



**India Meteorological Department
(Ministry of Earth Sciences)**

NATIONAL BULLETIN NO. 25 (BOB/06/2024)

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FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

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Subject: Cyclonic storm "DANA" over north coastal Odisha weakened into a Deep Depression

The cyclonic storm "DANA" (pronounced as DANA) moved northwestwards with a speed of 7 kmph during past 6 hours, weakened into a deep depression and lay centred near latitude 21.4°N and longitude 86.4°E at 1430 hrs IST of today, the 25th October, about 40 km north-northwest of Bhadrak. The maximum sustained wind speed around the centre of the cyclone is about 55-65 kmph gusting to 75 kmph.

It is likely to move nearly westwards across north Odisha and weaken gradually into a depression during next 12 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 (IST)	Position (Lat. °N/ Long. °E)	Maximum Sustained Surface Wind Speed (Kmph)	Category Of Cyclonic Disturbance
25.10.24/1430	21.4/86.4	55-65 gusting to 75	Deep Depression
25.10.24/1730	21.4/86.2	50-60 gusting to 70	Deep Depression
25.10.24/2330	21.3/85.9	30-40 gusting to 50	Depression

Warnings:

(i) Rainfall Warning:

- ❖ Light to moderate rainfall at most places with **heavy rainfall over to very heavy rainfall** at a few places over **Keonjhar, Mayurbhanj, Balasore, Bhadrak, Dhenkanal, Cuttack, Jajpur, Kendrapara, Angul, Nayagarh, Khorda, Puri and Jagatsinghpur** districts of Odisha on 25th October. **Extremely heavy rainfall (≥ 21 cm)** at isolated places is very likely over **Keonjhar, Mayurbhanj, Balasore and Bhadrak** districts of Odisha on 25th October.
- ❖ **Light to moderate rainfall at most places with heavy to very heavy rainfall** at a few places **with extremely heavy rainfall** at isolated places over **East & West Medinipur**, districts of Gangetic West Bengal on 25th October.
- ❖ Light to moderate rainfall at many places with **heavy to very heavy rainfall** at isolated places is likely over south Jharkhand on 25th October.

(ii) Wind Warning:

Northwest Bay of Bengal: Squally wind speed reaching 50-60 gusting to 70 kmph is prevailing and would gradually decrease becoming 30-40 kmph gusting to 50 kmph from night of 25th October 2024.

Along & off Odisha-west Bengal coasts and adjoining interior districts: Squally wind speed reaching 55-65 kmph gusting to 75 kmph would prevail over Balasore, Mayurbhanj, Keonjhar, Bhadrak, Kendrapara districts of Odisha and East Medinipur district of West Bengal till evening of 25th October 2024 and decrease thereafter.

Squally wind speed reaching 30-40 kmph gusting to 50 kmph would prevail over Jagatsinghpur, Cuttack, Dhenkanal, Angul & adjoining areas of Sundargarh & Khorda districts of Odisha and south 24 Paraganas, West Medinipur & Jhargram districts of West Bengal till evening of 25th October and decrease thereafter.

South Jharkhand: Squally wind speed reaching 30-40 kmph gusting to 60 kmph is very likely to prevail till 25th October evening.

(iii) Sea Condition:

Northwest Bay of Bengal and along & off Odisha-west Bengal coasts: Sea condition is likely to be **Very rough to rough** till 25th evening and improve gradually thereafter.

(v) Fishermen Warning:

Fishermen are advised not to venture into Northwest Bay of Bengal and along & off Odisha and West Bengal coasts on 25th October.

❖ Post Landfall Outlook for the interior districts of North Odisha

Light to moderate rainfall at most places with **heavy rainfall over to very heavy rainfall** at a few places over **Keonjhar, Mayurbhanj, Balasore, Bhadrak, Dhenkanal, Cuttack, Jajpur, Kendrapara, Angul, Nayagarh, Khorda, Puri and Jagatsinghpur** districts of Odisha on 25th October. **Extremely heavy rainfall (≥ 21 cm)** at isolated places is very likely over **Keonjhar, Mayurbhanj, Balasore and Bhadrak** districts of Odisha on 25th October.

Squally wind speed reaching 40-60 kmph gusting to 70 kmph is likely to prevail over **interior districts of north Odisha** till night of 25th October and decrease gradually thereafter.

❖ **Impact Expected over districts of Odisha (Baleswar, Bhadrak, Mayurbhanj, Keonjhar, Dhenkanal) and West Bengal (East & West Medinipur and Jhargram) till 25th October evening**

- Damage to thatched houses/ huts. Unattached metal sheets may fly.
- Breaking of tree branches and uprooting of trees.
- Partial damage to power and communication lines.
- damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- Damage to vulnerable structure.
- Damage to standing crops including banana, papaya, horticultural and vegetable crops due to inundation and wind.
- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities and roadways due to water logging in roads and poor visibility due to heavy rain leading to increased travel time and incidents
- Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- Likely disruption of marine and inland water transportation like small boats and trawlers.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Webpage of Central Water Commission)

❖ **Action Suggested for districts of Odisha (Baleswar, Bhadrak, Mayurbhanj, Keonjhar and Dhenkanal) and West Bengal (East & West Medinipur and Jhargram) till 25th October evening**

- Fishermen are advised not to venture into Northwest Bay of Bengal and along & off Odisha and West Bengal coasts on 25th October.
- Movement in motor boats unsafe
- People in affected areas to remain indoors.
- Judicious regulation of Port and maritime activities including shipping.
- Judicious regulation of tourism activities in coastal areas.
- Judicious regulation of surface transports including railways and roadways.
- Check for traffic congestion on your route before leaving for your destination.
- Follow any traffic advisories that are issued in this regard.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

Next bulletin will be issued at 2030 hours IST of today, the 25th October, 2024.

