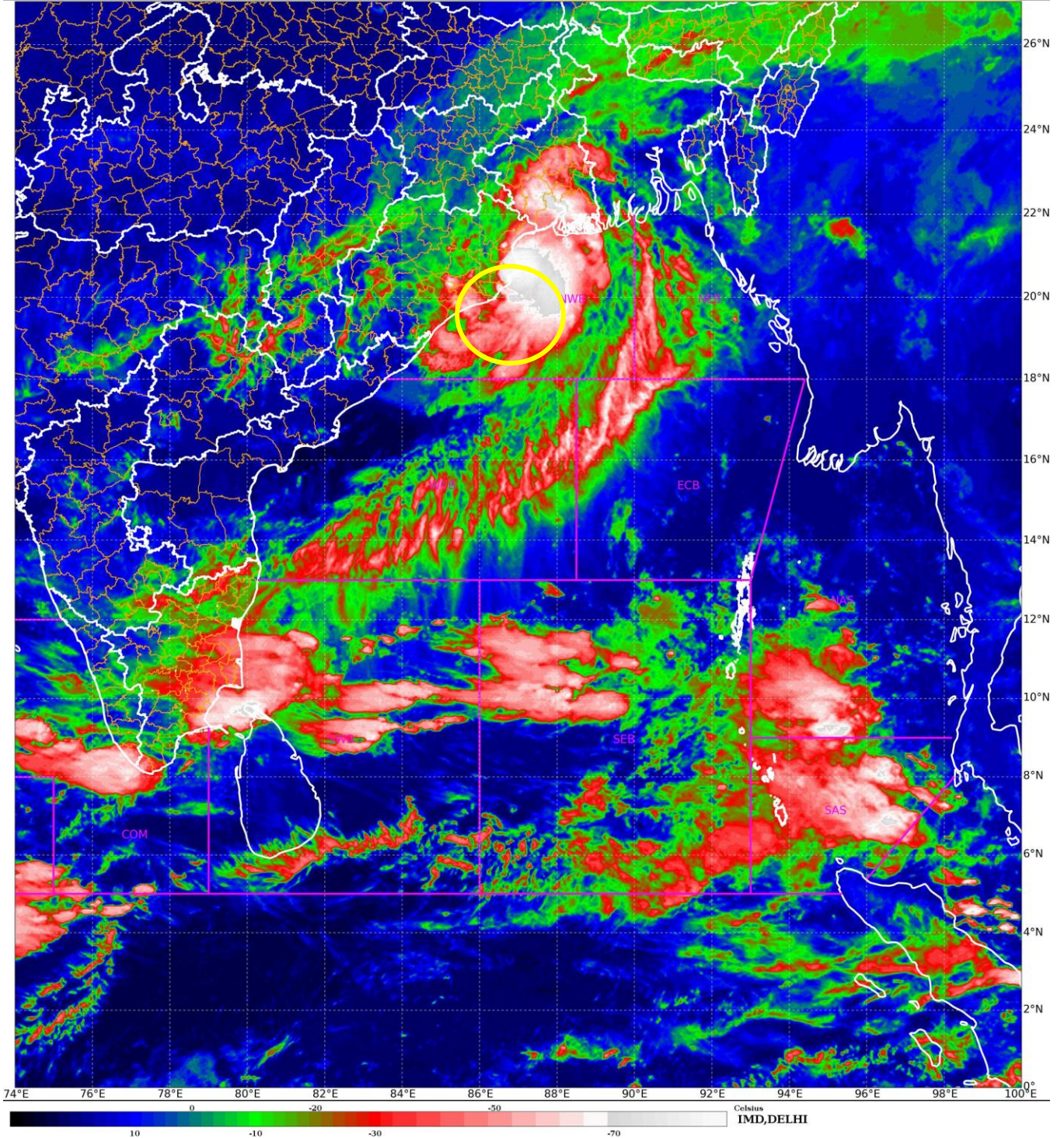
AFTER LANDFALL IT IS LIKELY TO MOVE NEARLY WEST-NORTHWESTWARDS ACROSS NORTH ODISHA AND WEAKEN GRADUALLY INTO A CYCLONIC STORM BY 0600 UTC OF THE 25TH OCTOBER.

