



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

NATIONAL BULLETIN NO. 23 (BOB/06/2024)

TIME OF ISSUE: 1130 HOURS IST

DATED: 25.10.2024

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

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)
CONTROL ROOM NDMA (FAX.NO. 26701729)
CABINET SECRETARIAT (FAX.NO.23012284, 23018638)
PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)
SECRETARY, MOES (FAX NO. 24629777)
H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)
DIRECTOR GENERAL, DOORDARSHAN (23385843)
DIRECTOR GENERAL, AIR (23421105, 23421219)
PIB MOES (FAX NO. 23389042)
UNI (FAX NO. 23355841)
D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)
DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)
CHIEF SECRETARY, ODISHA (FAX NO. 0674-2536660)
CHIEF SECRETARY, WEST BENGAL (FAX NO. 033-22144328)
CHIEF SECRETARY, ANDAMAN & NICOBAR ISLANDS (FAX NO. 03192-232656)
CHIEF SECRETARY, ANDHRA PRADESH (FAX NO. 0863-2441029)
CHIEF SECRETARY, TAMIL NADU (FAX NO. 044-25672304)
CHIEF SECRETARY, PUDUCHERRY (FAX NO. 0413-2334145)
CHIEF SECRETARY, JHARKHAND (FAX NO. 0651-2400240)
CHIEF SECRETARY, BIHAR (FAX NO. 0612-2205800)**

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

The severe cyclonic storm "DANA" (pronounced as DANA) moved north-northwestwards with a speed of 10 kmph and weakened into a cyclonic storm over north coastal Odisha and lay centred near latitude 21.2°N and longitude 86.7°E at 0830 hrs IST of today, the 25th October, about 30 km northeast of Bhadrak and 50 km north-northwest of Dhamara. The maximum sustained wind speed around the centre of the cyclone is about 80-90 kmph gusting to 100kmph. The landfall process has completed.

It is likely to move northwestwards 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 (IST)	Position (Lat. °N/ Long. °E)	Maximum Sustained Surface Wind Speed (Kmph)	Category Of Cyclonic Disturbance
25.10.24/0830	21.2/86.7	80-90 gusting to 100	Cyclonic Storm
25.10.24/1130	21.4/86.6	60-70 gusting to 80	Cyclonic Storm
25.10.24/1730	21.6/86.3	50-60 gusting to 70	Deep Depression
25.10.24/2330	21.6/85.9	30-40 gusting to 50	Depression

(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: Gale wind speed reaching 80-90 gusting to 100 kmph is prevailing and would gradually decrease becoming squally wind speed reaching 40-50 kmph gusting top 60 kmph from evening of 25th October 2024.

Along & off Odisha-west Bengal coasts: Gale wind speed reaching 60-80 kmph gusting to 90 kmph would prevail over Balasore, Mayurbhanj, Keonjhar, Bhadrak, Kendrapara districts of Odisha and East Mednipur district of West Bengal till evening of 25th 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 evening of 25th October and decrease thereafter.

South Jharkhand: Squally wind speed reaching 40-50 gusting to 60 kmph is very likely to prevail from morning of 25th till evening of 26th October.

(iii) Storm surge warning:

Storm surge of upto 1.0 m height above astronomical tide is very likely to inundate low lying areas of Bhadrak & Balasore districts 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.

(iv) Sea Condition:

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

(v) Fishermen Warning:

- Total suspension of fishing operations over Northwest Bay of Bengal till 25th noon.
- 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 50-60 kmph gusting to 70 kmph is likely to prevail over **interior districts of north Odisha** from 25th October afternoon till night and decrease gradually thereafter.

❖ **Impact Expected over districts of Odisha (Baleswar, Bhadrak, Kendrapara, Jagatsinghpur, Mayurbhanj, Keonjhar, Dhenkanal) and West Bengal (East & West Medinipur, South 24 Parganas and Jhargram)**

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Breaking of tree branches and uprooting of trees. Large dead limbs blown from trees.
- Damage to power and communication lines.
- Major damage to Kutchha and some damage to Pucca roads. Flooding of escape routes.
- Damage to vulnerable structure.
- Major damage to standing crops including banana, papaya, horticultural and vegetable crops due to inundation and wind.
- Damage to embankments/ salt pans.
- 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)