(M. Sharma)
Scientist-D, IMD, New Delhi

Copy to: ACWC Kolkata/ACWC Chennai/CWC Bhubaneswar/CWC Vishakhapatnam/Meteorological Centre Port Blair/MC Ranchi

Annexure-1

Realised Adverse Weather during 0830 hours IST of 24th October to 0830 hours IST of 25th October

Realised Rainfall: Widespread rainfall occurred over North coastal districts with heavy to very heavy rainfall at a few places over Bhadrak, Kendrapara and Jagatsinghpur districts of North coastal Odisha, heavy rainfall at isolated places over East & West Medinipur districts of West Bengal and heavy rainfall at isolated places over South Jharkhand.

24 hours cumulative rainfall realised during 0830 hours IST of 24th October to 0830 hours IST of 25th October is given below:

Odisha: Chandbali (Bhadrak) 16, Rajkanika (Kendrapara) 16, Nawana (Mayurbhanj) 14, Marsaghai (Kendrapara) 11, Basudevpur (Bhadrak) 11, Oupada (Balasore) 11, Rajnagar (Kendrapara) 10, Mohakalapada (Kendrapara) 9, Aul (Kendrapara) 8, Paradeep Cwr (Jagatsinghpur) 8, Derabis (Kendrapara) 7, Bhadrak (Bhadrak) 7, Balasore (Balasore) 7, Jajpur Pto (Jajpur) 7, Kendrapada Pto (Kendrapara) 7, Nilgiri (Balasore) 7, Kendrapara (Kendrapara) 7, Pattamundai (Kendrapara) 7,

Gangetic West Bengal: Diamond Harbour (South 24 Parganas) 9, Kalaikunda (dist West Midnapore) 9, Kharagpur (West Midnapore) 9, Durgachack (East Midnapore) 8, Mohanpur (West Midnapore) 7, Jhargram (Jhargram) 7, Uluberia (Howrah) 7;

Jharkhand: Gurabandha (East Singbhum) 7;

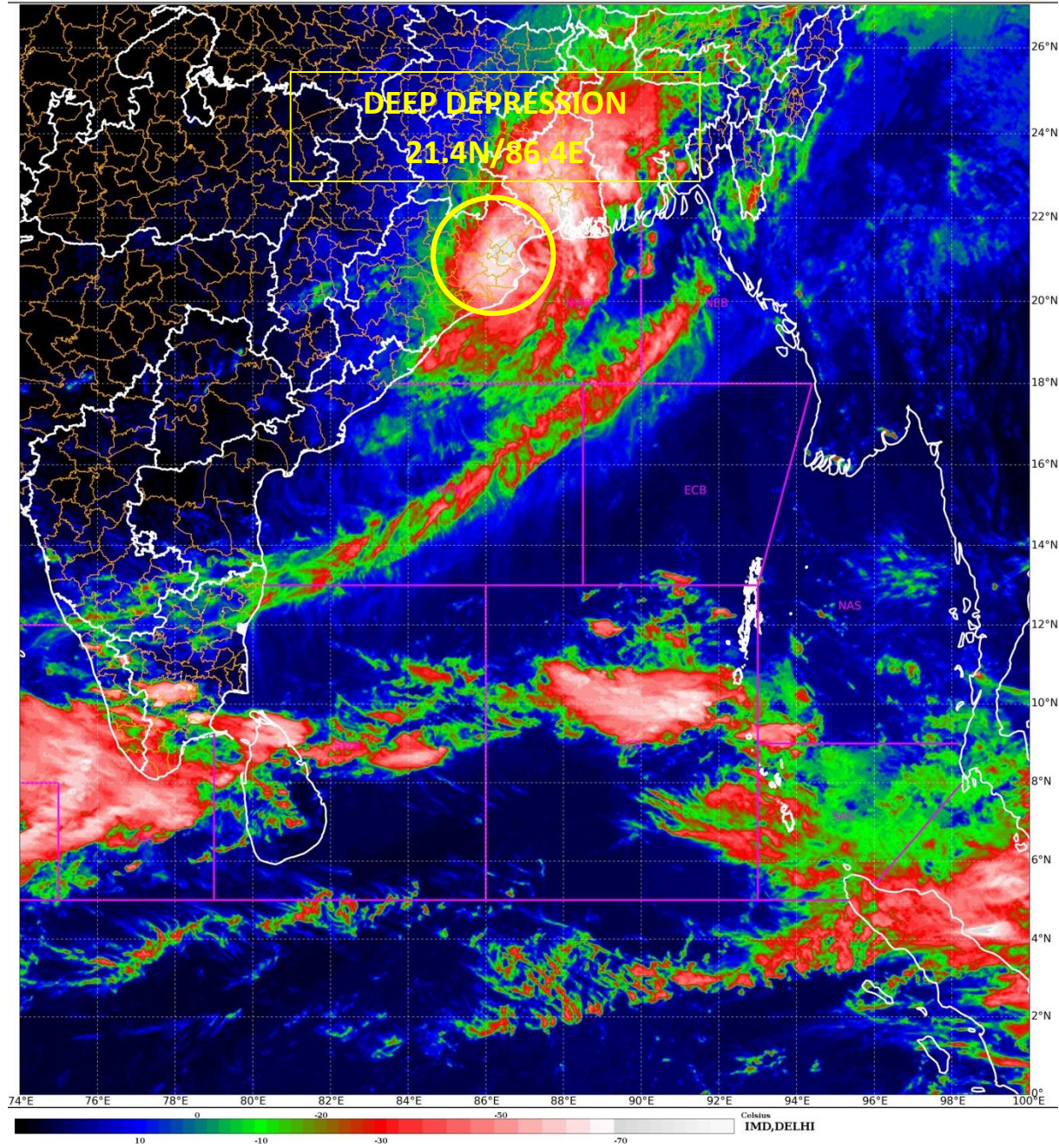
Realised maximum Wind: The estimated maximum sustained wind was about 100-110 kmph gusting to 120 kmph at the time of landfall over Kendrapara and Bhadrak districts of Odisha.

