



Thursday, May 11, 2023
Time of Issue: 0955 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Significant Meteorological features:

- ❖ The **deep depression** over southeast Bay of Bengal moved north-northwestwards with a speed of 8 kmph during past 06 hours, intensified into a **cyclonic storm "Mocha" pronounced as "Mokha"** and lay centered at 0530 hours IST of 11th May 2023 over the same region near latitude 11.2°N and longitude 88.1°E, about 510 km west-southwest of Port Blair, 1210 km south-southwest of Cox's Bazar (Bangladesh) and 1120 km south-southwest of Sittwe (Myanmar). It is very likely to move north-northwestwards and gradually intensify into a **severe cyclonic storm** around mid-night of today, the 11th May. Thereafter, it is likely to recurve gradually, move north-northeastwards from 12th May morning and intensify further into a **very severe cyclonic storm** around 12th May evening over central Bay of Bengal. It would reach its peak intensity around 13th evening. Thereafter, it is likely to weaken slightly from 14th May morning and cross southeast Bangladesh and north Myanmar coasts between Cox's Bazar (Bangladesh) and Kyaukpyu (Myanmar) around forenoon of 14th May, 2023 with maximum sustained wind speed of 120-130 kmph gusting to 145 kmph.
- ❖ A trough runs from cyclonic circulation associated with the **cyclonic storm "Mocha"** over Southeast Bay of Bengal to south Andhra Pradesh coast in lower & middle tropospheric levels.
- ❖ A fresh feeble Western Disturbance is likely to affect Western Himalayan Region from the night of 12th May, 2023.

Forecast and warning over rest parts of the country during next 5 days:

South India:

- ❖ Thunderstorm/lightning/gusty winds with light/moderate scattered to fairly widespread rainfall very likely over Kerala & Mahe during next 5 days; over South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal on 11th May.
- ❖ **Heavy rainfall** very likely at isolated places over South Interior Karnataka and Kerala & Mahe on 11th May.

Northeast India:

- ❖ Isolated to scattered rainfall likely over the region during next 2 days and scattered to fairly widespread during subsequent 2 days.
- ❖ **Heavy rainfall** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura on 13th & 15th May and over Arunachal Pradesh and Assam & Meghalaya on 14th & 15th May. **Heavy to very heavy rainfall also likely at isolated places over Nagaland, Manipur, Mizoram & Tripura on 14th May.**

No significant weather likely over rest parts of the country.

Maximum Temperatures, its forecast and Heat Wave Warnings (Graphics in Annexure II):

- ❖ Yesterday, Maximum Temperatures were below 40°C over many parts of the country except over parts of East India, Rajasthan, East Uttar Pradesh, Madhya Pradesh, interior Maharashtra & Gujarat; where these were between 40-44°C. Maximum Temperatures were above normal by 4-7°C over many parts of Saurashtra & Kutch, Bihar, West Bengal west Assam, Meghalaya and Nagaland, Manipur, Mizoram & Tripura India. It was near normal to below normal over rest parts of the country.
- ❖ Due to humid air and high temperature, **Hot and Discomfort weather** is very likely over Gujarat and Konkan during next 2 days; over Odisha during next 5 days; Kerala and Tamil Nadu during 13th-15th May.
- ❖ **Heat wave conditions** very likely in isolated pockets over Bihar on 11th May; over West Bengal and Saurashtra & Kutch during 11th-12th May and over Coastal Andhra Pradesh & Yanam during 13th-15th May.

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Main Weather Observations

- ❖ **Rainfall/thundershowers observed (from 0830 to 1730 hrs IST of yesterday):** at isolated places over Andaman & Nicobar Islands, North Interior Karnataka and Chhattisgarh.
- ❖ **Heavy Rainfall observed (from 0830 to 1730 hrs IST of yesterday):** Nil.
- ❖ **Significant rainfall recorded (from 0830 to 1730 hrs IST of yesterday):** (in cm): Port Blair-1.
- ❖ **Thunderstorm observed (from 0830 hrs IST of yesterday to 0530 hrs IST of today):** at isolated places over North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Assam & Meghalaya.
- ❖ Yesterday, **Heat wave conditions** at a few places with severe **heat wave conditions** at isolated places observed over West Bengal; **Heat wave conditions** observed in isolated pockets over Bihar.
- ❖ **Minimum Temperature Departures (as on 10-05-2023):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at many places over Nagaland, Manipur, Mizoram & Tripura and Madhya Maharashtra; **above normal (1.6°C to 3.0°C)** at many places over Jharkhand and Gangetic West Bengal; at a few places over Assam & Meghalaya, Kerala & Mahe and Andaman & Nicobar Islands; at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha, Saurashtra & Kutch, Telangana and Coastal Andhra Pradesh & Yanam. They were **markedly below normal (-5.1°C or less)** at a few places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad and Haryana, Chandigarh & Delhi; at isolated places over West Uttar Pradesh, East Rajasthan and Madhya Pradesh; **appreciably below normal (-3.1°C to -5.0°C)** at most places over and Uttarakhand and Punjab; at many places over Himachal Pradesh; at a few places over East Uttar Pradesh; at isolated places over West Rajasthan; **below normal (-1.6°C to -3.0°C)** at a few places over Chhattisgarh and Vidarbha; at isolated places over Bihar and Tamil Nadu, Puducherry & Karaikal and **near normal** over rest parts of the country. Yesterday, the **lowest minimum temperature** of **16.2°C** was reported at **Karnal (Haryana)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 10-05-2023):** Maximum temperatures were **markedly above normal (5.1°C or more)** at most places over Nagaland, Manipur, Mizoram & Tripura; at many places over Sub-Himalayan West Bengal & Sikkim; at a few places over Gangetic West Bengal and Assam & Meghalaya; at isolated places over Bihar; **above normal (1.6°C to 3.0°C)** at many places over Gujarat State and Jharkhand at a few places over Madhya Maharashtra and Odisha; at isolated places over West Madhya Pradesh, Konkan & Goa, East Uttar Pradesh, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal. They were **appreciably below normal (-3.1°C to -5.0°C)** at a few places over West Uttar Pradesh; **below normal (-1.6°C to -3.0°C)** at most places over Uttarakhand and Telangana; at a few places over East Madhya Pradesh, Vidarbha, Rayalaseema, Andaman & Nicobar Island; at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, West Uttar Pradesh and **near normal** over rest parts of the country. Yesterday, the **highest maximum temperature** of **44.6°C** was reported at **Jalgaon (Madhya Maharashtra)**.

