

Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 22<sup>nd</sup> October, 2024

Time of Issue: 1345 hours IST

**Subject: (i) A Depression lay over Eastcentral Bay of Bengal. It is very likely to move west-northwestwards and intensify into a Cyclonic Storm by 23<sup>rd</sup> over same region. Thereafter, it is very likely to intensify into a Severe Cyclonic Storm over northwest Bay of Bengal by morning of 24<sup>th</sup> and cross north Odisha and West Bengal coasts between Puri and Sagar Island during night of 24<sup>th</sup> to morning of 25<sup>th</sup> October, 2024 as a Severe Cyclonic Storm with a wind speed of 100-110 kmph gusting 120 kmph. (ii) Isolated extremely heavy rainfall very likely over Odisha, Gangetic West Bengal on 24<sup>th</sup> & 25<sup>th</sup> October 2024.**

**Realised rainfall during past 24 hours till 0830 hours IST of today (Annexure I)**

- ❖ **Heavy to very Heavy rainfall** at isolated places over South Interior Karnataka; **Heavy rainfall** at isolated places over Andaman & Nicobar Islands, West Madhya Pradesh, Rayalaseema, Konkan & Goa, Tamil Nadu, Puducherry & Karaikal.

**Weather Systems:**

- ❖ Yesterday's Low Pressure Area over Eastcentral Bay of Bengal & adjoining north Andaman Sea intensified into a **Depression** over Eastcentral Bay of Bengal at 0530 hours IST of today. It moved west-northwestwards with a speed of 6 kmph during past 3 hours and lay centred at 0830 hrs IST of today over the same region near latitude 15.5° N and longitude 91.0°E, about 700 km southeast of Paradip (Odisha), 750 km south-southeast of Sagar Island (West Bengal) and 730 km south-southeast of Khepupara (Bangladesh). It is very likely to move west-northwestwards and intensify into a **Cyclonic Storm** by 23<sup>rd</sup> October, 2024 over eastcentral Bay of Bengal. Thereafter, continuing to move northwestwards, it is very likely to intensify into a **Severe Cyclonic Storm** over northwest Bay of Bengal by morning of 24<sup>th</sup> and cross north Odisha and West Bengal coasts between Puri and Sagar Island during night of 24<sup>th</sup> to morning of 25<sup>th</sup> October, 2024 as a Severe Cyclonic Storm with a wind speed of 100-110 kmph gusting 120 kmph.
- ❖ A **trough** runs from the above system to south Tamil Nadu coast in lower tropospheric levels.
- ❖ Yesterday's **Low Pressure Area** over westcentral Arabian Sea persisted over the same region. It is likely to move west-northwestwards away from Indian coast and weaken further during next 12 hours.
- ❖ An **upper air cyclonic circulation** lies over eastcentral Arabian sea off Karnataka coast in lower and middle tropospheric levels.

## Forecast & Warnings (upto 7 days) (Annexure II & III):

### East India

- ✓ Light to moderate rainfall at most places with **heavy rainfall** at isolated places very likely over Andaman & Nicobar Islands on 22<sup>nd</sup> October.
- ✓ Light to moderate rainfall at most places with **heavy rainfall** at isolated places very likely over Odisha on 23<sup>rd</sup> & 26<sup>th</sup>; **heavy to very heavy rainfall** at a few places with **extremely heavy rainfall** at isolated places on 24<sup>th</sup> & 25<sup>th</sup> October.
- ✓ **Light to moderate rainfall at most places with heavy rainfall** at isolated places very likely over Gangetic West Bengal on 22<sup>nd</sup>, 23<sup>rd</sup> & 26<sup>th</sup> **heavy to very heavy rainfall** at a few places with **extremely heavy rainfall** at isolated places on 24<sup>th</sup> & 25<sup>th</sup> October.
- ✓ Light to moderate rainfall at a few places with **heavy rainfall** at isolated places very likely over Jharkhand on 24<sup>th</sup>; **heavy to very heavy rainfall** at isolated places on 25<sup>th</sup> October.

### South Peninsular India

- ✓ Light to moderate rainfall at many places accompanied with isolated thunderstorm and lightning very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal & South Interior Karnataka during next 3 days and light rainfall at isolated places is likely to prevail subsequent 4 days; light to moderate rainfall at Isolated places very likely over rest of the region during the week.
- ✓ **Isolated very heavy rainfall** very likely over South Interior Karnataka on 22<sup>nd</sup> October.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal and Karnataka, Kerala & Mahe on 22<sup>nd</sup> & 23<sup>rd</sup>, Rayalaseema on 22<sup>nd</sup>, Coastal Andhra Pradesh & Yanam on 25<sup>th</sup> October.

