

National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

Friday, September 20, 2024 Time of Issue: 1400 hours IST (MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ Conditions are becoming favourable for withdrawal of **Southwest Monsoon** from parts of West Rajasthan and Kachchh around from 23rd September.
- ✓ An upper air **cyclonic circulation** is likely over north Andaman Sea & neighbourhood around 21st September 2024. It is likely to move northwestwards, thereafter, under its influence, a low pressure area is likely over northwest & adjoining westcentral Bay of Bengal around 23rd September 2024.
- ✓ A **cyclonic circulation** over lies over northeast Rajasthan & neighbourhood in lower tropospheric levels.

Forecast & Warnings (upto 7 days):

Central India:

- ✓ Isolated to Scattered light to moderate rainfall very likely over the region during next 3 days; Scattered to Fairly Widespread light to moderate rainfall very likely over remaining days over the region during the week.
- ✓ Isolated **heavy rainfall** very likely over Chhattisgarh during 23rd-26th; Vidarbha & East Madhya Pradesh during 24th-26th; West Madhya Pradesh on 25th & 26th September.

East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Andaman & Nicobar Islands; Scattered to Fairly widespread light to moderate rainfall very likely over Odisha, Gangetic West Bengal during the week; Isolated to Scattered light to moderate rainfall very likely over Bihar, Jharkhand & Sub-Himalayan West Bengal & Sikkim next 5 days & Scattered to Fairly widespread light to moderate rainfall during subsequent 2 days.
- ✓ Isolated **heavy rainfall** very likely over Andaman & Nicobar Islands on 20th; Odisha during 22nd-24th; Nagaland, Manipur, Mizoram & Tripura during 22nd-26th; Arunachal Pradesh, Assam & Meghalaya during 23rd-26th; Sub-Himalayan West Bengal & Sikkim on 26th September.
- ✓ **Hot and Humid Weather** very likely over Sub-Himalayan West Bengal & Sikkim on 20th & 21st; Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 20th-22nd September.
- ✓ **Above normal Maximum temperature** very likely over Northeast India during next 3 days.

Northwest India

✓ Isolated to Scattered light to moderate rainfall very likely over the region except West Rajasthan where mainly dry weather likely to prevail during the week.

West & South Peninsular India

- ✓ Isolated to Scattered light rainfall very likely over the region during next 4 days & Scattered to Fairly widespread light to moderate rainfall thereafter for subsequent 3 days.
- ✓ Isolated **heavy rainfall** very likely over Madhya Maharashtra, Konkan & Goa on 24th & 25th; Marathwada on 25th; Gujarat Region on 25th & 26th; Coastal Andhra Pradesh & Yanam on 20th, 24th & 25th; North Interior Karnataka on 24th September.
- ✓ **Above normal Maximum temperature** very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe during next 3 days.





Main Weather Observations:

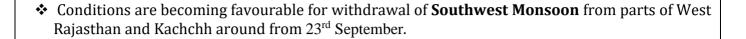
- * Rainfall distribution (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Andaman & Nicobar Islands; at a few places over Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Coastal Karnataka; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Telangana and South Interior Karnataka.
- **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy** rainfall at isolated places over Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam.
- **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): Andaman & Nicobar Islands: Hut Bay (dist South Andaman) 8, Coastal Andhra Pradesh & Yanam: Gantyada (dist Vizianagaram) 7,
- Minimum Temperature Departures (as on 20-09-2024): Minimum temperatures are appreciably above normal (3.1°C to 5.0°C) at isolated places over Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; above **normal** (1.6°C to 3.0°C) at many places over Bihar; at a few places over Rayalaseema and Marathwada: at isolated places over Gangetic West Bengal, Jharkhand, East Uttar Pradesh, Vidarbha Coastal Andhra Pradesh, Madhya Maharashtra, Gujarat region, Madhya Pradesh, East Rajasthan, Telangana and Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country. Today, the lowest minimum temperature of 20.2°C is reported at Narsinghpur (East Madhya Pradesh) over the plains of the country. (Fig.4)
- Maximum Temperature Departures (as on 19-09-2024): Maximum temperatures were markedly above normal (5.1°C or more) at many places over Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim, at a few places over Assam & Meghalaya; at isolated places over Nagaland, Manipur, Mizoram & Tripura; appreciably above normal (3.1°C to 5.0°C) at a few places over Coastal Andhra Pradesh & Yanam; at isolated places over Bihar, East Uttar Pradesh, Rayalaseema and Tamil Nadu, Puducherry & Karaikal; above normal (1.6°C to 3.0°C) at most places over Konkan & Goa and Karnataka; at many places over Gangetic West Bengal, Jharkhand, Telangana, Madhya Maharashtra, Marathwada, Kerala & Mahe; isolated places over Odisha and Chhattisgarh. These were markedly below normal (-5.1°C or less) at isolated places over Rajasthan, West Madhya Pradesh and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; below normal (-1.6°C to -3.0°C) at a few places over Haryana-Chandigarh-Delhi; at isolated places over Himachal Pradesh, Punjab, West Uttar Pradesh and near normal over rest parts of the country. Yesterday, the highest Maximum Temperature of 40.1°C was reported at Madurai (Tamil Nadu) over the country. (Fig. 2)