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Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **deep depression** over southeast Bay of Bengal moved north-northwestwards with a speed of 8 kmph during past 06 hours, intensified into a **cyclonic storm "Mocha" pronounced as "Mokha"** and lay centered at 0530 hours IST of 11th May 2023 over the same region near latitude 11.2°N and longitude 88.1°E, about 510 km west-southwest of Port Blair, 1210 km south-southwest of Cox's Bazar (Bangladesh) and 1120 km south-southwest of Sittwe (Myanmar). It is very likely to move north-northwestwards and gradually intensify into a **severe cyclonic storm** around mid-night of today, the 11th May. Thereafter, it is likely to recurve gradually, move north-northeastwards from 12th May morning and intensify further into a **very severe cyclonic storm** around 12th May evening over central Bay of Bengal. It would reach its peak intensity around 13th May evening. Thereafter, it is likely to weaken slightly from 14th May morning and cross southeast Bangladesh and north Myanmar coasts between Cox's Bazar (Bangladesh) and Kyaukpyu (Myanmar) around forenoon of 14th May, 2023 with maximum sustained wind speed of 120-130 kmph gusting to 145 kmph.
- ❖ The **trough** now runs from cyclonic circulation associated with the **cyclonic storm "Mocha"** over Southeast Bay of Bengal to south Andhra Pradesh coast extending upto 5.8 km above mean sea level tilting southwestwards with height.
- ❖ The **Western Disturbance** as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 81°E to the north of Lat. 30°N and it is moving away east-northeastwards.
- ❖ The **trough** in westerlies roughly along Long. 89°E to the north of Lat. 22°N at 1.5 km above mean sea level persists.
- ❖ A fresh feeble Western Disturbance is likely to affect Western Himalayan Region from the night of 12th May, 2023.

Weather Forecast for next 5 days (Upto 0830 hours IST of 16th May, 2023)

- ❖ Meteorological sub-division wise detailed 5 days rainfall forecast is given in Table-1.
- Maximum Temperatures Forecast and Heat Wave Warnings:**
- ❖ **Northwest & Central India:** Maximum temperatures are likely to rise by 2-4°C over most parts of the region during next 2 days and no significant change thereafter.
 - ❖ **South India:** Maximum temperatures are likely to rise by 2-4°C over most parts of the region during next 5 days.
 - ❖ **Maharashtra:** Maximum temperatures are likely to rise by 3-4°C over most parts during next 2 days and no significant change thereafter.
 - ❖ No significant change in Maximum temperatures likely over rest parts of the country.

Weather Outlook for subsequent 2 days (During 16th-18th May, 2023)

- ❖ Scattered to fairly widespread light/moderate rainfall likely to continue over northeast India and Islands.
- ❖ Isolated to Scattered rainfall/snowfall over Western Himalayan Region and isolated rainfall over Konkan & Goa, Karnataka, Kerala and Tamil Nadu.
- ❖ Dry weather over rest parts of the country.

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Weather Warning during next 5 days

11 May (Day 1): ♦ **Heavy to very heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands and **heavy rainfall** at isolated places over South Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** at isolated places over Kerala & Mahe; **with lightning** at isolated places over South Interior Karnataka.

♦ **Gale Wind likely with wind speed:**

- **60-70 kmph gusting to 80 kmph-** over Southeast Bay of Bengal and **80-90 kmph gusting to 100 kmph** from evening;
- **Squally Wind 40-55 kmph gusting to 65 kmph-** over Eastcentral Bay of Bengal and **80-90 kmph gusting to 100 kmph** by evening;
- **Squally Wind 45-55 kmph gusting to 65 kmph-** over Westcentral Bay of Bengal and **60-70 kmph gusting to 80 kmph** by afternoon;

♦ **Squally Wind likely with wind speed:**

- **50-60 kmph gusting to 70 kmph-** over Andaman Sea and Andaman & Nicobar Islands;

♦ **Heat wave to severe heat wave conditions** very likely in isolated pockets over West Bengal and Saurashtra & Kutch; **Heat wave conditions** at isolated places over Bihar.

12 May (Day 2): **Heavy rainfall** very likely at isolated places over Andaman Islands.

♦ **Thunderstorm with lightning** at isolated places over Andaman & Nicobar Islands and Kerala & Mahe.

♦ **Gale Wind likely with wind speed:**

- **110-120 kmph gusting to 135 kmph-** over Eastcentral Bay of Bengal;
- **100-110 kmph gusting to 120 kmph-** over Southeast Bay of Bengal by morning to evening;
- **110-120 kmph gusting to 130 kmph-** over Westcentral Bay of Bengal on morning and **120-130 kmph gusting to 145 kmph** on evening.

♦ **Squally Wind likely with wind speed 50-60 kmph gusting to 70 kmph-** over north Andaman Sea and Northeast Bay of Bengal;

♦ **Heat wave conditions** very likely in isolated pockets over West Bengal and Saurashtra & Kutch.

13 May (Day 3): ♦ **Heavy rainfall** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm with lightning** likely at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands and Kerala & Mahe.

♦ **Gale Wind likely with wind speed:**

- **130-140 kmph gusting to 155 kmph-** over Eastcentral Bay of Bengal on morning and **140-150 kmph gusting to 165 kmph** on evening;
- **80-90 kmph gusting to 100 kmph-** over Northeast Bay of Bengal from morning and **130-140 kmph gusting to 155 kmph** during morning to night;
- **100-110 kmph gusting to 120 kmph-** over Westcentral Bay of Bengal on evening and decrease thereafter.

♦ **Squally Wind likely with wind speed 55-65 kmph gusting to 75 kmph-** over Northwest & Southeast Bay of Bengal;

♦ **Heat wave conditions** very likely in isolated pockets over Saurashtra & Kutch and Coastal Andhra Pradesh & Yanam.

14 May (Day 4): ♦ **Heavy rainfall** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, east Arunachal Pradesh and east Assam.

♦ **Thunderstorm with lightning** likely at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, West Bengal & Sikkim, Andaman & Nicobar Islands and Kerala & Mahe.

♦ **Gale Wind likely with wind speed:**

- **100-110 kmph gusting to 120 kmph-** over Eastcentral Bay of Bengal by morning;
- **125-135 kmph gusting to 150 kmph-** over Northeast Bay of Bengal on forenoon and significantly decrease thereafter.

♦ **Squally Wind likely with wind speed:**

- **50-60 kmph gusting to 70 kmph-** over Tripura, Mizoram & South Manipur;
- **55-65 kmph gusting to 75 kmph-** over Northwest Bay of Bengal.

♦ **Heat wave conditions** very likely in isolated pockets over Coastal Andhra Pradesh & Yanam.

15 May (Day 5): ♦ **Heavy rainfall** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, east Arunachal Pradesh and east Assam.

♦ **Thunderstorm with lightning** likely at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands and Kerala & Mahe.

♦ **Heat wave conditions** very likely in isolated pockets over Coastal Andhra Pradesh & Yanam.