### West India

- ✓ Light to moderate rainfall at a few places accompanied with isolated thunderstorm and lightning very likely over Konkan & Goa and Madhya Maharashtra during next 3 days and dry weather is likely to prevail subsequent 4 days; light to moderate rainfall at Isolated places very likely over rest of the region during next 2 days and where dry weather is likely to prevail subsequent 5 days.
- ✓ **Isolated heavy rainfall** very likely over Konkan & Goa, Madhya Maharashtra on 22<sup>nd</sup> October.

### Northeast India

- ✓ Light to moderate rainfall at many places accompanied with isolated thunderstorm and lightning very likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 4 days and light rainfall at isolated places is likely to prevail subsequent 3 days; light to moderate rainfall at Isolated places very likely over Arunachal Pradesh during next 7.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh on 23<sup>rd</sup>, Assam & Meghalaya on 23<sup>rd</sup> & 24<sup>th</sup> and Nagaland, Manipur, Mizoram & Tripura on 23<sup>rd</sup> - 25<sup>th</sup>

### Central & Northwest India

- ✓ No significant rainfall likely over these regions during the week.

### **Wind Warning:**

**Eastcentral Bay of Bengal:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely on 22<sup>nd</sup> October, 50-60 kmph gusting to 70 kmph by 22<sup>nd</sup> night, 70-90 kmph gusting to 100 kmph from 23<sup>rd</sup> evening till 24<sup>th</sup> morning.

**Adjoining areas of Westcentral Bay of Bengal:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to commence from 22<sup>nd</sup> evening, 70-80 kmph gusting to 90 kmph from 23<sup>rd</sup> morning to 24<sup>th</sup> afternoon.

**Northwest Bay of Bengal:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to commence from 23<sup>rd</sup> morning. It would gradually increase becoming gale wind speed reaching 70-90 kmph gusting to 100 kmph from 23<sup>rd</sup> night to 24<sup>th</sup> morning and 100-110 kmph gusting to 120 kmph from 24<sup>th</sup> Oct evening to 25<sup>th</sup> Oct morning and decrease gradually thereafter.

**Adjoining areas of northeast Bay of Bengal:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to commence from 23<sup>rd</sup> night, becoming 50-60 kmph gusting to 70 kmph from 24<sup>th</sup> till 25<sup>th</sup> morning and decrease gradually thereafter.

**Along & off Odisha-west Bengal coasts:** Squally wind speed reaching 40-50 gusting to 60 kmph is very likely to commence from 23<sup>rd</sup> Oct evening. It would gradually increase becoming gale wind speed reaching 60-70 kmph gusting to 80 kmph from 24<sup>th</sup> morning and reaching 100-110 kmph gusting to 120 kmph from 24<sup>th</sup> night till 25<sup>th</sup> Oct morning and decrease gradually thereafter.

### **Fishermen Warning (ANNEXURE IV):**

Fishermen are advised not to venture into

- Eastcentral Bay of Bengal during 22<sup>nd</sup> to 24<sup>th</sup> October.
- **Adjoining areas of Westcentral Bay of Bengal on 23<sup>rd</sup> and 24<sup>th</sup> Oct.**
- **North Bay of Bengal** and along & off Odisha, West Bengal and Bangladesh coasts during 23<sup>rd</sup> to 25<sup>th</sup> October.

Fishermen out at sea are advised to return to coasts by today, the 22<sup>nd</sup> Oct.

**For more details, kindly refer National Weather Bulletin:**

[https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

**For District wise warnings refer:**

<https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

**For Fishermen warnings, kindly refer:**

[https://rsmcnewdelhi.imd.gov.in/uploads/archive/51/51\\_bdf575\\_GRAPHIC.png](https://rsmcnewdelhi.imd.gov.in/uploads/archive/51/51_bdf575_GRAPHIC.png)

