

Tuesday, September 24, 2024  
Time of Issue: 1350 hours IST  
(MID-DAY)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems:

- ✓ **Southwest monsoon** has further withdrawn from some more parts of Rajasthan, Gujarat, some parts of Punjab, Haryana today, the 24<sup>th</sup> September, 2024.
- ✓ Under the influence of **cyclonic circulation** over Central Bay of Bengal, a low pressure area has formed over Westcentral Bay of Bengal & adjoining Northwest Bay off north Andhra - south Odisha coasts.
- ✓ A **shear zone** runs roughly along 16°N over North Peninsular India between middle & upper tropospheric levels above mean sea level tilting southwards with height.

#### Forecast & Warnings (upto 7 days):

##### South Peninsular India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Coastal Karnataka, Lakshadweep, Kerala & Mahe; Scattered to Fairly widespread light to moderate rainfall over Interior Karnataka, Coastal Andhra Pradesh & Yanam; Telangana during next 3 days and Isolated to Scattered light to moderate rainfall during next 4 subsequent days; Isolated to Scattered light to moderate rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Rayalaseema during the week.
- ✓ **Isolated extremely heavy rainfall** very likely over Coastal Karnataka on 24<sup>th</sup> September.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Coastal Karnataka on 24<sup>th</sup> & 25<sup>th</sup>; South Interior Karnataka on 24<sup>th</sup> & 25<sup>th</sup>; North Interior Karnataka, Coastal Andhra Pradesh & Yanam on 24<sup>th</sup> September.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal on 24<sup>th</sup>; Kerala & Mahe on 24<sup>th</sup>, 25<sup>th</sup>, 29<sup>th</sup> & 30<sup>th</sup>; Coastal Andhra Pradesh & Yanam on 24<sup>th</sup> & 25<sup>th</sup>; Rayalaseema on 24<sup>th</sup>; Telangana, Karnataka on 24<sup>th</sup> & 25<sup>th</sup> September.

##### West India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Konkan & Goa, Gujarat Region, over Madhya Maharashtra & Marathwada during the next 3 days and Scattered to Fairly widespread light to moderate rainfall during the subsequent 4 days over the region; Scattered to Fairly widespread light to moderate rainfall over Saurashtra & Kutch during the week.
- ✓ **Isolated extremely heavy rainfall** very likely over Konkan & Goa during 24<sup>th</sup> -26<sup>th</sup>; Madhya Maharashtra on 25<sup>th</sup> & 26<sup>th</sup>; Gujarat Region on 26<sup>th</sup> September.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Marathwada on 24<sup>th</sup>; Madhya Maharashtra, Konkan & Goa during 24<sup>th</sup> -26<sup>th</sup>; Saurashtra & Kutch on 26<sup>th</sup> & 27<sup>th</sup>; Gujarat Region during 24<sup>th</sup> -27<sup>th</sup> September.
- ✓ **Isolated heavy rainfall** very likely over Madhya Maharashtra, Konkan & Goa during 24<sup>th</sup> -27<sup>th</sup>; Marathwada on 24<sup>th</sup> & 25<sup>th</sup>; Saurashtra & Kutch during 25<sup>th</sup> -28<sup>th</sup>; Gujarat Region during 24<sup>th</sup> -28<sup>th</sup> September.

##### Central India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Vidarbha, Chhattisgarh during next 3 days & Scattered to Fairly widespread light to moderate rainfall during subsequent next 4 days; Scattered to Fairly widespread light to moderate rainfall over Madhya Pradesh during the week.
- ✓ **Isolated heavy to very heavy rainfall** very likely over West Madhya Pradesh on 24<sup>th</sup> & 25<sup>th</sup>; Vidarbha & East Madhya Pradesh on 25<sup>th</sup> September.
- ✓ **Isolated heavy rainfall** very likely over Madhya Pradesh during 24<sup>th</sup> -27<sup>th</sup>; Vidarbha, Chhattisgarh during 24<sup>th</sup> -26<sup>th</sup> September.

##### East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Northeast India & Sub-Himalayan West Bengal & Sikkim during the next 7 days; Fairly widespread to widespread light/moderate rainfall very likely over Gangetic West Bengal, Bihar, Jharkhand & Odisha during the next 3 days & Scattered to Fairly widespread light to moderate rainfall during the next subsequent 4 days; Scattered to Fairly widespread light to moderate rainfall over Andaman & Nicobar Islands during the week.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Assam & Meghalaya on 25<sup>th</sup> & 26<sup>th</sup>; Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim on 26<sup>th</sup> September.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh during all the 7 days; Assam & Meghalaya during 24<sup>th</sup> -29<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura during 25<sup>th</sup> -28<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim during 24<sup>th</sup> -27<sup>th</sup>; Gangetic West Bengal during, Jharkhand & Odisha during 24<sup>th</sup> -26<sup>th</sup>; Bihar during 25<sup>th</sup> -27<sup>th</sup> September.

##### Northwest India

- ✓ Isolated to Scattered light to moderate rainfall very likely over northwest India except East Uttar Pradesh where Isolated to Scattered light to moderate rainfall during next 2 days & Scattered to Fairly widespread light to moderate rainfall during next 5 subsequent days during the week;
- ✓ **Isolated heavy to very heavy rainfall** very likely East Uttar Pradesh on 28<sup>th</sup> September.
- ✓ **Isolated heavy rainfall** very likely over Himachal Pradesh on 26<sup>th</sup>; Uttarakhand on 26<sup>th</sup> & 27<sup>th</sup>; West Uttar Pradesh on 28<sup>th</sup>; East Uttar Pradesh during 27<sup>th</sup> -29<sup>th</sup> September.

