

2026-01-21

Time of Issue: 13:27:00 hours IST
(Mid-Day)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Weather Forecast and warning:

- Fairly widespread to widespread rainfall/snowfall over Jammu-Kashmir-Ladakh on 22nd & 23rd; Himachal Pradesh, Uttarakhand on 23rd January.
- Fairly widespread to widespread light to moderate rainfall over Punjab on 23rd January.
- Thunderstorm activity accompanied with **hailstorm, lightning & gusty winds (speed 50-60 kmph)** likely over Punjab on 22nd & 23rd; Haryana Chandigarh & Delhi on 23rd January; with **hailstorm, lightning & gusty winds (speed 40-50 kmph)** likely over Jammu-Kashmir-Ladakh, Punjab on 22nd & 23rd; Himachal Pradesh, Uttarakhand, West Uttar Pradesh, north Rajasthan on 23rd; with **lightning & gusty winds (speed 40-50 kmph)** likely over East Rajasthan, Haryana Chandigarh & Delhi on 22nd; with **lightning & gusty winds (speed 30-40 kmph)** likely over West Rajasthan on 22nd January.
- Thunderstorm activity accompanied with lightning** likely over northeast Nicobar on 21st & 22nd; Tamil Nadu, Puducherry & Karaikal on 24th & 25th January.

Forecast of minimum temperatures:

- Gradual rise in minimum temperatures by 2-4°C likely over Northwest India during next 2 days; gradual fall by 2-4°C during subsequent 2 days and rise by 2-4°C thereafter.
- No significant change in minimum temperatures likely over many parts of Central India during next 2 days; gradual fall by 2-3°C during subsequent 2 days and rise by 2-4°C likely thereafter.
- Gradual rise by 2-4°C minimum temperatures likely over Maharashtra during next 2 days and no significant change thereafter.
- No significant change in minimum temperatures likely over Gujarat during next 2 days and gradual fall by 2-3°C during subsequent 2 days and gradual rise by 2-4°C thereafter.
- No significant change in minimum temperatures likely over rest parts of the country.

Dense Fog & Cold wave Warnings:

- Dense fog** conditions also likely during morning/night hours in isolated pockets over Punjab, Haryana and Chandigarh till 22nd; Punjab, Haryana and Chandigarh, West Rajasthan during 24th - 26th January.

Fisherman Warning:

Fishermen are advised not to venture into the following areas during 21st January to 26th January, 2026:

Bay of Bengal: No Warning.

Arabian Sea: Over northwest Arabian Sea from 22nd to 24th January, along and off Oman coast on 23rd, January, some parts of southwest & adjoining westcentral Arabian Sea from 23rd to 24th January, along and off Somalia coast 22nd to 25th January 2026.

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Main Weather Observations:

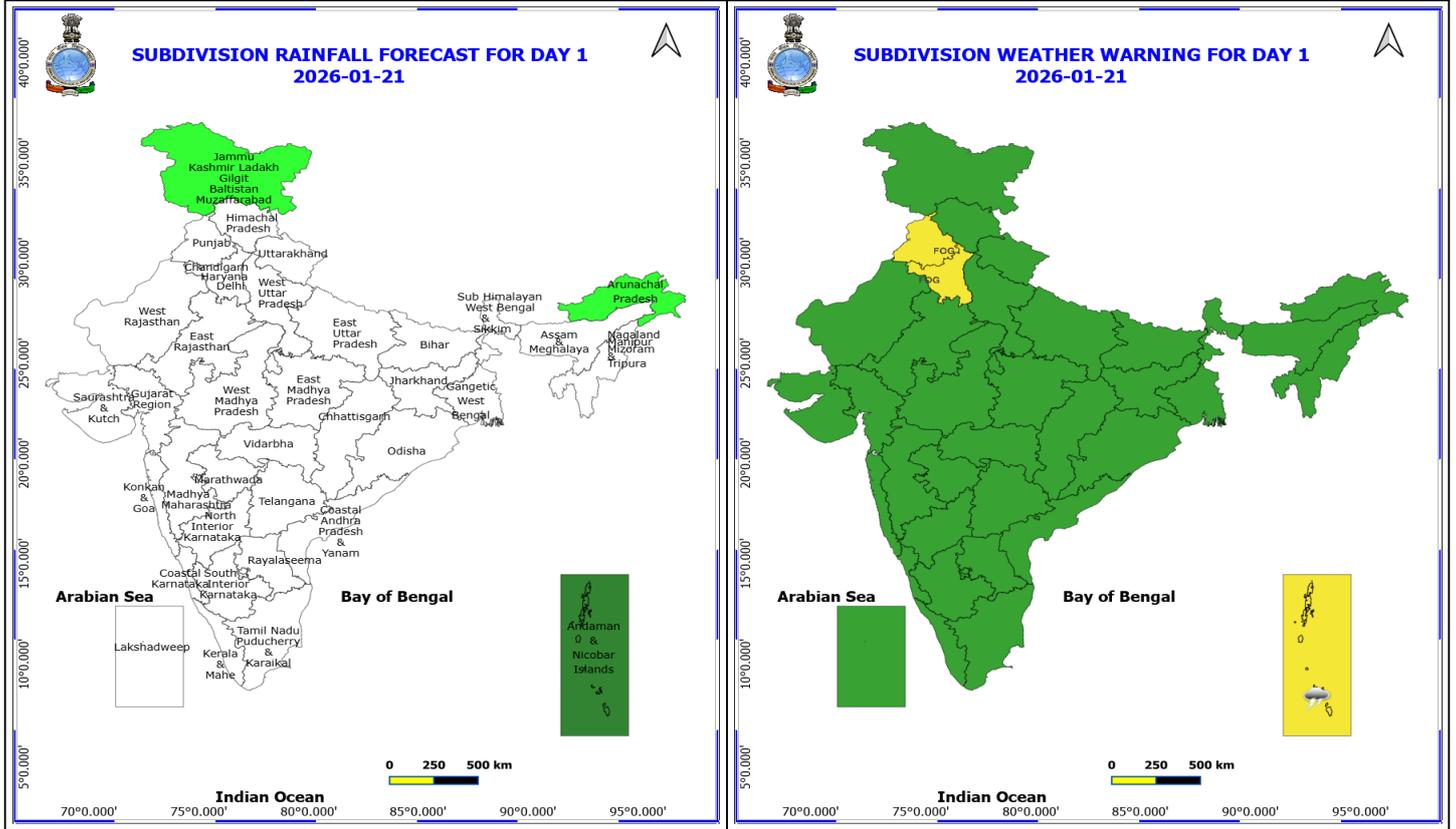
- **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at a few places** over Andaman & Nicobar Islands; **at isolated places** over Arunachal Pradesh; **Dry** over rest of the country.
 - ❖ **Significant rainfall recorded(in cm)** (from 0830 hours IST of yesterday to 0830 hours IST of today):
Andaman & Nicobar Islands: Iaf Carnicobar (dist Nicobar) 1.
- **Dense to Very Dense fog(visibility <200 m) conditions** prevailed in some parts of Punjab and Haryana.
- **Visibility reported (in meters ?200 m): Punjab:**Bathinda IAF (00), Amritsar (50); Ludhiana (50); **Haryana:**Hisar (20), Bhiwani (10), Karnal (30), Narnaul (100).
- **Cold wave to severe cold wave conditions** prevailed in some parts of Himachal Pradesh and Punjab.
- **Ground frost conditions** have been recorded in isolated pockets of Uttarakhand.
 - ❖ **Minimum Temperature Departures (as on 21-01-2026): Minimum Temperatures** were above normal by (2°C to 5°C) over Jammu-Kashmir-Ladakh, Himachal Pradesh, West Rajasthan, Central India and adjoining western India, Haryana, East Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Assam & Meghalaya and below normal (-2°C to -4°C) over Haryana, Odisha, Telangana, Rayalaseema, Coastal & South Interior Karnataka and Tamil Nadu and near normal over rest parts of the country.**The lowest minimum temperature** of 2.6°C is reported at ADAMPUR AIF (PUNJAB) over the Plains of India.
 - ❖ **Maximum Temperature Departures (as on 20-01-2026): The highest maximum temperature** of 35.2°C is reported at KOTTAYAM (KERALA).