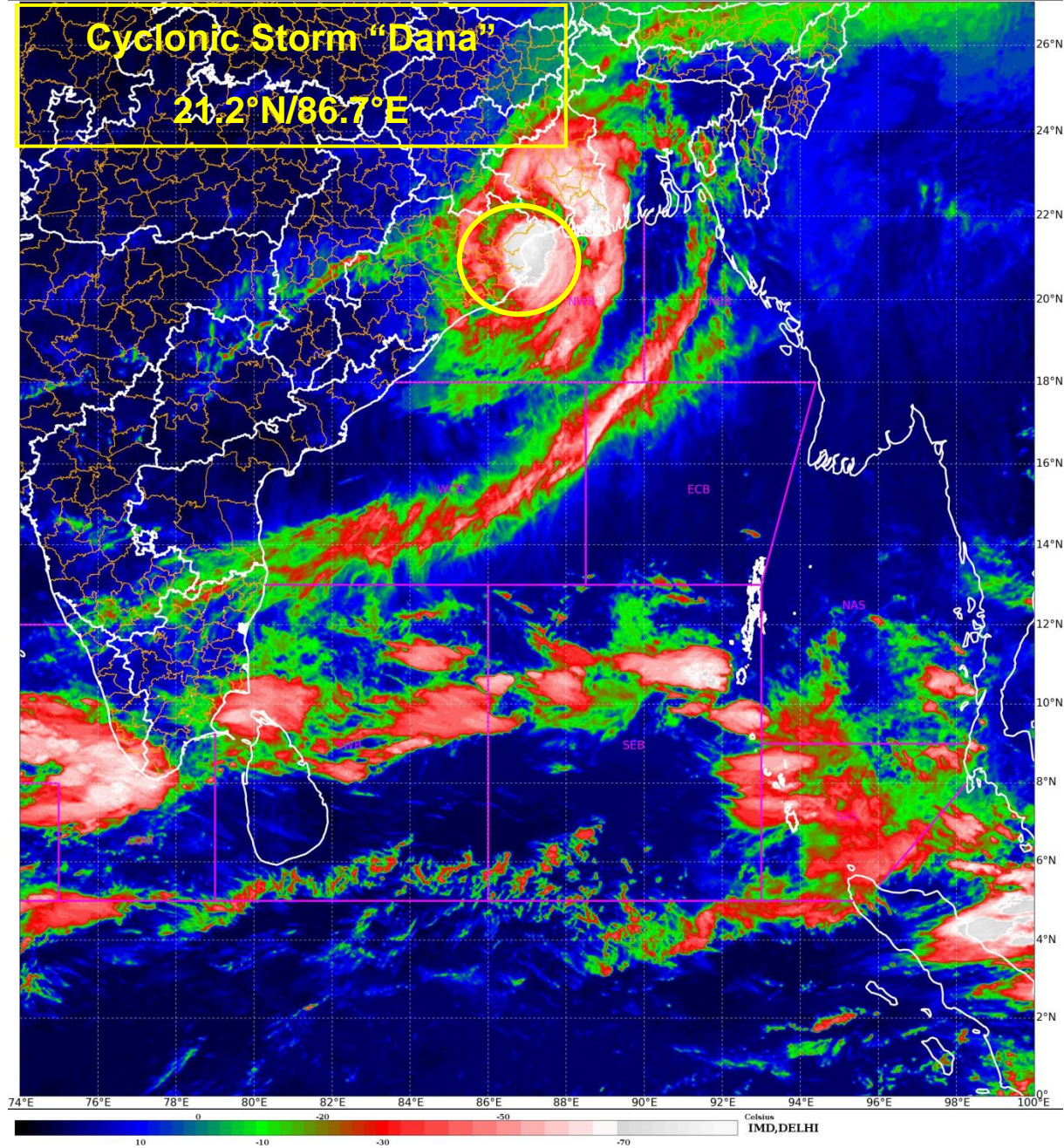
❖ **Action Suggested for districts of Odisha (Baleswar, Bhadrak, Kendrapara, Jagatsinghpur, Mayurbhanj, Keonjhar and Dhenkanal) and West Bengal (East & West Medinipur, South 24 Parganas and Jhargram)**

- Total suspension of fishing operations over Northwest Bay of Bengal till 25th noon.
 - ✓ 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
- Coastal hutment dwellers to be moved to safer places.
- People in affected areas to remain indoors.
- Judicious regulation of onshore/offshore, 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.

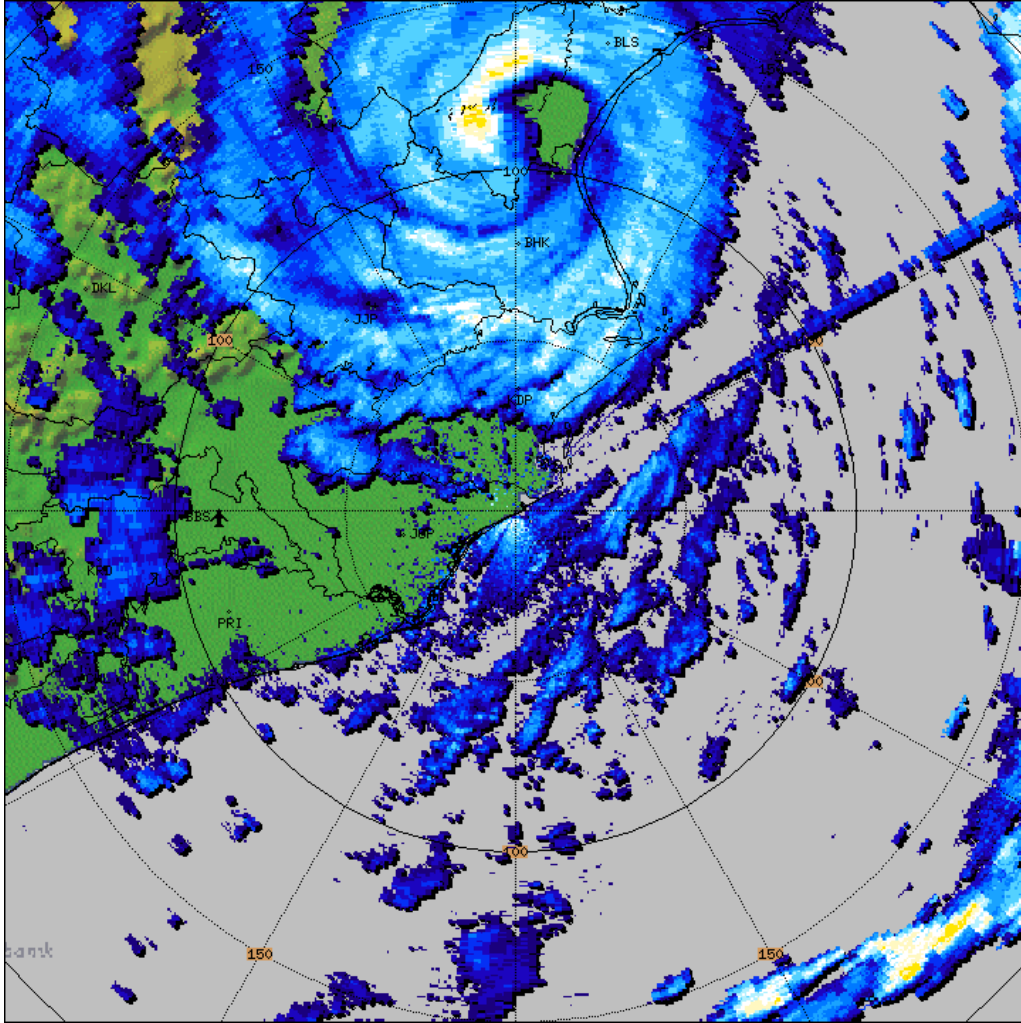
Next bulletin will be issued at 1430 hours IST of today, the 25th October, 2024.

