



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 02nd October, 2024

Time of Issue: 1300 hours IST

Subject: (i) Withdrawal of Southwest monsoon from most parts of northwest India & some parts of central India.
(ii) Formation of a low pressure area over north Bay of Bengal around 04th October.

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

Heavy rainfall at isolated places over West Bengal & Sikkim, Telangana, Kerala & Mahe, Interior Karnataka and Tamil Nadu.

On further Withdrawal of Southwest Monsoon

- ❖ Today, the **Southwest Monsoon** has further withdrawn from entire Jammu & Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab and Haryana-Chandigarh-Delhi; remaining parts of West Rajasthan; some parts of West Uttar Pradesh, West Madhya Pradesh and East Rajasthan.
- ❖ The **line of withdrawal of Southwest Monsoon** now passes through 30.8°N/81.2°E, Lakhimpur Kheri, Shivpuri, Kota, Udaipur, Deesa, Surendranagar, Junagarh and 21°N/70°E.
- ❖ Conditions are favourable for further withdrawal of **Southwest Monsoon** from remaining parts of West Uttar Pradesh, some more parts Madhya Pradesh, remaining parts of East Rajasthan, some more parts of Gujarat and some parts of Maharashtra during next 2-3 days.

Weather Systems:

- ✓ A cyclonic circulation lies over southeast Bangladesh & neighbourhood and a trough runs from this cyclonic circulation to North Andaman Sea across Myanmar coast in lower tropospheric levels. Under its influence, a **Low Pressure Area** is likely to form over North Bay of Bengal & neighbourhood around 04th October.

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

East & Northeast India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over northeast region during the week; widespread light to moderate rainfall very likely over Andaman & Nicobar Islands during the week; Scattered to Fairly widespread light to moderate rainfall very likely over Bihar, West Bengal & Sikkim during the week and Isolated to Scattered light to moderate rainfall over Jharkhand, Odisha region during the week.
- ✓ **Isolated heavy to very Heavy rainfall** very likely over northeast region on 02nd & 03rd October.
- ✓ **Isolated heavy rainfall** very likely over Andaman & Nicobar Islands on 02nd October, Sub-Himalayan West Bengal & Sikkim on 03rd October, Gangetic West Bengal on 04th October, northeast region on

during 04st – 05th October; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 06th – 08th October.

South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Kerala & Mahe, South Interior Karnataka, Lakshadweep during the week; Scattered to Fairly widespread light to moderate rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka North Interior Karnataka during the week; Isolated to Scattered light to moderate rainfall very likely over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana during the week.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 02nd - 06th October; Kerala & Mahe during 02nd -03rd October.

Central India:

- ✓ Isolated to Scattered light to moderate rainfall over Vidarbha, Chhattisgarh region during last 03 days of the week.

Northwest & West India:

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

Fishermen warning

- ✓ Squally weather with wind speed Reaching 35 kmph to 45 kmph gusting to 55 kmph is likely over Northeast and adjoining eastcentral Bay of Bengal during next 03 days (02nd -04th October). Fishermen are advised not to venture into these areas during the period.

Southwest Monsoon withdrawal Map (ANNEXURE IV)

For more details, kindly refer:

https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

For District wise warnings refer:

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

ANNEXURE I

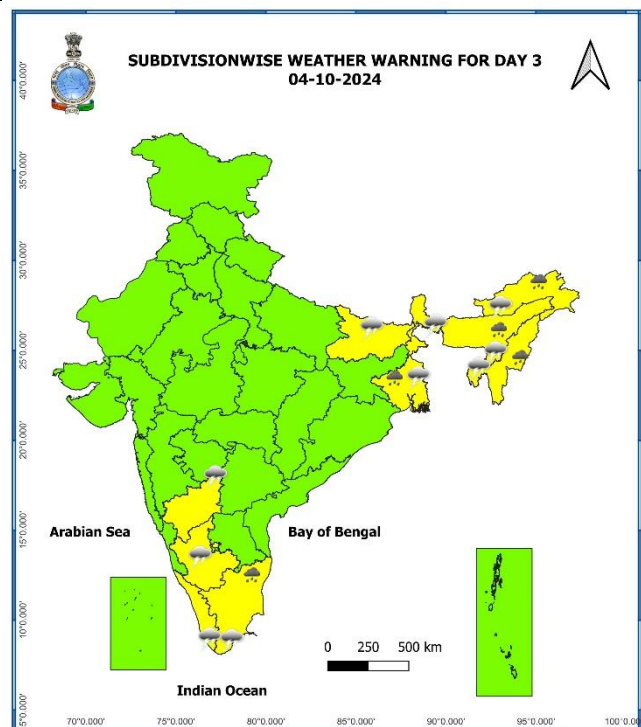
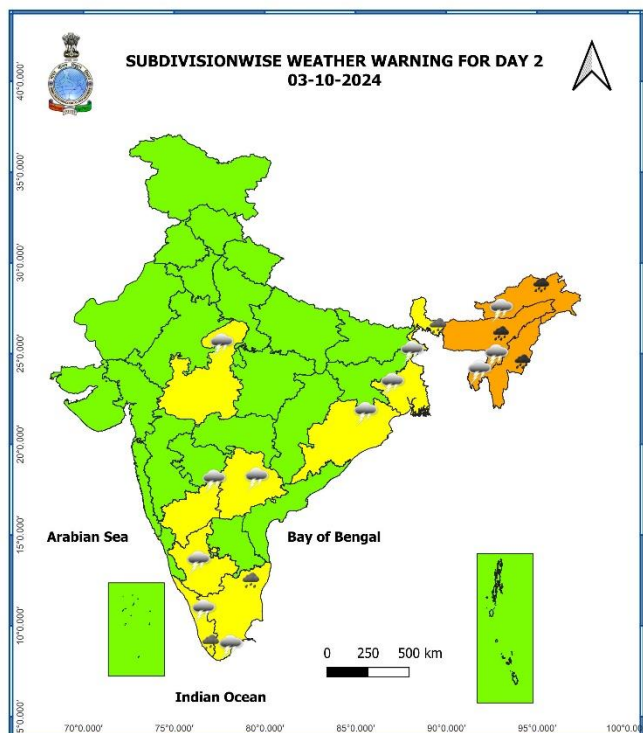
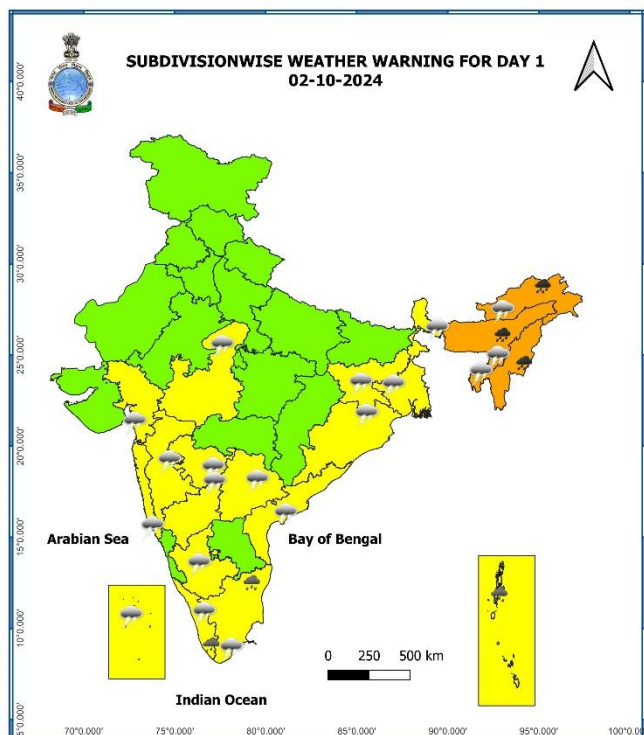
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 02.10.2024 (in cm):