Realised Storm Surge: Maximum estimated storm surge of height 1-2 m above astronomical tide inundated low-lying areas of Kendrapara and Bhadrak districts of Odisha during landfall.

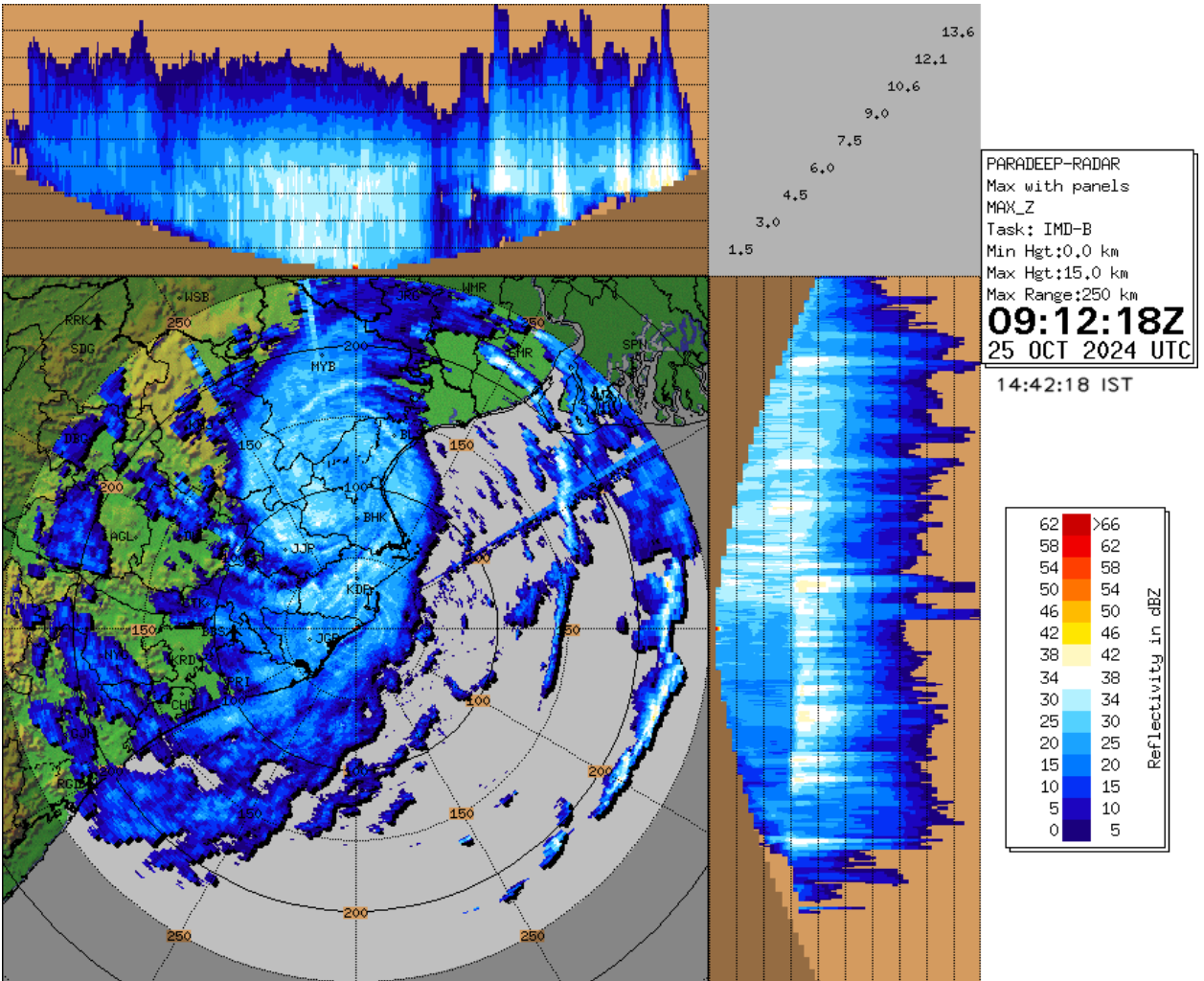
SATELLITE IMAGERY

SAT : INSAT-3DR IMG
IMG_TIR1_TEMP 10.8 um
LIC Mercator

25-10-2024/(0815 to 0842) GMT