Meteorological Analysis (Based on 0830 hours IST)

- The **Western Disturbance** now seen as a cyclonic circulation over north Pakistan at 3.1 km with the trough aloft trough in middle tropospheric westerlies with its axis at 5.8 k above mean sea level roughly along Long. 73°E to the north of Lat. 32 °N.
- The upper air **cyclonic circulation** over northwest Uttar Pradesh & neighbourhood persists and now extends upto 1.5 km above mean sea level.
- The **Western disturbance** as a trough in middle and upper tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 50°E to the north of Lat. 28°N, now seen as a cyclonic circulation over northeast Iran between 3.1 & 5.8 km above mean sea level.
- The upper air **cyclonic circulation** over northeast Assam & neighbourhood persists and now seen at 1.5 km above mean sea level.
- **Subtropical westerly Jet Stream** with core winds of the order of 120 knots at 12.6 km above mean sea level prevails over Northeast India.
- An **upper air cyclonic circulation** lies over southeast Arabian sea and adjoining Lakshadweep at 0.9 km above mean sea level
- A fresh **western disturbance** is likely to affect northwest India from 26th January 2026
- The upper air **cyclonic circulation** over southeast Bay of Bengal & neighbourhood at 3.1 km above mean sea level has become less marked.

Weather Outlook for subsequent 3 days

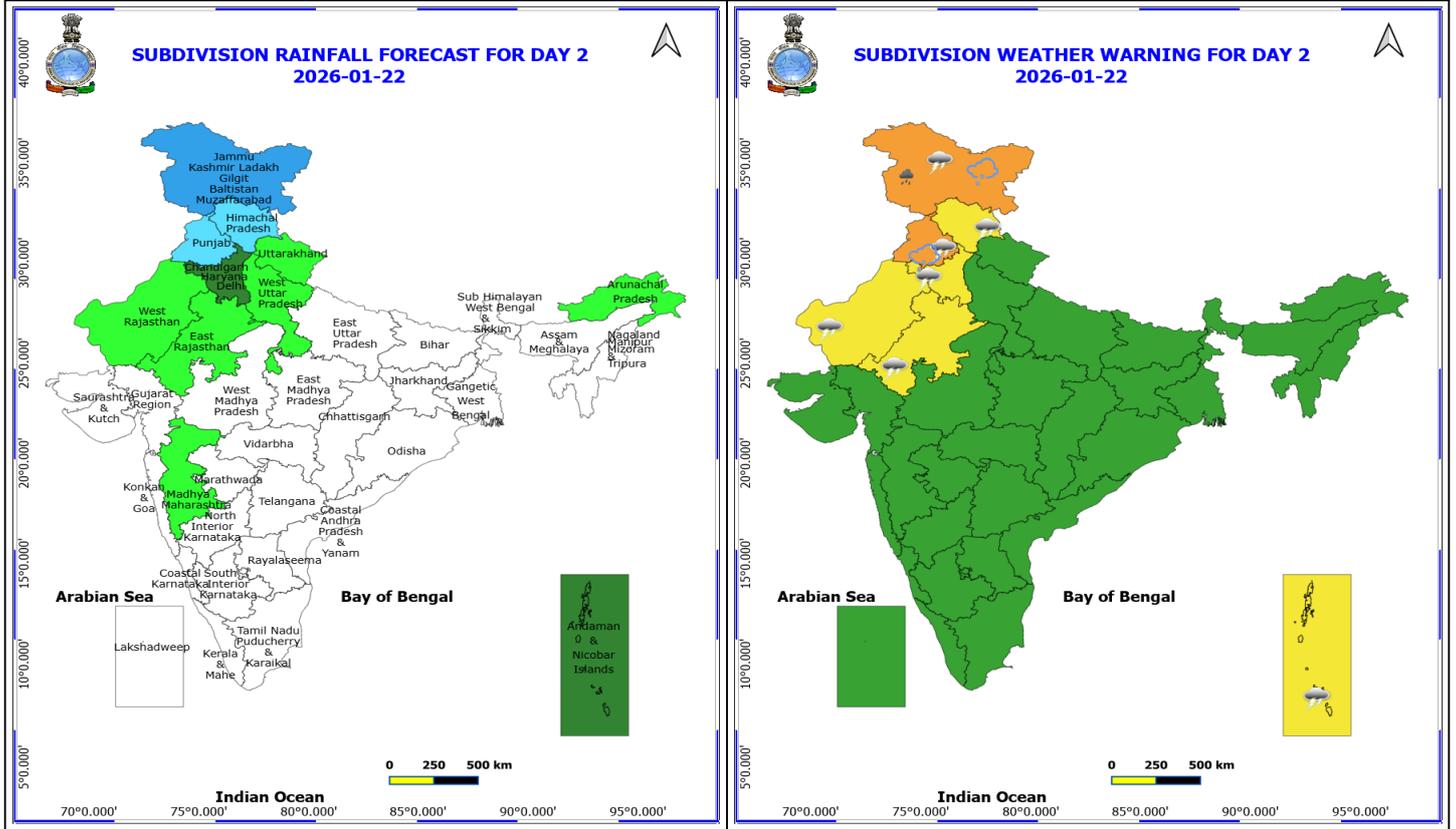
- Fairly widespread to widespread rainfall/snowfall activity likely over Western Himalayan Region.
- Fairly widespread to widespread rainfall activity likely over Punjab, Haryana, Delhi.
- Isolated/Scattered rainfall activity is likely over Uttar Pradesh, Rajasthan and West Madhya Pradesh.
- Isolated rainfall activity is likely over Lakshadweep and Nicobar islands.