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Table-1

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

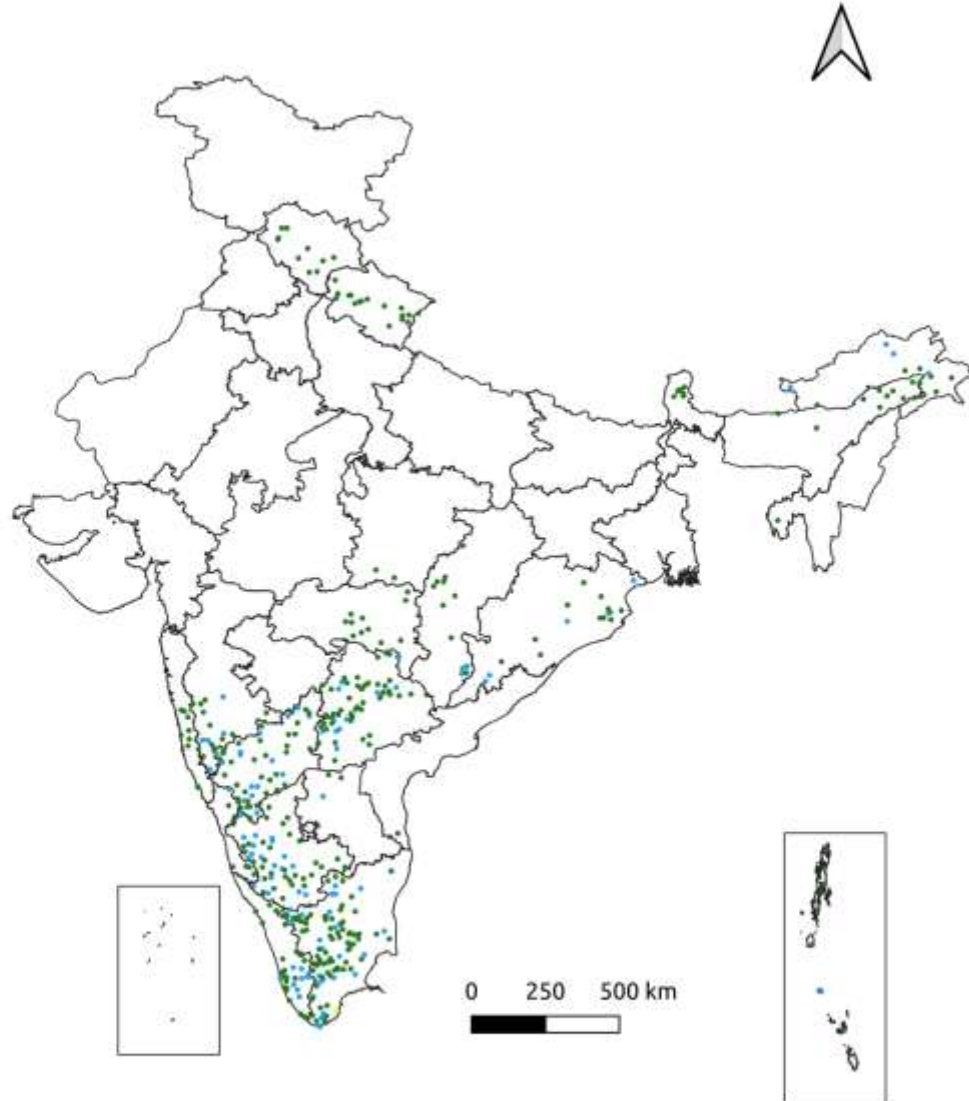
Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many Places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0



Fig. 1: Accumulated Rainfall (mm) during past 24 hours



24 Hr cumulative rainfall recorded over different stations
during 0830 IST of 9-5-2023 to 0830 IST of 10-5-2023



Legends

- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall (≥ 204.5 mm)

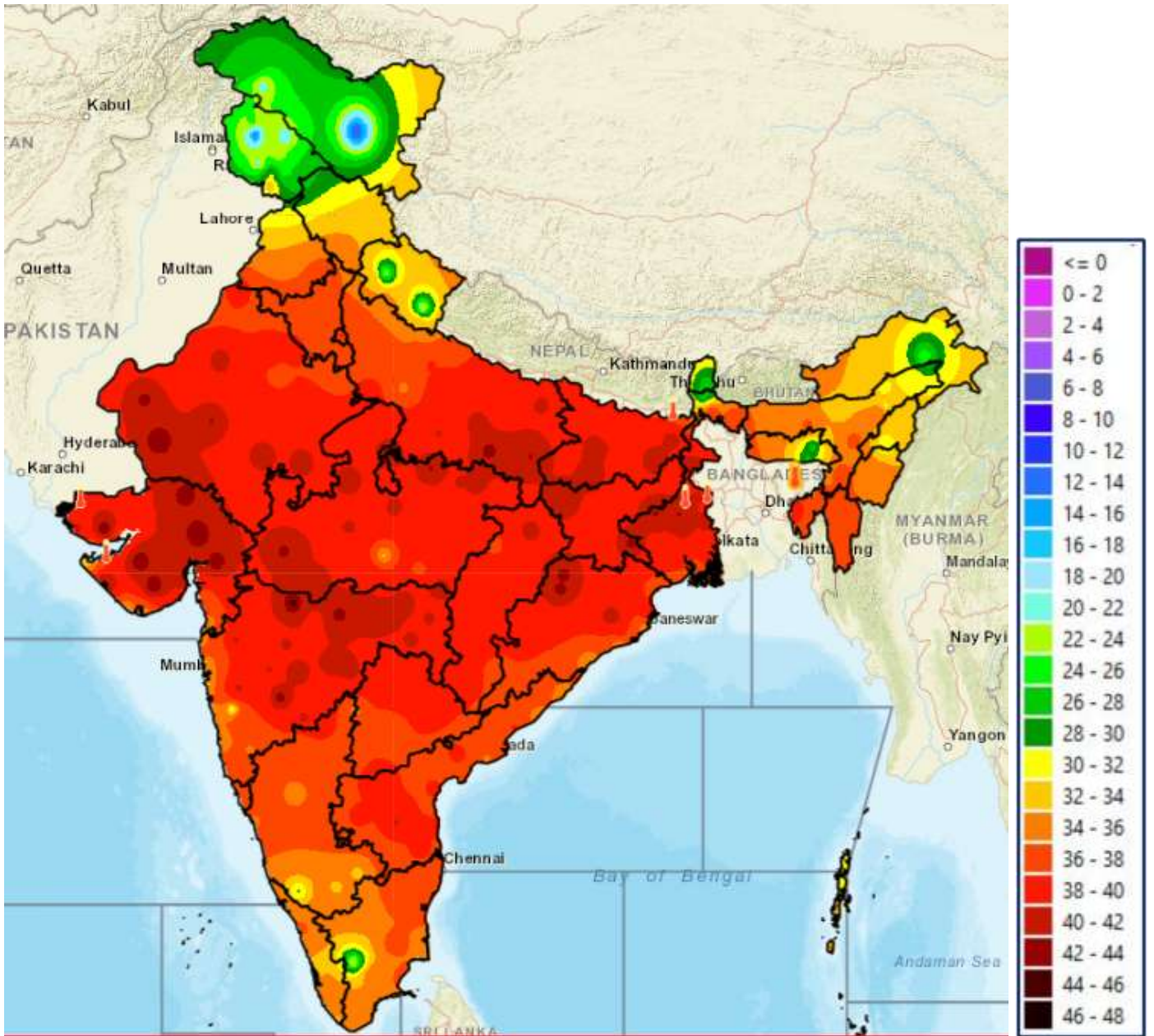
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Fig. 2: Maximum Temperatures Dated 10.05.2023