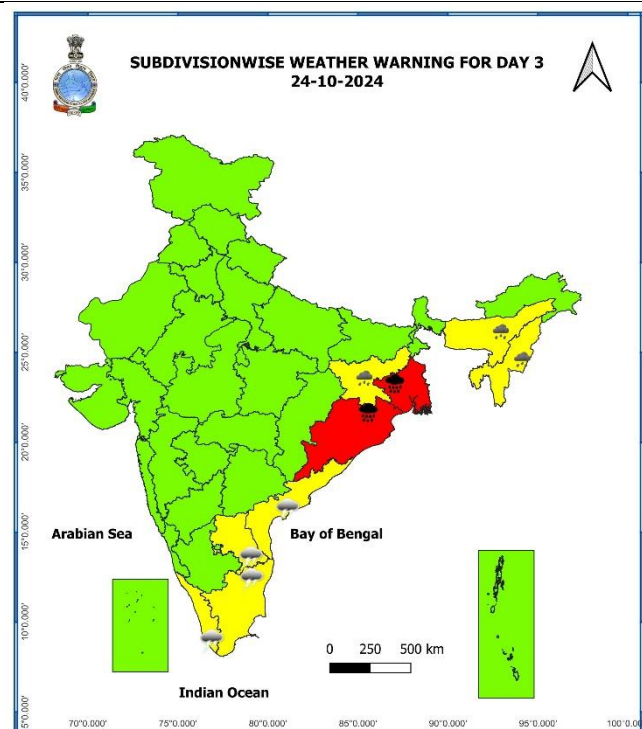
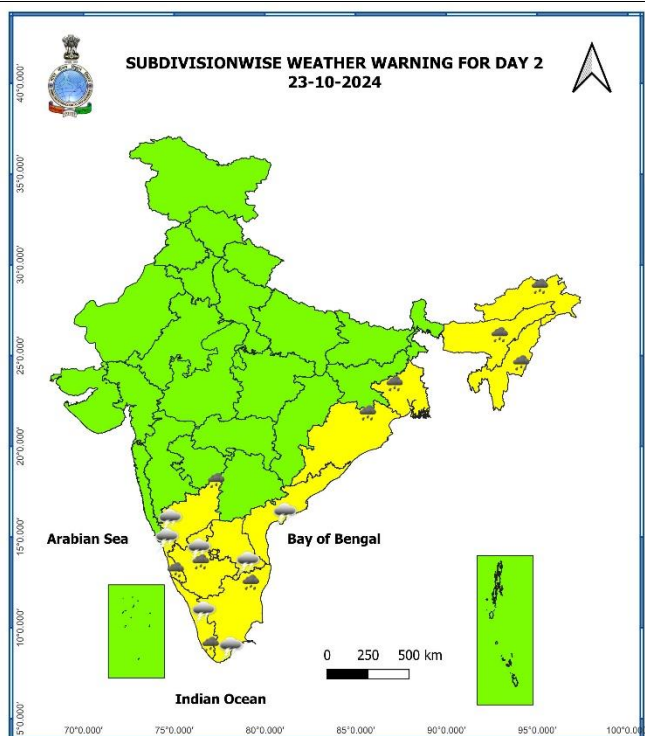
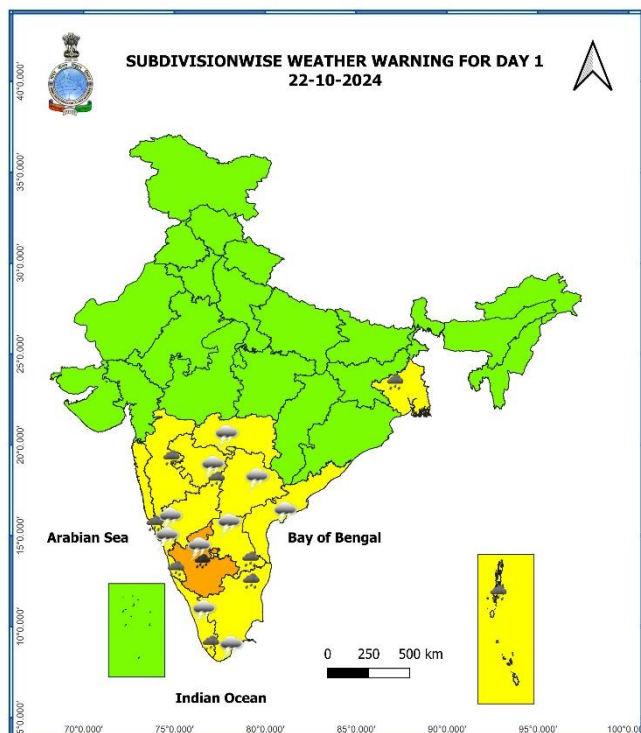
## ANNEXURE I

