



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 29th September, 2024

Time of Issue: 1300 hours IST

**Subject: (i) Enhanced rainfall activity with isolated heavy to very heavy rainfall very likely over northeastern states during next 5-6 days.
(ii) No significant rainfall activity likely over northwest & central India during next one week.**

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

Heavy to very Heavy rainfall with extremely heavy rainfall at isolated places over East Uttar Pradesh; **Heavy to very Heavy rainfall** at isolated places over Bihar, Saurashtra & Kutch; **Heavy rainfall** at isolated places over East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Rayalaseema, Madhya Pradesh, Kerala & Mahe.

Weather Systems:

- ✓ Yesterday's upper air cyclonic circulation over southwest Uttar Pradesh, now lies over northwest Madhya Pradesh & neighbourhood in lower tropospheric levels.
- ✓ A trough runs from Comorin area to Rayalaseema in lower tropospheric levels.

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

East & Northeast India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Assam & Meghalaya during the week; Scattered to Fairly widespread light to moderate rainfall very likely over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura during next 3 days & Fairly widespread to widespread light to moderate rainfall during the next subsequent 4 days over the same region; Scattered to Fairly widespread light to moderate rainfall very likely over Andaman & Nicobar Islands, Bihar, Sub-Himalayan West Bengal & Sikkim; Isolated to Scattered light to moderate rainfall over Gangetic West Bengal, Jharkhand & Odisha during the week.
- ✓ **Isolated heavy to very Heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 02nd - 04th October.
- ✓ **Isolated heavy rainfall** very likely over Odisha on 29th September; Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during the week; Arunachal Pradesh during 01st -05th October.

South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Kerala & Mahe, Coastal Karnataka, Lakshadweep; Scattered to Fairly widespread light to moderate rainfall very likely over Interior Karnataka, Coastal Andhra Pradesh & Yanam; Isolated to Scattered light to moderate rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Telangana during the week.
- ✓ **Isolated heavy to very Heavy rainfall** very likely over South Interior Karnataka on 29th September.
- ✓ **Isolated heavy rainfall** very likely over Rayalaseema, Coastal Karnataka & North Interior Karnataka on 29th September; South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal on 29th & 30th September; Kerala & Mahe during 29th September – 01st October.

West & Central India:

- ✓ Isolated to Scattered light to moderate rainfall over central India during the week; Scattered to Fairly widespread light to moderate rainfall very likely over Konkan & Goa during the week; Scattered to Fairly widespread light to moderate rainfall very likely over the remaining region during next 2 days & Isolated to Scattered light to moderate rainfall over the next subsequent 5 days, except Saurashtra & Kutch where dry weather is likely to prevail from 2nd October.
- ✓ **Isolated heavy rainfall** very likely over Konkan & Goa, Gujarat State & West Madhya Pradesh on 29th September.

Northwest India

- ✓ Isolated to Scattered light to moderate rainfall very likely over Uttarakhand, East Uttar Pradesh, East Rajasthan during the week; Isolated to Scattered light to moderate rainfall over remaining region during next 2 days & Dry weather likely to prevail during next subsequent 5 days over the same region.
- ✓ **Isolated heavy rainfall** very likely over East Uttar Pradesh on 29th September.