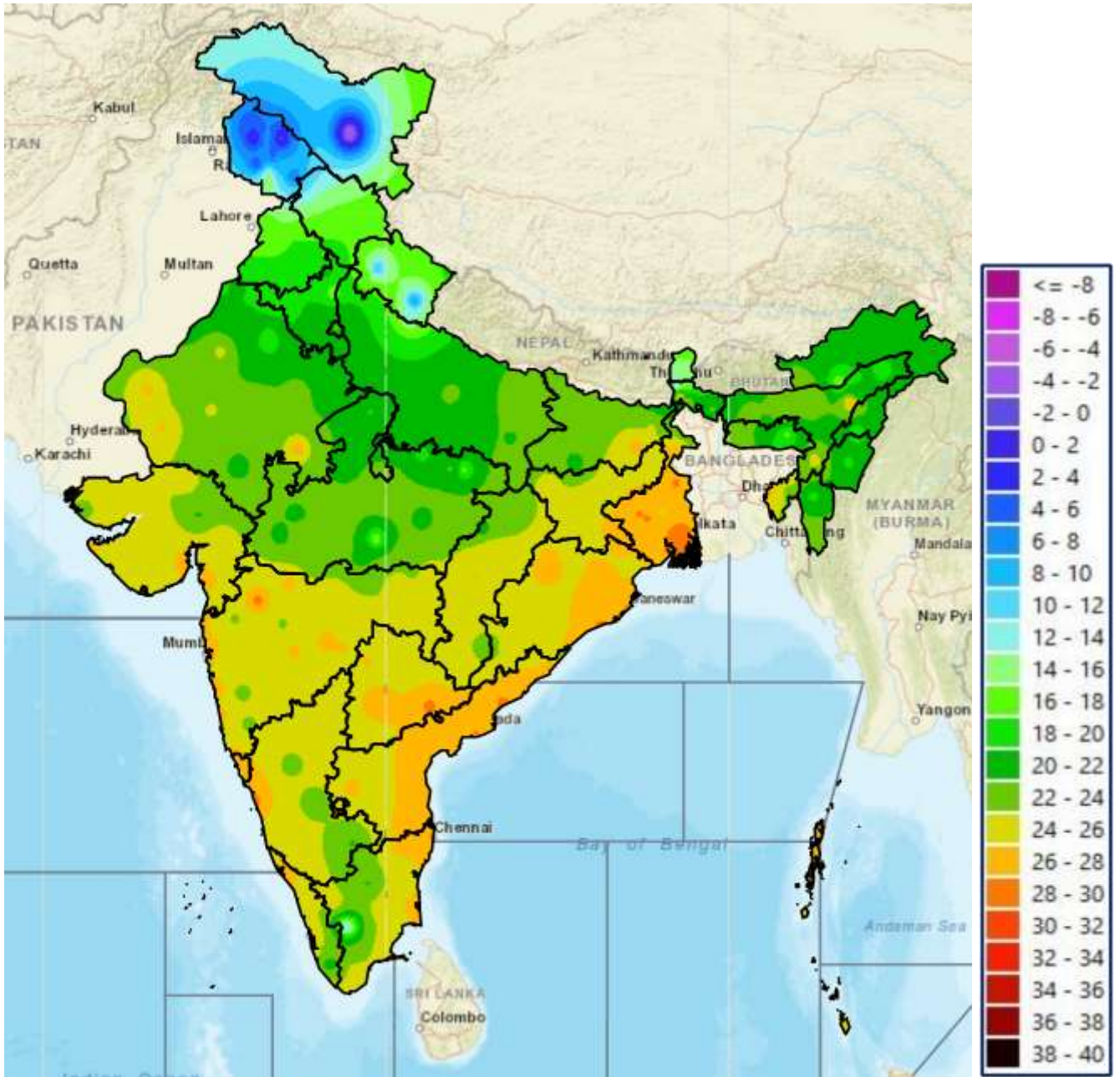
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Fig. 3: Minimum Temperatures Dated 10.05.2023



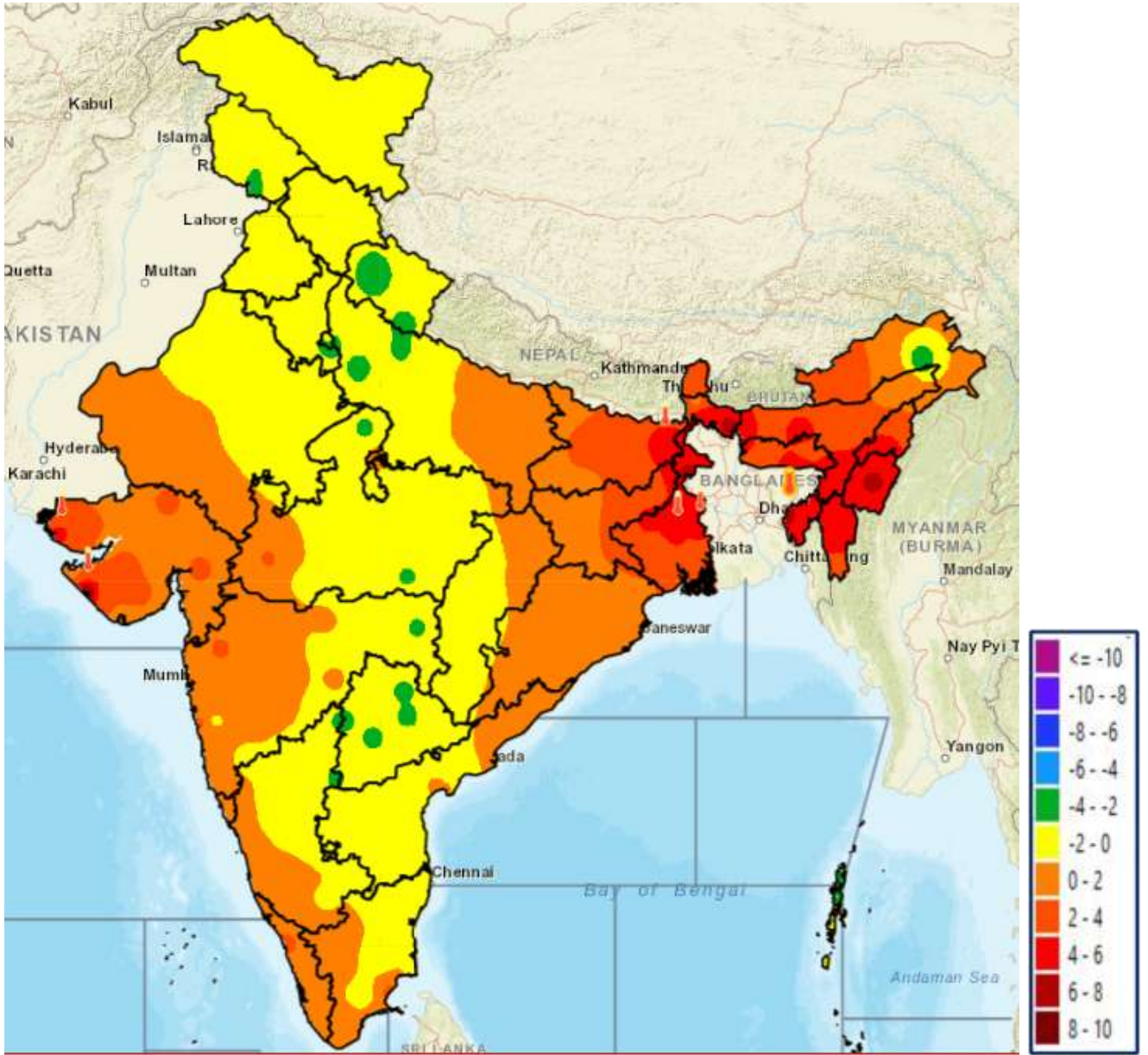
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Fig. 4: Departure from Normal of Maximum Temperatures Dated 10.05.2023