(D. R. PATTANAİK)  
SCIENTIST-F  
RSMC NEW DELHI

SAT : INSAT-3DR IMG  
IMG\_TIR1\_TEMP 10.8 um  
L1C Mercator

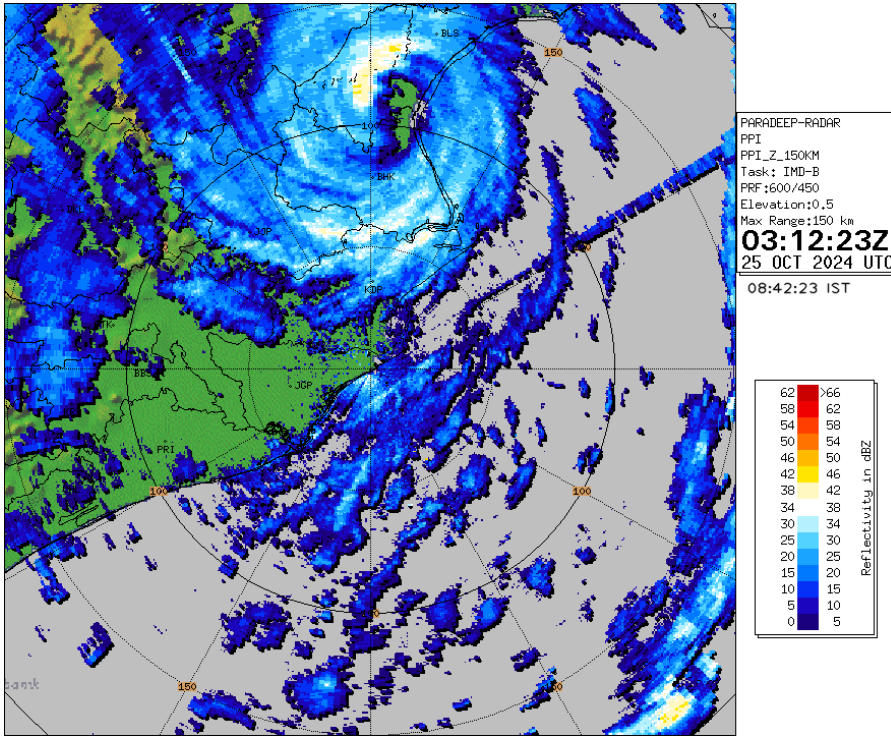
24-10-2024/(2215 to 2242) GMT  
25-10-2024/(0345 to 0412) IST

# Severe Cyclonic Storm "Dana" 21.0N/86.8°E



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%  
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