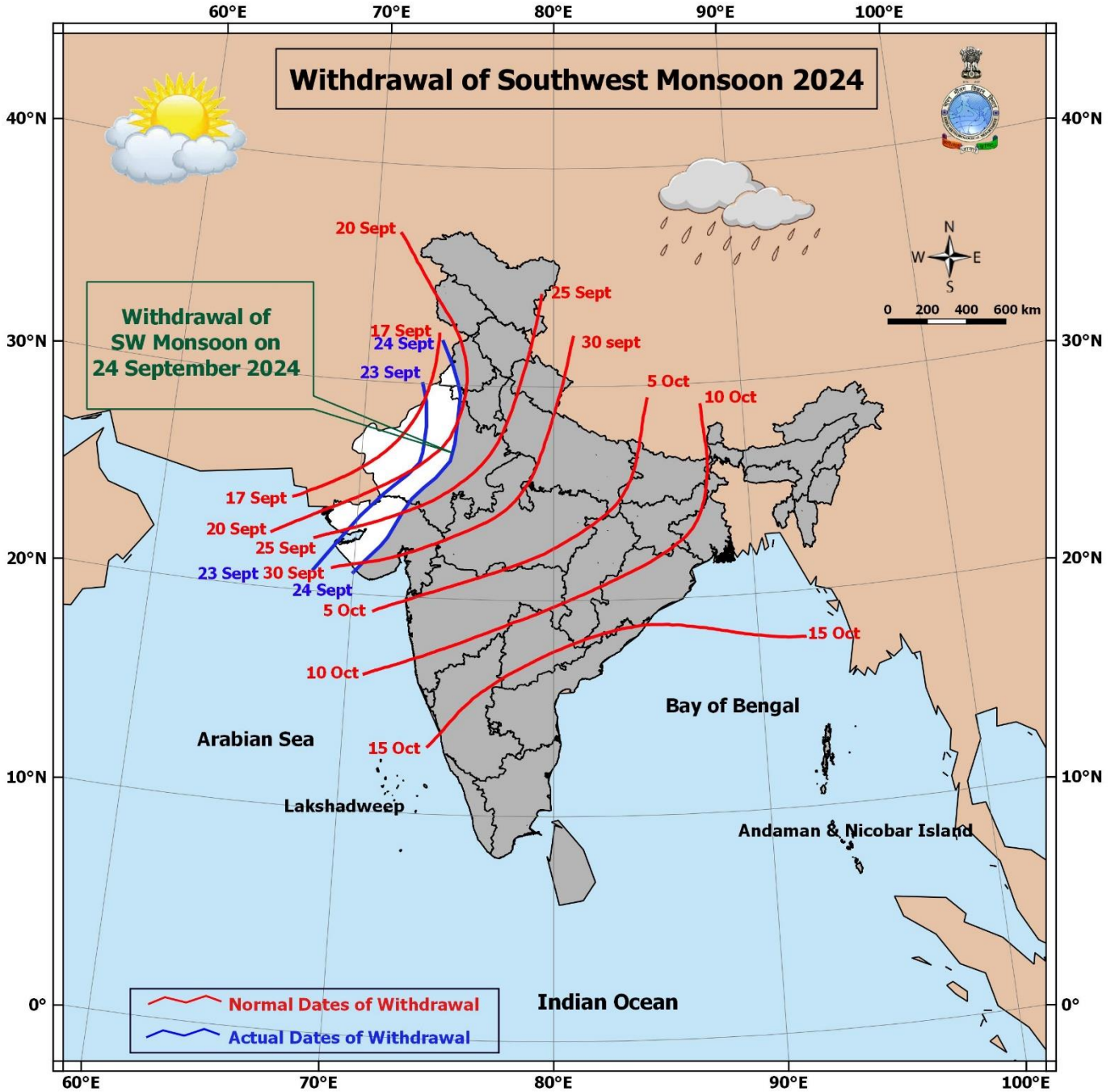
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Vidarbha, Gangetic West Bengal, Odisha, Konkan & Goa, Madhya Maharashtra, Kerala & Mahe, Lakshadweep, Coastal Karnataka, North Interior Karnataka; **at many places** over Chhattisgarh, Arunachal Pradesh, Gujarat Region, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema; **at a few places** over West Madhya Pradesh, Andaman & Nicobar Islands, Bihar, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, South Interior Karnataka; **at isolated places** over Himachal Pradesh, East Rajasthan, East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Saurashtra & Kutch, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heavy rainfall** recorded (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very Heavy rainfall** at isolated places over Gujarat Region, West Madhya Pradesh, Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka, North Interior Karnataka, Madhya Maharashtra; **Heavy rainfall** at isolated places over East Rajasthan, Jharkhand, Marathwada, Konkan & Goa, Assam & Meghalaya, Odisha, Rayalaseema, Kerala & Mahe.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **North Interior Karnataka:** Vijayapura Pto (dist Vijayapura) 19, Tikkota (dist Vijayapura) 11; **West Madhya Pradesh:** Udaigarh (dist Alirajpur) 16, Bagh (dist Dhar) 16, Ranapur (dist Jhabua) 9; **Tamil Nadu, Puducherry & Karaikal:** Zone 02 D15 Manali (dist Chennai) 15, Avadi (dist Tiruvallur) 11, Jaya Engg College AWS (dist Tiruvallur) 9; **Gujarat Region:** Pardi (dist Valsad) 13; **Madhya Maharashtra:** Gaganbawada (dist Kolhapur) 12; **Coastal Karnataka:** Manki (dist Uttara Kannada) 12, Shirali Pto (dist Uttara Kannada) 12; **Assam & Meghalaya:** Udaipur (dist Tinsukia) 11; **Konkan & Goa:** Panvel\_agri (dist Raigad) 10; **Odisha:** Binjharpur ( Jajpur) 11, Gopalpur ( Ganjam) 10; **Rayalaseema:** Nandavaram (dist Kurnool) 10; **East Rajasthan:** Khushalgarh (dist Banswara) 7; **Kerala & Mahe:** Muliya (dist Kasargod) 7; **Marathwada:** Latur (dist Latur) 7; **Jharkhand:** Baharagoda AWS (dist East Singhbhum) 7,
- ❖ **Minimum Temperature Departures (as on 24-09-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at isolated places over West Rajasthan, Punjab, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at many places over Uttarakhand, Haryana-Chandigarh-Delhi, West Uttar Pradesh; at isolated places over East Rajasthan, East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim; **above normal (1.6°C to 3.0°C)** at many places over Bihar, Madhya Pradesh, Madhya Maharashtra, Gujarat State; at isolated places over Konkan & Goa, Vidarbha, Chhattisgarh, Odisha, Tamil Nadu, Puducherry & Karaikal, Jharkhand, Gangetic West Bengal, Interior Karnataka and **near normal** over rest parts of the country. Today, **the lowest minimum temperature** of 19.8°C is reported at **Dhar (West Madhya Pradesh)** over the plains of the country. **(Fig.4)**
- ❖ **Maximum Temperature Departures (as on 23-09-2024):** Maximum temperatures were **markedly above normal (5.1°C or more)** at most place over Arunachal Pradesh & Assam & Meghalaya, at many places Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at a few places over Himachal Pradesh; at isolated places over Nagaland, Manipur, Mizoram & Tripura; **appreciably above normal (3.1°C to 5.0°C)** at many places over Bihar, East Uttar Pradesh, Uttarakhand & Punjab; at isolated places over Haryana-Chandigarh-Delhi, West Uttar Pradesh, Gangetic West Bengal, Jharkhand & Chhattisgarh; **above normal (1.6°C to 3.0°C)** at many places over Odisha, Madhya Pradesh, Rajasthan, Gujarat Region, Vidarbha, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe & Andaman & Nicobar Islands; at a few places over Saurashtra & Kutch & Telangana; at isolated places over Madhya Maharashtra, Marathwada and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature** of 41.1°C was reported at **Pokhran IAF (West Rajasthan)** over the country. **(Fig. 2)**

## Meteorological Analysis (Based on 0830 hours IST)

- ❖ **Southwest monsoon** has further withdrawn from some more parts of Rajasthan & Gujarat, some parts of Punjab & Haryana today, the 24<sup>th</sup> September, 2024.
- ❖ The **line of withdrawal of southwest monsoon** now passes through Firozpur, Sirsa, Churu, Ajmer, Mount Abu, Deesa, Surendranagar, Junagarh.
- ❖ Under the influence of cyclonic circulation over **Central Bay of Bengal**, a **low pressure** area has formed over Westcentral Bay of Bengal & adjoining Northwest Bay off north Andhra - south Odisha coasts. The associated **cyclonic circulation** extends upto 7.6 km above mean sea level tilting southwestwards with height.
- ❖ A **shear zone** runs roughly along 16°N over north peninsular India between 3.1 km to 7.6 km above mean sea level tilting southwards with height.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood at 1.5 km above mean sea level has become less marked.