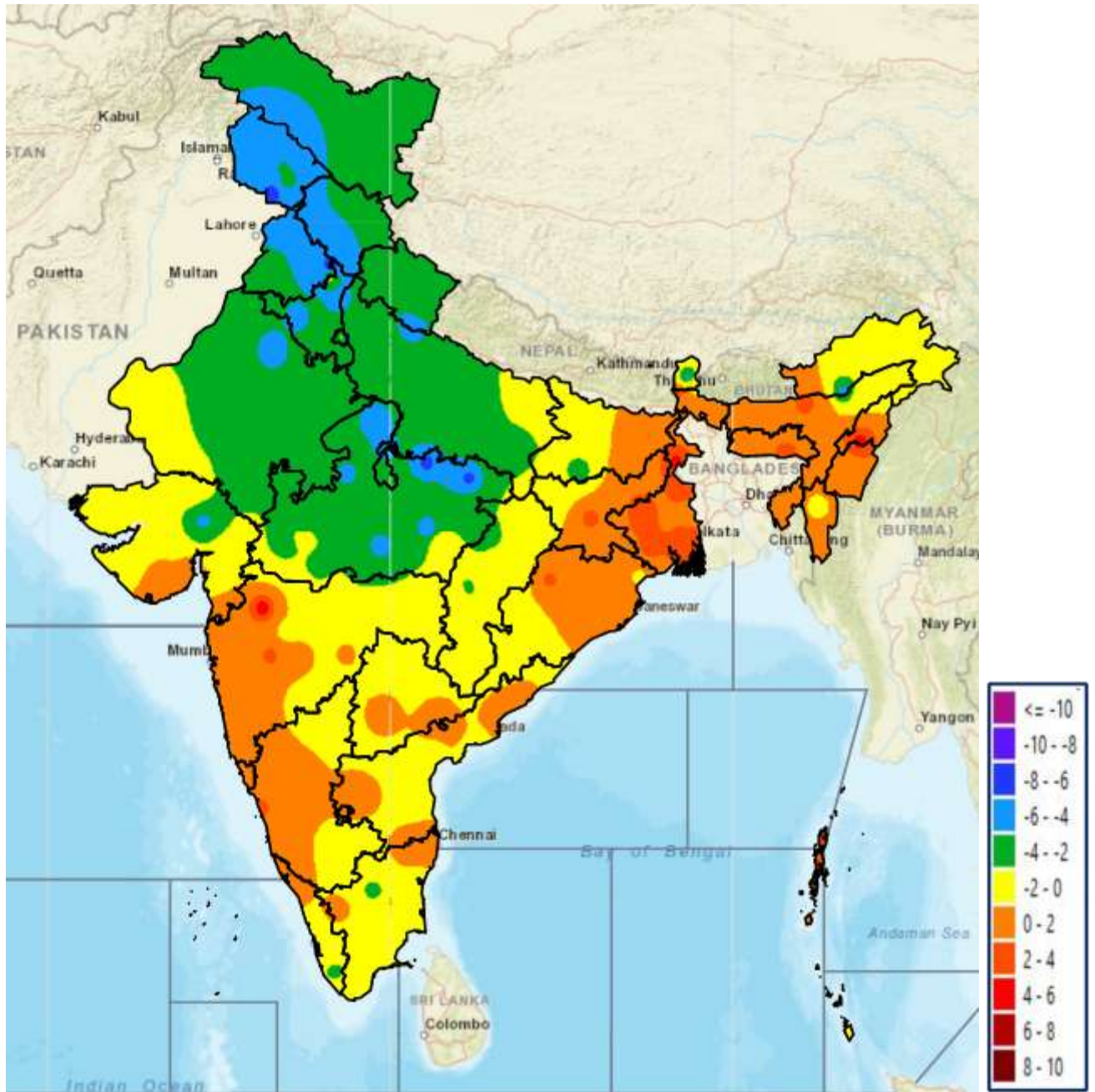
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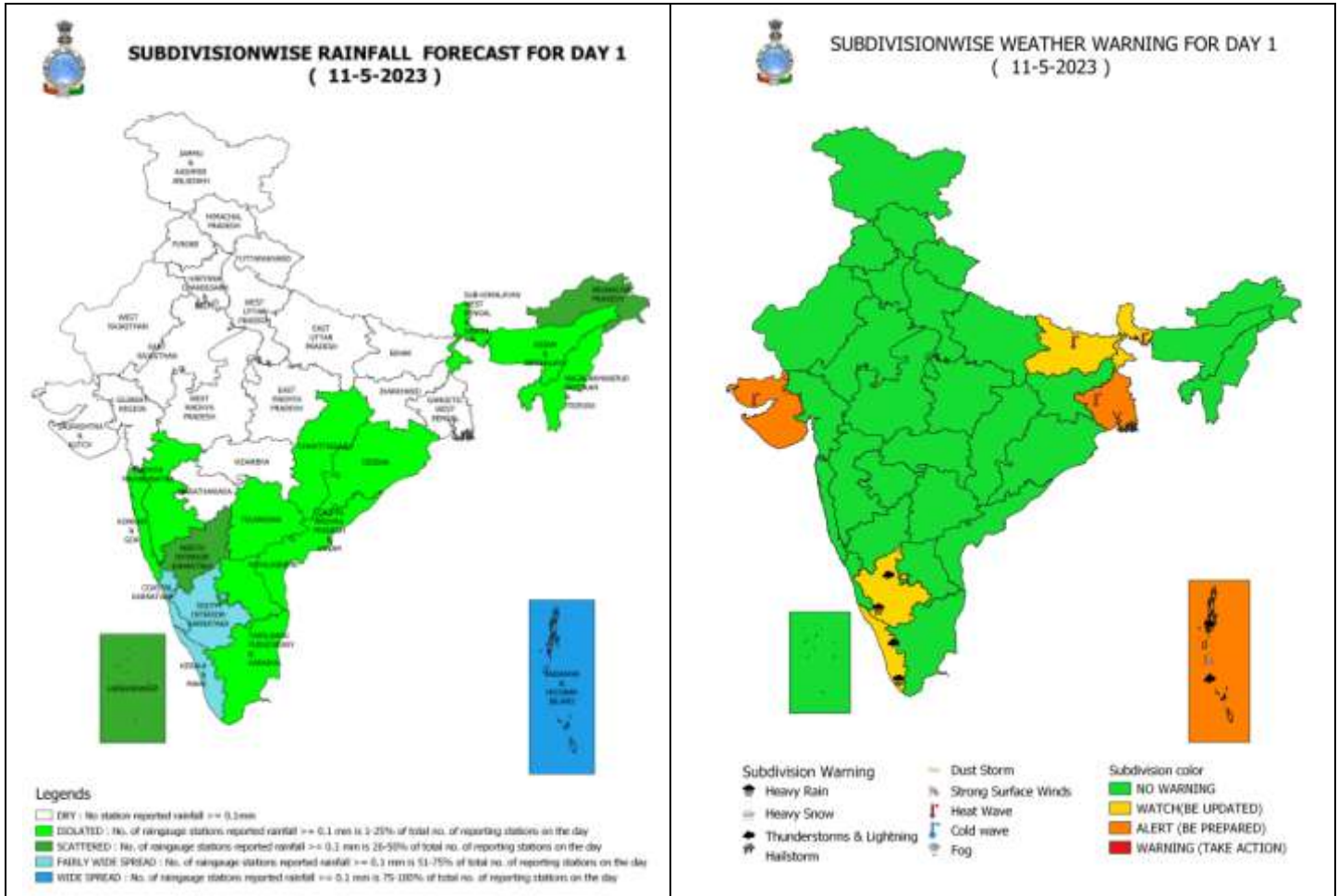
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Fig. 5: Departure from Normal of Minimum Temperatures Dated 10.05.2023



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11 May (Day 1): ♦ **Heavy to very heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands and **heavy rainfall** at isolated places over South Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** at isolated places over Kerala & Mahe; **with lightning** at isolated places over South Interior Karnataka.