21 January (Day 1)

- ❖ **Thunderstorm accompanied with Lightning** very likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Dense Fog** very likely at isolated places over Haryana, Chandigarh and Punjab.

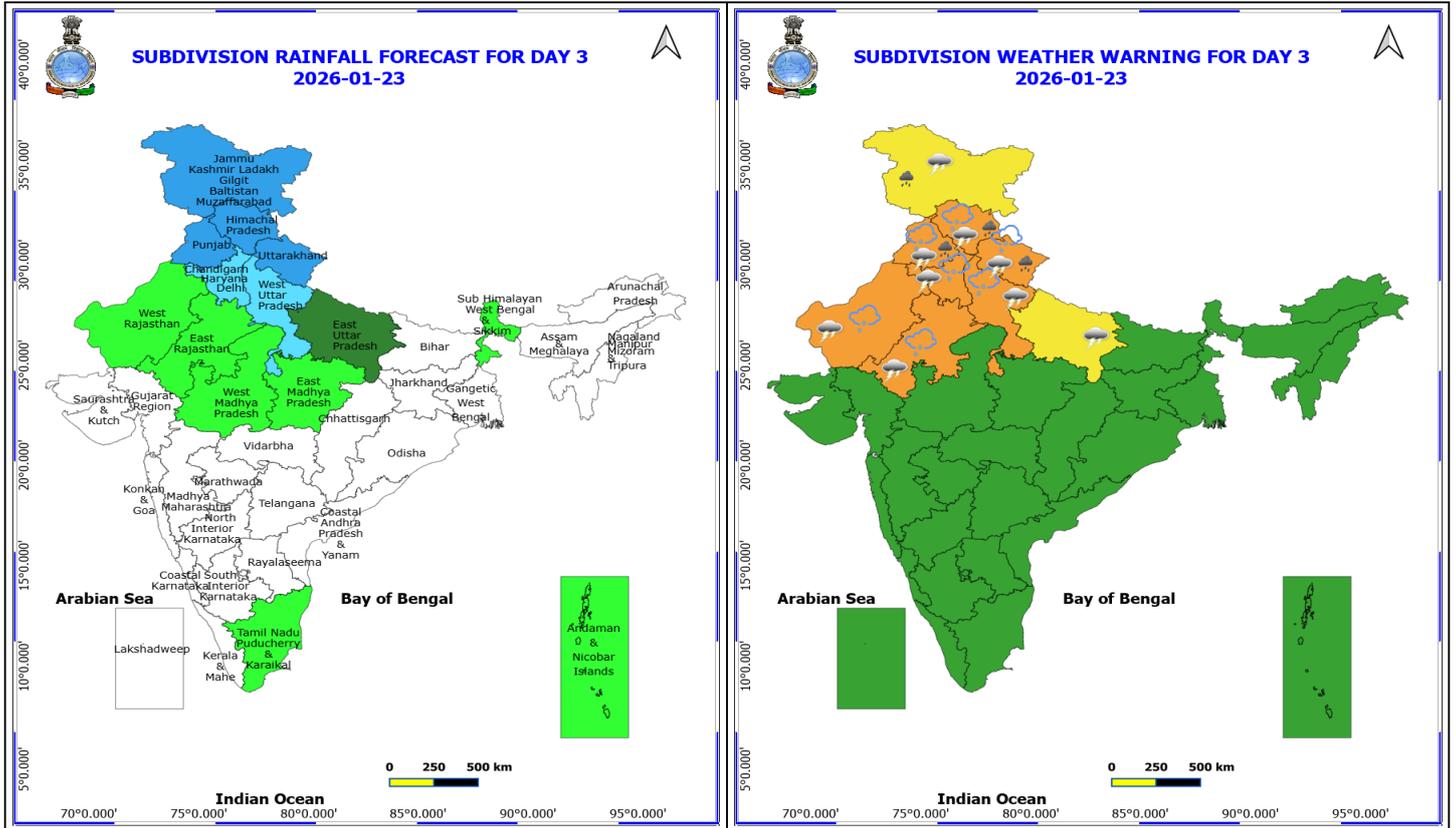
No Fishermen Warning



22 January (Day 2)

- ❖ **Heavy Rainfall** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Thunderstorm accompanied with Hailstorm** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Punjab.
- ❖ **Thundersquall with wind speed reaching(50-60kmph)** very likely at isolated places over Punjab.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(40-50kmph)** very likely at isolated places over East Rajasthan, Haryana, Chandigarh & Delhi, Himachal Pradesh and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over West Rajasthan.
- ❖ **Thunderstorm accompanied with Lightning** very likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Squally winds with speeds of 45 to 55 kmph, gusting up to 65 kmph**, are expected over parts of the northwest Arabian Sea and adjoining areas, as well as along and off the Somalia coast and the western parts of the southwest Arabian Sea.

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23 January (Day 3)