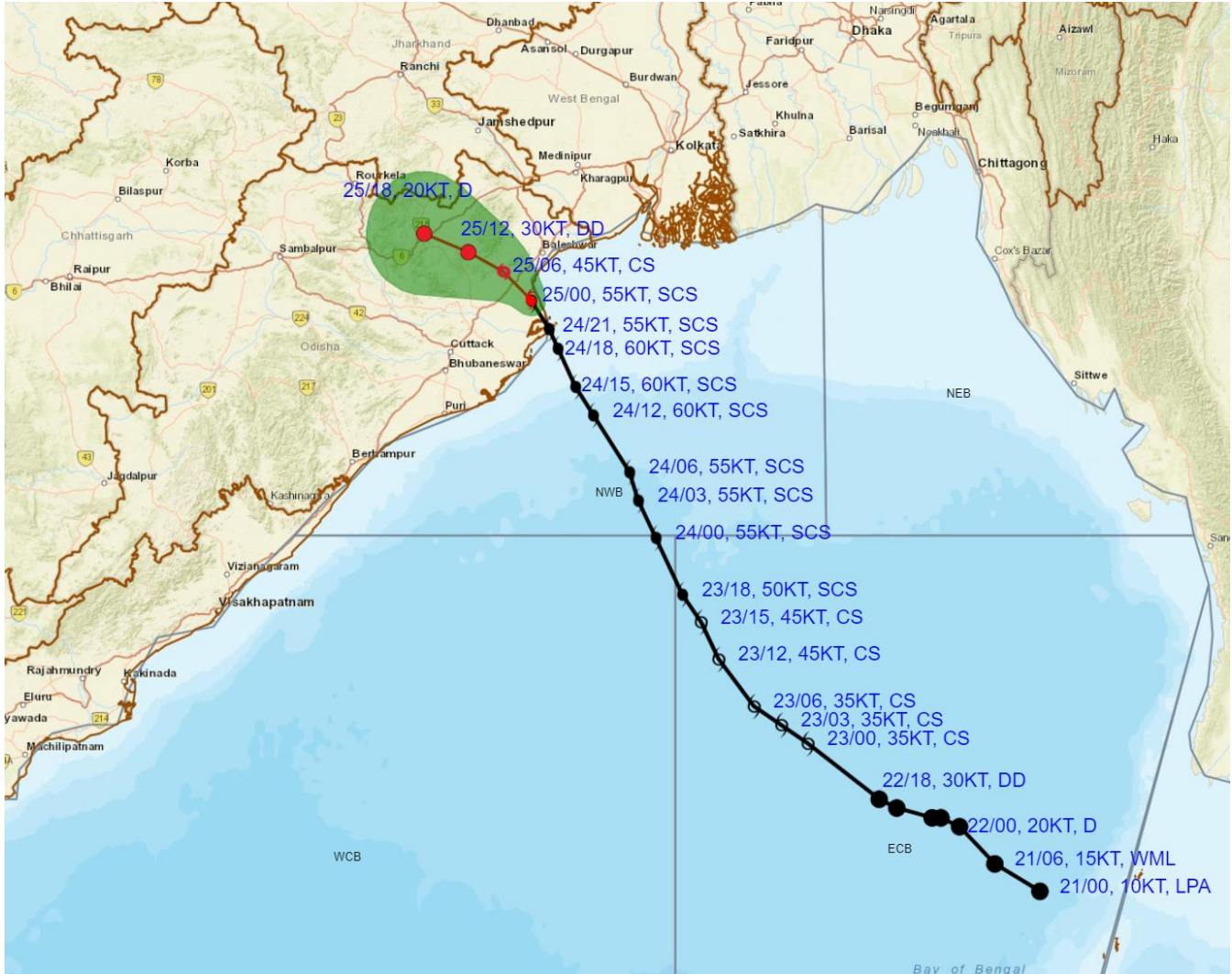
# Paradip Doppler Weather Radar (MAX\_Z)



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%  
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF SEVERE CYCLONIC STORM 'DANA' OVER NORTH COASTAL ODISHA BASED ON 0000 UTC (0530 Hrs. IST) OF 25<sup>th</sup> OCTOBER 2024**



DATE/TIME : IN UTC  
 IST : UTC + 0530  
 KT : NAUTICAL MILE S/HOUR = 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)