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Meteorological Analysis (Based on 0830 hours IST)

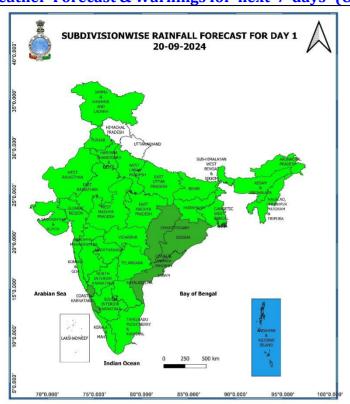


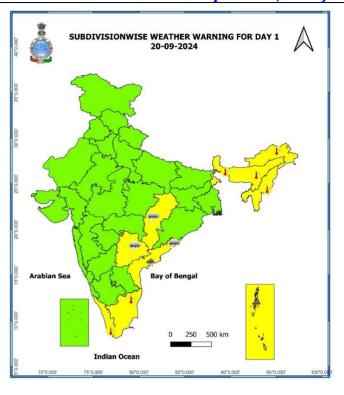
- ❖ The **Monsoon trough** at mean sea level now passes through Bikaner, Shivpuri, Sidhi, Jamshedpur, Digha and thence southeastwards to eastcentral Bay of Bengal.
- ❖ The **cyclonic circulation** over southeast Rajasthan & neighbourhood now lies over northeast Rajasthan extending upto 3.1 km above mean sea level tilting southwestwards with height.
- ❖ A **cyclonic circulation** lies over westcentral & adjoining southwest Bay of Bengal between 3.1 and 5.8 km above mean sea level.
- ❖ A **cyclonic circulation** lies over Punjab and adjoining Pakistan at 0.9 km above mean sea level.
- ❖ An upper air **cyclonic circulation** is likely over north Andaman Sea & neighborhood around 21st September 2024. It is likely to move northwestwards, thereafter, under its influence, a **low pressure area** is likely to form over northwest & adjoining westcentral Bay of Bengal around 23rd September 2024.





Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 27th September, 2024)

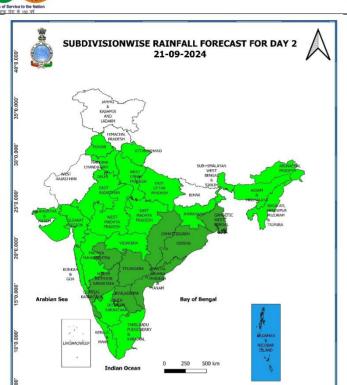


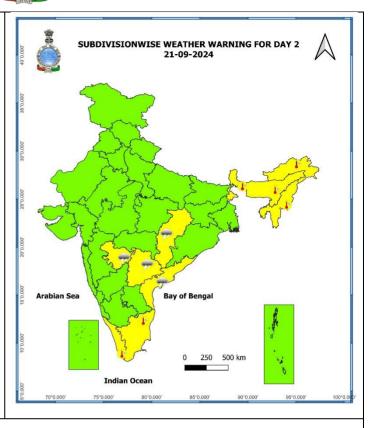


20 September (Day 1):

- ❖ Heavy rainfall (≥7 cm) very likely at isolated places over Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam.
- Thunderstorm accompanied with lightning very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Telangana, Odisha and Chhattisgarh.
- Hot & humid weather very likely at isolated places over Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura.
- Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph very likely to prevail over gulf of Mannar, off Sri Lanka coast, most parts of south Bay of Bengal, few parts of west central Arabian sea and adjoining southwest Arabian sea. Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph likely to prevail over western parts of southwest Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.