25-10-2024/(1345 to 1412) IST

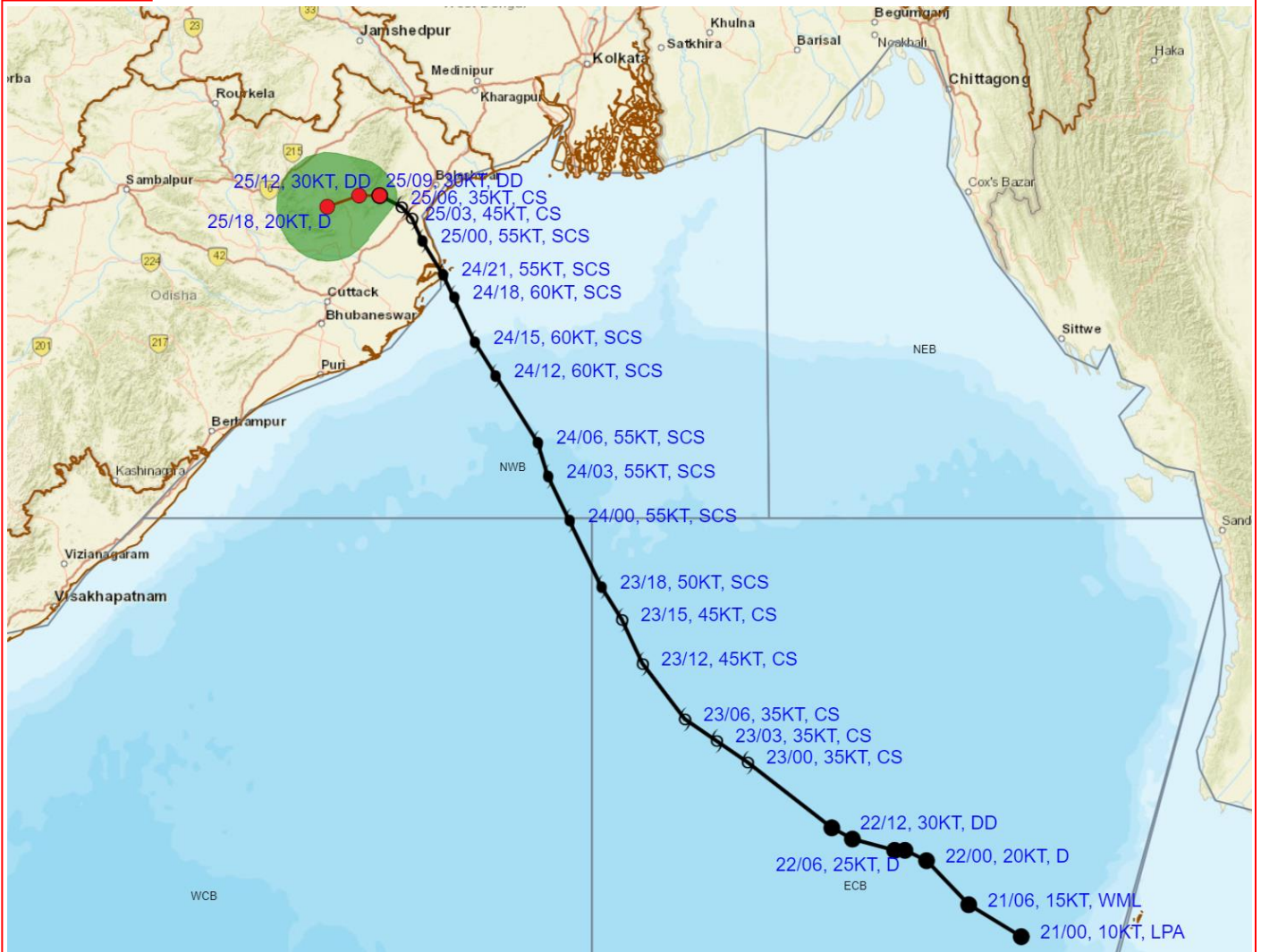


RADAR OBSERVATIONS (MAX_Z) OF DWR PARADIP





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION (REMNANT OF SEVERE CYCLONIC STORM 'DANA') OVER NORTH COASTAL ODISHA BASED ON 0900 UTC (1430 Hrs. IST) OF 25th OCTOBER 2024