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>

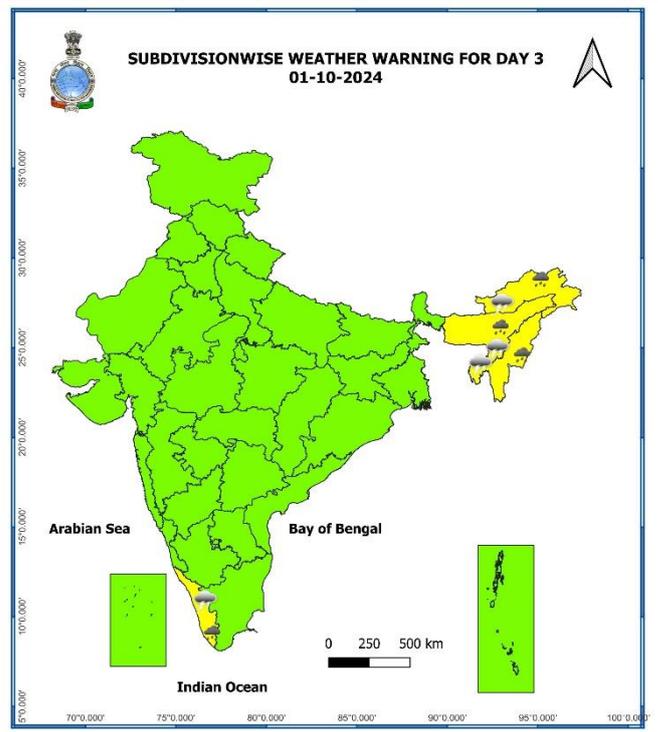
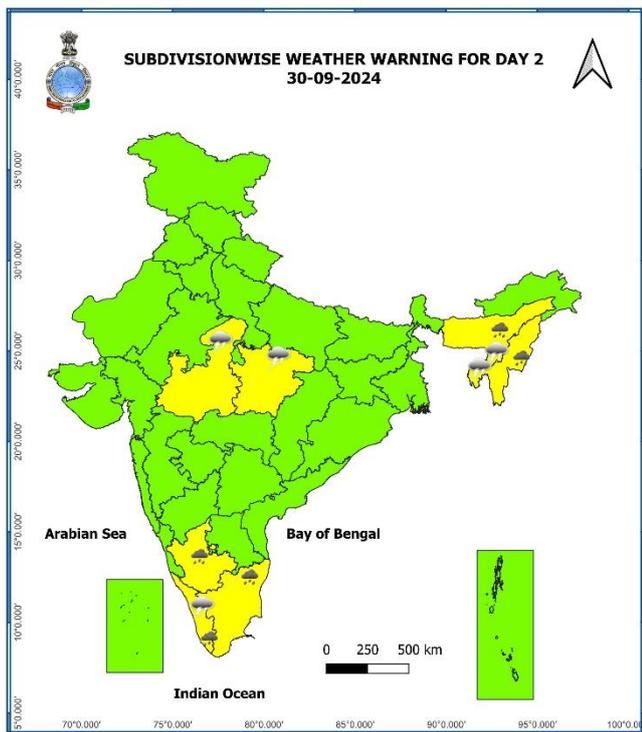
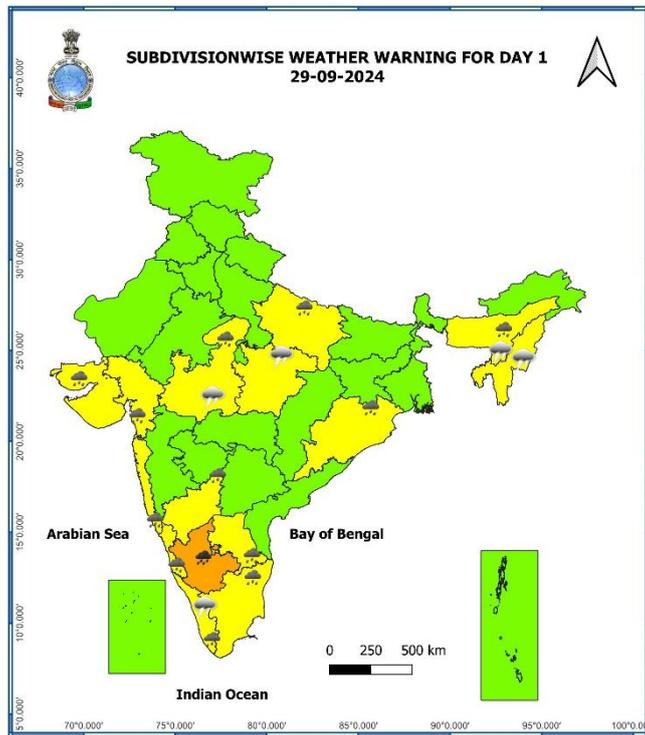
ANNEXURE I