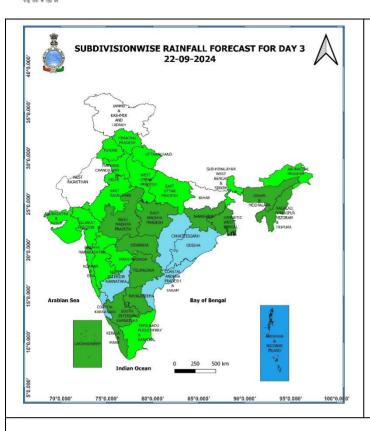


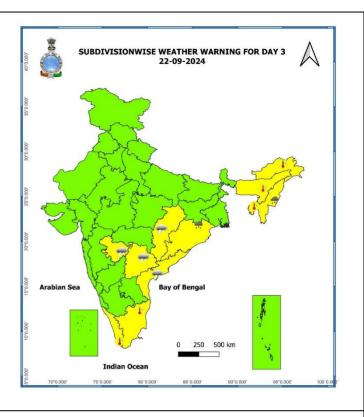
21 September (Day 2):

- **Thunderstorm accompanied with lightning** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Telangana, Chhattisgarh, Gangetic West Bengal, Odisha.
- **\Delta** Hot & humid weather very likely at isolated places over Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura.
- ❖ Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph very likely to prevail over gulf of Mannar, off Sri Lanka coast, many parts of south 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 west central Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.



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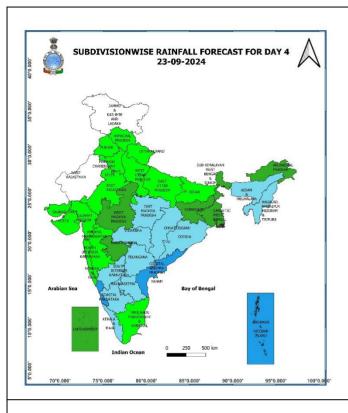


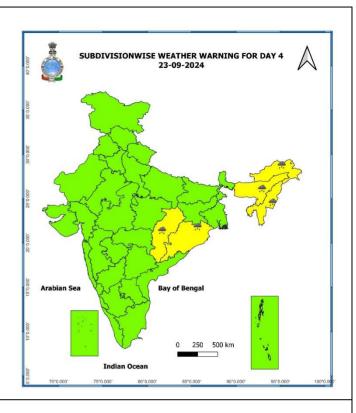
22 September (Day 3):

- ❖ Heavy rainfall (≥7 cm) very likely at isolated places over Odisha and Nagaland, Manipur, Mizoram & Tripura.
- ❖ Thunderstorm accompanied with lightning very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, East Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Jharkhand.
- ❖ Hot & humid weather very likely at isolated places over Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura.
- ❖ Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph very likely to prevail over gulf of Mannar, off Sri Lanka coast, many parts of south 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 west central Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.







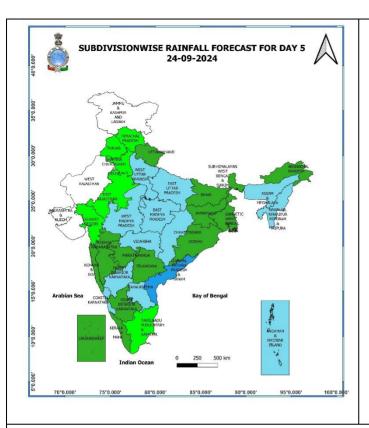


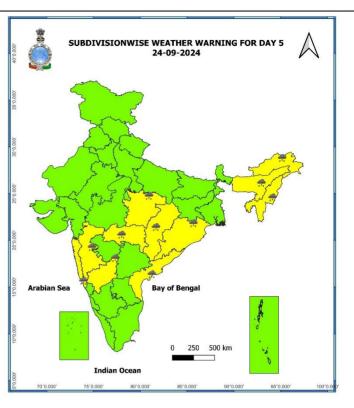
23 September (Day 4):