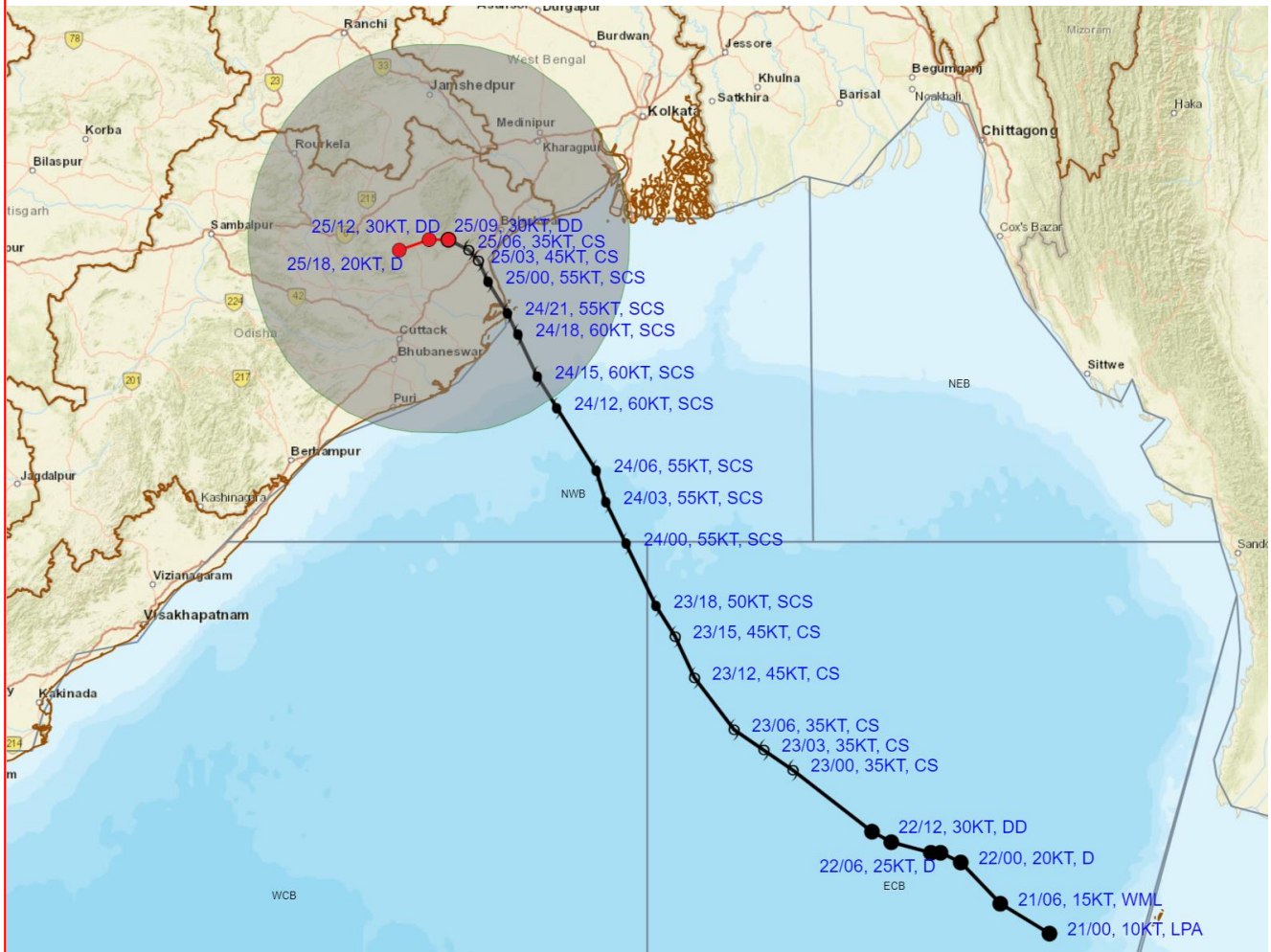


DATE/TIME : IN UTC
IST : UTC + 0530
KT : NAUTICAL MILE S/HOUR = 1.85 KM/HOUR
LPA : LOW PRESSURE AREA
WML : WELL MARKED LOW PRESSURE AREA
D : DEPRESSION (17-27 KT)
DD : DEEP DEPRESSION (28-33 KT)
CS : CYCLONIC STORM (34-47 KT)
SCS : SEVERE CYCLONIC STORM (48-63 KT)
VSCS : VERY SEVERE CYCLONIC STORM (64-89 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



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION (REMNANT OF SEVERE CYCLONIC STORM 'DANA') OVER NORTH COASTAL ODISHA BASED ON 0900 UTC (1430 Hrs. IST) OF 25th OCTOBER