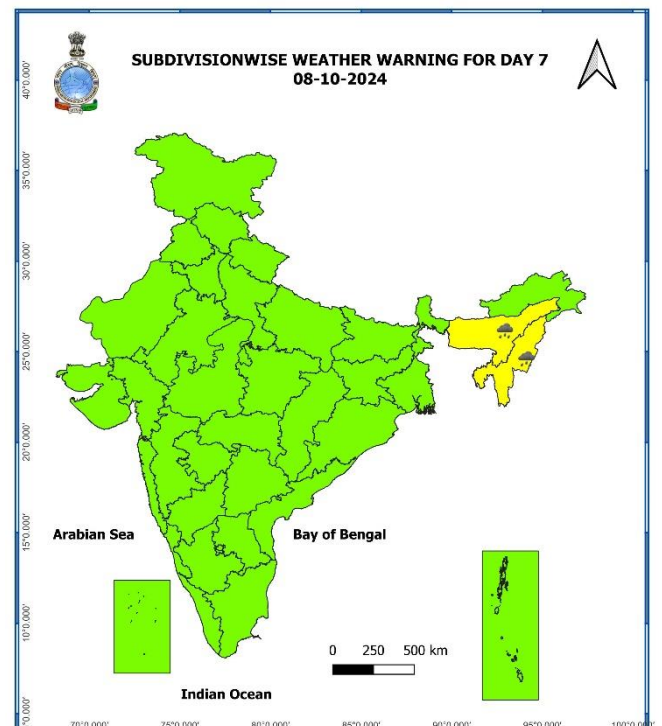
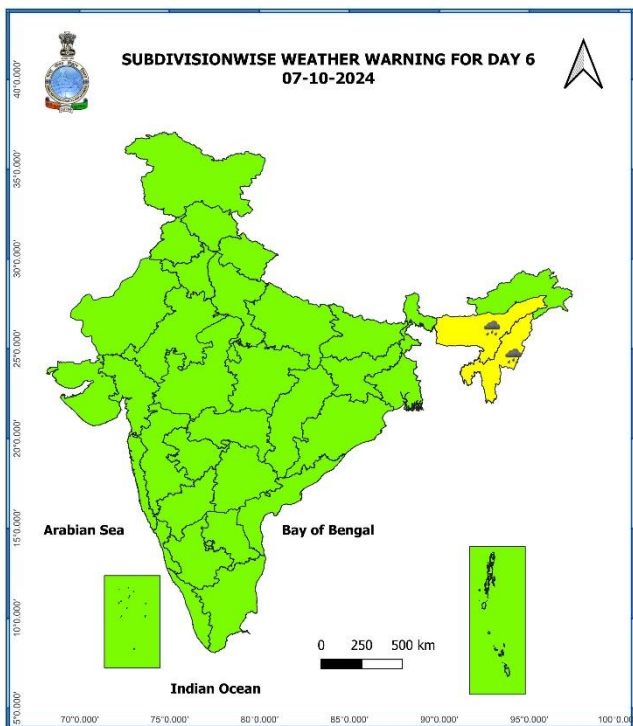
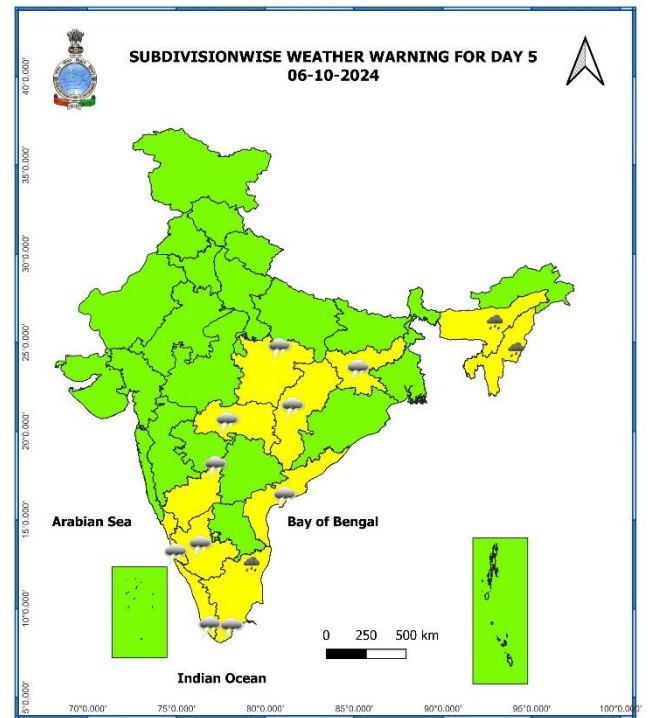
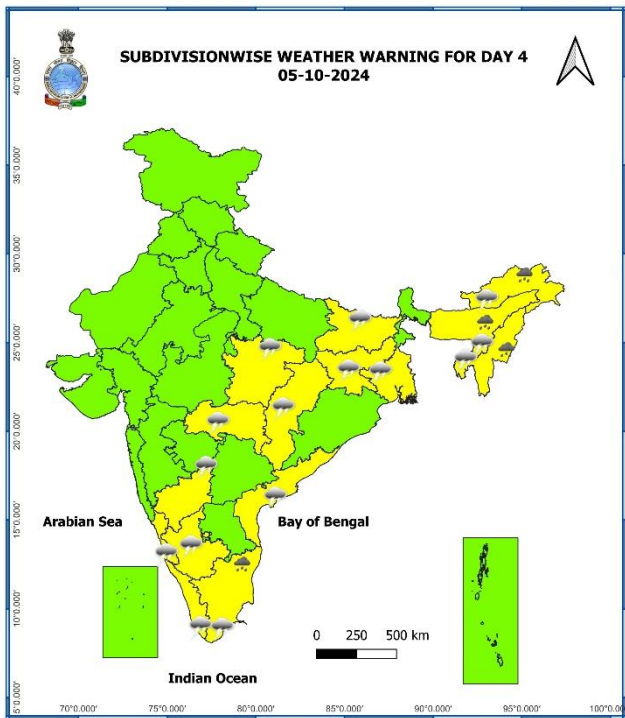
- ❖ **Telangana:** Sangareddy (dist Sangareddy) 11, Gandhari (dist Kamareddy) 9, Hathanoora (dist Sangareddy) 7;
- ❖ **North Interior Karnataka:** Bhalki (dist Bidar) 9;
- ❖ **Kerala & Mahe:** Mannarkkad (dist Palakkad) 8, Kanjirappally (dist Kottayam) 7, Palode (distThiruvananthapuram) 7;
- ❖ **South Interior Karnataka:** Kammardi (dist Chikkamagaluru) 7;
- ❖ **Tamil Nadu:** Uppar Dam (dist Tiruppur) , Tiruppur IB PWD (dist Tiruppur) 7 each;
- ❖ **Gangetic West Bengal:** Canning (dist South 24 Parganas) 7
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Neora (dist Jalpaiguri) 7, Nagarkata (dist Jalpaiguri) 7, Nh31 Bridge (dist Jalpaiguri) 7.

