



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 14th May, 2024

Time of Issue: 1400 hours IST

Subject:

- i. A fresh spell of heat wave likely to commence over Northwest India from 16th May, 2024.
- ii. Wet spell with isolated heavy rainfall accompanied with thunderstorms, lightning & gusty winds very likely to continue over south Peninsular India till 18th May, 2024.
- iii. Southwest Monsoon is very likely to advance into South Andaman Sea, some parts of Southeast Bay of Bengal and Nicobar Islands around 19th May, 2024.

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

- ❖ **Heavy to very heavy rainfall** observed at isolated places over Coastal Andhra Pradesh & South Interior Karnataka and **heavy rainfall** at isolated places over Saurashtra, Rayalaseema, South Interior Karnataka, Tamil Nadu and Kerala.
- ❖ **Hailstorm activity** observed at isolated places over Uttarakhand, East Uttar Pradesh, Madhya Pradesh, Konkan and Madhya Maharashtra.
- ❖ **Thunderstorm** observed at many places over Madhya Pradesh; at some places over Uttar Pradesh, Bihar, Gangetic West Bengal, Jharkhand, Gujarat State, Madhya Maharashtra, Konkan, Jammu-Kashmir, Rajasthan, Chhattisgarh, Coastal Andhra Pradesh, Telangana, South Interior Karnataka Kerala and Tamil Nadu.
- ❖ **Gusty winds** reported over the country (in knots) is attached in Annexure II
- ❖ Yesterday, the **highest maximum temperature of 43.1°C** was reported at **Kota (East Rajasthan)** over the country.

Weather Systems and Forecast & Warnings: (Annexure III)

- ❖ Southwest Monsoon is very likely to advance into South Andaman Sea, some parts of Southeast Bay of Bengal and Nicobar Islands around 19th May, 2024.
- ❖ A cyclonic Circulation lies over Southeast Arabian Sea & adjoining Kerala and a trough runs from this cyclonic circulation to Marathwada in lower tropospheric levels. Another cyclonic circulation lies over north Equatorial Indian Ocean & adjoining Comorin area in lower tropospheric levels. Under their influence:
 - Isolated light to moderate rainfall accompanied with **thunderstorm, lightning & squally winds (40-60 kmph)** very likely over Madhya Maharashtra, Marathwada during 14th-17th; over Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Gujarat state on 14th & 15th May. Isolated **Hailstorm activity** very likely over Madhya Pradesh on 14th; Madhya Maharashtra, Marathwada on 14th & 15th May, 2024.
 - Scattered to fairly widespread light to moderate rainfall accompanied with **thunderstorm, lightning & squally winds (40-50 kmph)** very likely over Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands during next 7 days. Isolated light to moderate rainfall likely over Bihar, Gangetic West Bengal and Jharkhand on 14th May, 2024.
 - Scattered to Fairly widespread light to moderate rainfall accompanied with **thunderstorm, lightning & squally winds (40-50 kmph)** likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal & South Interior Karnataka, Konkan & Goa and Isolated to scattered light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** over Coastal Andhra

Pradesh & Yanam, Telangana, Rayalaseema, North Interior Karnataka during next 7 days. **Isolated heavy rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal & South Interior Karnataka during 14th-18th; north Coastal Andhra Pradesh, Rayalaseema on 14th May, 2024. Isolated very heavy rainfall also likely over south Tamil Nadu and Kerala on 14th May, 2024.**

- ❖ A cyclonic circulation lies over southwest Bangladesh and a trough in westerlies runs roughly along long. 88°E to the north of lat. 21°N in lower tropospheric levels. Under its influence:
 - Scattered light to moderate rainfall accompanied with **thunderstorm, lightning & squally winds (30-40 kmph)** very likely over Arunachal Pradesh, Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura on 14th & 15th and likely to increase to fairly widespread to widespread rainfall during 16th - 18th May, 2024.
 - **Isolated heavy rainfall also likely over Arunachal Pradesh during 16th-18th and Assam & Meghalaya on 17th & 18th May, 2024.**
- ❖ A fresh Western Disturbance likely to affect Western Himalayan region from 17th May. Under their influence; Isolated light to moderate rainfall activity very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during 17th-19th May, 2024.