- ❖ Heavy rainfall (≥7 cm) likely at isolated places over Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Chhattisgarh and Odisha.
- ❖ Thunderstorm accompanied with lightning likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Rayalaseema, Karnataka, Madhya Pradesh, Vidarbha, Jharkhand and Chhattisgarh.
- ❖ Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph likely to prevail gulf of Mannar, off Sri Lanka coast, many parts of south 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 west central Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.







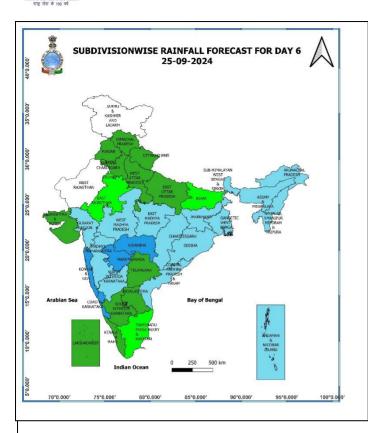


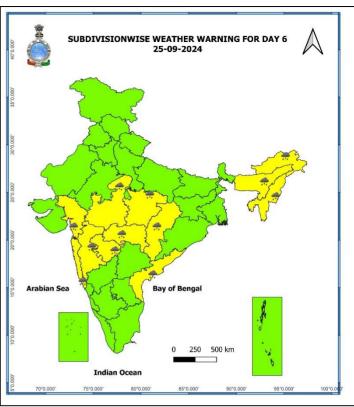
24 September (Day 5):

- ❖ Heavy rainfall (≥7 cm) likely at isolated places over Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, North Interior Karnataka, East Madhya Pradesh, Vidarbha, Chhattisgarh and Odisha.
- * Thunderstorm accompanied with lightning likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Rayalaseema, Karnataka, Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand.
- ❖ Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph likely to prevail over gulf of Mannar, off Sri Lanka coast, many parts of south and adjoining 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 west central Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.



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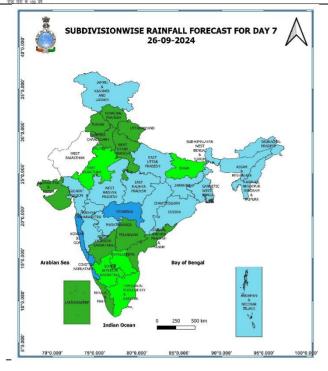


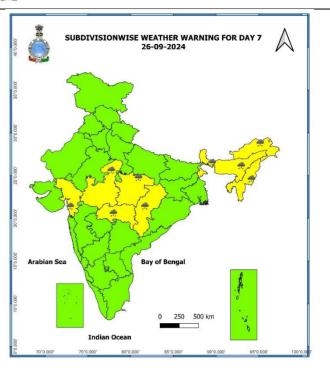
25 September (Day 6):

❖ Heavy rainfall (≥7 cm) likely at isolated places over Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat Region, Coastal Andhra Pradesh & Yanam, Madhya Pradesh, Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.



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26 September (Day 7):

❖ Heavy rainfall (≥7 cm) likely at isolated places over Gujarat Region, Madhya Pradesh, Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim.

Weather Outlook for subsequent 3 days (During 27th September - 29th September, 2024)

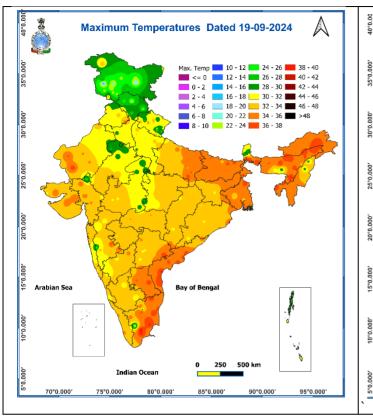
Scattered to Fairly widespread rainfall likely over many parts of the Westcentral & Eastern India; Isolated to Scattered rainfall likely over northern and peninsular India.