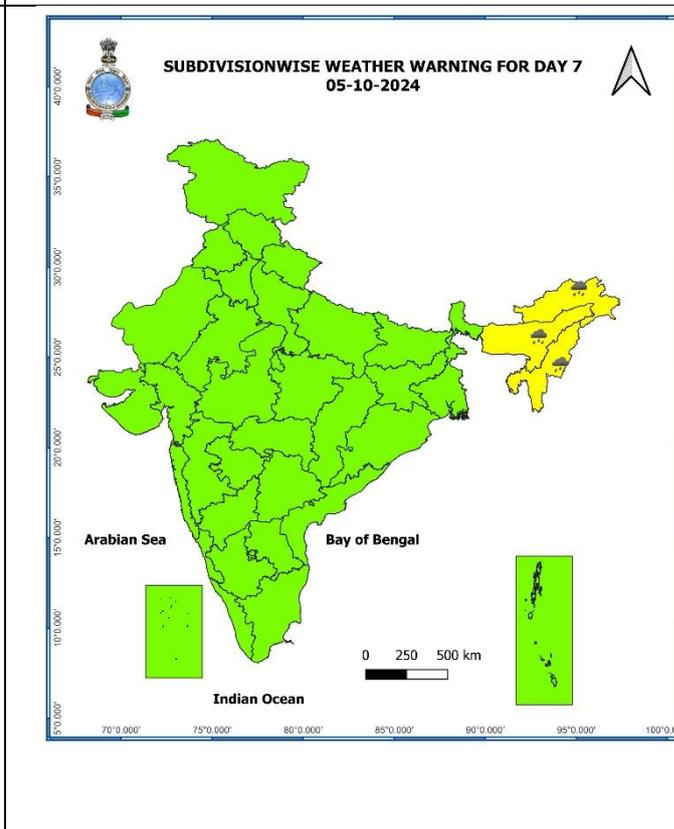
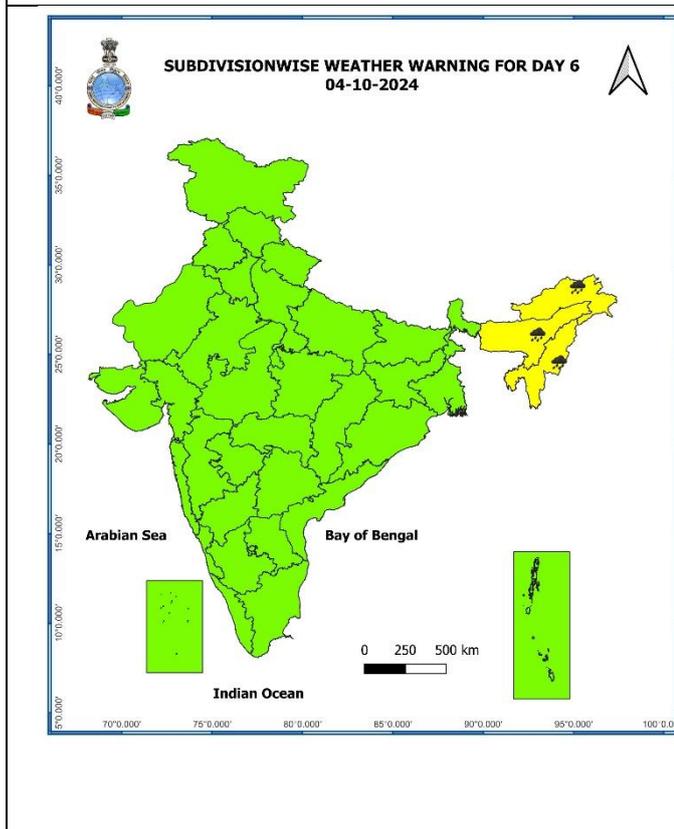
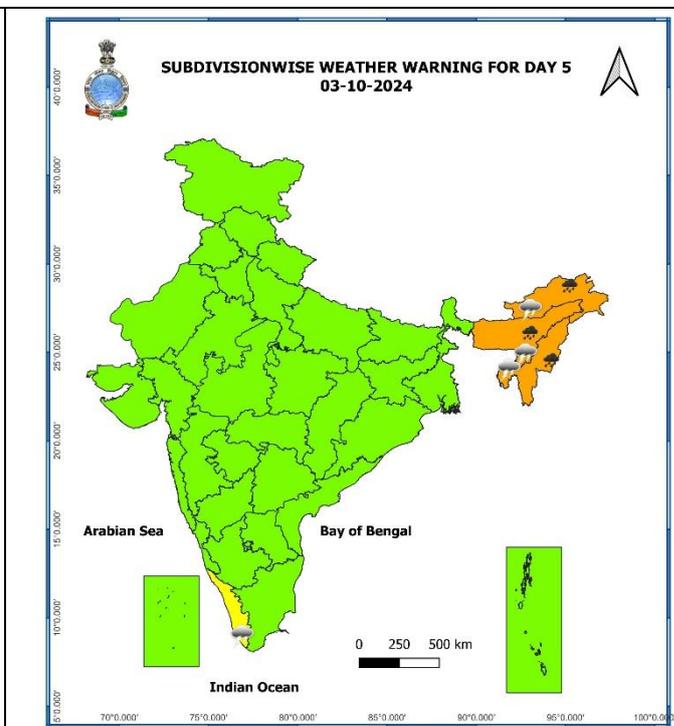
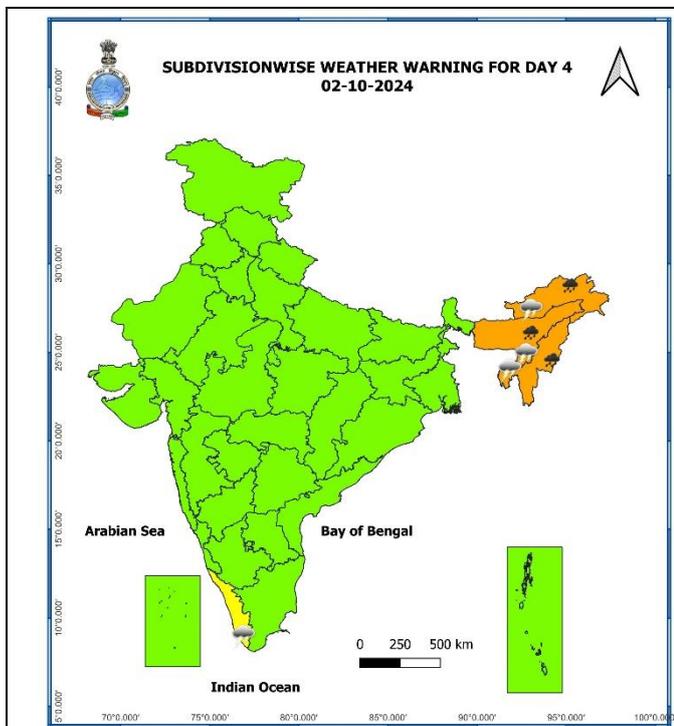
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 29.09.2024 (in cm):