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 22.10.2024 (in cm):**

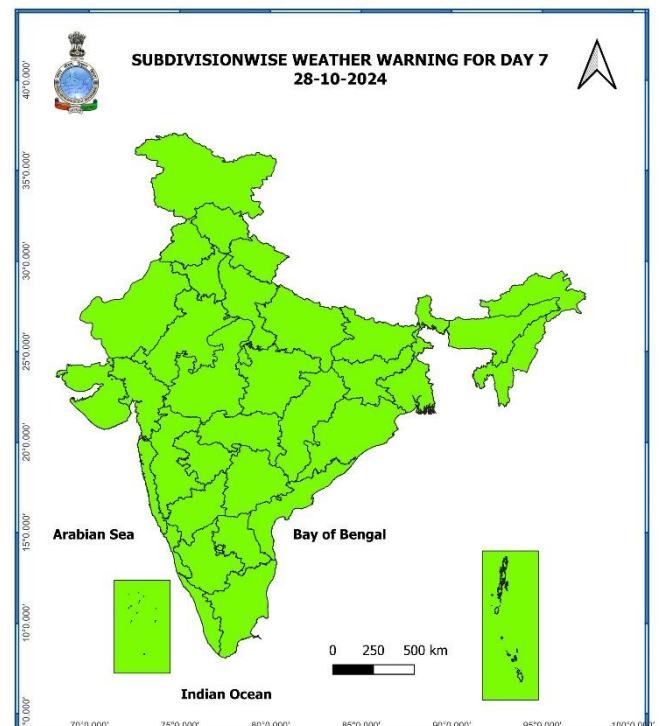
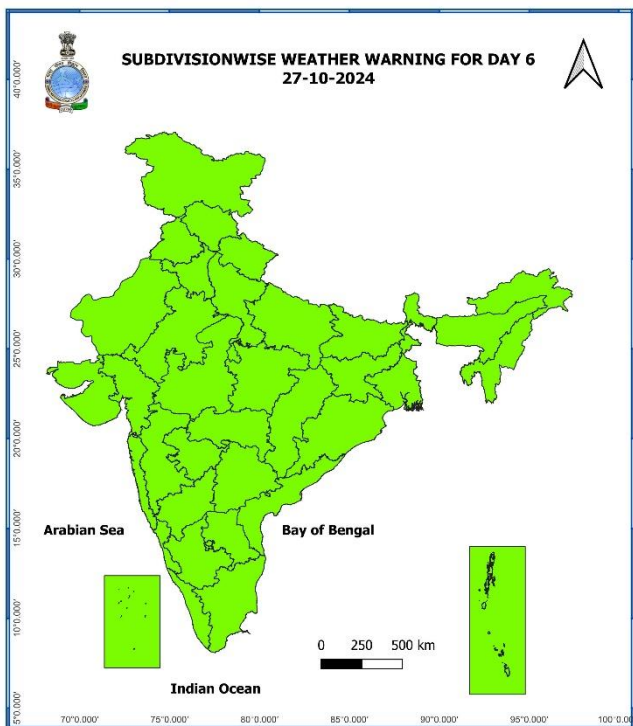
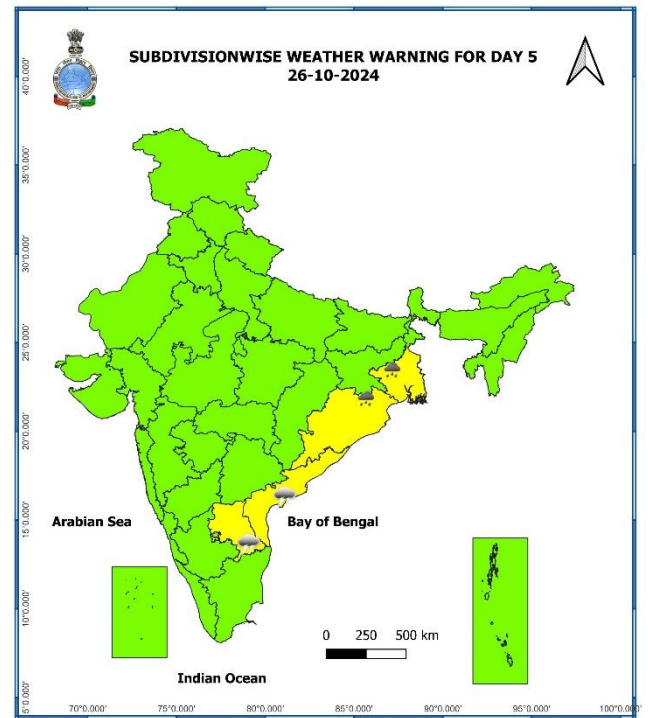
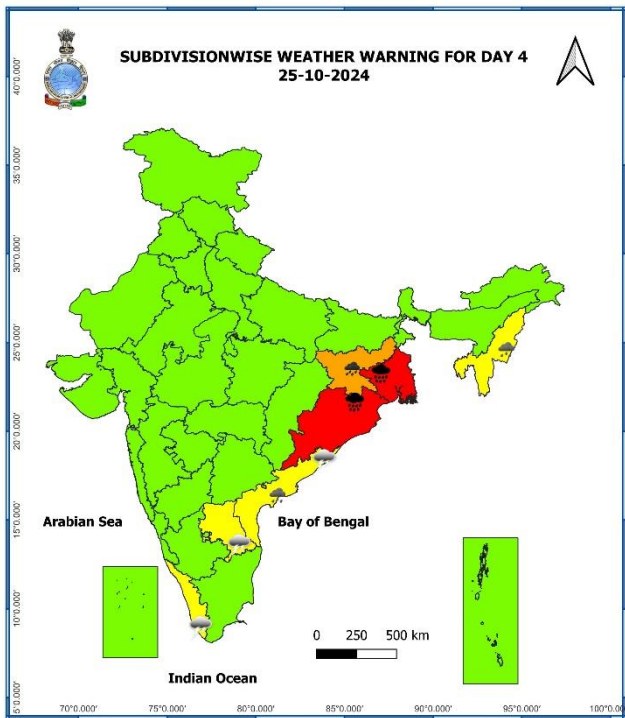
- ❖ **South Interior Karnataka:** Nayakanahatty (dist Chitradurga) 13, Tyagarthi (dist Shivamogga) 8;
- ❖ **Rayalaseema:** Ramagiri (dist Sri Sathyasai District) 10, Chenne Kothapalle (dist Sri Sathyasai District) 9, Penu Konda (dist Sri Sathyasai District) 9, Kalyandrug (dist Anantapuramu) 9; Hindupur (dist Sri Sathyasai District) 8, Dharmavaram (dist Sri Sathyasai District) 8, Amadagur(dist Sri Sathyasai District) 7, Madanapalle (dist Annamayya District) 7, Lepakshi (dist SriSathyasai District) 7, Kambadur (dist Anantapuramu) 7;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Tiruvarur (dist Thiruvarur) 9, Tiruvarur AWS (dist Thiruvarur) 8, Chinnakalar (dist Coimbatore) 7;
- ❖ **Konkan & Goa:** Wakwali\_agri (dist Ratnagiri) 8;
- ❖ **West Madhya Pradesh:** Gogawan (dist Khargone) 7;
- ❖ **Andaman & Nicobar Islands:** Maya Bandar (dist North & Middle Andaman) 7;