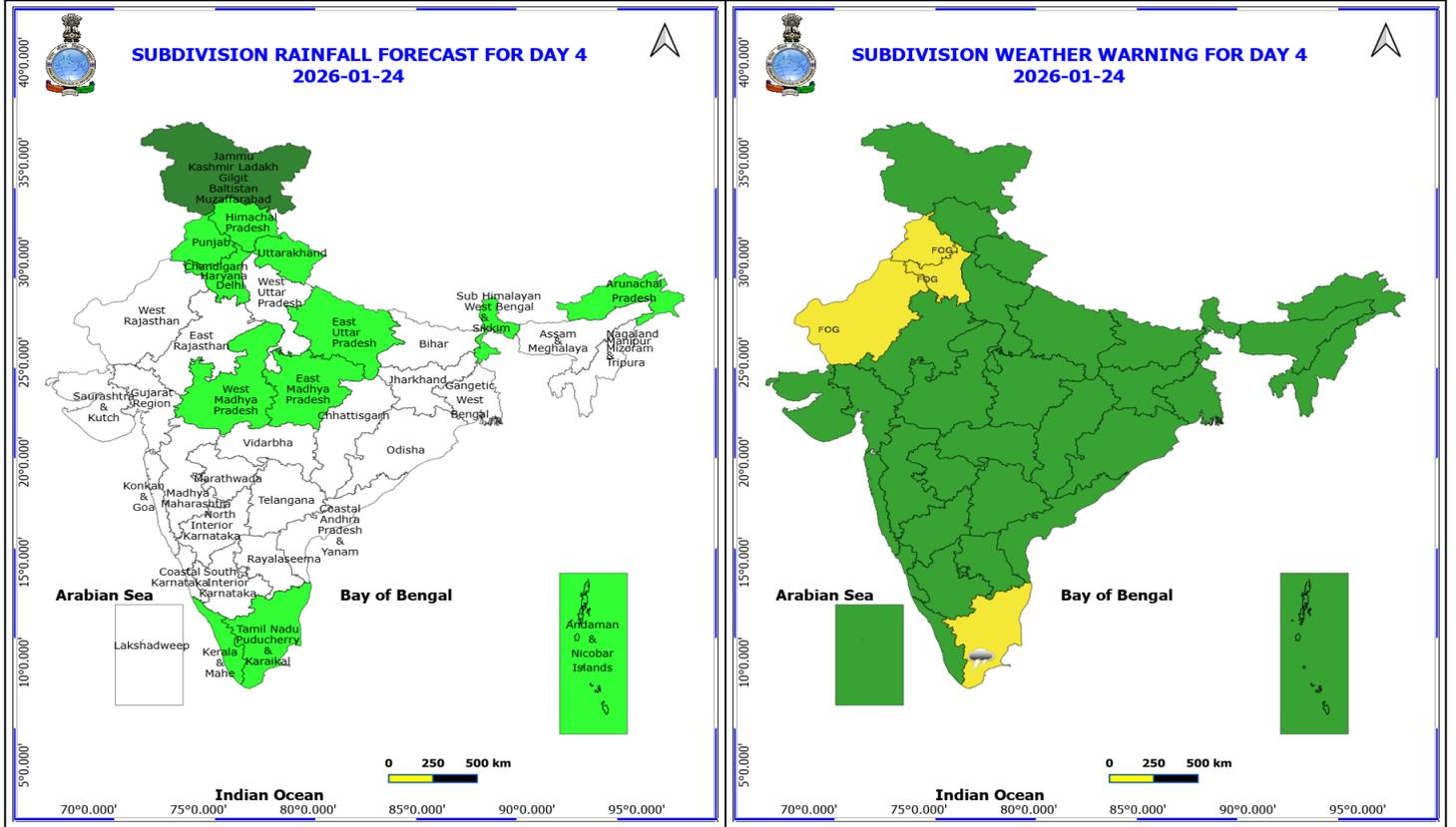
- ❖ **Heavy Rainfall** very likely at isolated places over Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab and Uttarakhand.
- ❖ **Thunderstorm accompanied with Hailstorm** very likely at isolated places over Haryana, Chandigarh & Delhi, Himachal Pradesh, Punjab, Rajasthan, Uttarakhand and West Uttar Pradesh.
- ❖ **Thundersquall with wind speed reaching(50-60kmph)** very likely at isolated places over Haryana, Chandigarh & Delhi and Punjab.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(40-50kmph)** very likely at isolated places over Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Rajasthan, Uttarakhand and West Uttar Pradesh.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over East Uttar Pradesh.
- ❖ **Squally winds with speeds of 45 to 55 kmph, gusting up to 65 kmph**, are expected over most parts of the northwest Arabian Sea, along and off the Oman coast, in parts of the west-central Arabian Sea, along and off the Somalia coast, and across the western parts of the southwest Arabian Sea.

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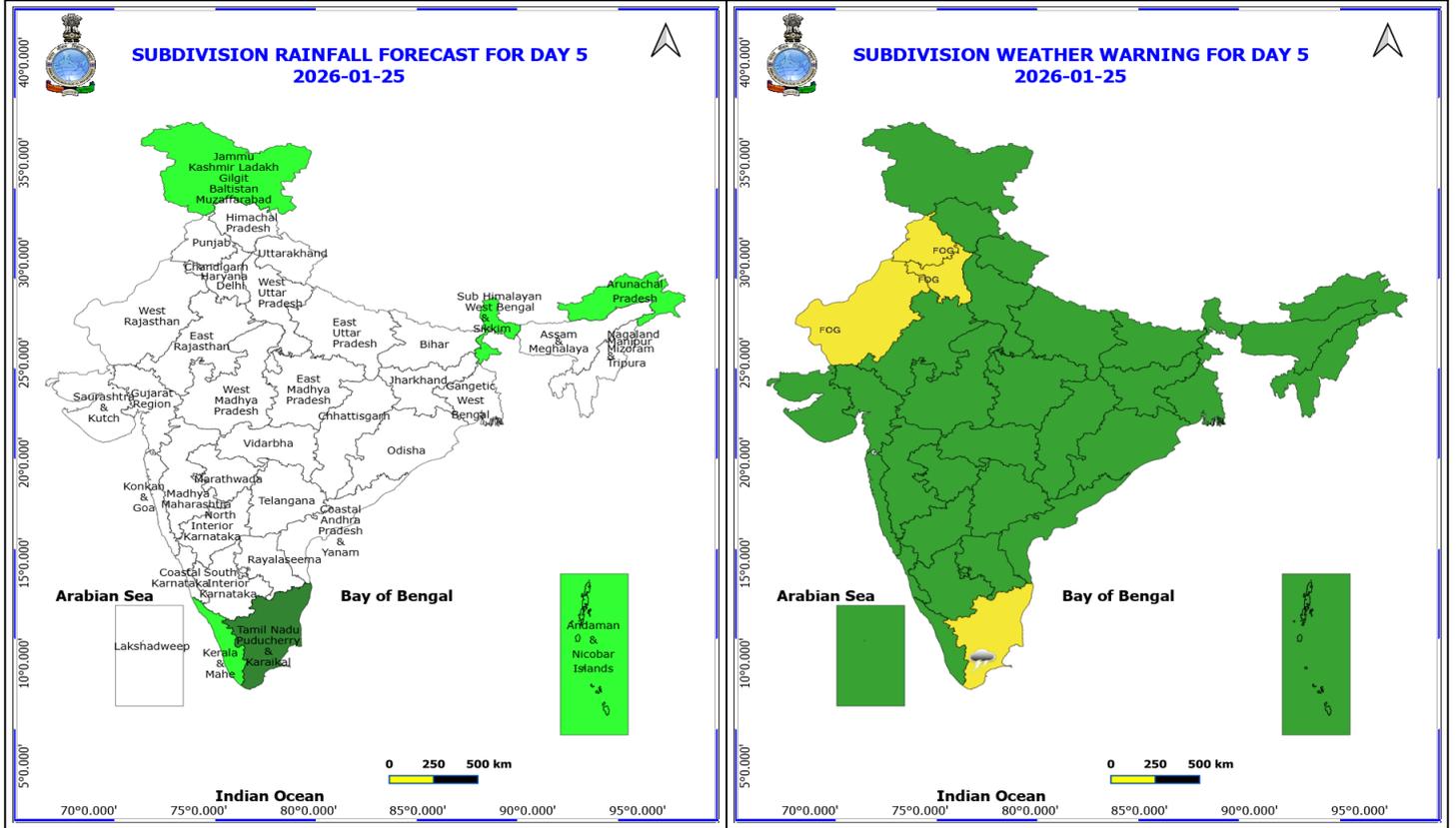
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24 January (Day 4)

- ❖ **Thunderstorm accompanied with Lightning** likely at isolated places over Tamil Nadu Puducherry & Karaikal.
- ❖ **Dense Fog** likely at isolated places over Haryana, Chandigarh , Punjab and West Rajasthan.
- ❖ **Squally winds with speeds of 45 to 55 kmph, gusting up to 65 kmph**, are expected along and off the Somalia coast, as well as over the western parts of the southwest Arabian Sea.