- ❖ **East Uttar Pradesh:** Attarra (dist Banda) 27, Banda (dist Banda) 21, Basti Obsy (dist Basti) 11, Beberu (dist Banda) 9, Bansgaon (dist Gorakhpur) 9, Naraini (dist Banda) 7,
- ❖ **Saurashtra & Kutch:** Mahuva(b) (dist Bhavnagar) 17, Umralla (dist Bhavnagar) 10, Vallabhipur (dist Bhavnagar) 9, Jesar (dist Bhavnagar) 9, Gadhda (dist Botad) 8, Palitana (dist Bhavnagar) 8, Shihor (dist Bhavnagar) 7,
- ❖ **Bihar:** Dhengbridge (dist Sitamarhi) 13, Sonbarsa (dist Sitamarhi) 12, Piprakothi (dist East Champaran) 12, Dhaka (dist East Champaran) 12, Bairgania (dist Sitamarhi) 11, Purnahia (dist Sheohar) 10, Bathnaha (dist Sitamarhi) 10, Harsidhi (dist East Champaran) 10, Mejorganj (dist Sitamarhi) 9, Kotwa (dist East Champaran) 9, Motihari (dist East Champaran) 8, Lalbegiaghat (dist East Champaran) 8, Hayaghat (dist Darbhanga) 8, Patahi (dist East Champaran) 8, Jainagar (dist Madhubani) 8, Sursand (dist Sitamarhi) 7, Piprahi (dist Sheohar) 7, Gogri (dist Khagaria) 7, Rajpur (dist Rohtas) 7, Belsand (dist Sitamarhi) 7, Indrapuri (dist Rohtas) 7, Sheohar (dist Sheohar) 7,
- ❖ **East Madhya Pradesh:** Ajaigarh (dist Panna) 12,
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Yuksom (dist Gyalshing) 11, Sukiapokhri (dist Darjeeling) 9,
- ❖ **East Rajasthan:** Kanva Sr (dist Dungarpur) 10;
- ❖ **Rayalaseema:** Pakala (dist Tirupati) 10;
- ❖ **Kerala & Mahe:** Neyyattinkara (dist Thiruvananthapuram) 8;
- ❖ **Assam & Meghalaya:** Rattachera (dist East Jaintia Hills) 8,
- ❖ **West Madhya Pradesh:** Kalapipal (dist Shajapur) 7,