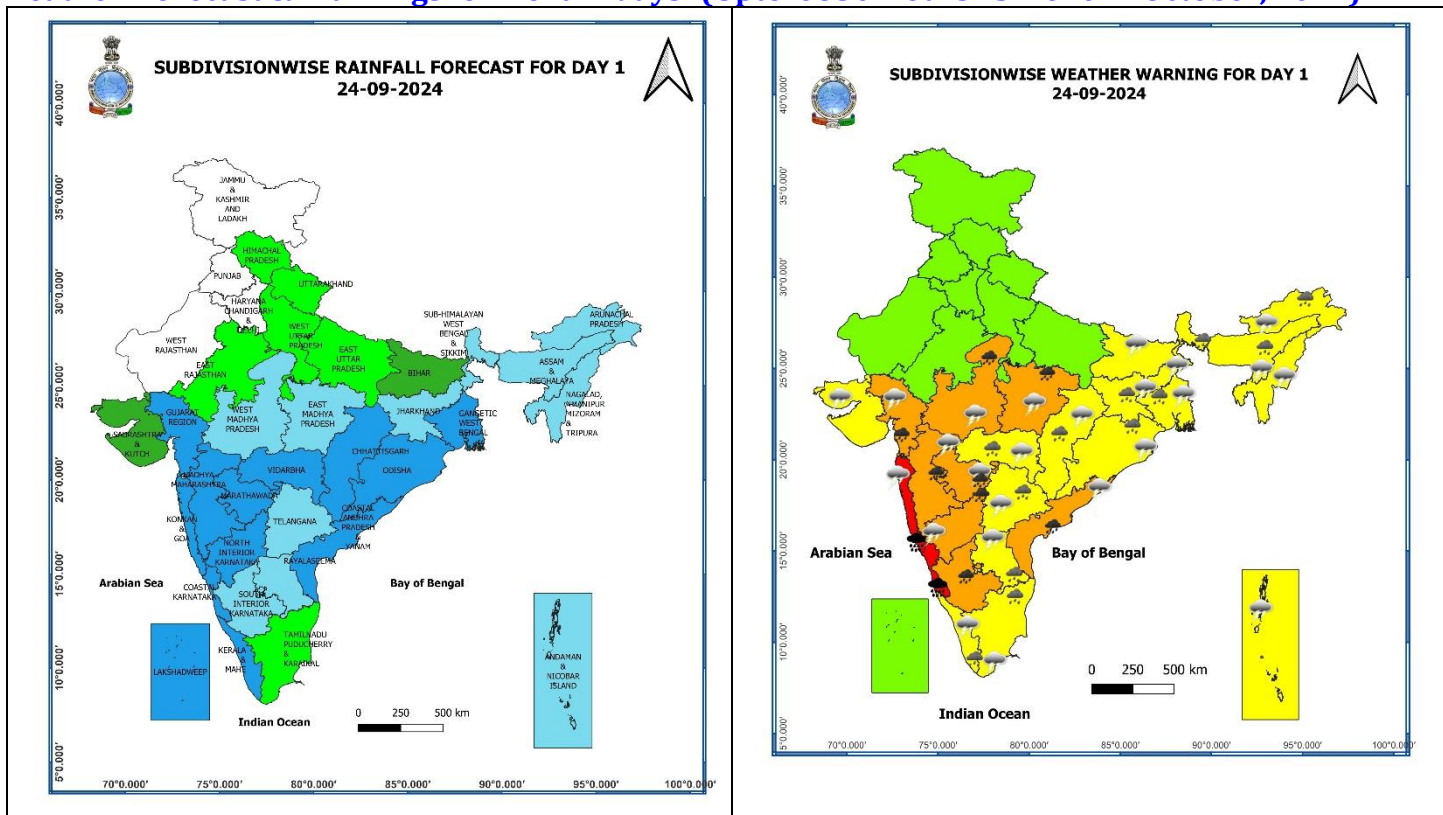
### Withdrawal of Southwest Monsoon 2024



\* 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.  
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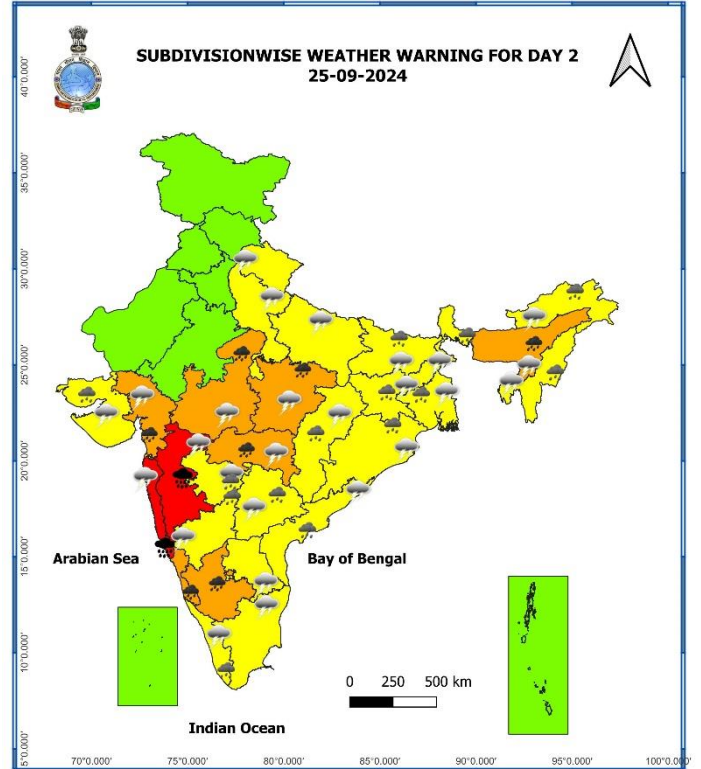
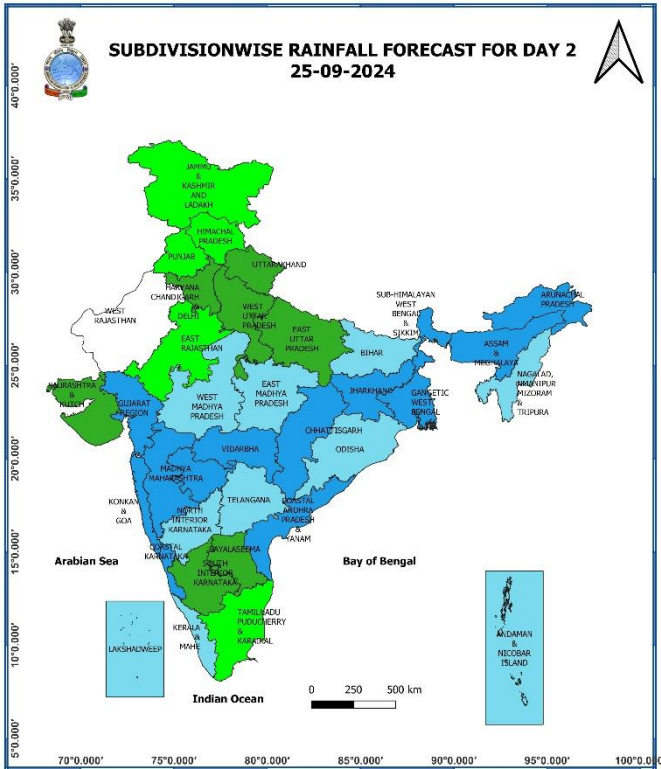
Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 01<sup>st</sup> October, 2024)