(Akhil Srivastava)
Scientist-D, IMD, New Delhi

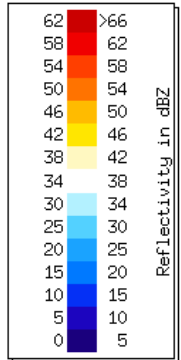
Copy to: ACWC Kolkata/ACWC Chennai/CWC Bhubaneswar/CWC Vishakhapatnam/Meteorological Centre Port Blair/MC Ranchi/MC, Patna



Paradip Doppler Weather Radar (PPI_Z)



PARADEEP-RADAR
PPI
PPI_Z_150KM
Task: IMD-B
PRF:600/450
Elevation:0.5
Max Range:150 km
03:52:22Z
25 OCT 2024 UTC
09:22:22 IST





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM 'DANA' OVER NORTH COASTAL ODISHA BASED ON 0300 UTC (0830 Hrs. IST) OF 25th OCTOBER 2024



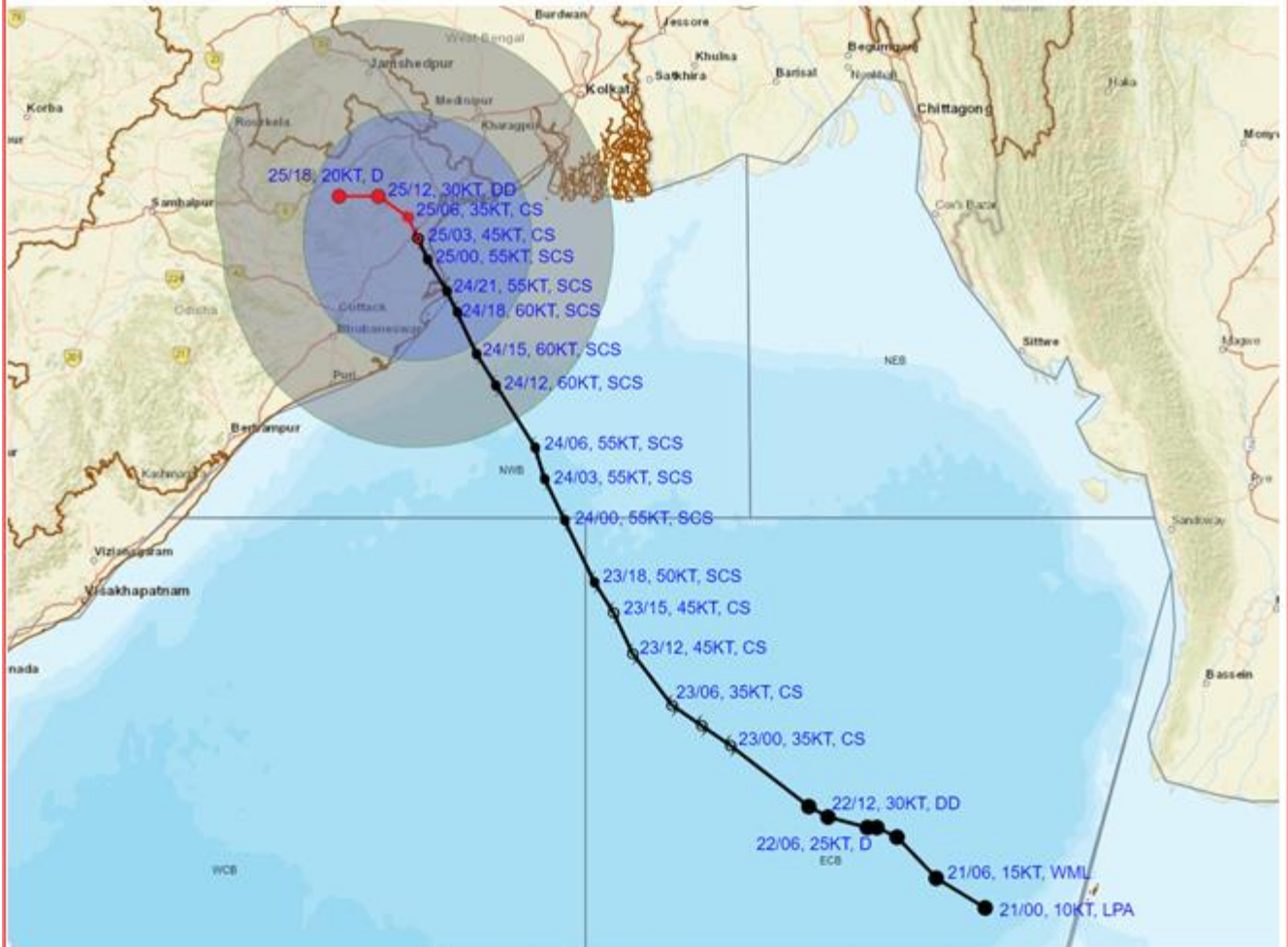
DATE/TIME : IN UTC
 IST : UTC + 0530
 KT : NAUTICAL MILE S/HOUR = 1.85 KM/HOUR
 LPA : LOW PRESSURE AREA
 WML : WELL MARKED LOW PRESSURE AREA
 D : DEPRESSION (17-27 KT)
 DD : DEEP DEPRESSION (28-33 KT)
 CS : CYCLONIC STORM (34-47 KT)
 SCS : SEVERE CYCLONIC STORM (48-63 KT)
 VSCS : VERY SEVERE CYCLONIC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