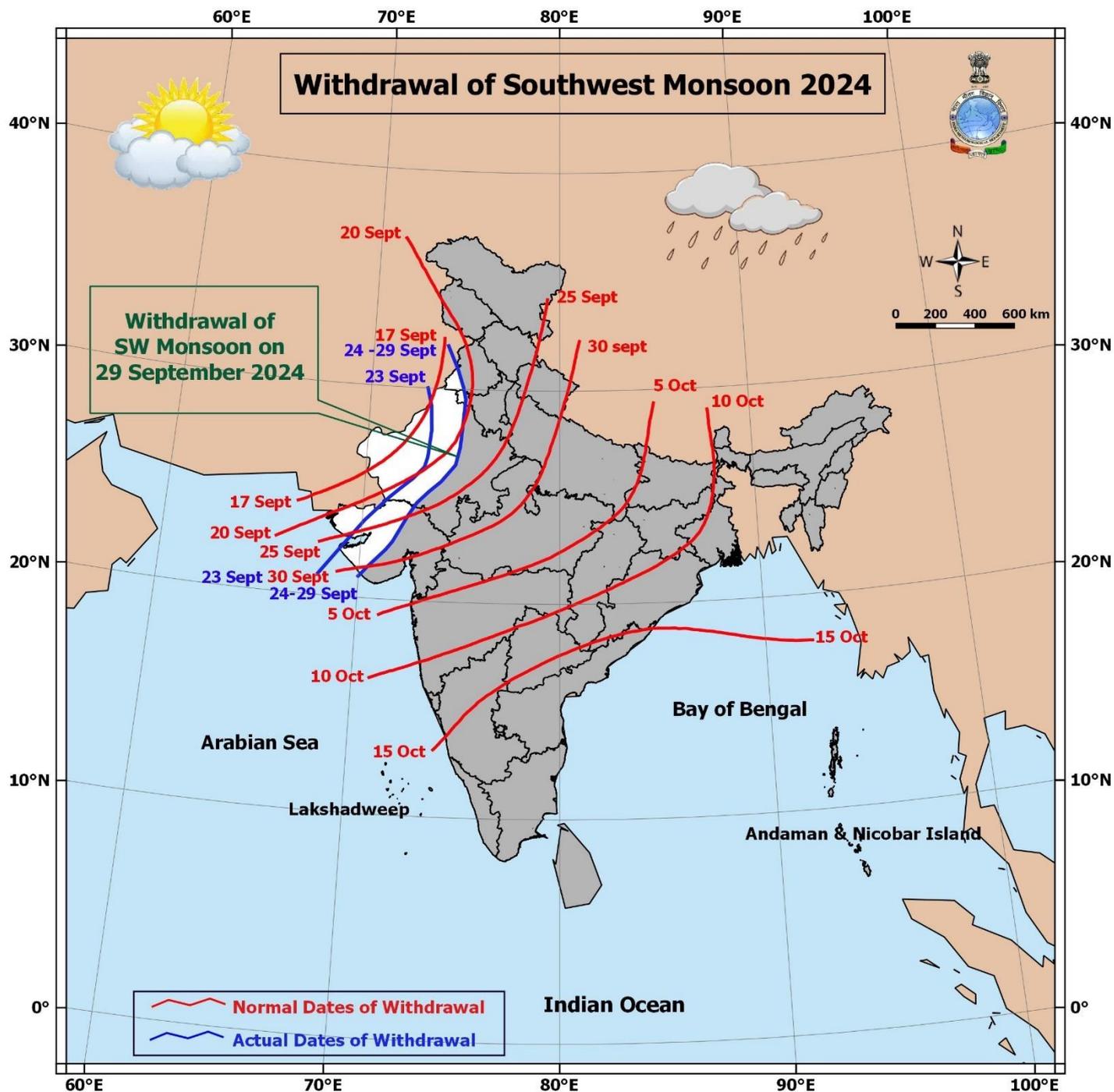
7 Days Rainfall Forecast								
S. No.	Subdivision	29-Sep	30-Sep	01-Oct	02-Oct	03-Oct	04-Oct	05-Oct
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	SCT	FWS	FWS	FWS	FWS	FWS
2	ARUNACHAL PRADESH	SCT	SCT	FWS	WS	WS	FWS	FWS
3	ASSAM & MEGHALAYA	FWS	FWS	WS	WS	WS	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	SCT	SCT	FWS	WS	WS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	SCT	SCT	SCT	FWS	FWS	FWS	SCT
6	GANGETIC WEST BENGAL	ISOL	ISOL	SCT	SCT	SCT	SCT	SCT
7	ODISHA	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
8	JHARKHAND	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
9	BIHAR	SCT	SCT	SCT	SCT	FWS	FWS	FWS
10	EAST UTTAR PRADESH	FWS	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
11	WEST UTTAR PRADESH	SCT	ISOL	DRY	DRY	DRY	ISOL	ISOL
12	UTTARAKHAND	ISOL						
13	HARYANA CHANDIGARH & DELHI	ISOL	DRY	DRY	DRY	DRY	ISOL	ISOL
14	PUNJAB	ISOL	DRY	DRY	DRY	DRY	DRY	ISOL
15	HIMACHAL PRADESH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
17	WEST RAJASTHAN	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	ISOL	ISOL	ISOL	DRY	DRY	ISOL	ISOL
19	WEST MADHYA PRADESH	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
20	EAST MADHYA PRADESH	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
21	GUJARAT REGION	WS	FWS	ISOL	ISOL	ISOL	ISOL	ISOL
22	SAURASHTRA & KUTCH	FWS	SCT	ISOL	DRY	DRY	DRY	DRY
23	KONKAN & GOA	FWS	FWS	SCT	FWS	FWS	SCT	SCT
24	MADHYA MAHARASHTRA	ISOL						
25	MARATHAWADA	DRY	ISOL	ISOL	ISOL	DRY	ISOL	ISOL
26	VIDARBHA	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
27	CHHATTISGARH	ISOL						
28	COASTAL ANDHRA PRADESH & YANAM	SCT	SCT	FWS	FWS	FWS	SCT	SCT
29	TELANGANA	SCT	SCT	ISOL	ISOL	SCT	SCT	SCT
30	RAYALASEEMA	SCT	ISOL	SCT	SCT	SCT	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAİKAL	SCT						
32	COASTAL KARNATAKA	FWS	WS	FWS	SCT	FWS	FWS	FWS
33	NORTH INTERIOR KARNATAKA	ISOL	SCT	SCT	FWS	FWS	FWS	SCT
34	SOUTH INTERIOR KARNATAKA	FWS	SCT	SCT	FWS	FWS	FWS	FWS
35	KERALA & MAHE	WS	WS	FWS	FWS	FWS	FWS	FWS
36	LAKSHADWEEP	WS	WS	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.