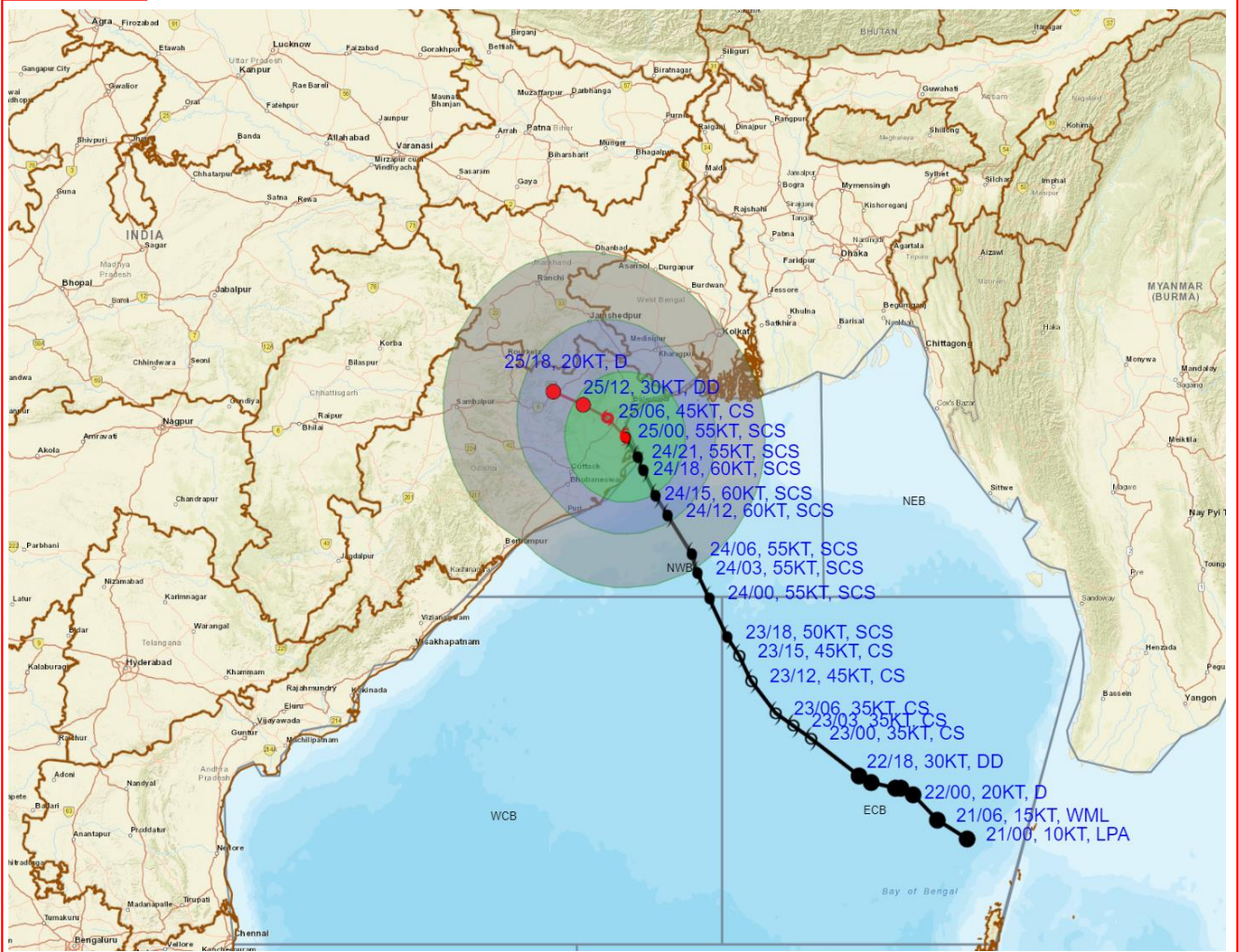
LESS THAN 34 KT  
 34-47 KT  
 $\geq 48$  KT  
 OBSERVED TRACK  
 FORECAST TRACK  
 CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS		
Date and Time (UTC)	PARADIP (CWR)	DHAMARA	SAGAR ISLAND
25.10.24/0000	80, N	20, NNW	150, WSW

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%  
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



# OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF SEVERE CYCLONIC STORM 'DANA' OVER NORTH COASTAL ODISHA BASED ON 0000 UTC (0530 Hrs. IST) OF 25<sup>th</sup> OCTOBER 2024



**DATE/TIME** : IN UTC  
**IST** : UTC + 0530  
**KT** : NAUTICAL MILE S/HOUR = 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 (≥120 KT)