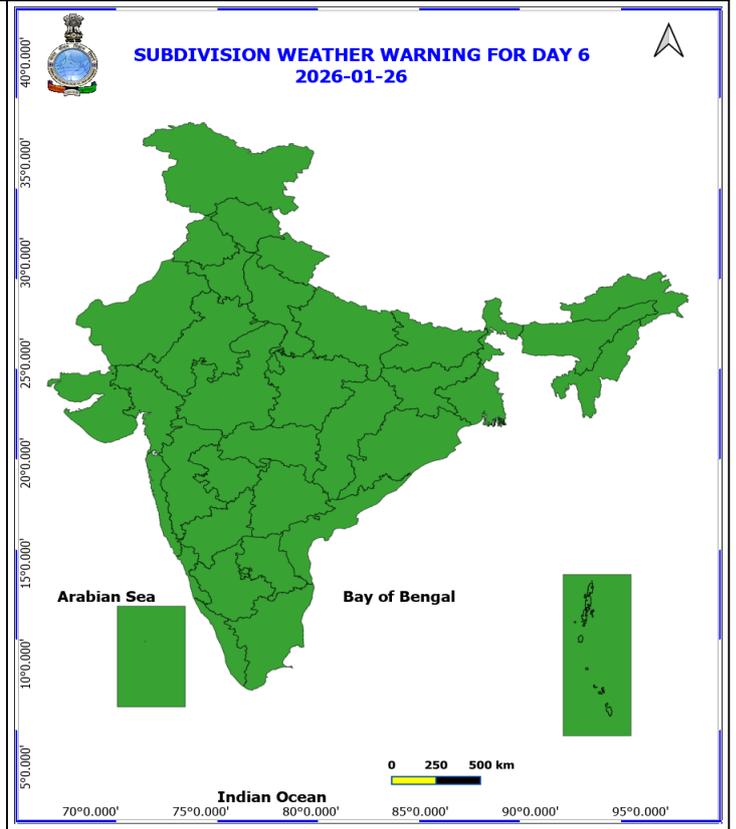
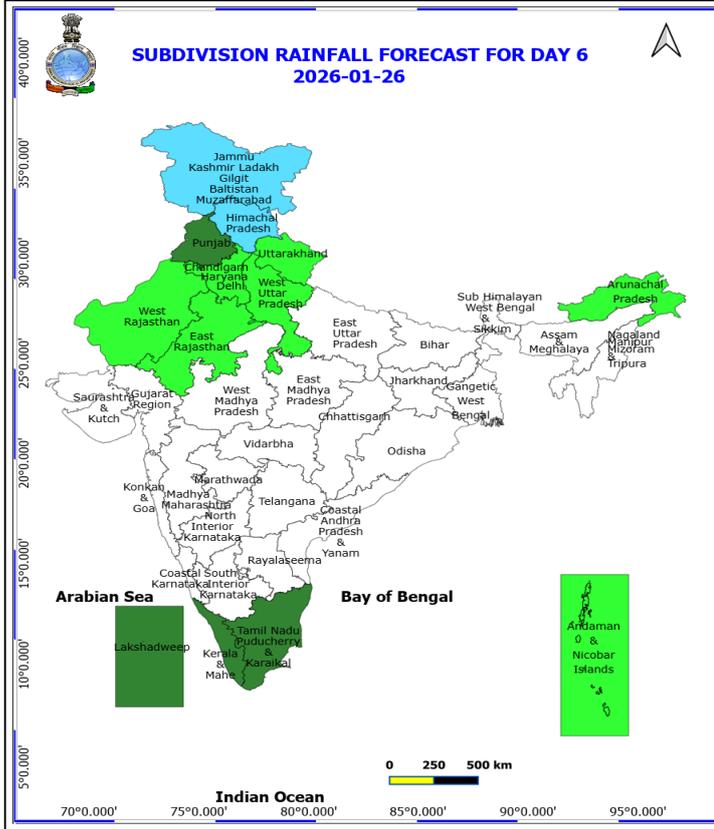
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25 January (Day 5)

- ❖ **Thunderstorm accompanied with Lightning** likely at isolated places over Tamil Nadu Puducherry & Karaikal.
- ❖ **Dense Fog** likely at isolated places over Haryana, Chandigarh , Punjab and West Rajasthan.