7 Days Rainfall Forecast

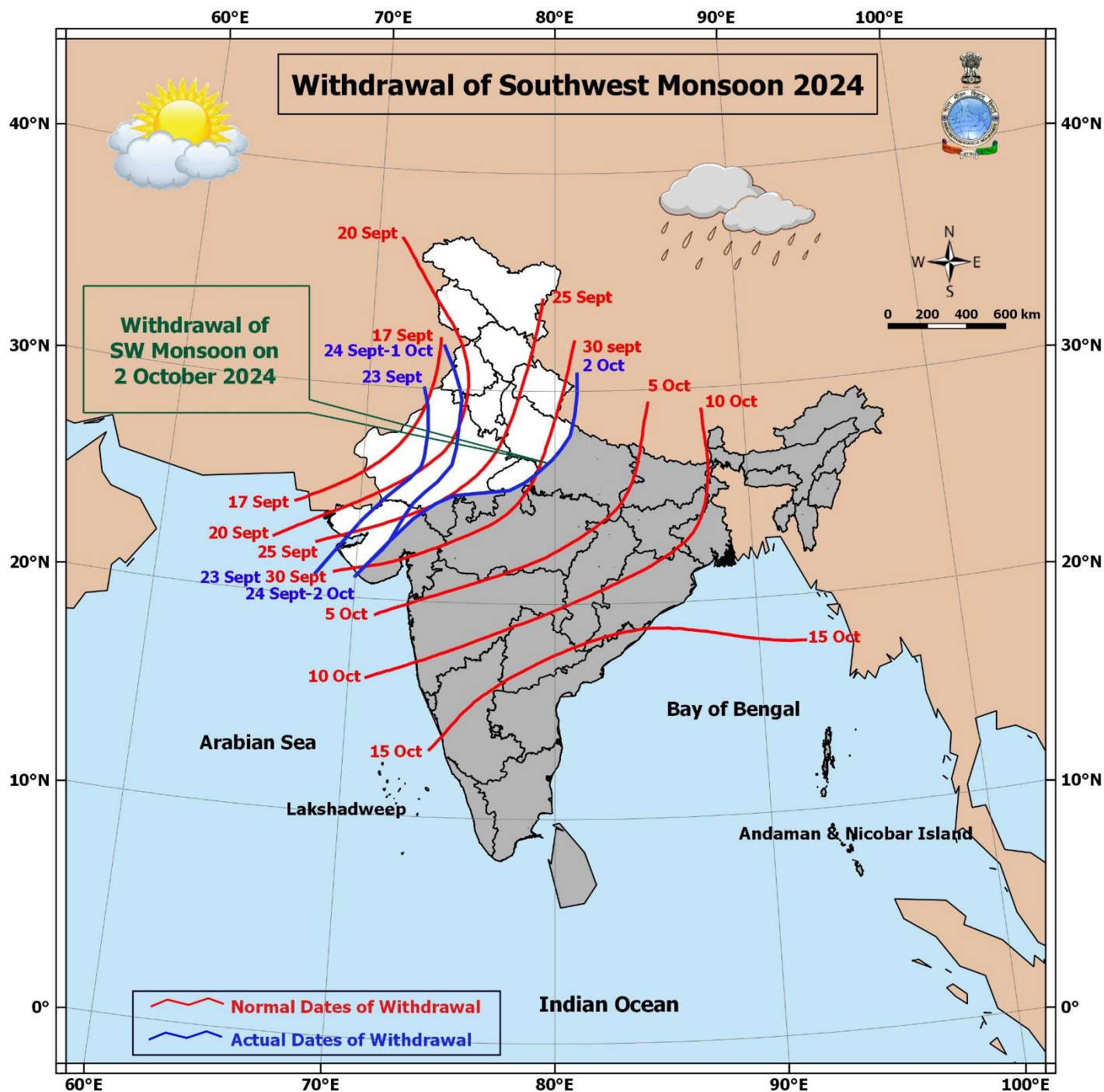
S. No.	Subdivision	02-Oct	03-Oct	04-Oct	05-Oct	06-Oct	07-Oct	08-Oct
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	WS	WS	FWS	FWS	FWS	SCT	SCT
3	ASSAM & MEGHALAYA	WS	WS	FWS	FWS	FWS	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	WS	WS	WS	FWS	FWS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	FWS	FWS	FWS	SCT	SCT	SCT	SCT
6	GANGETIC WEST BENGAL	SCT	SCT	FWS	FWS	FWS	FWS	SCT
7	ODISHA	SCT	SCT	SCT	ISOL	ISOL	SCT	SCT
8	JHARKHAND	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
9	BIHAR	ISOL	SCT	SCT	FWS	SCT	SCT	SCT
10	EAST UTTAR PRADESH	DRY	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
11	WEST UTTAR PRADESH	DRY	DRY	ISOL	ISOL	ISOL	ISOL	ISOL
12	UTTARAKHAND	DRY	ISOL	ISOL	ISOL	DRY	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	ISOL	ISOL	DRY	ISOL	DRY
14	PUNJAB	DRY	DRY	ISOL	ISOL	DRY	ISOL	DRY
15	HIMACHAL PRADESH	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	DRY	DRY	DRY	ISOL	DRY	DRY	DRY
17	WEST RAJASTHAN	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
18	EAST RAJASTHAN	DRY	DRY	DRY	ISOL	DRY	DRY	DRY
19	WEST MADHYA PRADESH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
20	EAST MADHYA PRADESH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
21	GUJARAT REGION	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
22	SAURASHTRA & KUTCH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
26	VIDARBHA	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
27	CHHATTISGARH	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
29	TELANGANA	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	FWS	FWS	FWS	FWS	FWS
32	COASTAL KARNATAKA	SCT	SCT	FWS	FWS	FWS	FWS	FWS
33	NORTH INTERIOR KARNATAKA	SCT	FWS	FWS	FWS	FWS	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	FWS	FWS	FWS	WS	WS	FWS	FWS
35	KERALA & MAHE	FWS	WS	WS	WS	FWS	FWS	FWS
36	LAKSHADWEEP	FWS	FWS	WS	WS	FWS	FWS	FWS