7 Days Rainfall Forecast								
S. No.	Subdivision	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	FWS	FWS	FWS	SCT
2	ARUNACHAL PRADESH	ISOL	SCT	SCT	SCT	ISOL	ISOL	ISOL
3	ASSAM & MEGHALAYA	SCT	FWS	FWS	FWS	ISOL	ISOL	ISOL
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	WS	FWS	SCT	ISOL	ISOL	ISOL
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	ISOL	SCT	SCT	SCT	SCT	SCT
6	GANGETIC WEST BENGAL	ISOL	FWS	WS	WS	FWS	ISOL	ISOL
7	ODISHA	ISOL	SCT	FWS	WS	SCT	ISOL	ISOL
8	JHARKHAND	DRY	ISOL	FWS	WS	FWS	ISOL	DRY
9	BIHAR	DRY	ISOL	SCT	SCT	ISOL	ISOL	ISOL
10	EAST UTTAR PRADESH	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	DRY	ISOL	ISOL	DRY	DRY	DRY	ISOL
17	WEST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
21	GUJARAT REGION	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	SCT	ISOL	ISOL	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
25	MARATHAWADA	ISOL	ISOL	DRY	DRY	DRY	DRY	ISOL
26	VIDARBHA	ISOL	DRY	DRY	DRY	ISOL	ISOL	ISOL
27	CHHATTISGARH	DRY	DRY	ISOL	ISOL	ISOL	ISOL	ISOL
28	COASTAL ANDHRA PRADESH & YANAM	SCT	SCT	ISOL	SCT	SCT	SCT	SCT
29	TELANGANA	SCT	ISOL	DRY	DRY	ISOL	ISOL	ISOL
30	RAYALASEEMA	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAİKAL	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	FWS	FWS	SCT	ISOL	DRY	DRY	ISOL
33	NORTH INTERIOR KARNATAKA	SCT	SCT	ISOL	DRY	DRY	DRY	ISOL
34	SOUTH INTERIOR KARNATAKA	WS	WS	FWS	SCT	ISOL	ISOL	ISOL
35	KERALA & MAHE	FWS	FWS	FWS	FWS	SCT	SCT	SCT
36	LAKSHADWEEP	FWS	FWS	FWS	FWS	SCT	SCT	SCT

- As the lead period increases forecast accuracy decreases.