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS	
Date and Time (UTC)	BHADRAK	DHAMARA
25.10.24/0300	30, ENE	50, NNW



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM 'DANA' OVER NORTH COASTAL ODISHA BASED ON 0300 UTC (0830 Hrs. IST) OF 25th OCTOBER 2024

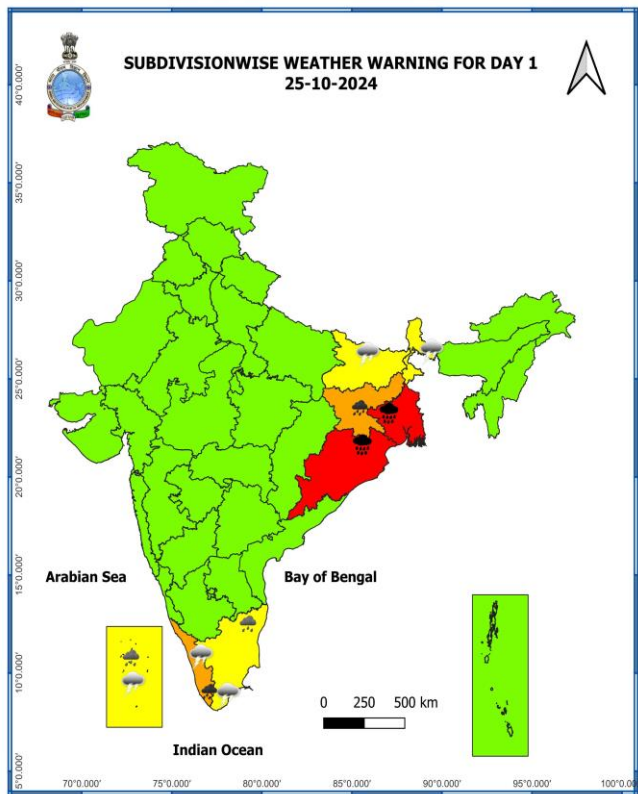


DATE/TIME : IN UTC
IST : UTC + 0530
KT : NAUTICAL MILE/SHOUR = 1.85 KM/HOUR
LPA : LOW PRESSURE AREA
WML : WELL MARKED LOW PRESSURE AREA
D : DEPRESSION (17-27 KT)
DD : DEEP DEPRESSION (28-33 KT)
CS : CYCLONIC STORM (34-47 KT)
SCS : SEVERE CYCLONIC STORM (48-63 KT)
VSCS : VERY SEVERE CYCLONIC STORM (64-89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



Heavy Rain

Very Heavy Rain

Extremely Heavy Rain

COLOUR CODED WARNING

No Warning (No Action)

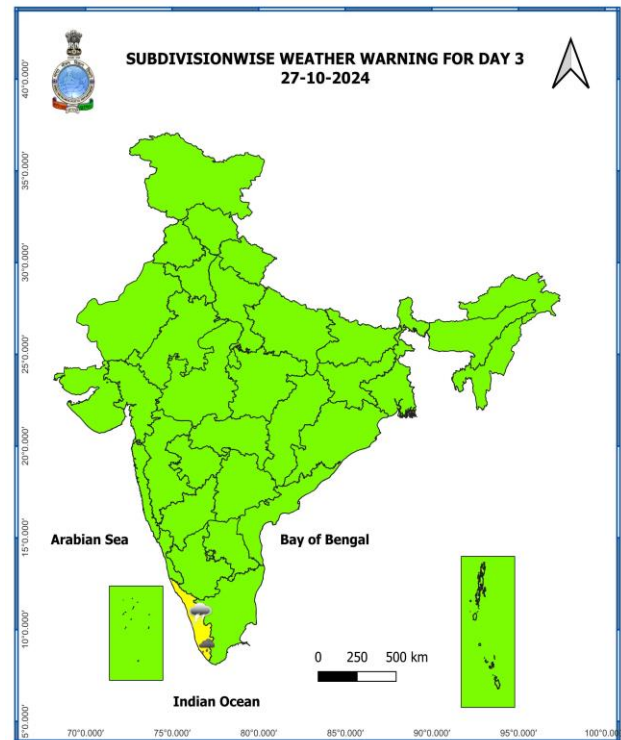
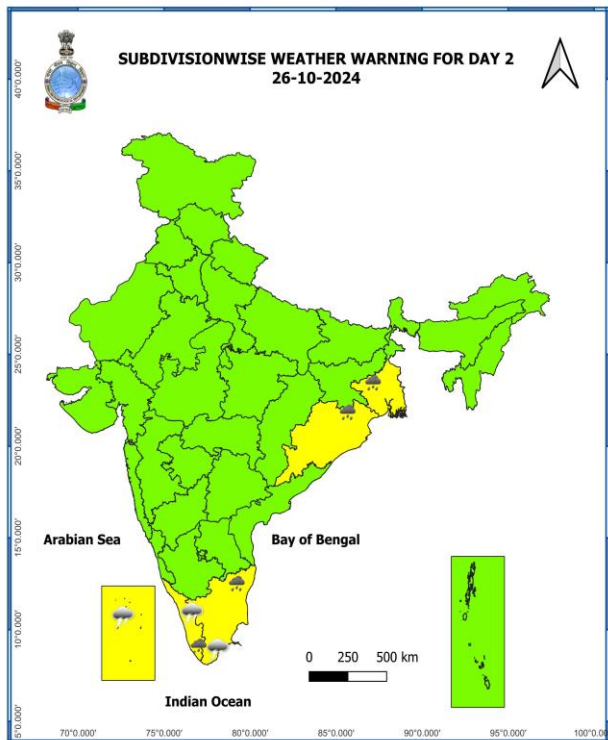
Watch (Be Aware)