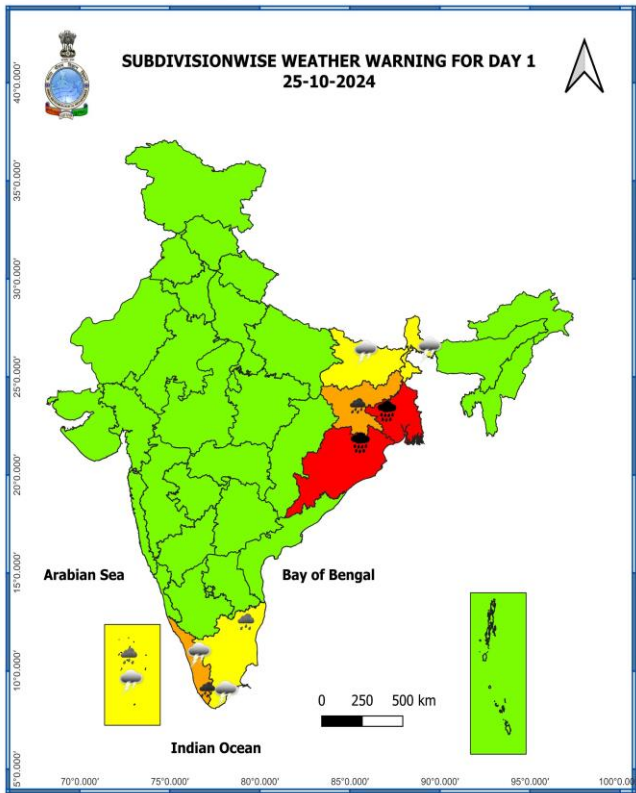


DATE/TIME : IN UTC
 IST : UTC + 0530
 KT : NAUTICAL MILE S/HOUR = 1.85 KM/HOUR
 LPA : LOW PRESSURE AREA
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 D : DEPRESSION (17-27 KT)
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 SuCS : SUPER CYCLONIC STORM (≥ 120 KT)

● 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



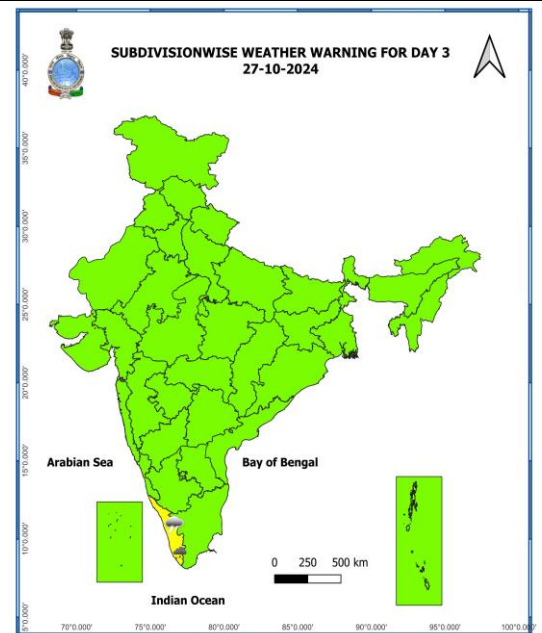
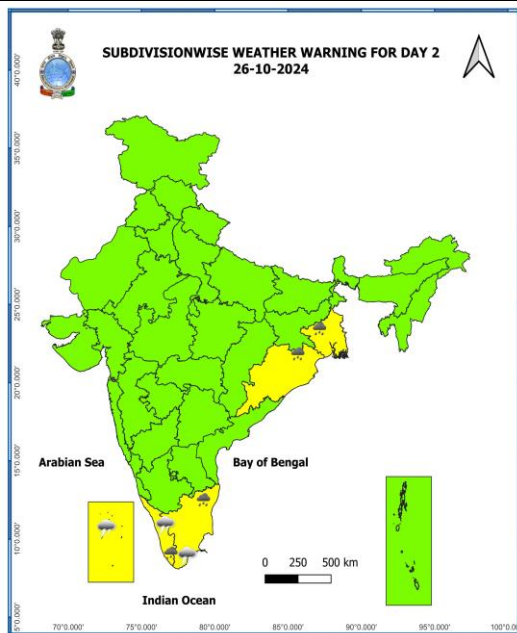
- Heavy Rain
- Very Heavy Rain
- Extremely Heavy Rain