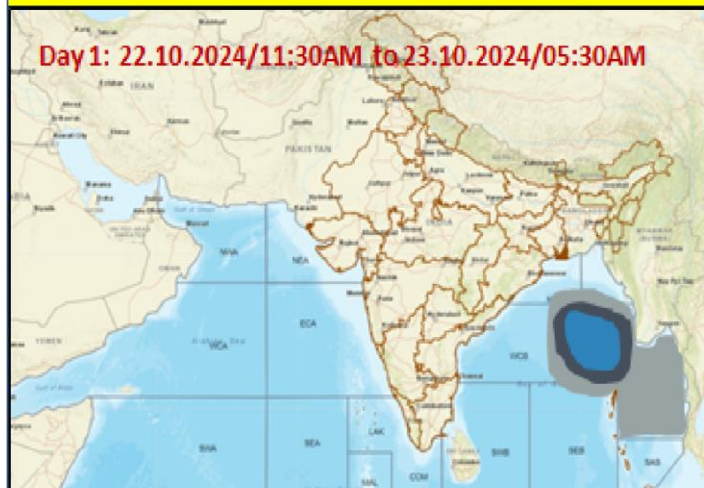


- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

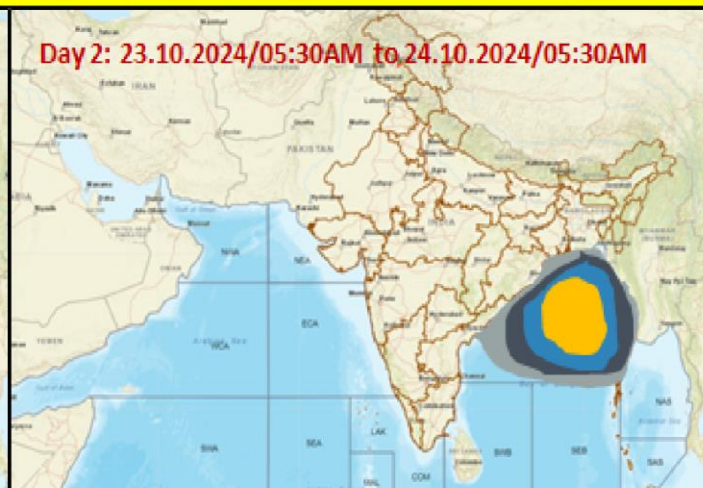


## Fishermen Warning Graphics

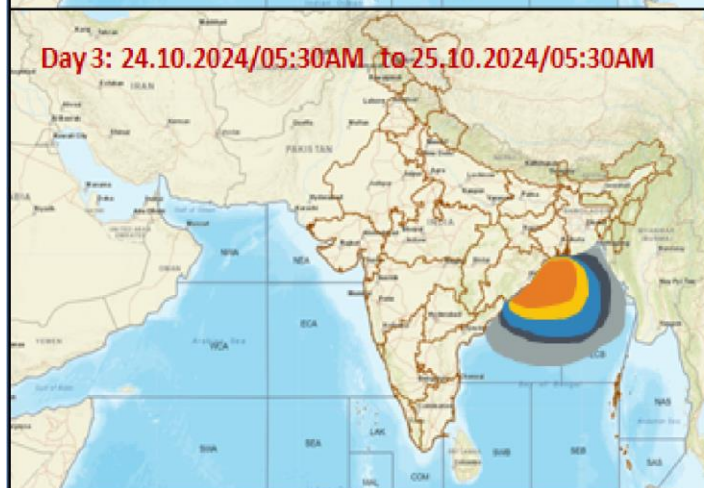
**Day 1: 22.10.2024/11:30AM to 23.10.2024/05:30AM**