♦ **Gale Wind likely with wind speed:**

- **60-70 kmph gusting to 80 kmph-** over Southeast Bay of Bengal and **80-90 kmph gusting to 100 kmph** from evening;
- **Squally Wind 40-55 kmph gusting to 65 kmph-** over Eastcentral Bay of Bengal and **80-90 kmph gusting to 100 kmph** by evening;
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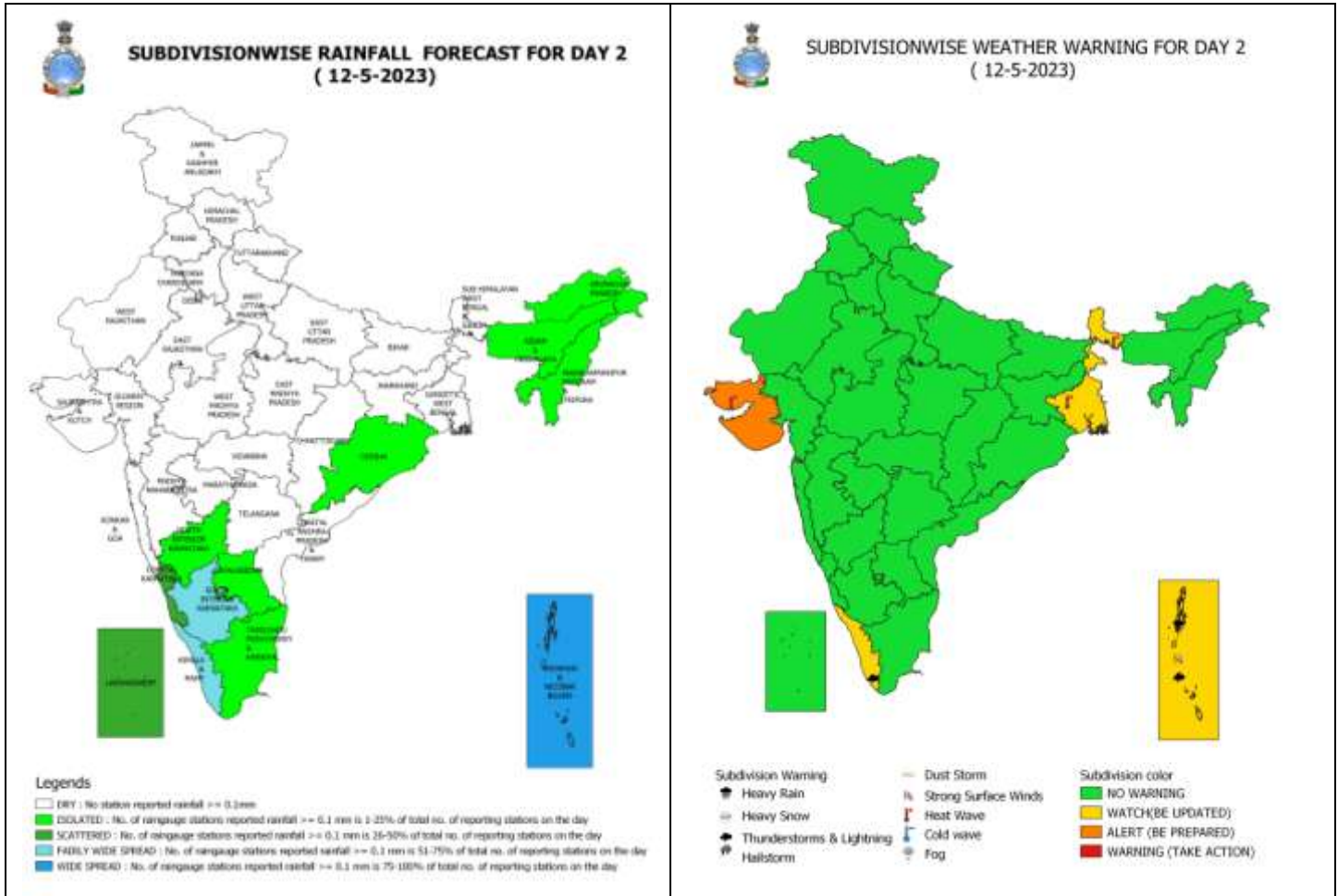
- **50-60 kmph gusting to 70 kmph-** over Andaman Sea and Andaman & Nicobar Islands;

♦ **Heat wave to severe heat wave conditions** very likely in isolated pockets over West Bengal and Saurashtra & Kutch; **Heat wave conditions** at isolated places over Bihar.

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12 May (Day 2): Heavy rainfall very likely at isolated places over Andaman Islands.

◆ **Thunderstorm with lightning** at isolated places over Andaman & Nicobar Islands and Kerala & Mahe.

◆ **Gale Wind likely with wind speed:**

- **110-120 kmph gusting to 135 kmph-** over Eastcentral Bay of Bengal;
- **100-110 kmph gusting to 120 kmph-** over Southeast Bay of Bengal by morning to evening;
- **110-120 kmph gusting to 130 kmph-** over Westcentral Bay of Bengal on morning and **120-130 kmph gusting to 145 kmph** on evening.