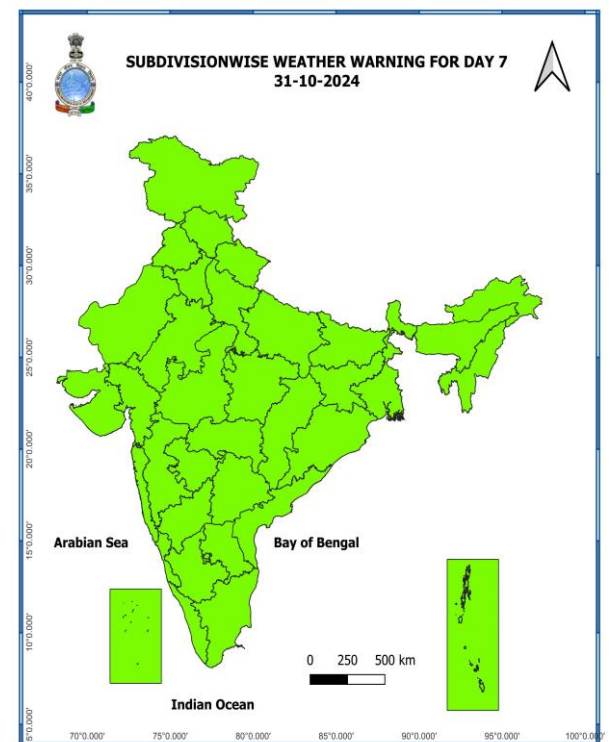
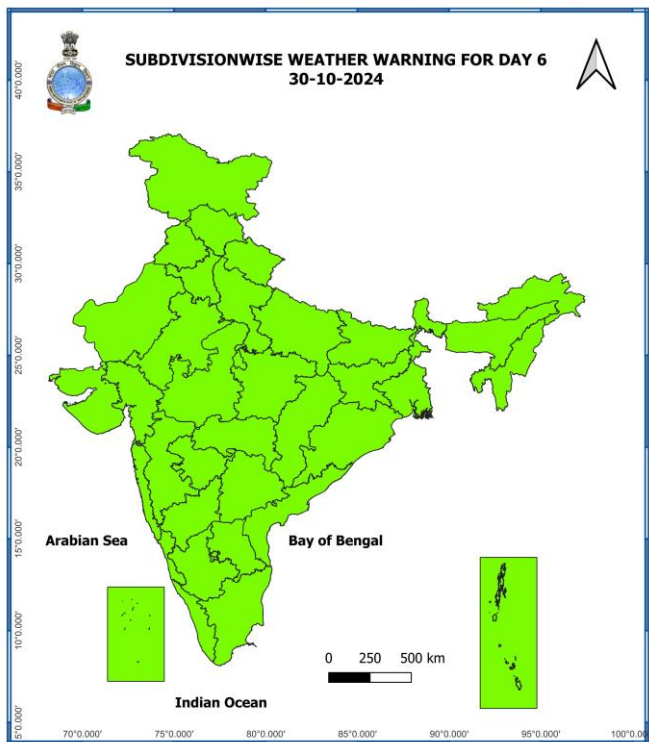
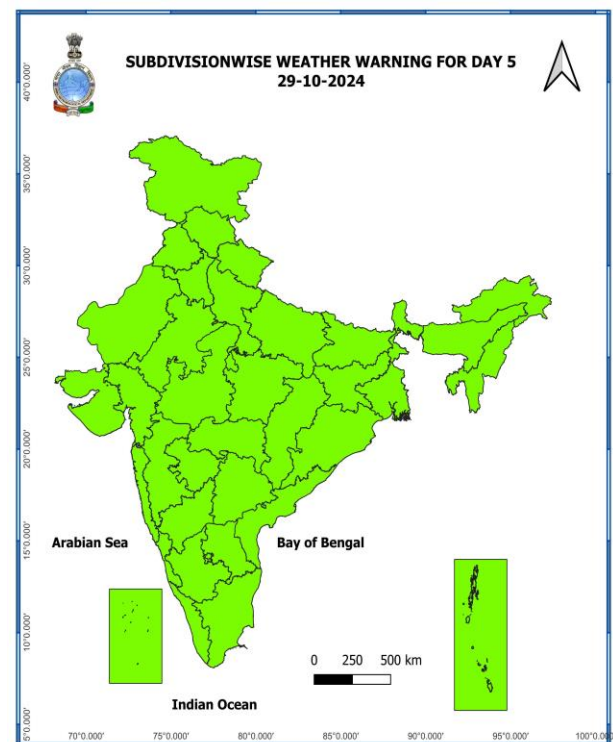
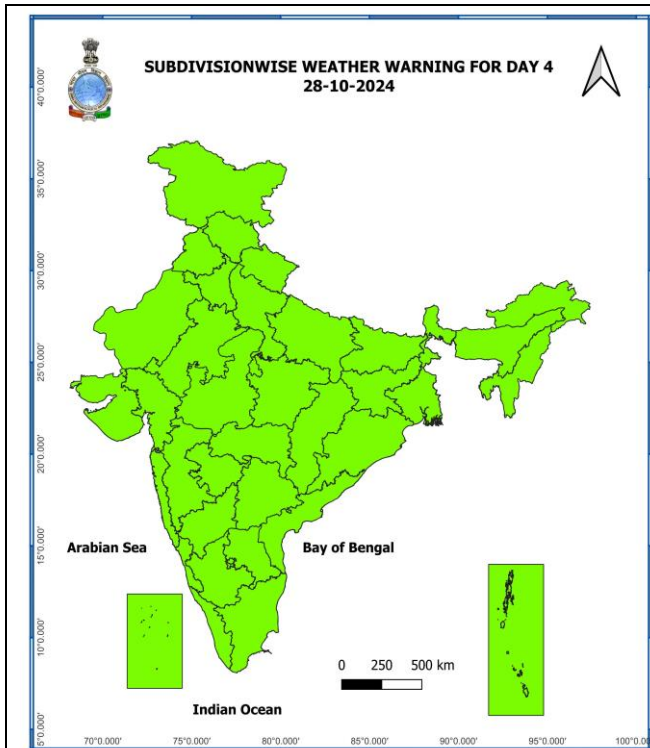
Alert (Be Prepared To Take Action)