Maximum temperature observation and forecast for next 5 days:

- ❖ **Areas having maximum temperatures greater than 40°C:** Yesterday, maximum temperatures were in the range of 40- 42°C in some parts of Rajasthan, Madhya Pradesh, Gujarat state & south Haryana and in isolated pockets of East Uttar Pradesh, Rayalaseema & Vidarbha.
- ❖ Gradual rise by about 3-5°C in maximum temperatures very likely over many parts of Northwest & East India during next 5 days.
- ❖ Gradual rise by about 2-4°C in maximum temperatures very likely over many parts of Central India during next 5 days.
- ❖ No significant change in maximum temperatures very likely over many parts of West India during next 2 days and rise by about 2-4°C for subsequent 3 days.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

Heat Wave and Hot & Humid weather warning for next 5 days:

- ❖ **Heat wave conditions** very likely in isolated/some pockets over Konkan on 14th & 15th; over West Rajasthan during 15th-18th; over Uttar Pradesh, Punjab, south Haryana, Bihar during 16th-18th and north Madhya Pradesh, East Rajasthan on 17th & 18th May, 2024.
- ❖ **Severe Heat wave conditions** also very likely in some parts of West Rajasthan on 17th & 18th; in isolated pockets of Punjab, south Haryana on 18th May, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Konkan & Goa on 14th & 15th; Saurashtra & Kutch during 16th-18th and Gangetic West Bengal on 17th & 18th May.

For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

Reported maximum wind speed (kmph) during past 24 hours till 0830 hours IST of today:

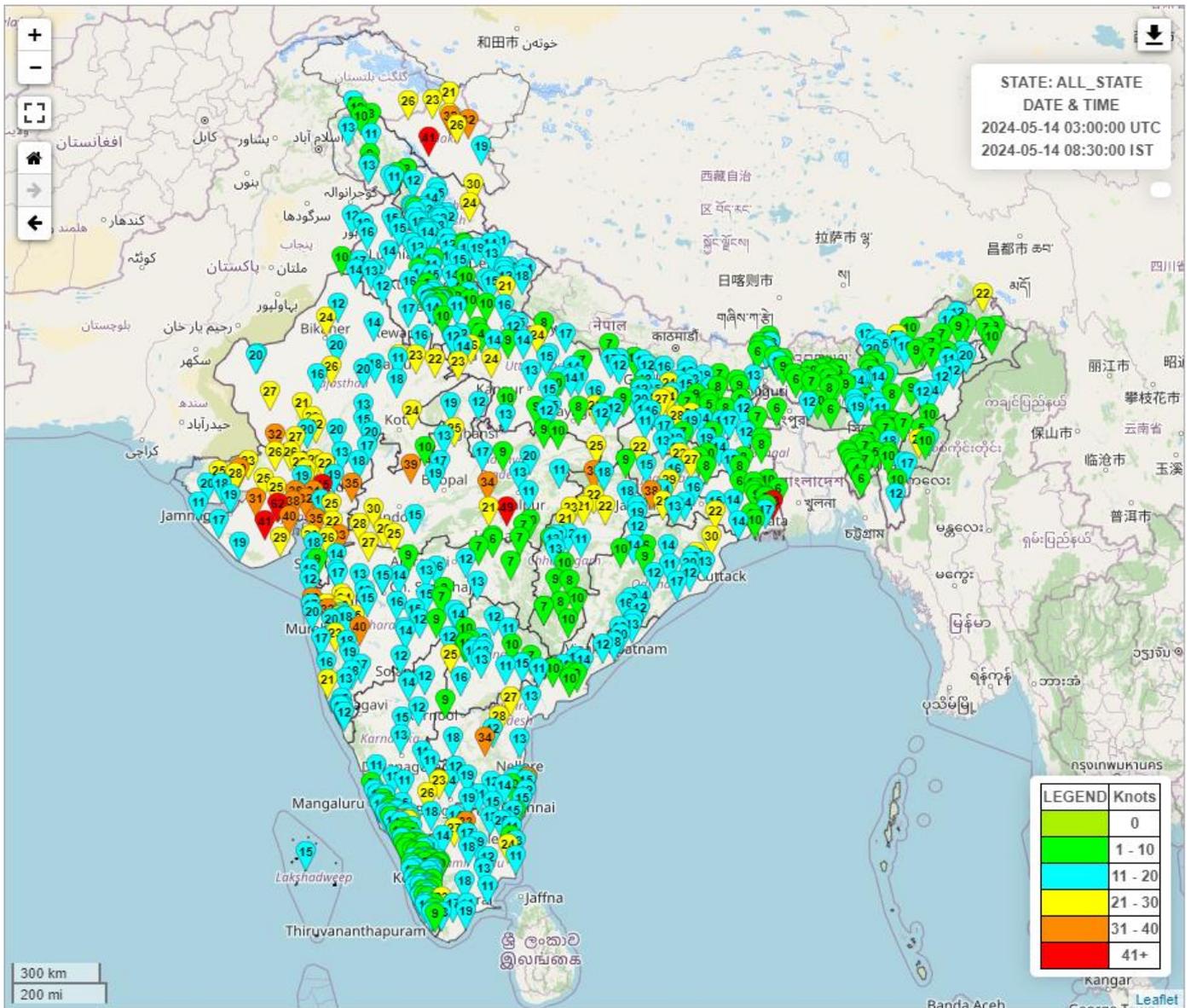
- ❖ **Gangetic West Bengal:** South_Twenty_Four_Paraganas 72;
- ❖ **Gujarat state:** Botad 114, Panchmahal 83, Amreli 75, Bhavnagar 74, Kachchh 72, Ahmedabad 70, Dahod 64, Banaskantha, Anand 59 each;
- ❖ **Madhya Pradesh:** Seoni 90, Shajapur 72, Chhindwara 62, Barwani 55, Jalgaon 48, Ashoknagar, Singrauli 46 each;
- ❖ **Madhya Maharashtra:** Pune-61
- ❖ **Konkan:** Ghatkopar-90, Mumbai Santa Cruz-59, Kolaba-51
- ❖ **Jammu & Kashmir:** Kargil 75, Leh 59;
- ❖ **Jharkhand:** Simdega 70, Khunti 54, Bokaro 50, Ramgarh, Palamu 40 each;
- ❖ **Chhattisgarh:** Koriya 68, Mungeli 42, Korba, Janjgir, Champa 41 each, Bemetara 38;
- ❖ **Kerala:** Wayanad 63;
- ❖ **Coastal Andhra Pradesh:** YSR_Kadapa 63, Prakasam 51;
- ❖ **Tamil Nadu:** Salem 61, Erode 50, Tiruvarur 44, Tenkasi 42;
- ❖ **Rajasthan:** Sirohi 53, Barmer 50, Pali 48, Baran, Bikaner 44 each, Dausa, Jaipur, Dholpur 42 each;
- ❖ **Bihar:** Patna 50, Nalanda 51, Sheikpura 44, Muzaffarpur 38;
- ❖ **Uttar Pradesh:** Firozabad 48, Etawah, Sitapur 44 each, Bhadohi 42;
- ❖ **South Interior Karnataka:** Mandya 48, Ramnagara 42;
- ❖ **Telangana:** Vikarabad 46;