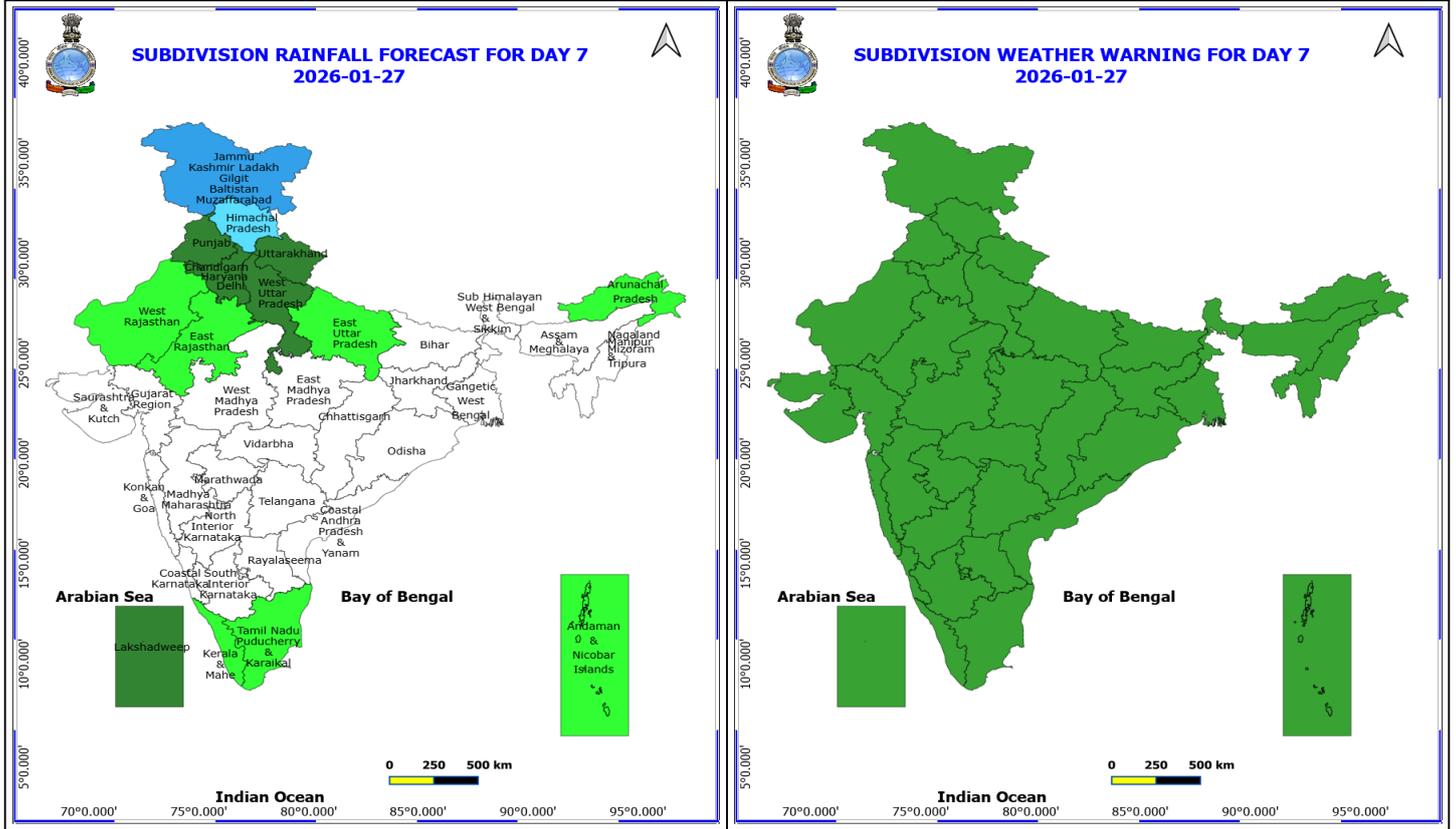
No Fishermen Warning



26 January (Day 6)

No Warning

No Fishermen Warning



27 January (Day 7)

No Warning

No Fishermen Warning

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Table-1

7 Days Rainfall Forecast

| S.No. | Subdivision | 21- Jan | 22- Jan | 23- Jan | 24- Jan | 25- Jan | 26- Jan | 27- Jan |
|-------|------------------------------|------------|------------|------------|------------|------------|------------|------------|
| | | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 |
| 1 | ANDAMAN & NICOBAR ISLANDS | SCT | SCT | ISOL | ISOL | ISOL | ISOL | ISOL |
| 2 | ARUNACHAL PRADESH | ISOL | ISOL | DRY | ISOL | ISOL | ISOL | ISOL |
| 3 | ASSAM & MEHGHALAYA | DRY |
| 4 | N. M. M. & T. | DRY |
| 5 | S.H. WEST BENGAL & SIKKIM | DRY | DRY | ISOL | ISOL | ISOL | DRY | DRY |
| 6 | GANGETIC WEST BENGAL | DRY |
| 7 | ODISHA | DRY |
| 8 | JHARKHAND | DRY |
| 9 | BIHAR | DRY |
| 10 | EAST UTTAR PRADESH | DRY | DRY | SCT | ISOL | DRY | DRY | ISOL |
| 11 | WEST UTTAR PRADESH | DRY | ISOL | FWS | DRY | DRY | ISOL | SCT |
| 12 | UTTARAKHAND | DRY | ISOL | WS | ISOL | DRY | ISOL | SCT |
| 13 | HARYANA, CHD & DELHI | DRY | SCT | FWS | ISOL | DRY | ISOL | SCT |
| 14 | PUNJAB | DRY | FWS | WS | ISOL | DRY | SCT | SCT |
| 15 | HIMACHAL PRADESH | DRY | FWS | WS | ISOL | DRY | FWS | FWS |
| 16 | JAMMU AND KASHMIR AND LADAKH | ISOL | WS | WS | SCT | ISOL | FWS | WS |
| 17 | WEST RAJASTHAN | DRY | ISOL | ISOL | DRY | DRY | ISOL | ISOL |
| 18 | EAST RAJASTHAN | DRY | ISOL | ISOL | DRY | DRY | ISOL | ISOL |
| 19 | WEST MADHYA PRADESH | DRY | DRY | ISOL | ISOL | DRY | DRY | DRY |
| 20 | EAST MADHYA PRADESH | DRY | DRY | ISOL | ISOL | DRY | DRY | DRY |
| 21 | GUJRAT REGION | DRY |
| 22 | SAURASHTRA & KUTCH | DRY |
| 23 | KONKAN & GOA | DRY |
| 24 | MADHYA MAHARASHTRA | DRY | ISOL | DRY | DRY | DRY | DRY | DRY |
| 25 | MARATHWADA | DRY |
| 26 | VIDARBHA | DRY |
| 27 | CHATTISGARH | DRY |
| 28 | COASTAL ANDHRA PRADESH | DRY |
| 29 | TELANGANA | DRY |
| 30 | RAYALASEEMA | DRY |
| 31 | TAMILNADU & PUDUCHERRY | DRY | DRY | ISOL | ISOL | SCT | SCT | ISOL |
| 32 | COSTAL KARNATAKA | DRY |
| 33 | NORTH INTERIOR KARNATAKA | DRY |
| 34 | SOUTH INTERIOR KARNATAKA | DRY |
| 35 | KERALA | DRY | DRY | DRY | ISOL | ISOL | SCT | ISOL |
| 36 | LAKSHDWEEP | DRY | DRY | DRY | DRY | DRY | 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 |

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Fig. 1: Maximum Temperatures Dated 2026-01-20