Warning (Take Action)

Probabilistic Forecast

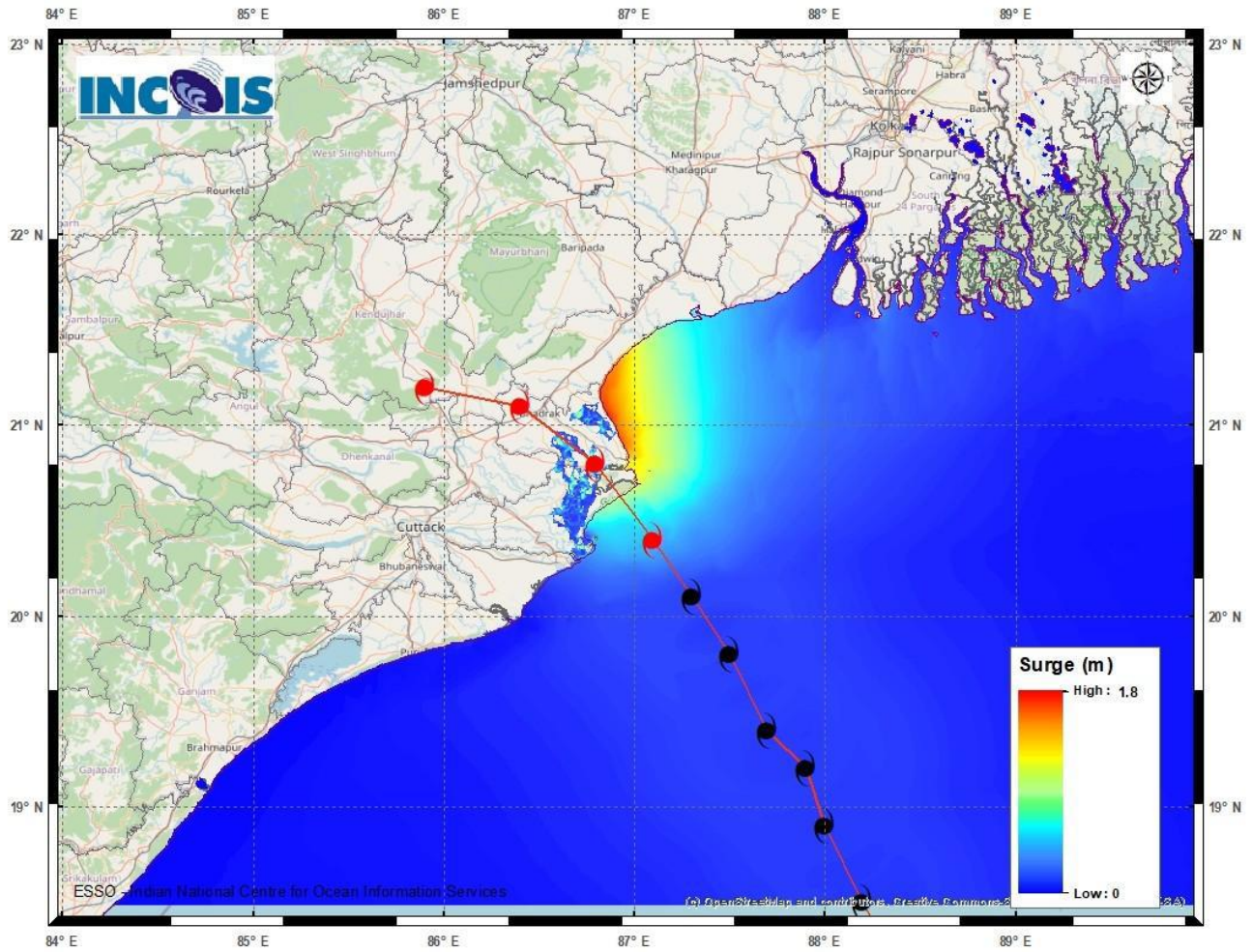
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75