Impact due to

- ✓ **Isolated heavy to very heavy rainfall** very likely over South Interior Karnataka on 29th September; Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 02nd - 04th October.
- ✓ **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Assam & Meghalaya on 29th & 30th September. (**Annexure V**).

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 kutcha 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

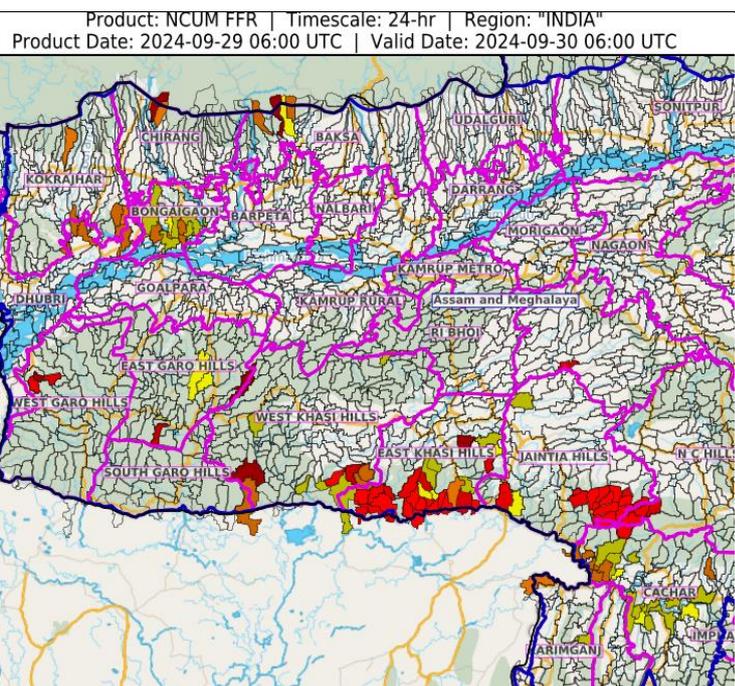
- ✓ Drain out excess water from standing crop fields and fruit orchards to avoid water stagnation in Sub Himalayan West Bengal, Bihar, East Uttar Pradesh, East Rajasthan, Madhya Pradesh, Saurashtra & Kutch, Tamil Nadu and Rayalaseema.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Assam & Meghalaya, Kerala and South Interior Karnataka.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