Fig. 2: Departure of Maximum Temp. Dated 2026-01-20

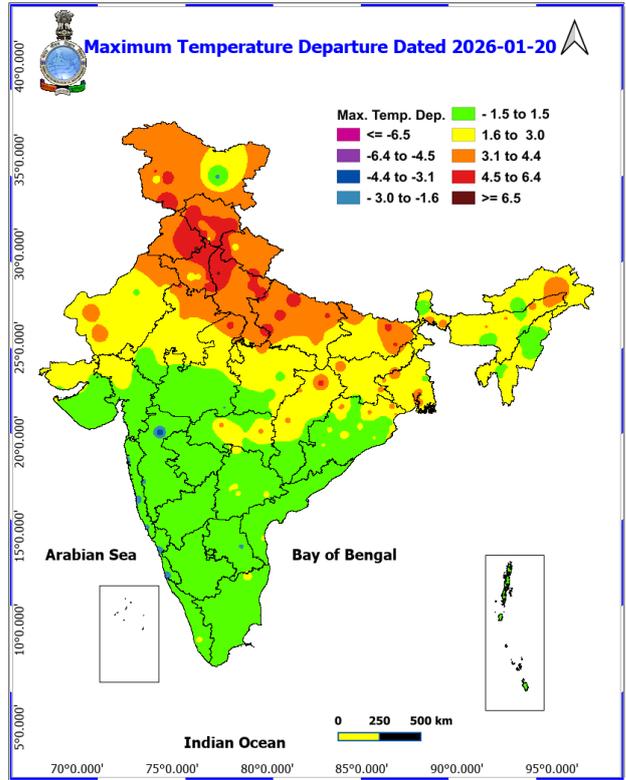
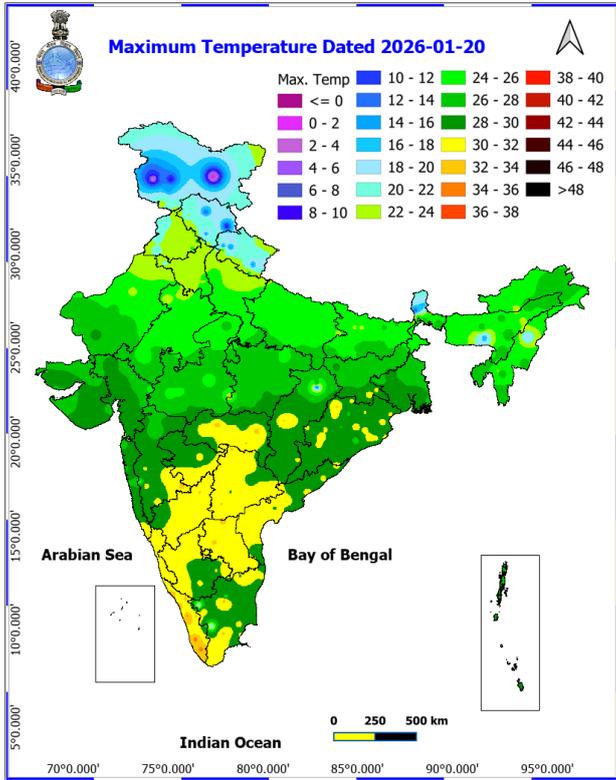
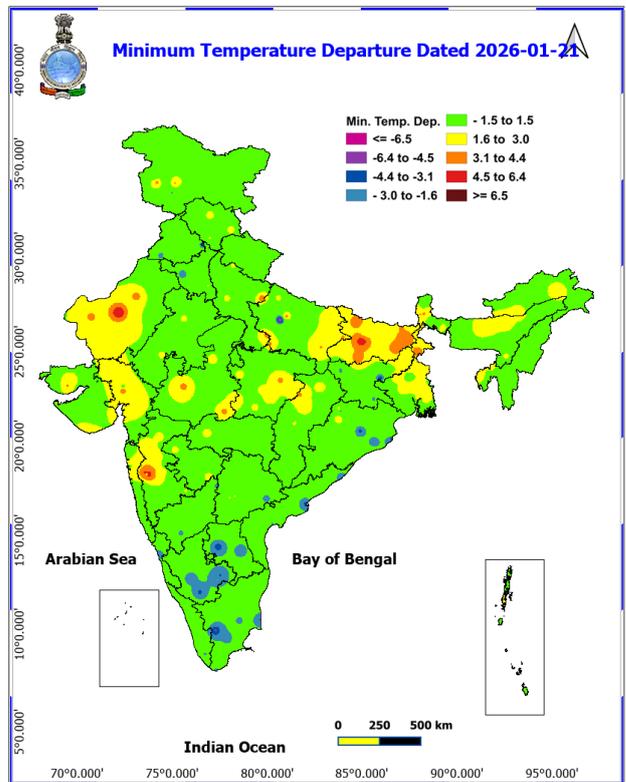
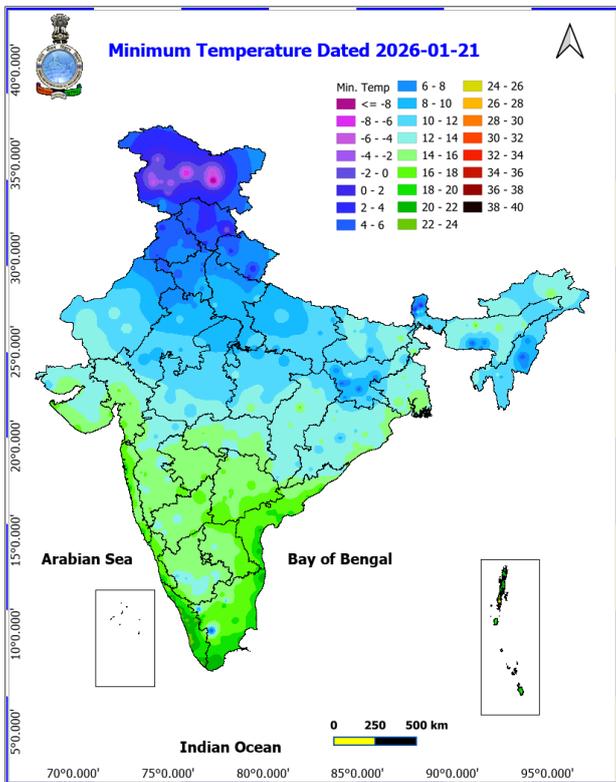
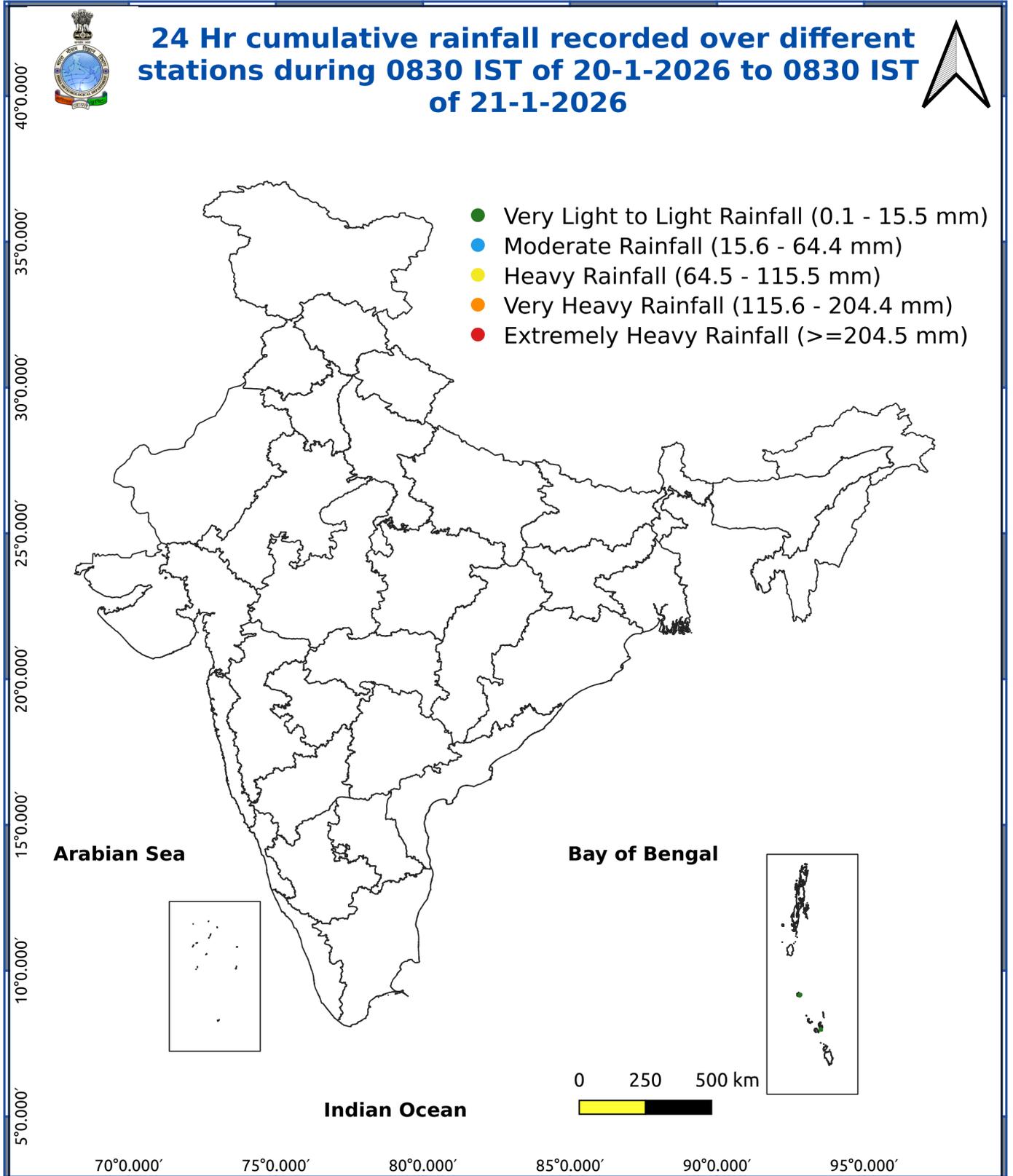