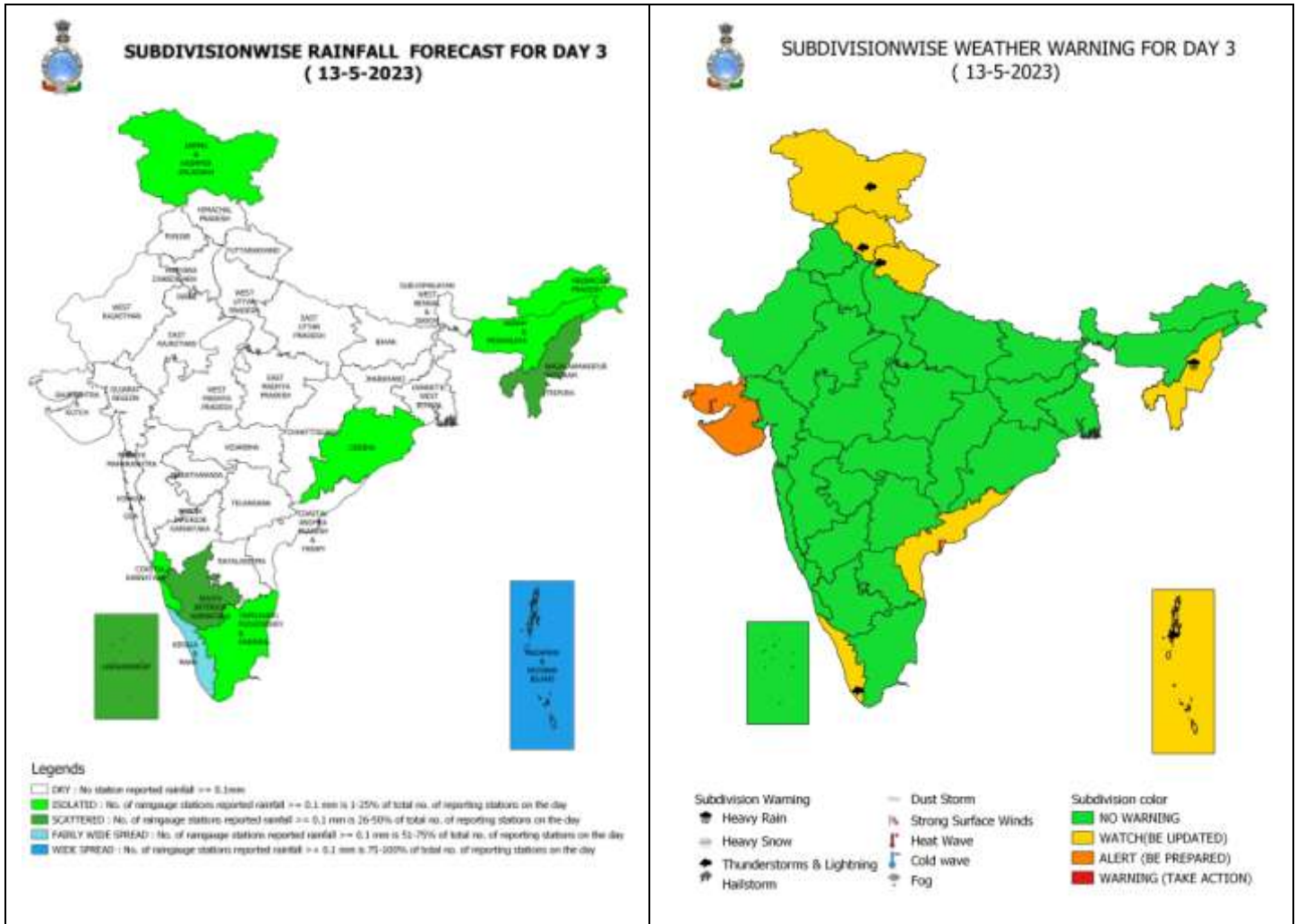
◆ **Squally Wind likely with wind speed 50-60 kmph gusting to 70 kmph-** over north Andaman Sea and Northeast Bay of Bengal;

◆ **Heat wave conditions** very likely in isolated pockets over West Bengal and Saurashtra & Kutch.

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13 May (Day 3): ♦ Heavy rainfall likely at isolated places over Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm with lightning** likely at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands and Kerala & Mahe.

♦ **Gale Wind likely with wind speed:**

- **130-140 kmph gusting to 155 kmph-** over Eastcentral Bay of Bengal on morning and **140-150 kmph gusting to 165 kmph** on evening;
- **80-90 kmph gusting to 100 kmph-** over Northeast Bay of Bengal from morning and **130-140 kmph gusting to 155 kmph** during morning to night;
- **100-110 kmph gusting to 120 kmph-** over Westcentral Bay of Bengal on evening and decrease thereafter.

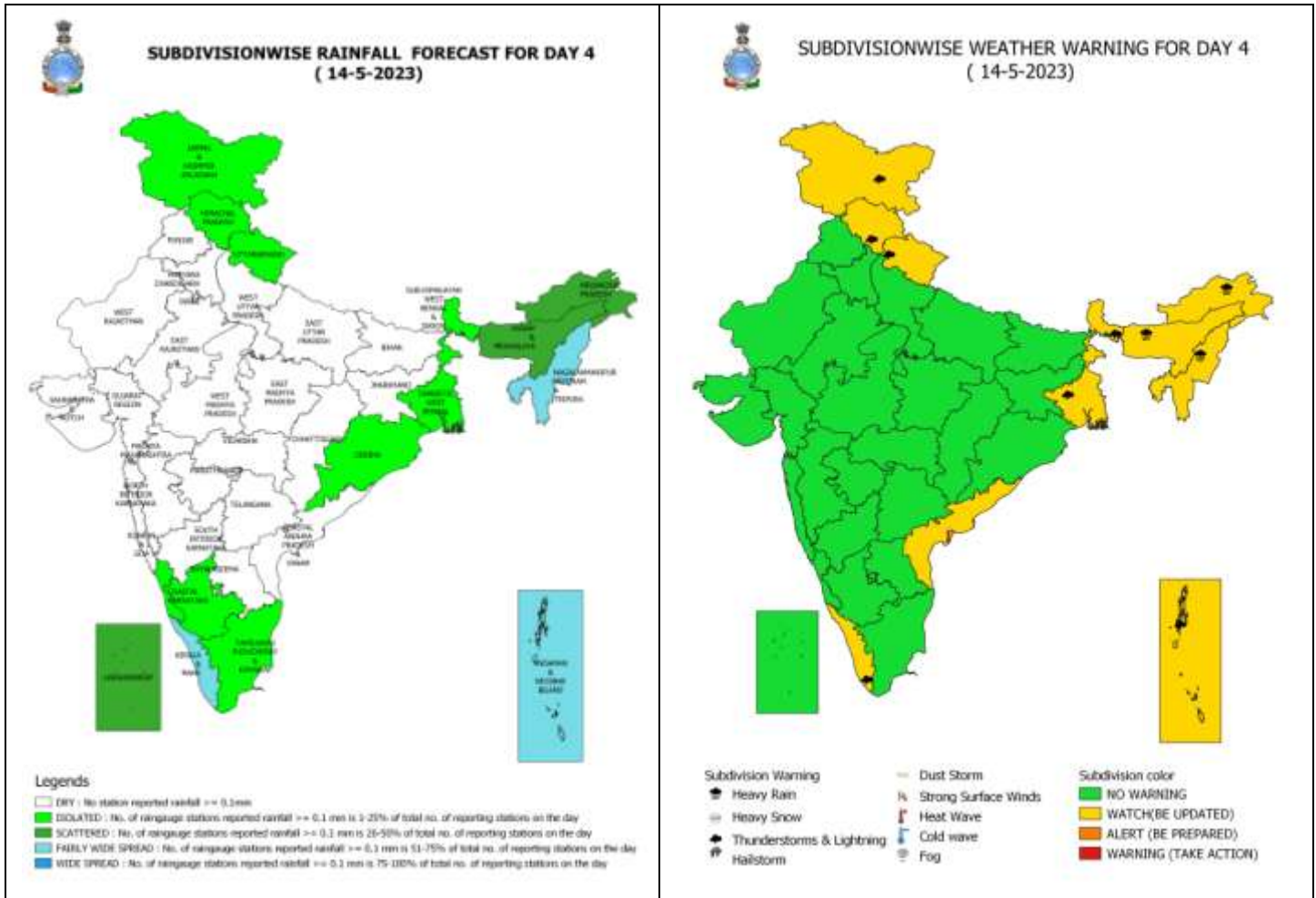
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♦ **Heat wave conditions** very likely in isolated pockets over Saurashtra & Kutch and Coastal Andhra Pradesh & Yanam.