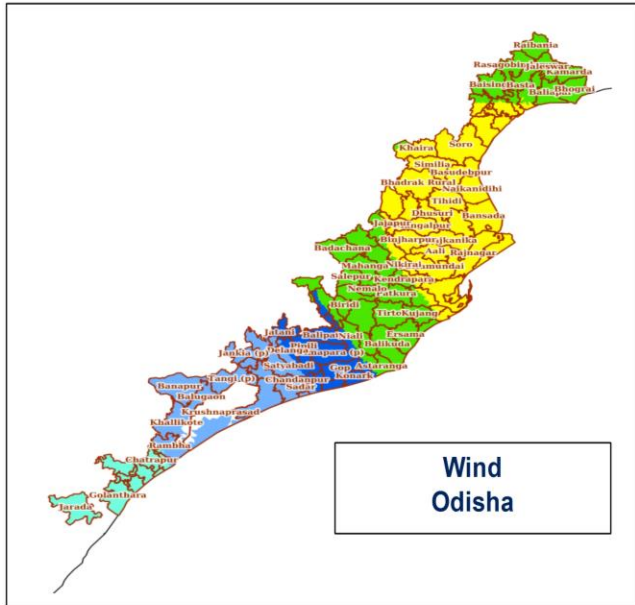
- Action may be taken based on **ORANGE AND RED** COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

Storm Surge warning graphics

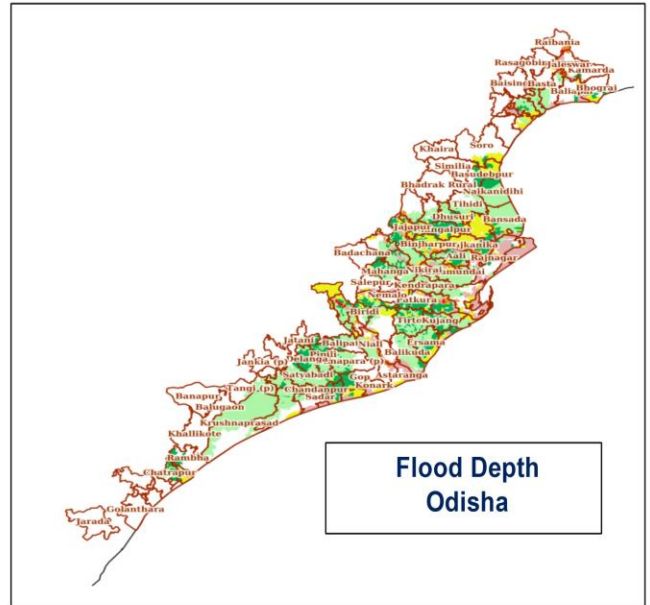


DISTRICT	STATE/UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m)*	EXPECTED INUNDATION EXTENT (km)
Bhadrak	Odisha	Mohanpur	1.3-1.8	Upto 1.15
Baleswar	Odisha	Kumbhargari	0.4-1.6	Upto 1.08
Kendrapara	Odisha	Tikayat Nagar	0.2-1.3	Upto 3.01
Jagatsinghapur	Odisha	Musadia	0.2-0.5	Upto 2.91
Purba Medinipur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

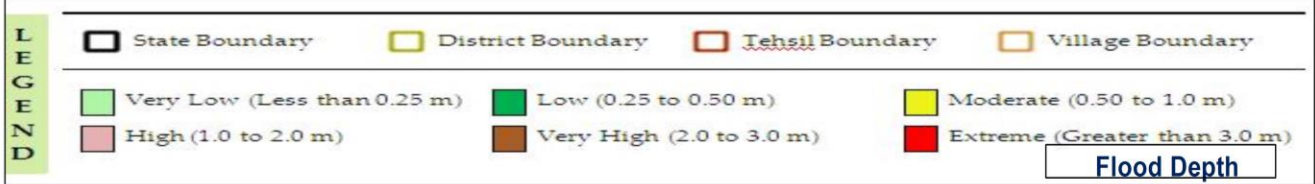
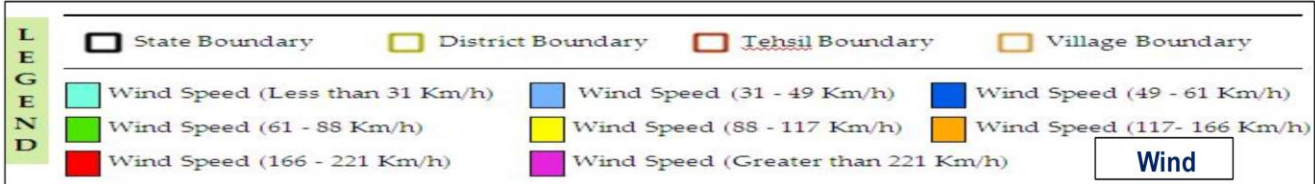
Impact Based Forecast by Web-Based Dynamic Composite Risk Atlas & Decision Support System (Web-DCRA & DSS)