24 September (Day 1):

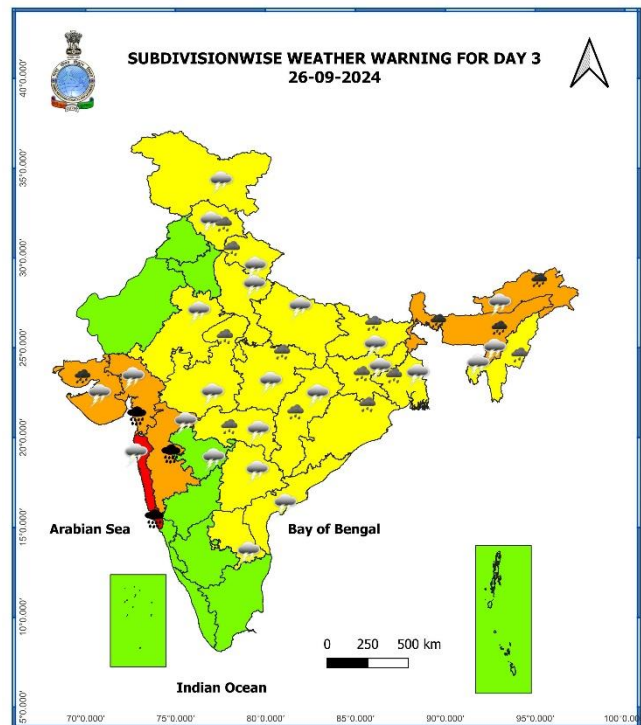
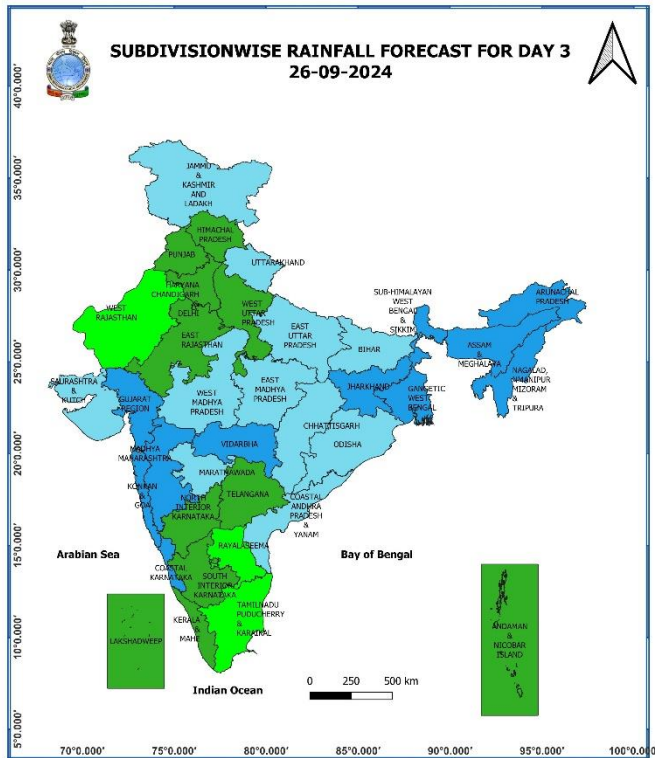
- ❖ **Heavy to very heavy rainfall with extremely heavy falls (> 20 cm)** very likely at isolated places over Coastal Karnataka, Goa; **Heavy to very Heavy rainfall (≥12 cm)** very likely at a few places Coastal Karnataka; at isolated places over West Madhya Pradesh, Marathwada, Madhya Maharashtra, Gujarat Region, Coastal Andhra Pradesh & Yanam, Interior Karnataka; **Heavy rainfall (≥7 cm)** very likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Rayalaseema, Telangana, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Madhya Pradesh; **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana, Andaman & Nicobar Islands, Gangetic West Bengal, Jharkhand; **with lightning** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar, Odisha, Coastal Andhra Pradesh & Yanam, Rayalaseema, North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat State, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Vidarbha, Chhattisgarh.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail along and off Maharashtra coasts, Karnataka, Konkan & goa, Kerala, over gulf of Mannar, off Sri Lanka coast, many parts of south Bay of Bengal, most parts of west central Bay of Bengal adjoining few parts of northwest Bay of Bengal and eastcentral Bay of Bengal, off north Andhra Pradesh coasts and south Odisha coast. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea adjoining westcentral Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.

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## 25 September (Day 2):

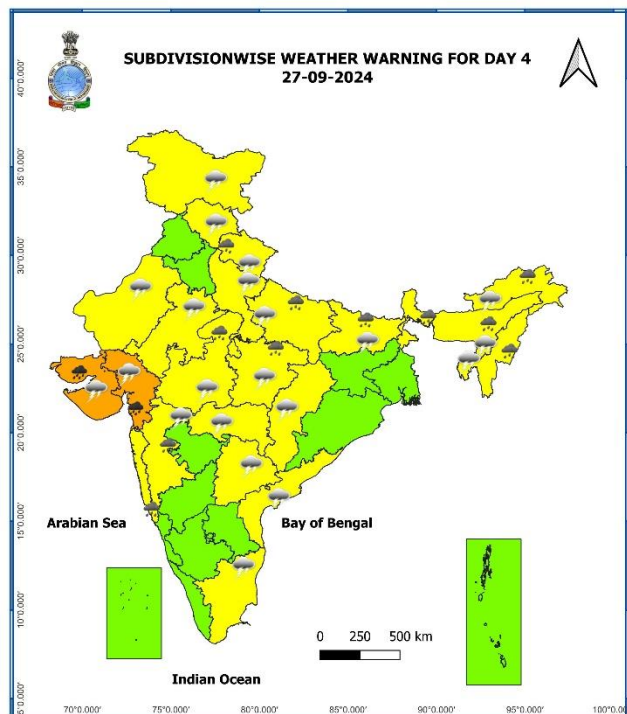
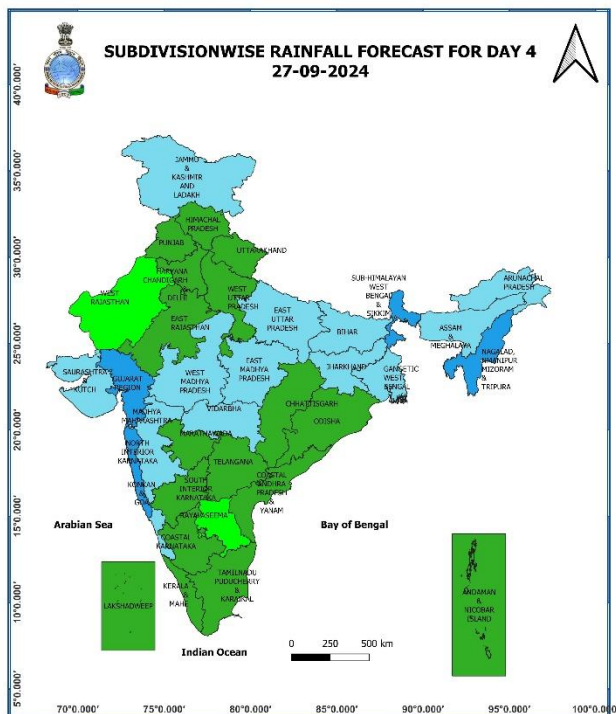
- ❖ **Heavy to very heavy rainfall with extremely heavy falls (> 20 cm)** very likely at isolated places over Konkan & Goa, Madhya Maharashtra; **Heavy to very Heavy rainfall (≥12 cm)** very likely at a few places over Coastal Karnataka; at isolated places over Madhya Pradesh, Vidarbha, Assam & Meghalaya, Gujarat Region, Coastal Karnataka, South Interior Karnataka; **Heavy rainfall (≥7 cm)** very likely at isolated places over Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam, Telangana, Kerala & Mahe, North Interior Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Madhya Pradesh; **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana, Jharkhand; **with lightning** very likely at isolated places over Uttarakhand, Uttar Pradesh, West Bengal & Sikkim, Bihar, Odisha, Coastal Andhra Pradesh & Yanam, Rayalaseema, North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat State, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Pradesh, Vidarbha, Chhattisgarh.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail along and off Maharashtra coasts, Karnataka, Konkan & Goa, Kerala, over gulf of Mannar, off Sri Lanka coast, many parts of south and central Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea adjoining few parts of west central Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.