- 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.



Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures



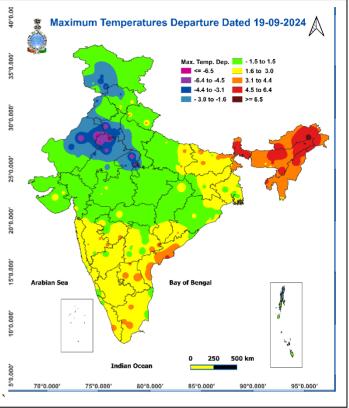
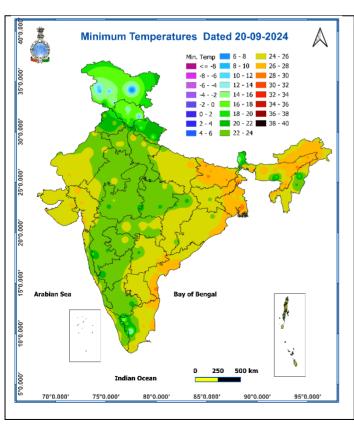


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



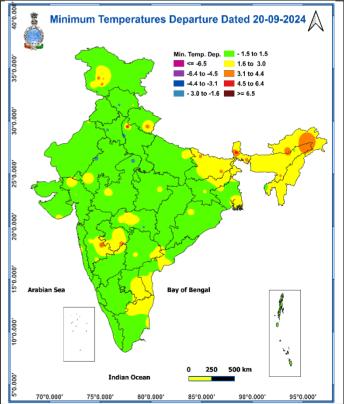
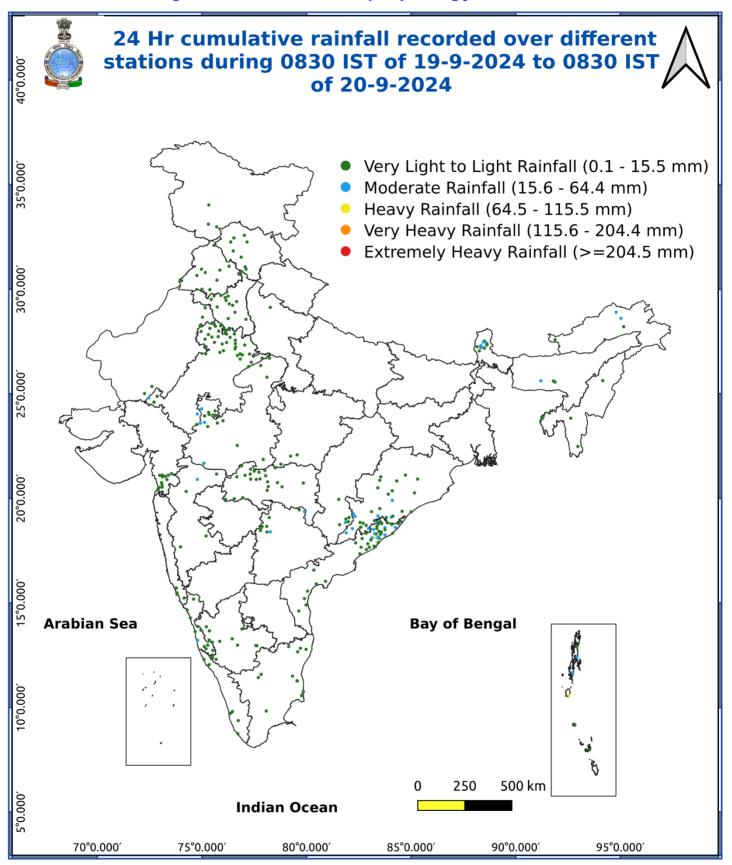