Fig. 3: Minimum Temperatures Dated 2026-01-21

Fig. 4: Departure of Minimum Temp. Dated 2026-01-21





Impact and Actions

Impact expected due to dense/very dense fog in the morning hours:

Dense fog conditions also likely during morning/night hours in isolated pockets over Punjab, Haryana and Chandigarh till 22nd; Punjab, Haryana and Chandigarh, West Rajasthan during 24th- 26th January.

Transport and Aviation:

- May affect some airports, highways and railway routes in the areas of met- sub-division.
- Difficult driving conditions with slower journey times.
- Unless taken precautionary measures, it may lead to some road traffic collisions.

Power Sector:

- Chances of Tripping of Power lines in the very dense fog routes.

Human Health:

- Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
- Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
- Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

❖ Transport and Aviation:

- Be careful while driving or outing through any transport.
- Use fog lights during driving.
- Be in touch with airlines, railways and state transport for schedule of your journey.

❖ Power Sector:

- To keep ready Maintenance Team.
- Human Health: To avoid outing until unless emergency and to cover the face.

Agromet advisories for various parts of the country

Agromet advisories for likely impact of Heavy Rainfall/ Snowfall / Hailstorm:

- In **Jammu & Kashmir**, make necessary arrangement to drain out excess water from wheat, mustard, chickpea, pea and vegetables fields. Gently shake the trees to remove snow immediately from the branches.
- In **Himachal Pradesh**, harvest the matured vegetables and keep the harvested produce in safe places. Make necessary arrangements to drain out excessrainwater from the standing crops, vegetable fields and fruit orchards.
- In **Uttarakhand**, harvest matured rapeseed & sugarcane and keep the harvested produce in safe places. Make necessary arrangements to drain excess water from standing crop fields and vegetables.
- Use hail nets to protect orchards and vegetable plants in Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh and Rajasthan.

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Livestock

Keep the animals inside the shed during heavy rainfall period and provide them balanced feed. Store feed and fodder in a safe place to prevent spoilage.

Agromet advisories for likely impact of Thunderstorm / Gusty Winds

- Provide mechanical support to horticultural crops and staking or support to vegetables and young fruit plants / fruit-bearing plants to avoid lodging due to strong winds.

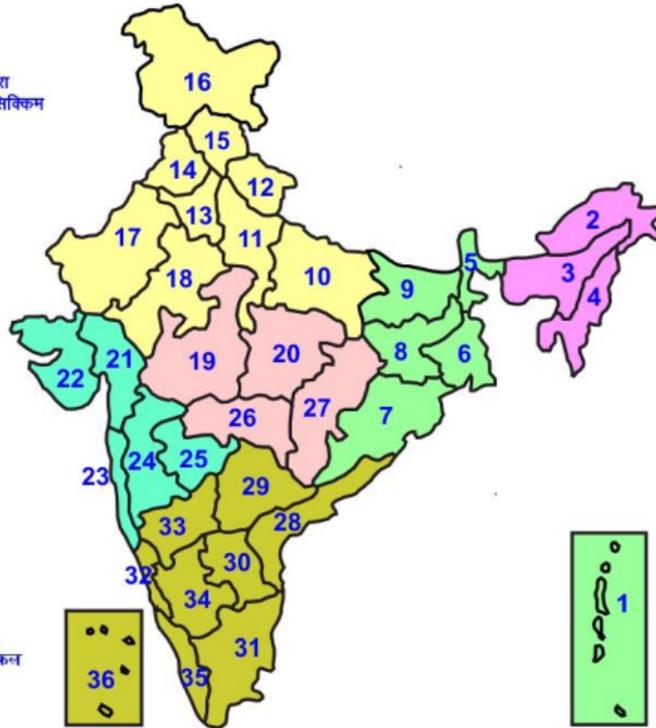
Legends & abbreviations:

Region wise classification of meteorological Sub-Divisions:

- **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
- **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
- **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
- **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
- **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

LEGENDS

- 1 अंडमान और निकोबार द्वीप समुह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम बंगाल
- 7 ओडिसा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ 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 मराठावाडा
- 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) |

Subdivision Colour

- NO WARNING
- WATCH (BE UPDATED)
- 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 |

- | | | | |
|--------------------------|-----------------|----------------------|--------------------|
| Heavy Rain | Very Heavy Rain | Extremely Heavy Rain | Heavy Snow |
| Thunderstorm & Lightning | Hailstorm | Dust Storm | Dust Raising Winds |
| Strong surface winds | Heat Wave | Hot Day | Warm Night |
| Cold Wave | Cold Day | Ground Frost | Fog |
| Hot & Humid | | | |

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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 |



Heavy: 64.5 to 115.5 mm/cm *
Very Heavy: 115.6 to 204.4 mm/cm*
Extremely Heavy: > 204.4 mm/cm *



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 $\geq 37^{\circ}\text{C}$



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 $> 6.4^{\circ}\text{C}$.



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 $\leq 15^{\circ}\text{C}$



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 $\leq -6.5^{\circ}\text{C}$



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



Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



Ice deposits on ground

Air temperature $\leq 4^{\circ}\text{C}$ (over Plains)



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



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)
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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