**26 September (Day 3):**

- ❖ **Heavy to very heavy rainfall with extremely heavy falls (> 20 cm)** very likely at isolated places over Konkan & Goa, Madhya Maharashtra, Gujarat Region; **Heavy to very Heavy rainfall (≥12 cm)** likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Saurashtra & Kutch; **Heavy rainfall (≥7 cm)** very likely at isolated places over Himachal Pradesh, Uttarakhand, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand, Odisha, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Telangana; **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Jharkhand; **with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, Gangetic West Bengal, Bihar, Coastal Andhra Pradesh & Yanam, Rayalaseema, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat State, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Pradesh, Vidarbha, Chhattisgarh.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over north Maharashtra, south Gujarat coasts, gulf of Mannar, along and off Sri Lanka coast, few parts of south and westcentral Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea adjoining few parts of westcentral Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.

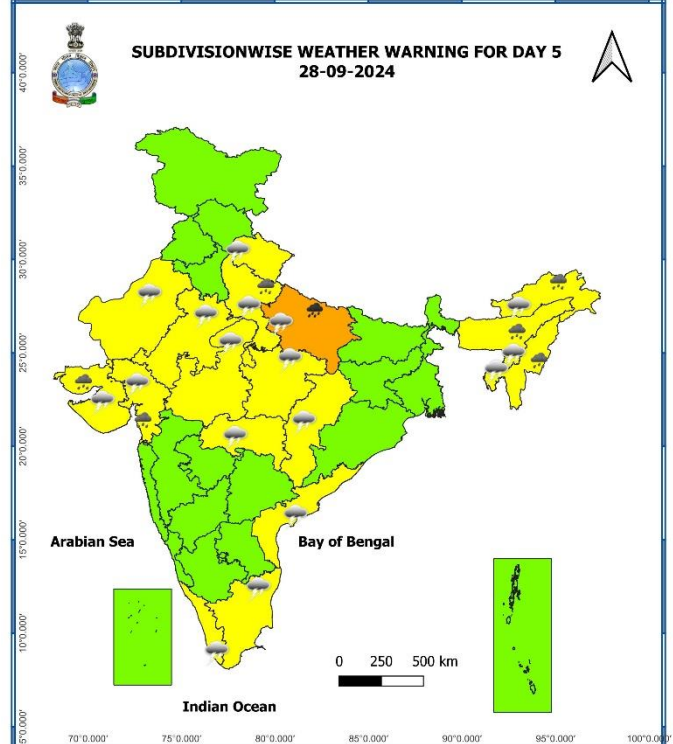
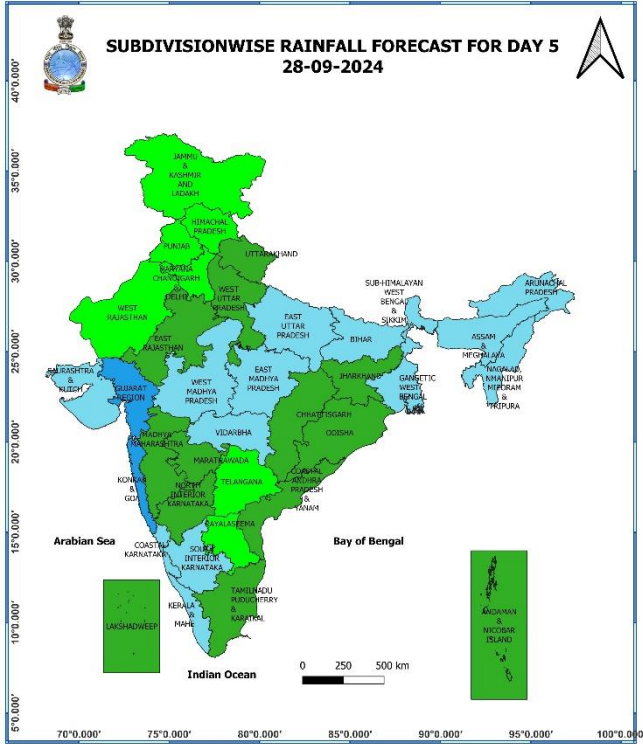




### 27 September (Day 4):

- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Gujarat State; **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Uttarakhand, East Uttar Pradesh, Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Bihar, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Madhya Maharashtra, Gujarat State, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Pradesh, Vidarbha, Chhattisgarh.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over south Gujarat and gulf of Mannar. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea adjoining few parts of westcentral Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.

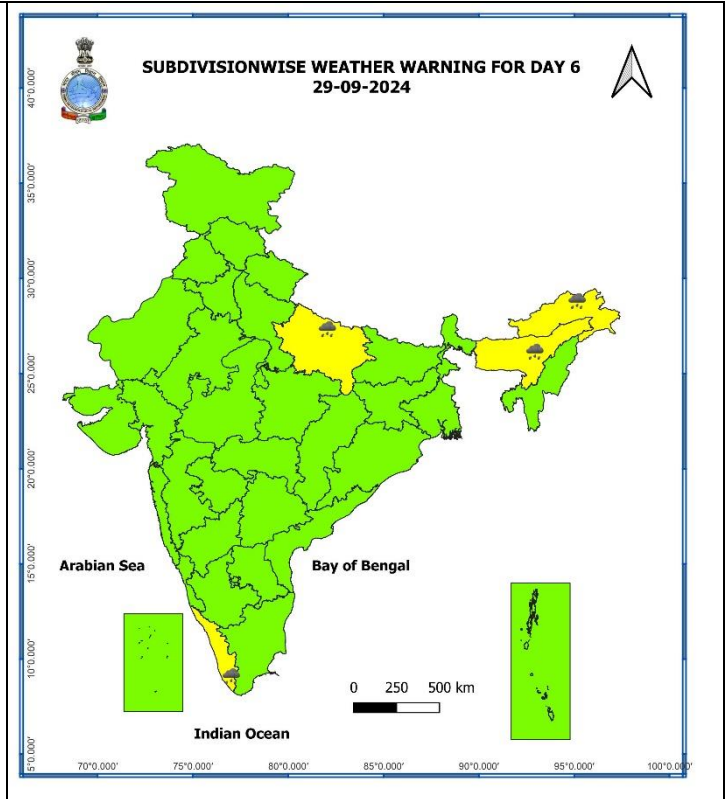
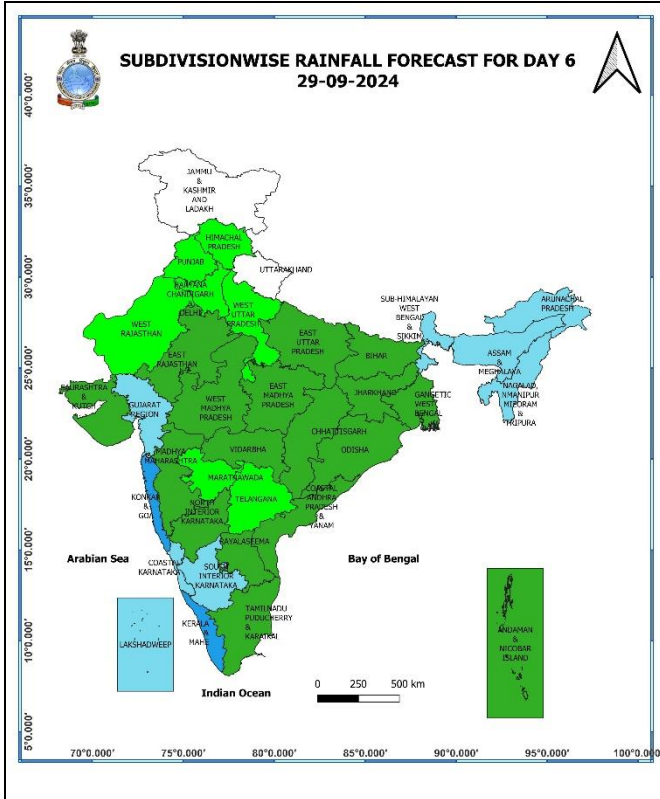