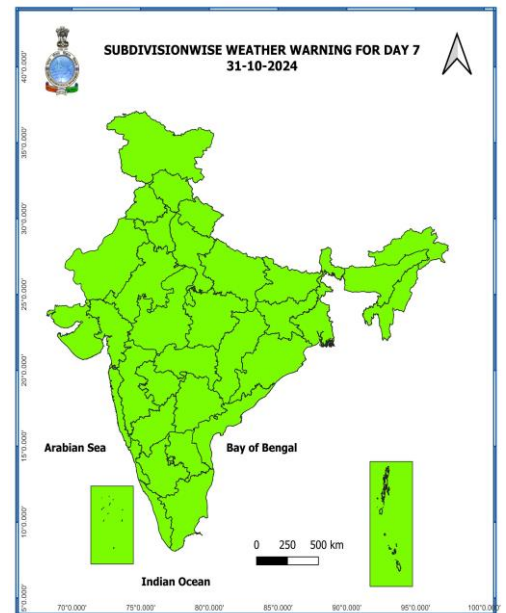
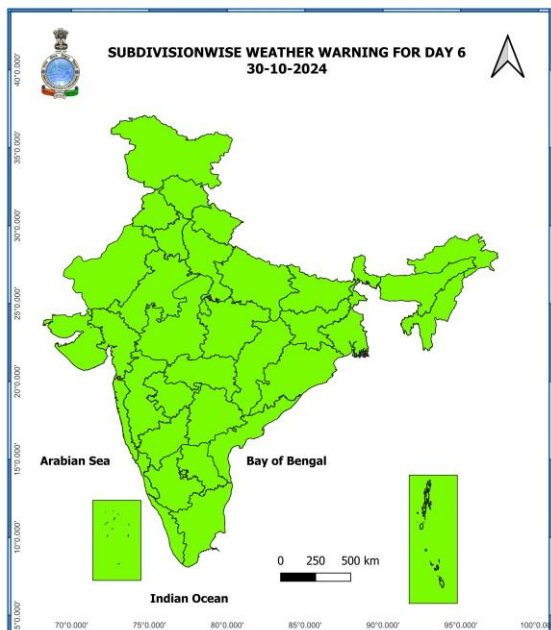
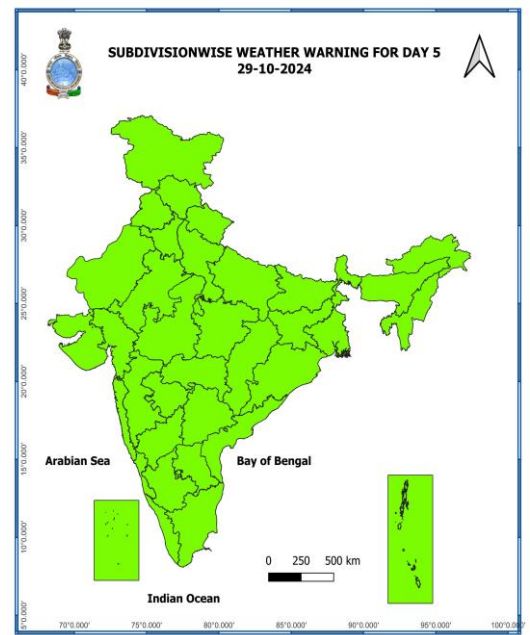
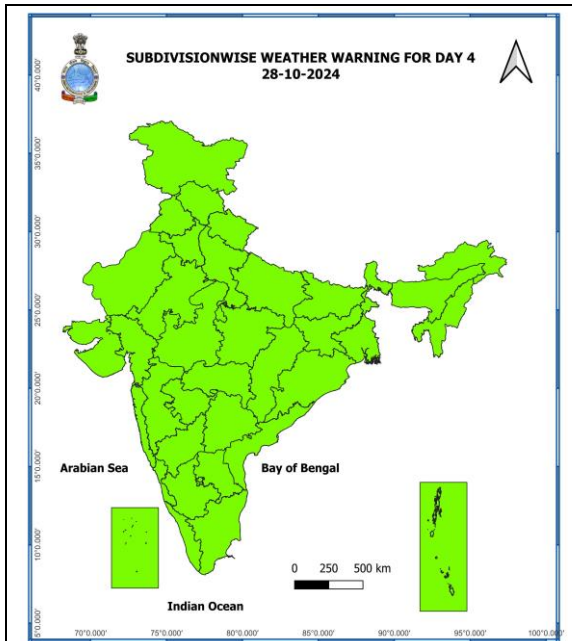
COLOUR CODED WARNING

- No Warning (No Action)
- Watch (Be Aware)
- Alert (Be Prepared To Take Action)
- Warning (Take Action)