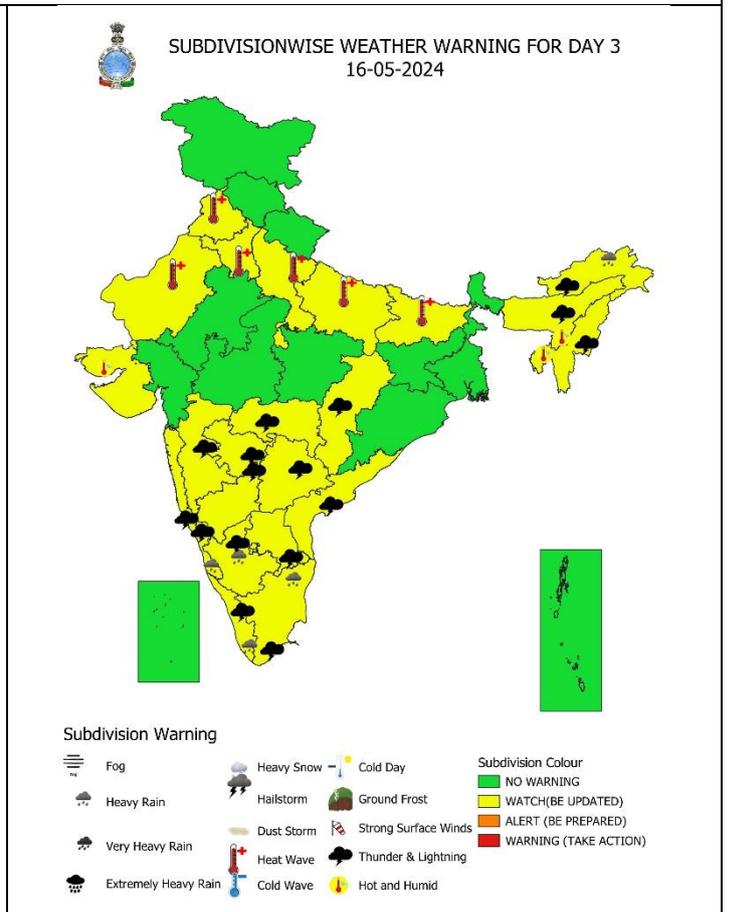
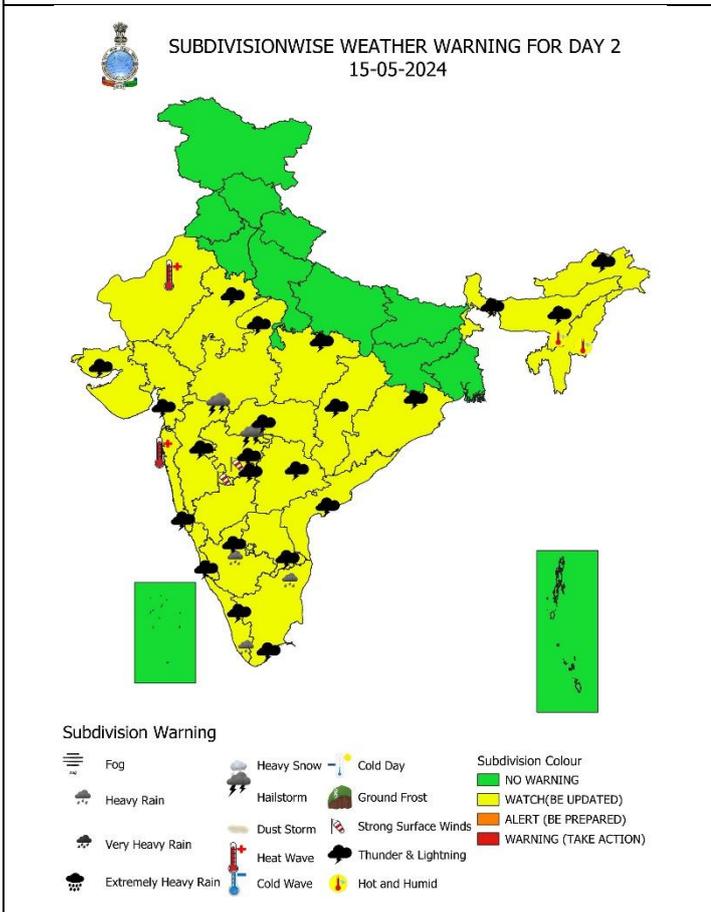