**28 September (Day 5):**

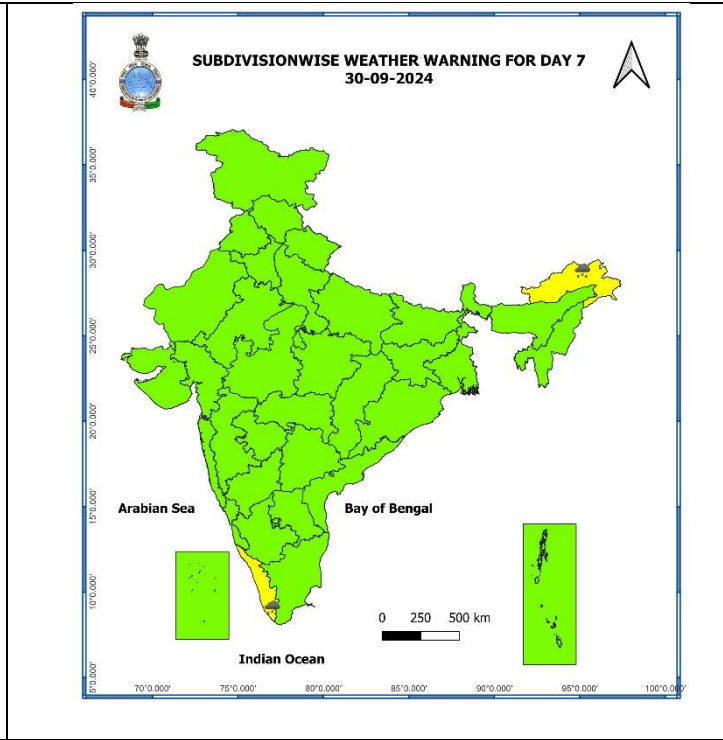
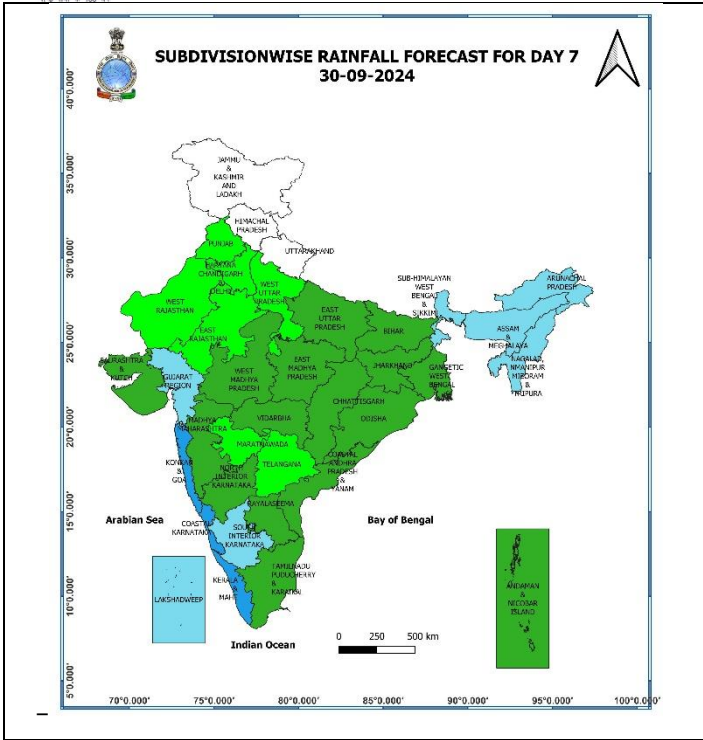
- ❖ **Heavy to very Heavy rainfall ( $\geq 12$  cm)** likely at isolated places over East Uttar Pradesh; **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places West Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Uttarakhand, Uttar Pradesh, Rajasthan, Tamil Nadu, Puducherry & Karaikal, Gujarat State, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Pradesh, Vidarbha, Chhattisgarh.
- ❖ **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea adjoining few parts of westcentral Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.

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**29 September (Day 6):**

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over East Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya.



### 30 September (Day 7):

- ❖ Heavy rainfall ( $\geq 7$  cm) likely at isolated places over Arunachal Pradesh, Kerala & Mahe.

### Weather Outlook for subsequent 3 days (During 01<sup>st</sup> October- 03<sup>rd</sup> October, 2024)

- ❖ Dry weather likely to prevail over West Rajasthan, north Gujarat, Punjab, Haryana-Chandigarh-Delhi, and Isolated rainfall activity likely over Himachal Pradesh, Uttarakhand, East Rajasthan and Uttar Pradesh.
- ❖ Isolated to Scattered rainfall likely over Central, Eastern, North Eastern and Peninsular India.

- 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 extremely heavy rainfall** very likely over Coastal Karnataka on 24<sup>th</sup>; Konkan & Goa during 24<sup>th</sup> -26<sup>th</sup>; Madhya Maharashtra on 25<sup>th</sup> & 26<sup>th</sup>; Gujarat Region on 26<sup>th</sup> September.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Madhya Maharashtra, Marathwada, North Interior Karnataka, Coastal Andhra Pradesh & Yanam on 24<sup>th</sup>; South Interior Karnataka, West Madhya Pradesh during 24<sup>th</sup> & 25<sup>th</sup>; Gujarat Region on 24<sup>th</sup>, 25<sup>th</sup> & 27<sup>th</sup>; East Madhya Pradesh, Coastal Karnataka, Vidarbha on 25<sup>th</sup>; Assam & Meghalaya on 25<sup>th</sup> & 26<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh on 26<sup>th</sup>; Saurashtra & Kutch on 26<sup>th</sup> & 27<sup>th</sup>; East Uttar Pradesh on 28<sup>th</sup> September.
- ✓ **Moderate flash flood** risk likely over few watersheds & neighbourhoods of Gujarat Region, Coastal Karnataka, Konkan & Goa.