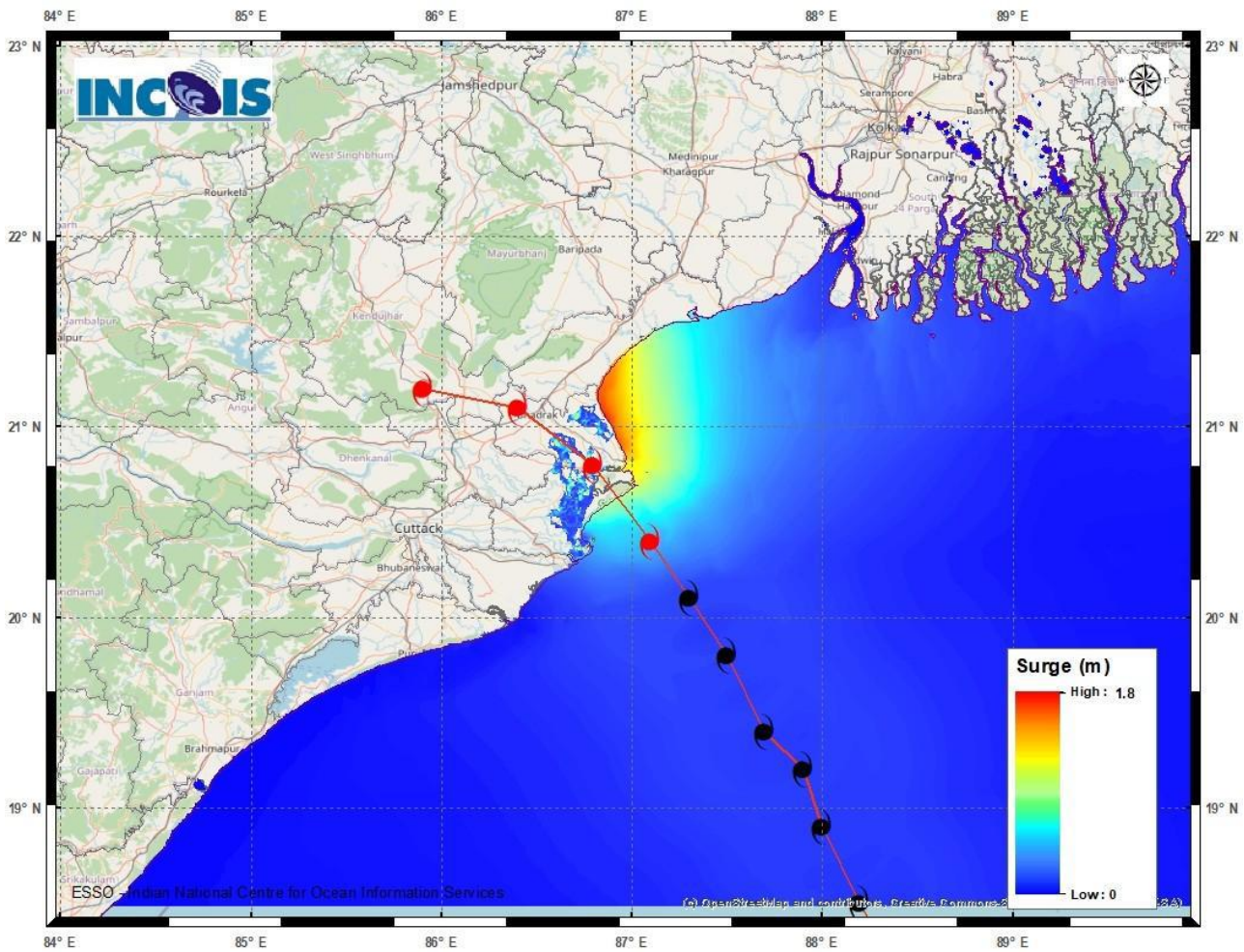
● LESS THAN 34 KT  
 ○ 34.47 KT  
 ○ ≥ 48 KT  
 — OBSERVED TRACK  
 — FORECAST TRACK  
 ● CONE OF UNCERTAINTY  
**AREA OF MAXIMUM SUSTAINED WIND SPEED:**  
 ■ 28-33 KT (52-61 KMPH)  
 ■ 34-49 KT (62-91 KMPH)  
 ■ 50-63 KT (92-117 KMPH)  
 ■ ≥ 64 KT (≥118 KMPH)

### 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

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%  
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

## Storm Surge warning graphics



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	Kumbhigari	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

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%  
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