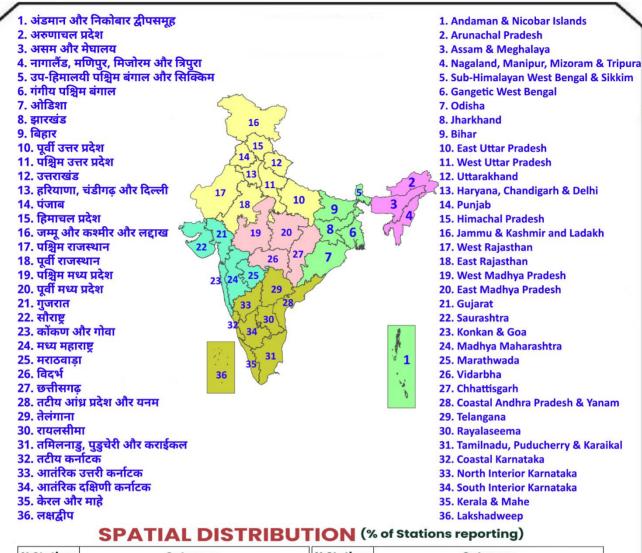
Fig. 5: Accumulated Rainfall (mm) during past 24 hours





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LEGENDS



% Stations	% 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 Wa	Cold Wave		COLOUR CODED WARNING	
_ ' ' ' ' '			- Cold Day		No Warning (No Action)		
Rain		ي Dust Storm			Watch (Be Aware)		
••• Very Heavy Rain		+ Heat Wave	Ground	Ground Frost		Alert (Be Prepared To Take Action)	
Extremely Heavy Rain		+ Warm Night			Warning (Take Action)		
Thunder & Lightning		+ Hot Day				Probabilistic Forecast	
		Tr Hot buy			Terms	Probability of Occurrence (%)	
		0			Unlikely	< 25	
Hailstorm		🚹 Hot & Humid			Likely	25 - 50	
					Very Likely	50 - 75	
😜 Dust Raising Winds		Strong Surface Winds		Most Likely	> 75		





	DEFINITION/CRITERIA					
	Heavy: 64.5 to 115.5 mm/cm *					
Rain/ Snow *	Very Heavy: 115.6 to 204.4 mm/cm*					
	Extremely Heavy: > 204.4 mm/cm *					
	When maximum temperature of a station reaches ≥40° C for plains and ≥30° C for hilly regions (a) Based on Departure from normal					
Heat Wave	Heat Wave: Maximum Temperature Departure from normal 4.5° C to 6.4° C.					
	Severe Heat Wave: Maximum Temperature Departure from normal ≥6.5° C					
	(b). Based on Actual maximum temperature					
	Heat Wave: When actual maximum temperature ≥45°C.					
	Severe Heat Wave: When actual maximum temperature ≥47°C					
	(c). Criteria for heat wave for coastal stations When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum					
	temperature ≥37°C					
	When maximum temperature remains 40°C					
Varm Night	Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C.					
	Severe Warm Night: When minimum temperature departure >6.4 °C.					
	When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions. (a). Based on departure					
Cold Wave	Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C.					
	Severe Cold Wave: Minimum Temperature Departure from normal ≤ -6.5 °C					
	(b) Based on actual Minimum Temperature (for Plains only)					
	Cold Wave : When Minimum Temperature is ≤ 4.0 °C					
	Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C					
	(c) For Coastal Stations When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C					
	When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions Based on departure					
Cold Day	Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C.					
	Severe Cold Day: Maximum Temperature Departure from normal ≤ -6.5 °C					
	Dhannan of and the plate are and disciplined the basic and the basic and the basic and the second of					
	Phenomenon of small droplets suspended in air and the horizontal visibility < 1km Moderate Fog: When the visibility between 500-200 metres					
Fog	Dense Fog: when the visibility between 50-200 metres					
	Very Dense Fog: when the visibility < 50 metres					
hunderstorm	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 ≤4°C (over Plains)					
	A strong wind that rises suddenly, lasts for atleast 1 minute					
	A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph					
Squall	Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph					
Squall	Moderate: Wind speed 52-61 kmph					
Squall	Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph					
	Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph 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					
Squall Sea State	Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph 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					
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Sea State	Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph 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 Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots) Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)					
	Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph 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 Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)					