## 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 and Gusty Winds likely over various parts of the country

- ✓ In Madhya Maharashtra, Marathwada and West Vidarbha regions of **Maharashtra**, harvesting of matured soybean, groundnut and pearl millet may only be undertaken during clear weather and immediately move the harvested produce to safer places. Alternatively, cover them with plastic sheets or tarpaulin.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, Madhya Pradesh, Chhattisgarh, Gujarat, Maharashtra, West Bengal, Odisha, Arunachal Pradesh, Assam and Meghalaya.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

ANNEXURE I

**Flash Flood Guidance:**

**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 25-09-2024:**

**Moderate flash flood risk** likely over few watersheds & neighbourhoods of following Met-subdivision in next 24 hours.

**Gujarat Region:** Tapi, Vadodara, Surat, Narmada and Chota Udaipur districts

**Konkan & Goa:** Mumbai, Thane, Ratnagiri, Sindhudurg, north & south Goa districts

**Coastal Karnataka:** Udupi Dakshin Kanada and Uttara Kannada 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.

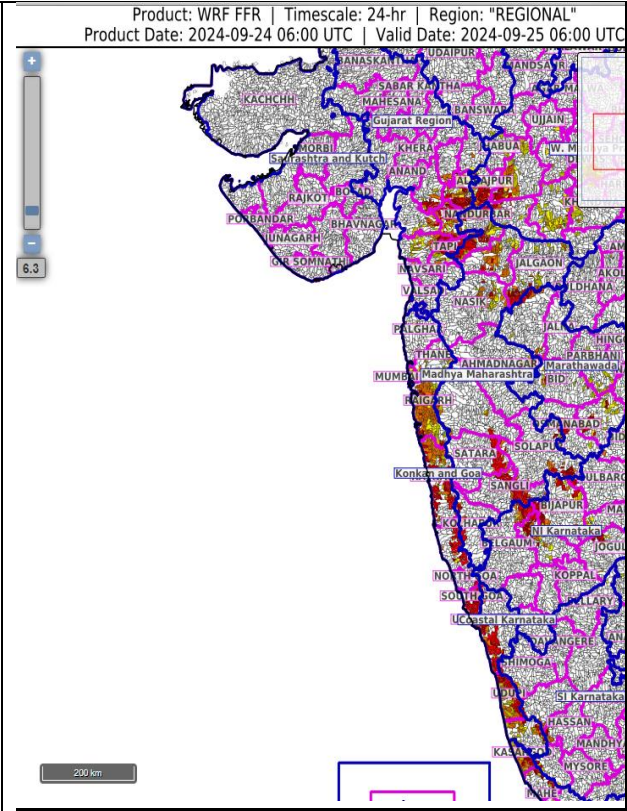


Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

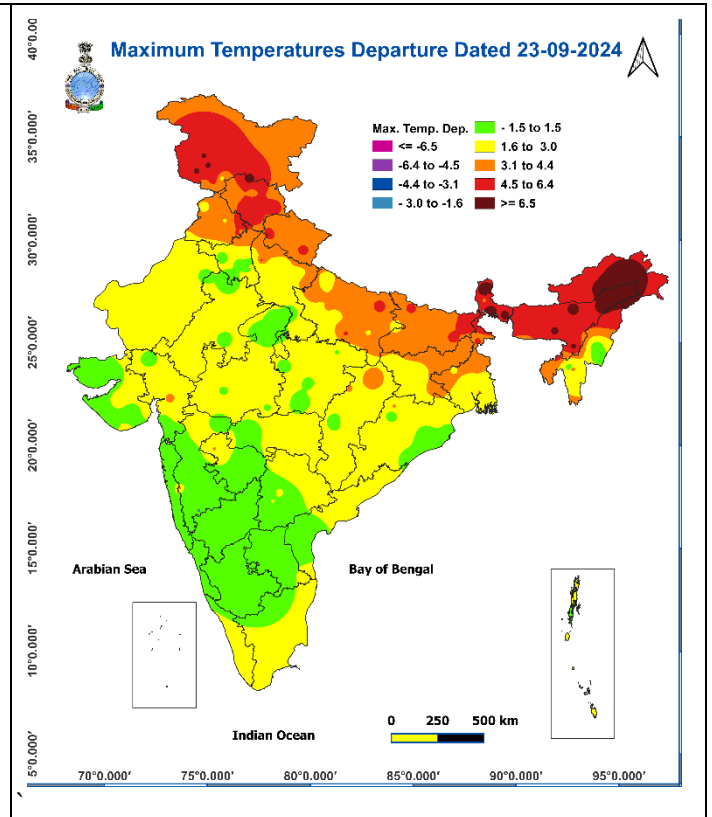
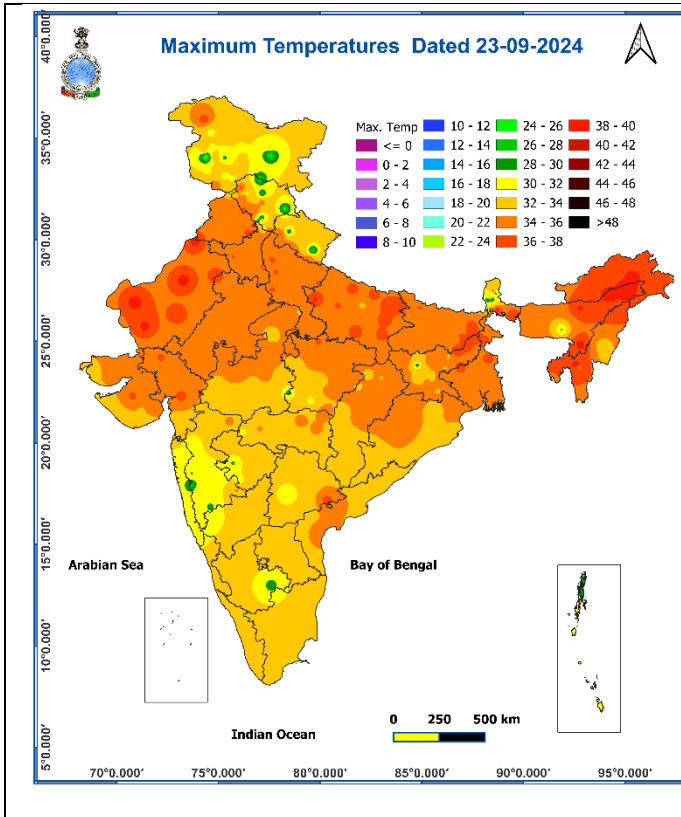