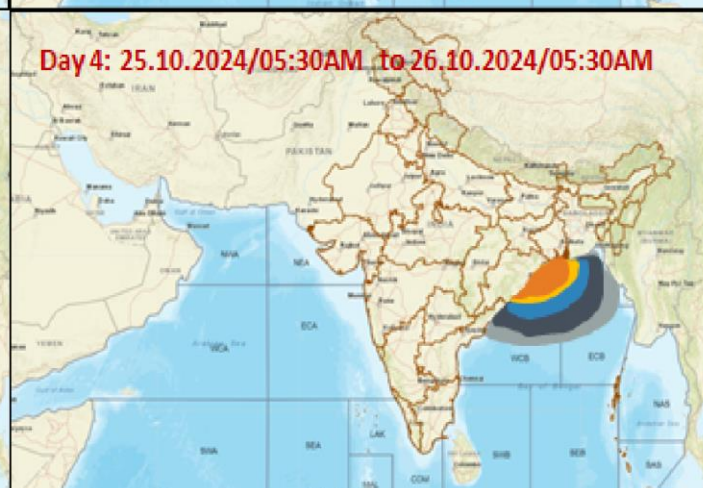
**Day 2: 23.10.2024/05:30AM to 24.10.2024/05:30AM**



**Day 3: 24.10.2024/05:30AM to 25.10.2024/05:30AM**



**Day 4: 25.10.2024/05:30AM to 26.10.2024/05:30AM**



**Day 5: 26.10.2024/05:30AM to 27.10.2024/05:30AM**



	Squally Weather with wind speed 35-45 kmph gusting to 55 kmph
	Squally wind with speed 45-55 kmph gusting to 65 kmph
	Squally winds with speed 50-60 kmph gusting to 75 kmph
	CS with Gale winds with speed 60-90 kmph gusting to 110 kmph
	SCS with Gale wind speed 90-110 kmph gusting to 120 kmph

**Fishermen are advised not to venture into the marked areas.**



### Impact due to

- ✓ **Isolated extremely heavy rainfall** very likely over Odisha, Gangetic West Bengal on 24<sup>th</sup> & 25<sup>th</sup> October.
- ✓ **Isolated heavy to very heavy rainfall** very likely over South Interior Karnataka on 22<sup>nd</sup>; Jharkhand on 25<sup>th</sup> October.

### Impact Expected

- ✓ Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- ✓ Breaking of tree branches and uprooting of trees.
- ✓ Damage to power and communication lines.
- ✓ Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Major damage to banana and papaya trees. Large dead limbs blown from trees.
- ✓ Damage to horticulture and standing 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

- Total suspension of fishing operations during 22<sup>nd</sup> to 25<sup>th</sup> Oct over Central and North Bay of Bengal.
- Fishermen are advised not to venture into
  - ✓ Eastcentral Bay of Bengal during 22<sup>nd</sup> to 24<sup>th</sup> October.
  - ✓ **Adjoining areas of Westcentral Bay of Bengal on 23<sup>rd</sup> and 24<sup>th</sup> Oct.**
  - ✓ **North Bay of Bengal** and along & off Odisha-West Bengal coasts during 23<sup>rd</sup> to 25<sup>th</sup> October morning.
- Fishermen out at sea are advised to return to coasts by today, the 22<sup>nd</sup> 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.

### Agromet advisories for Heavy Rainfall likely over various parts of the country

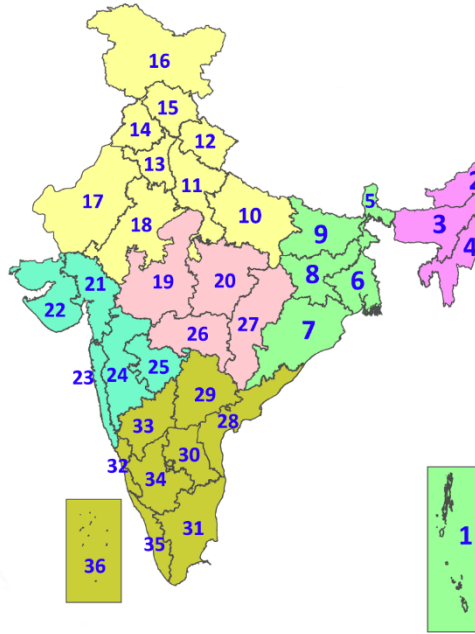
- ✓ In **Tamil Nadu**, drain out excess water from rice nurseries and fields of rice, maize, pepper and newly planted turmeric. Undertake detrashing and propping of more than five-month-old sugarcane to avoid lodging. Provide support to banana plantations.
- ✓ Make necessary arrangements to drain out excess water from standing crop fields and fruit orchards to avoid water stagnation in Andaman and Nicobar Islands, Kerala, Karnataka and Rayalaseema.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ In **Odisha**, undertake harvesting of rice crop if 85% of grains are matured in a panicle. Immediately harvest matured maize, black gram, green gram, groundnut, vegetables and fruits. Withhold sowing of pre-rabi pulses and winter vegetables. Provide propping in sugarcane by tying leaves from four to five plants together to prevent their lodging.
- ✓ In **Gangetic West Bengal**, drain out excess water from *Aman* rice, groundnut, pulses and vegetables. Complete harvesting of *kharif* rice, vegetables, and fruits as soon as possible.
- ✓ Shift the harvested produce to safer places at the earliest.
- ✓ Make arrangements for adequate drainage to avoid water logging in crop fields.
- ✓ Provide mechanical support to young fruit plants and staking in vegetables to prevent their lodging.

### Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **Region wise classification of meteorological Sub-Divisions:**
  - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
  - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
  - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
  - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
  - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

## LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखंड
13. हरियाणा, चंडीगढ़ और दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कोंकण और गोवा
24. मध्य महाराष्ट्र
25. मराठवाड़ा
26. विदर्भ
27. छत्तीसगढ़
28. तटीय आंध्र प्रदेश और यनम
29. तेलंगाना
30. रायलसीमा
31. तमिलनाडु, पुडुचेरी और कराईकल
32. तटीय कर्नाटक
33. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और माहे
36. लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Odisha
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chandigarh & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidarbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. Lakshadweep

## SPATIAL DISTRIBUTION (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/A Few Places)
51-75	Fairly Widespread (FWS/Many Places)	1-25	Isolated (ISOL)



Fog



Heavy Snow



Cold Wave



Heavy Rain



Dust Storm



Cold Day



Very Heavy Rain



Heat Wave



Ground Frost



Extremely Heavy Rain



Warm Night



Thunder & Lightning



Hot Day



Hailstorm



Hot & Humid



Dust Raising Winds



Strong Surface Winds

### 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

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(Service to the Nation since 1875)

## DEFINITION/CRITERIA

### Rain/ Snow \*

Heavy: 64.5 to 115.5 mm/cm \*  
Very Heavy: 115.6 to 204.4 mm/cm\*  
Extremely Heavy: > 204.4 mm/cm \*

### Heat Wave

When maximum temperature of a station reaches  $\geq 40^{\circ}\text{C}$  for plains and  $\geq 30^{\circ}\text{C}$  for hilly regions  
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

Severe Heat Wave: Maximum Temperature Departure from normal  $\geq 6.5^{\circ}\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature  $\geq 45^{\circ}\text{C}$ .

Severe Heat Wave: When actual maximum temperature  $\geq 47^{\circ}\text{C}$

(c) Criteria for heat wave for coastal stations

When maximum temperature departure is  $> 4.5^{\circ}\text{C}$  from normal. Heat Wave may be described provided maximum temperature  $\geq 37^{\circ}\text{C}$

### Warm Night

When maximum temperature remains  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

Severe Warm Night: When minimum temperature departure  $> 6.4^{\circ}\text{C}$ .

### Cold Wave

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions.

(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

Severe Cold Wave: Minimum Temperature Departure from normal  $\leq -6.5^{\circ}\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave: When Minimum Temperature is  $\leq 4.0^{\circ}\text{C}$

Severe Cold Wave: When Minimum Temperature is  $\leq 2.0^{\circ}\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is  $\leq -4.5^{\circ}\text{C}$  & actual Minimum Temperature is  $\leq 15^{\circ}\text{C}$

### Cold Day

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions

Based on departure

Cold Day: Maximum Temperature Departure from normal  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

Severe Cold Day: Maximum Temperature Departure from normal  $\leq -6.5^{\circ}\text{C}$

### Fog

Phenomenon of small droplets suspended in air and the horizontal visibility  $< 1\text{ km}$

Moderate Fog: When the visibility between 500-200 metres

Dense Fog: when the visibility between 50- 200 metres

Very Dense Fog: when the visibility  $< 50$  metres

### Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)

### Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.

### Frost

Ice deposits on ground

Air temperature  $\leq 4^{\circ}\text{C}$  ( over Plains)

### Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph

Severe: Wind speed 62-87 kmph

Very Severe: Wind speed  $> 87$  kmph

### Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre

High to very high: Wind speed 63-117 kmph ( 34-63 knots) & Wave height 6-14 metre

Phenomenal: Wind speed  $> 117$  kmph ( $> 63$  knots) & Wave height  $> 14$  metre

### Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)

Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Super Cyclone Strom: Wind speed  $> 220$  kmph ( $> 119$  knots)

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