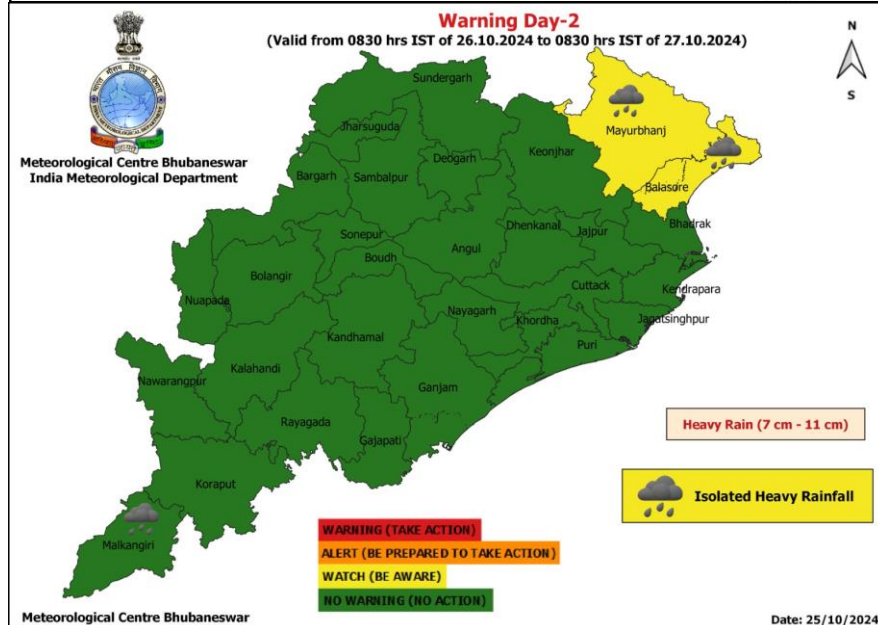
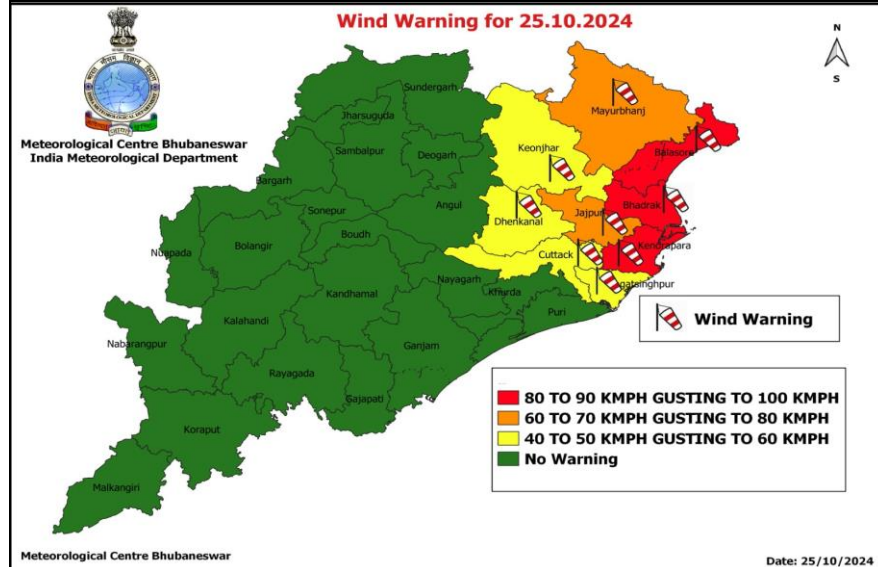
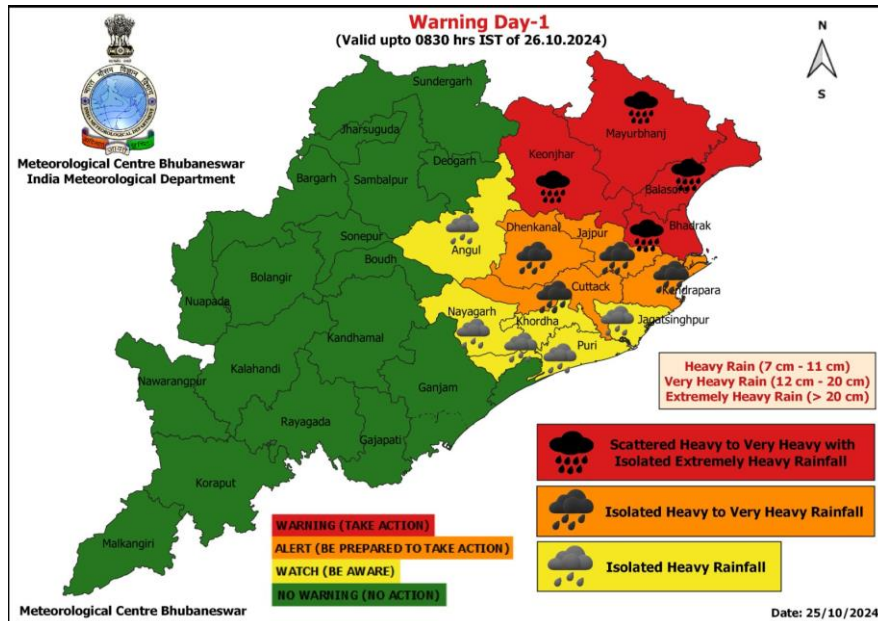
**Wind
Odisha**



**Flood Depth
Odisha**



WARNING MAPS FOR ODISHA



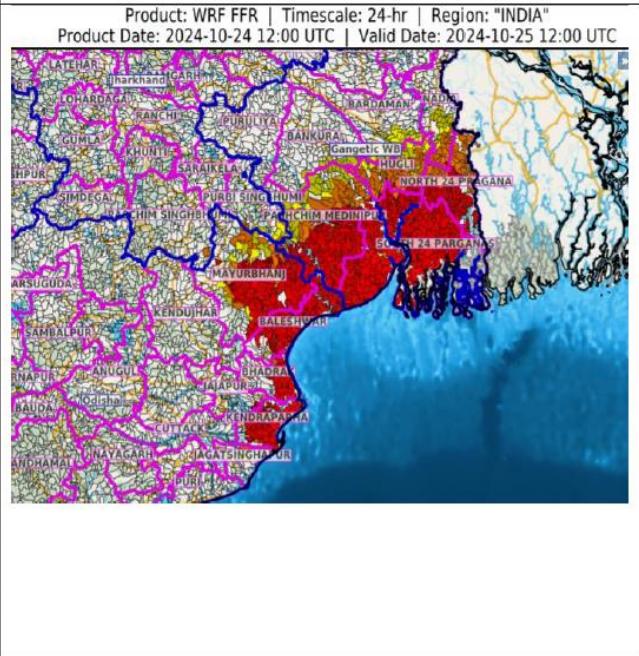
24 HOURS OUTLOOK FOR THE FLASH FLOOD RISK

24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 25-10-2024 :

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

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