Flash Flood Warnings:**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 30-09-2024:**

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

Assam & Meghalaya - Baksa, Bongaigaon, Cachar, Chirang, Kokrajhar, Karimganj, East Garo Hills, East Khasi Hills, West Garo Hills, West Khasi Hills and Jaintia Hills districts.

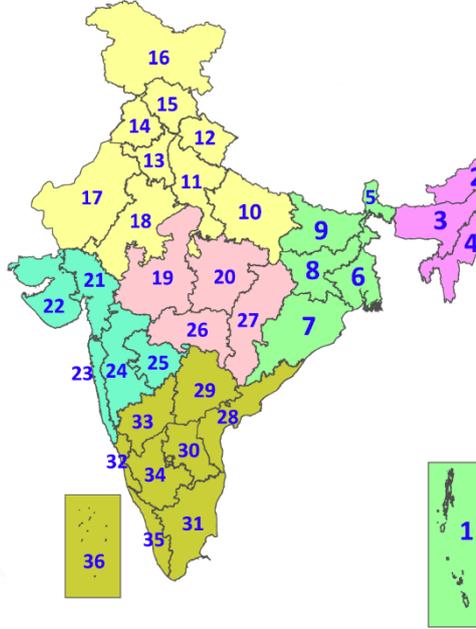
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over area of concern as shown in map due to expected rainfall occurrence in next 24 hours.

**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. रायलसेमा
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 *	<p>Heavy: 64.5 to 115.5 mm/cm *</p> <p>Very Heavy: 115.6 to 204.4 mm/cm*</p> <p>Extremely Heavy: > 204.4 mm/cm *</p>
Heat Wave	<p>When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions</p> <p>(a) Based on Departure from normal</p> <p>Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C.</p> <p>Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$</p> <p>(b). Based on Actual maximum temperature</p> <p>Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.</p> <p>Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$</p> <p>(c). Criteria for heat wave for coastal stations</p> <p>When maximum temperature departure is $>4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$</p>
Warm Night	<p>When maximum temperature remains 40°C</p> <p>Warm Night: When minimum temperature departure 4.5°C to 6.4°C.</p> <p>Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.</p>
Cold Wave	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.</p> <p>(a). Based on departure</p> <p>Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p> <p>(b) Based on actual Minimum Temperature (for Plains only)</p> <p>Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$</p> <p>Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$</p> <p>(c) For Coastal Stations</p> <p>When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$</p>
Cold Day	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions</p> <p>Based on departure</p> <p>Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p>
Fog	<p>Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$</p> <p>Moderate Fog: When the visibility between 500-200 metres</p> <p>Dense Fog: when the visibility between 50- 200 metres</p> <p>Very Dense Fog: when the visibility < 50 metres</p>
Thunderstorm	<p>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>
Dust/Sand Storm	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</p>
Frost	<p>Ice deposits on ground</p> <p>Air temperature $\leq 4^\circ\text{C}$ (over Plains)</p>
Squall	<p>A strong wind that rises suddenly, lasts for atleast 1 minute.</p> <p>Moderate: Wind speed 52-61 kmph</p> <p>Severe: Wind speed 62-87 kmph</p> <p>Very Severe: Wind speed >87 kmph</p>
Sea State	<p>Effect of various waves in the sea over specific area</p> <p>Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre</p> <p>High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre</p> <p>Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre</p>
Cyclone	<p>Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)</p> <p>Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)</p> <p>Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)</p> <p>Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)</p> <p>Super Cyclone Strom: Wind speed >220 kmph (>119 knots)</p>

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