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

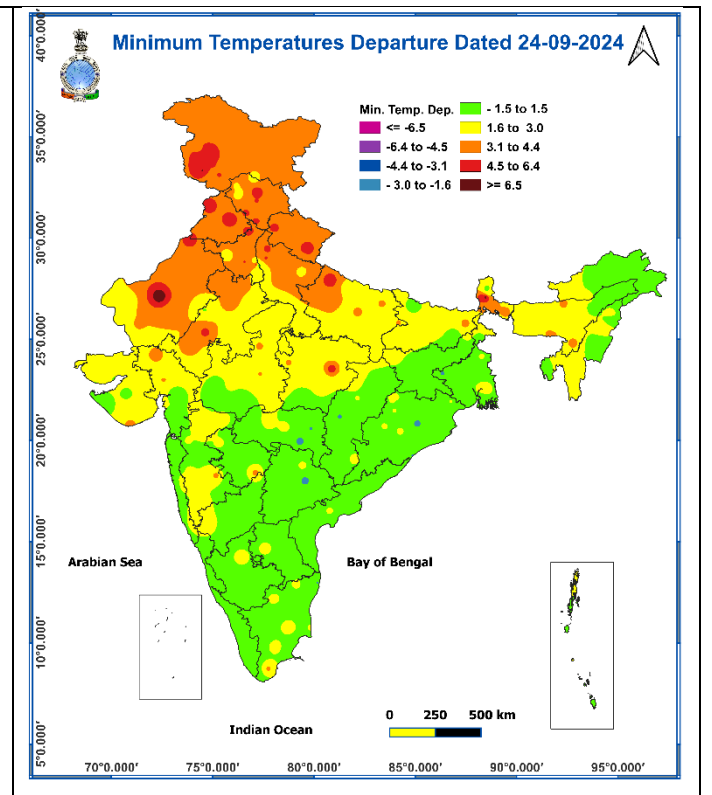
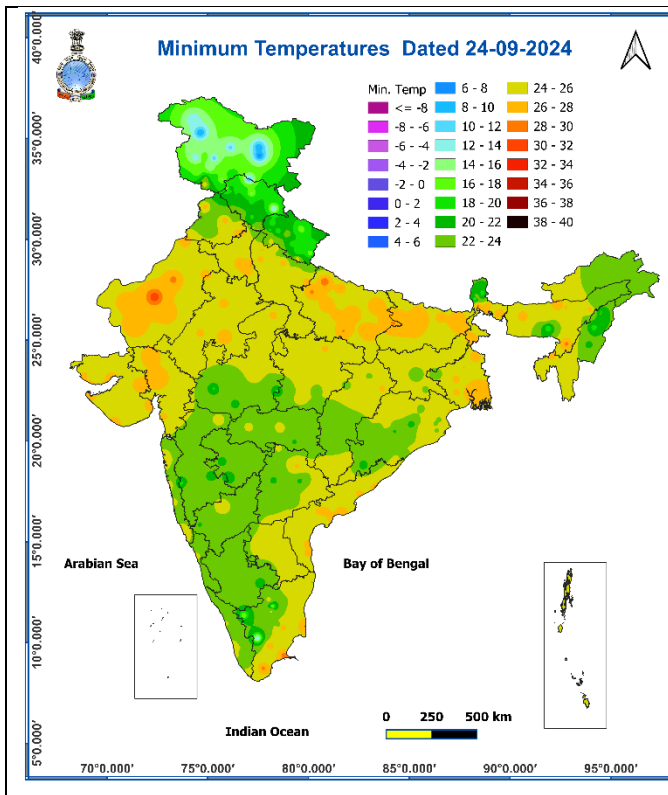
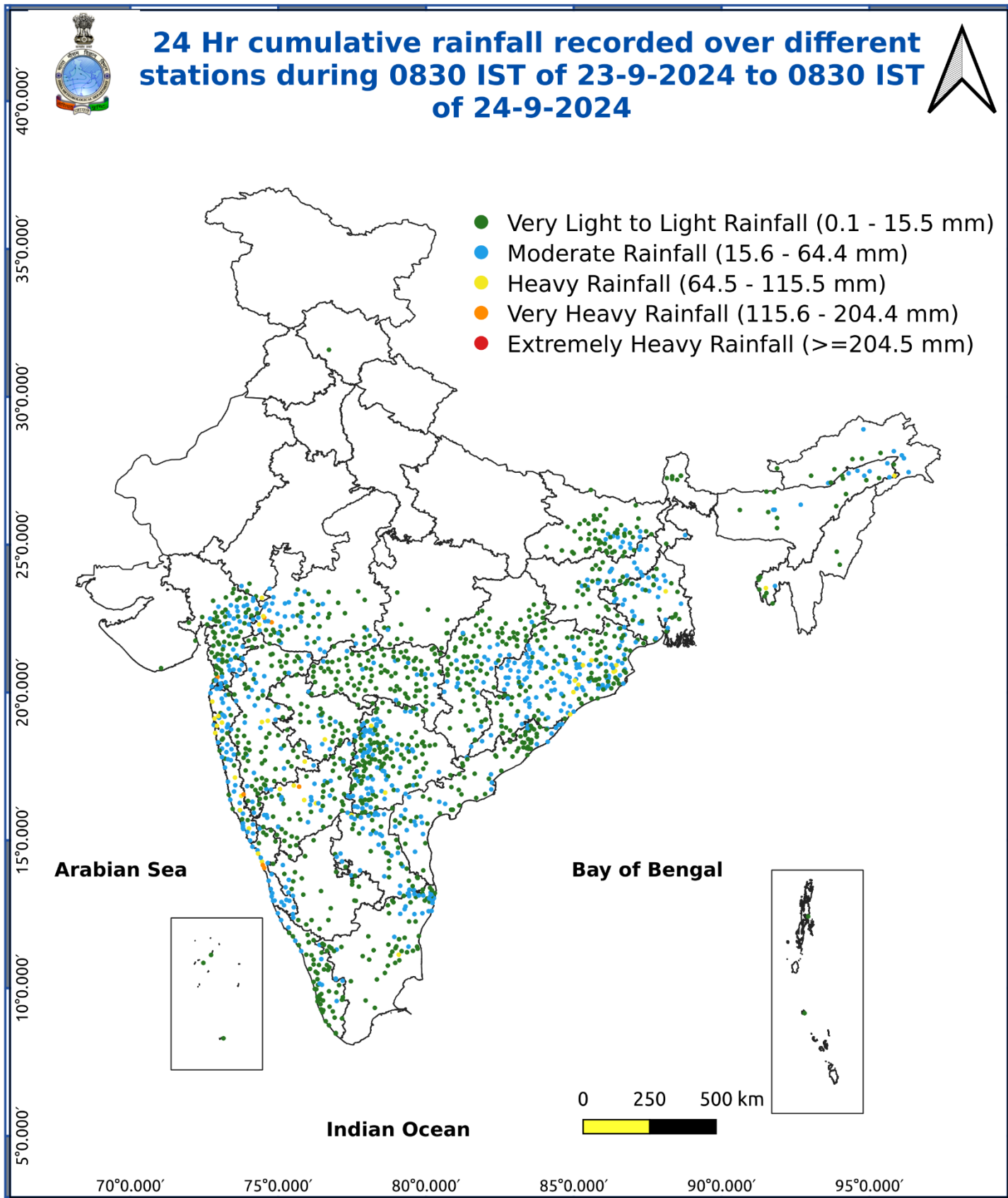




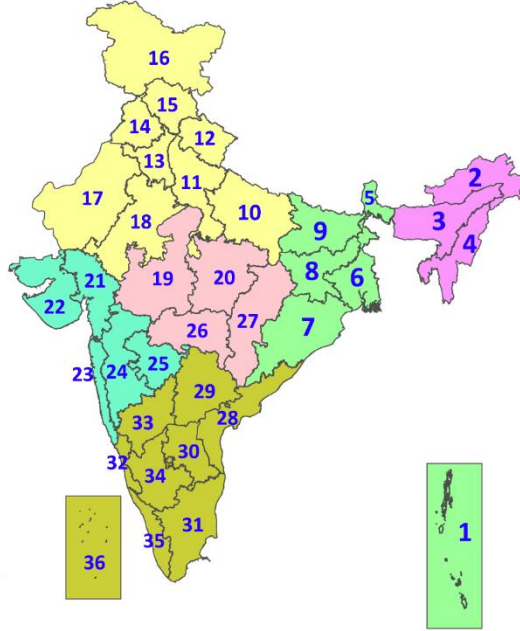
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



\* 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)

## 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



## DEFINITION/CRITERIA

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