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14 May (Day 4): ♦ **Heavy rainfall** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, east Arunachal Pradesh and east Assam.

♦ **Thunderstorm with lightning** likely at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, West Bengal & Sikkim, Andaman & Nicobar Islands and Kerala & Mahe.

♦ **Gale Wind likely with wind speed:**

- **100-110 kmph gusting to 120 kmph-** over Eastcentral Bay of Bengal by morning;
- **125-135 kmph gusting to 150 kmph-** over Northeast Bay of Bengal on forenoon and significantly decrease thereafter.

♦ **Squally Wind likely with wind speed:**

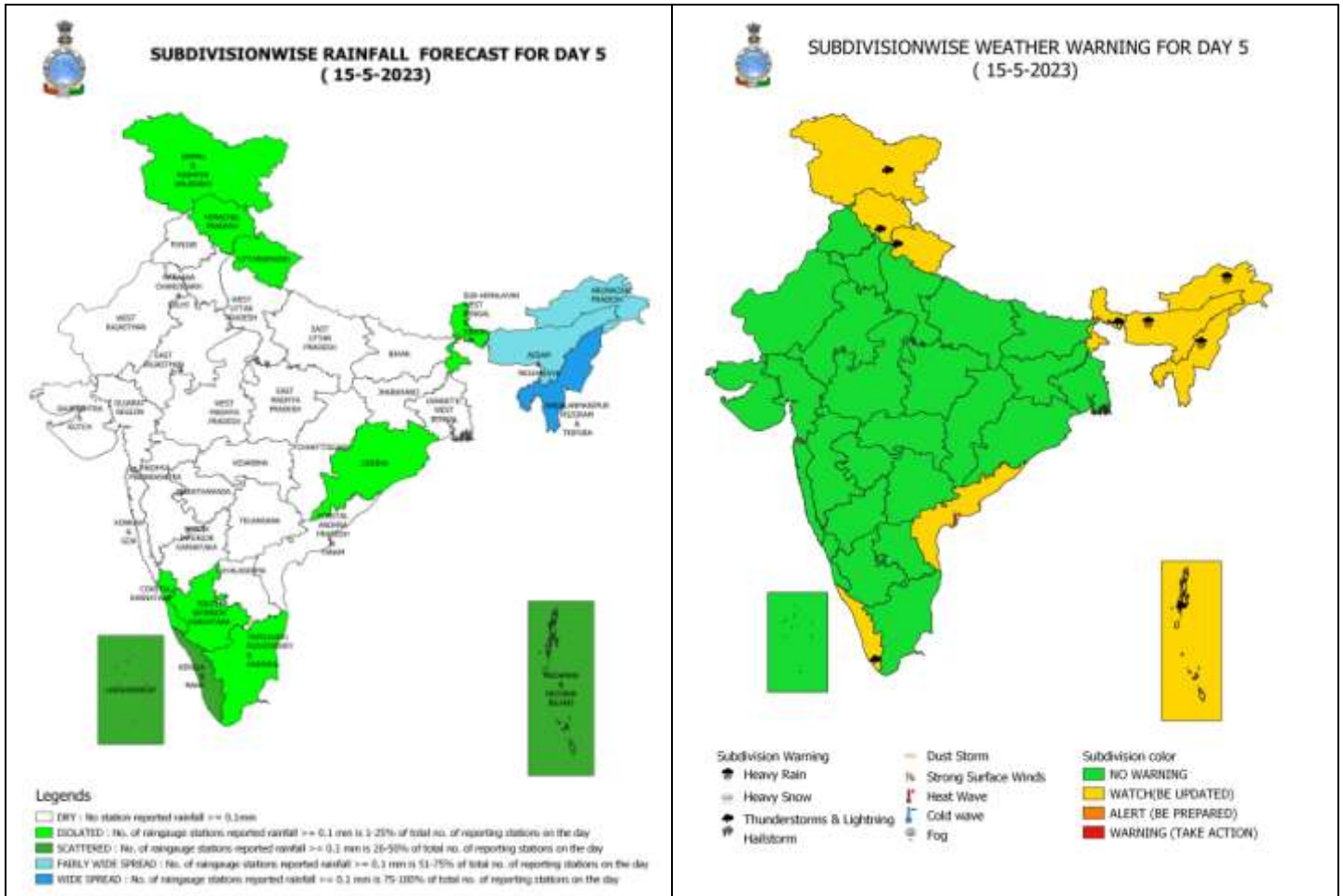
- **50-60 kmph gusting to 70 kmph-** over Tripura, Mizoram & South Manipur;
- **55-65 kmph gusting to 75 kmph-** over Northwest Bay of Bengal.

♦ **Heat wave conditions** very likely in isolated pockets over Coastal Andhra Pradesh & Yanam.

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15 May (Day 5): ♦ **Heavy rainfall** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, east Arunachal Pradesh and east Assam.

♦ **Thunderstorm with lightning** likely at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands and Kerala & Mahe.

♦ **Heat wave conditions** very likely in isolated pockets over Coastal Andhra Pradesh & Yanam.

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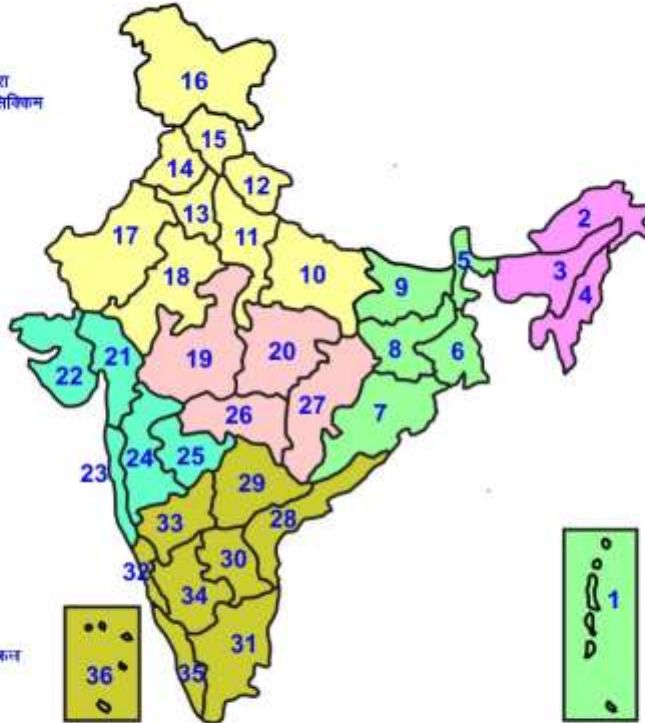
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LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा, चंडीगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठवाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं 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. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & 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. Marathawada
26. Vidharbha
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)

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

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LEGENDS

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75



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 Storm: Wind speed > 220 kmph (> 119 knots)

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