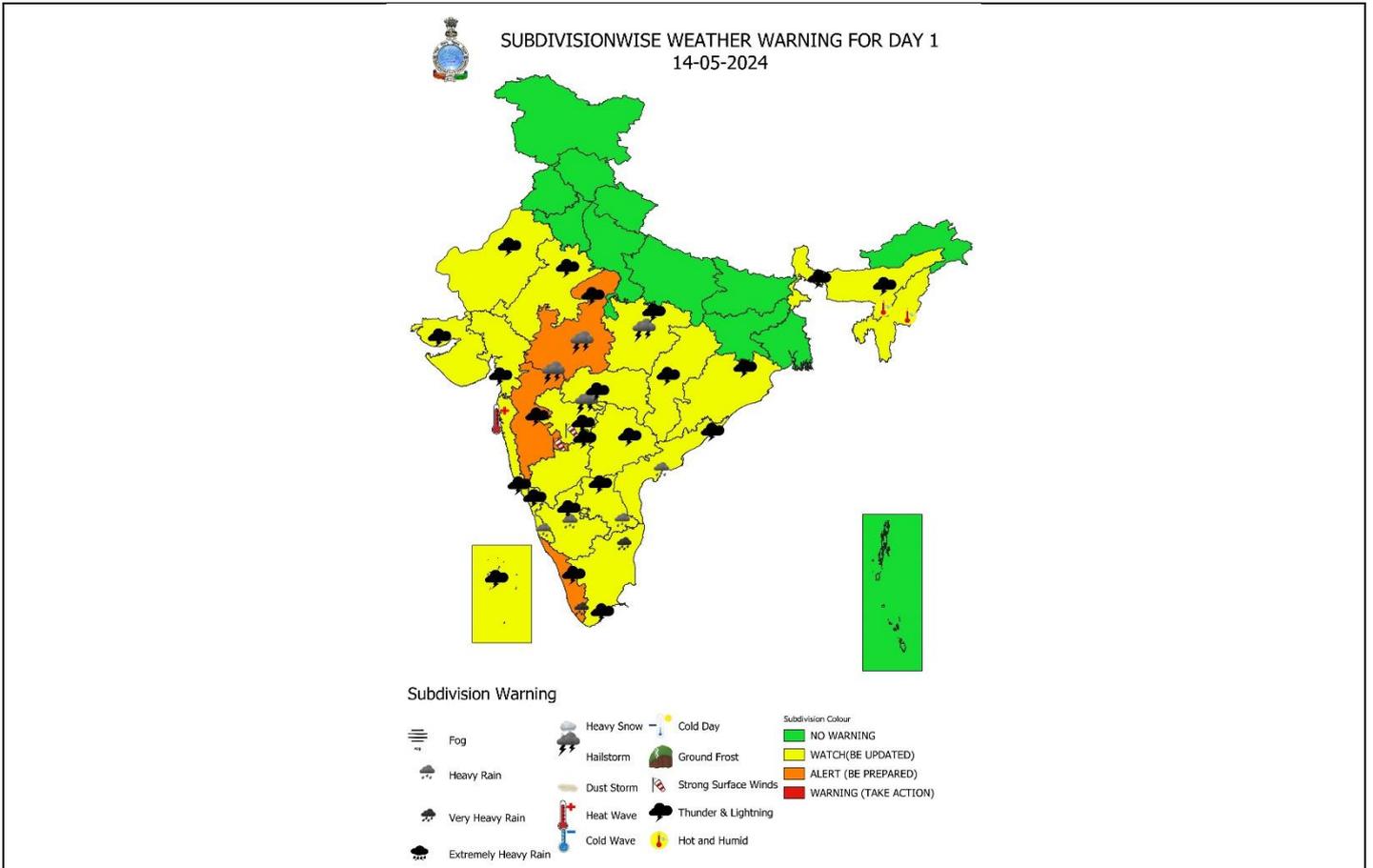
Realised Rainfall during past 24 hours till 0830 hours IST of today:

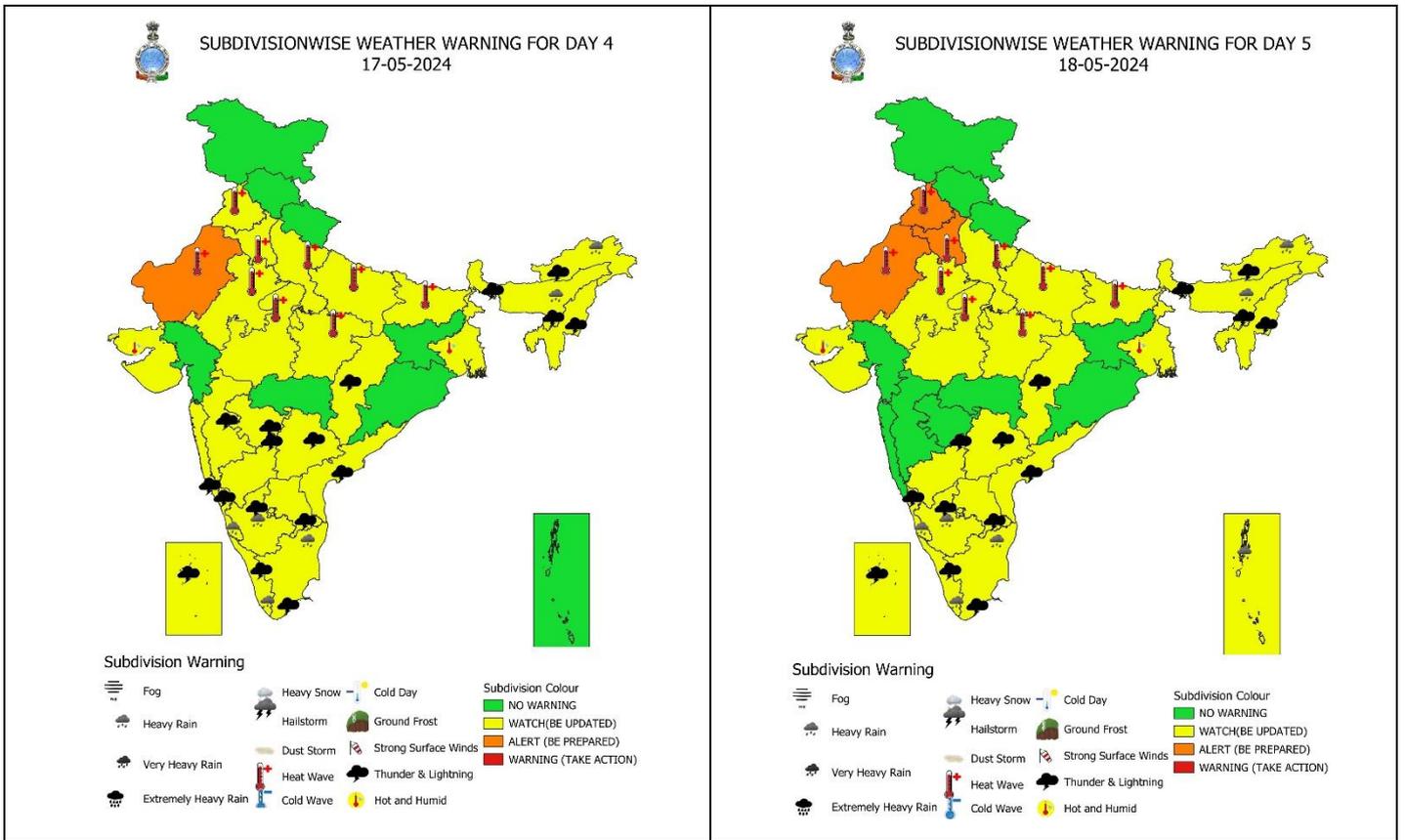
- ❖ Light to moderate rainfall accompanied with isolated thunderstorm & lightning observed **at most places** over; **at many places** over Gujarat Region, Kerala & Mahe, South Interior Karnataka; **at a few places** over Arunachal Pradesh, Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Saurashtra & Kutch, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and **at isolated places** over Uttarakhand, Uttar Pradesh, Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Odisha, Bihar, Jharkhand, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal & North Interior Karnataka, Rayalaseema and Telangana.