- 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.



Impact due to

- ✓ **Isolated heavy to very heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 02nd & 03rd October.

Impact Expected

- ✓ 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 leading to increased travel time.
- ✓ Minor damage to kutchha roads.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ Damage to horticulture and standing crops in some areas due to inundation and wind.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

Action Suggested

- ✓ 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

- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Tamil Nadu, Kerala, Interior Karnataka, Telangana and North Eastern States.
- Keep the harvested produce at safer places.
- Provide mechanical support to horticultural crops & staking to vegetables.

(Annexure V)

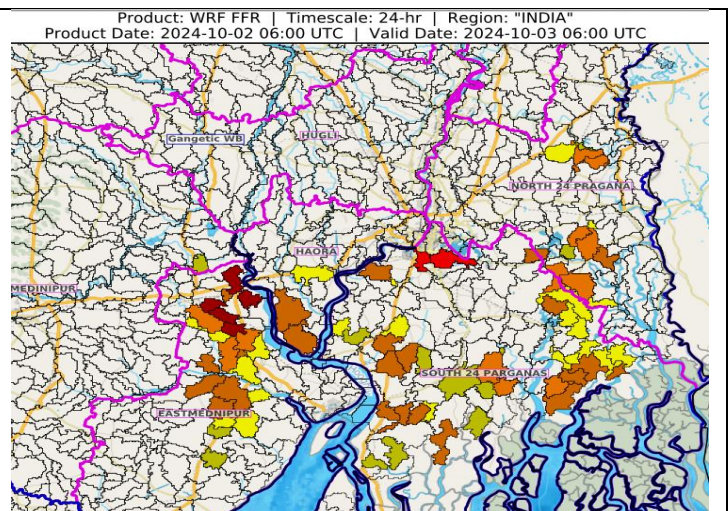
Flash Flood Warnings:

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 03-10-2024 :

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

Gangetic West Bengal - Eastmednipur, Haora, 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.

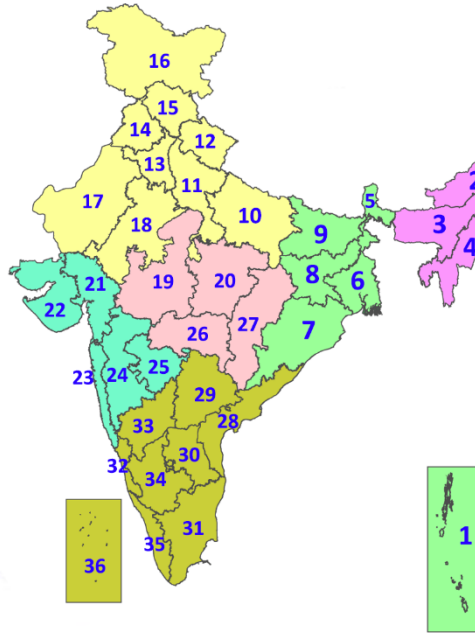


Legends & abbreviations:

- ❖ **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

* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(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°C to 6.4°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°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°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°C to -6.4°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°C to -6.4°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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