Probabilistic Forecast

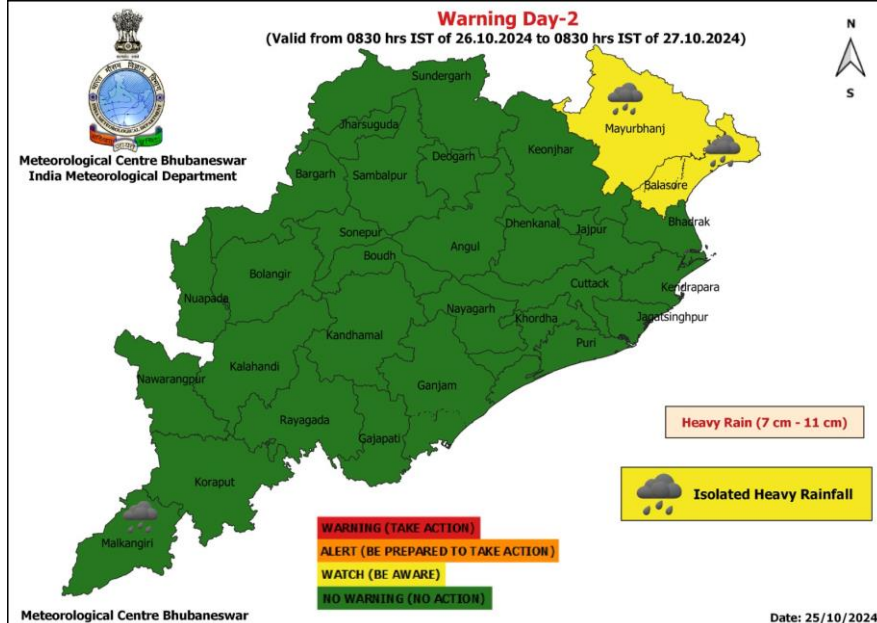
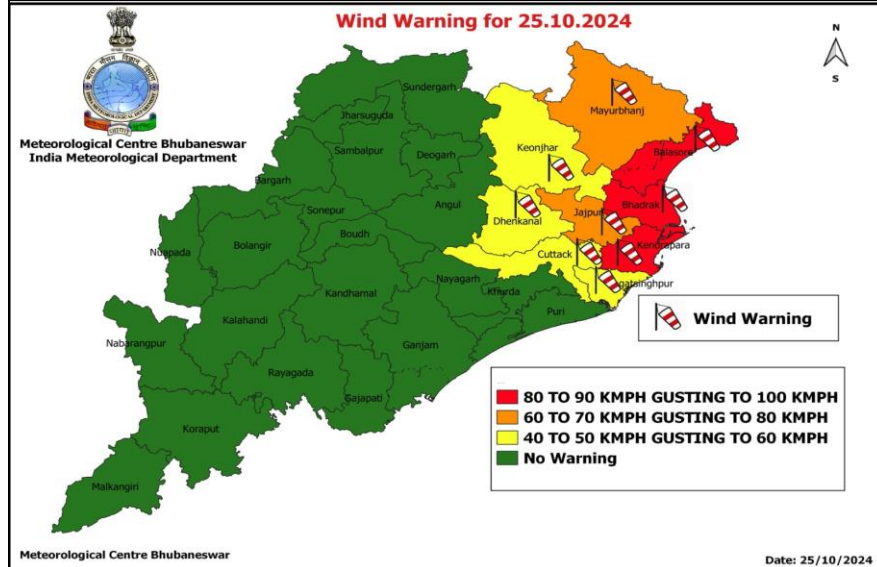
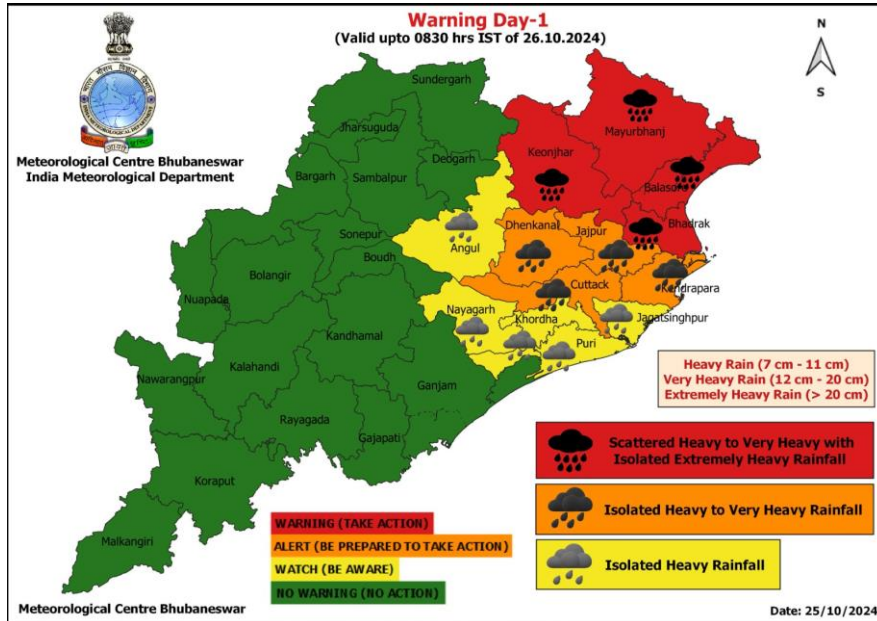
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75





- Action may be taken based on **ORANGE AND RED COLOUR** warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

WARNING MAPS FOR ODISHA



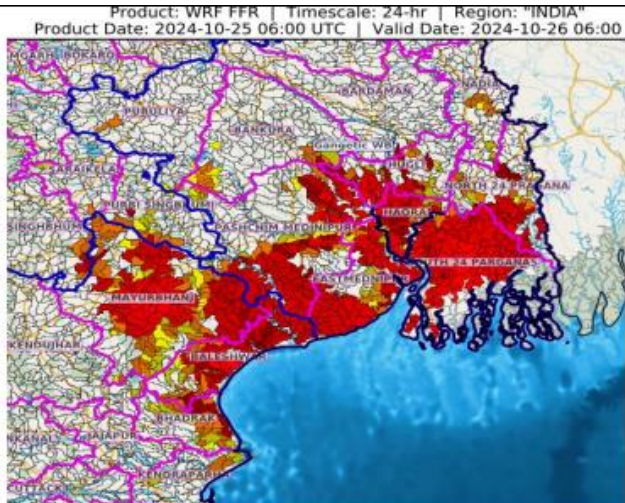
24 HOURS OUTLOOK FOR THE FLASH FLOOD RISK

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 26-10-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

Odisha - Baleshwar, Bhadrak, Kendraparha and Mayurbhanj districts.
Gangetic West Bengal - Bankura, Eastmednipur, Haora, Hugli, Nadia, North 24 Pragana, Pashchim Medinipur, Puruliya and South 24 Parganas districts.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



Flash Flood Risk

High Risk (Take Action)

Moderate Risk (Be Prepared)

Low Risk (Be Updated)

Fishermen Warning Graphics