Significant amount of rainfall (in cm):

- ❖ **Coastal Andhra Pradesh:** Udayagiri (dist Spsr Nellore) 12, Addanki (dist Bapatla) 7, Paderu (dist Alluri Sitharamaraju) 4,
- ❖ **Rayalaseema:** Thambalapalle (dist Annamayya District) 11, Orvakal (dist Kurnool) 6, Nambulipulikunta (dist Sri Sathyasai District) 5, Simhadripuram (dist Ysr District) 2,
- ❖ **Kerala:** Enadimangalam AWS (Pathanamthitta district) 11, Kunnamangalam AWS (Kozhikode district) 10, Kozhikode 8, Karipur AP (Malappuram district) & Laha AWS (Pathanamthitta district) 7 each; Quilandi (Kozhikode district) & Vakkad AWS (Malappuram district) 6 each, Kurudamannil & Ulanad AWS (both in Pathanamthitta district), Thennala AWS (Malappuram district), Perumkadavila ARG (Thiruvananthapuram district) & Anakayam ARG (Malappuram district) 5 each,
- ❖ **South Interior Karnataka:** Mandya Pto (dist Mandya) 9, Nanjanagud (dist Mysuru) 5, Ramanagara (dist Ramanagara) 4, Hesaraghatta (dist Bengaluru Urban) 4, Maddur (dist Mandya) 4, Tiptur (dist Tumakuru) 4, Yagati (dist Chikkamagaluru) 4,
- ❖ **Tamil Nadu:** PWD Makkinampatti (dist Coimbatore) 8, Pollachi (dist Coimbatore), Tuticorin Port (dist Thoothukudi) 7 each, Azhiyar (dist Coimbatore), Srivilliputhur (dist Virudhunagar), Natham (dist Dindigul), Veerapandi (dist Theni), Barwood (dist The Nilgiris) 6 each, Kalial (dist Kanniyakumari), Cincona (dist Coimbatore), Harisan Malayalam Ltd. (dist The Nilgiris), Mylaudy (dist Kanniyakumari) 5 each,
- ❖ **Saurashtra:** Savarkundla (dist Amreli) 7, Gandhidham (dist Kutch) 2, Amreli (dist Amreli) 2, Amreli_kvK Aws (dist Amreli) 2,







Impact expected and action suggested due to thunderstorms, lightning & gusty winds/hailstorm over Madhya Pradesh on 14th and Madhya Maharashtra, Marathwada on 14th & 15th May, 2024.

Impact expected:

- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha houses/walls and huts.
- Loose objects may fly.

Action suggested:

- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the objects that conduct electricity.

Impact & Action Suggested due to isolated very heavy rainfall very likely over Kerala and Tamil Nadu on 14th May, 2024.

Impacts Expected for Rainfall/Snowfall over above regions:

- ✓ Disruption of Electricity.
- ✓ Landslide, rock fall and mudslides, Blocking/washout of roads/highways/bridges Nallahs.
- ✓ Disruption of traffic flow.
- Damage to Kuccha and unsecured structures.

Suggested Actions

- ✓ Avoid roadway underpasses, drainage ditches, low lying areas and areas where water collects – they can unexpectedly flood or overflow.
- ✓ Stay away from power lines or electrical wires.
- ✓ Don't stay in kuchcha houses during heavy rainfall as it may collapse anytime soon.
- ✓ Drive carefully.

IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:

Orange alert Areas (Punjab, Haryana, West Rajasthan)

- ✓ High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- ✓ High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- ✓ Avoid heat exposure– keep cool. Avoid dehydration.
- ✓ Drink sufficient water- even if not thirsty.
- ✓ Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

Yellow alert Areas (East Rajasthan, Uttar Pradesh, Madhya Pradesh, Bihar, Konkan)

- ✓ Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- ✓ Avoid heat exposure.
- ✓ Wear lightweight, light colour, loose, cotton clothes.
- ✓ Cover your head, use a cloth, hat or umbrella.

Agromet advisories for Heavy Rainfall, Hailstorm & Gusty winds likely over various parts of the country:

- Use hail nets or hail caps in fruit orchards to prevent mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Madhya Pradesh, Madhya Maharashtra and Marathwada.
- Make provision for draining out excess water from crop fields to avoid water stagnation in Tamil Nadu, Kerala, Coastal and South Interior Karnataka and Andhra Pradesh.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

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; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office.
- ❖ **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.

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)



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

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)