



All India Impact Based Weather Warning Bulletin

Monday 31 May 2021

Time of Issue: 1630 hours IST

(EVENING)

31 May (Day 1): ♦ **Thunderstorm with lightning, hail & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Madhya Pradesh, Vidarbha; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over East Rajasthan, Punjab and Haryana, Chandigarh & Delhi; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan, & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, Odisha, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam and Kerala & Mahe and **with lightning** at isolated places over Chhattisgarh, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Telangana, Karnataka, Tamil Nadu, Puducherry & Karaikal .

♦ **Thunderstorm/Duststorm with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over West Rajasthan.

♦ **Heavy to Very Heavy Rainfall** with **extremely heavy falls** at isolated places very likely over Assam & Meghalaya; heavy to very heavy rainfall at isolated places over Arunachal Pradesh and **Heavy Rainfall** at isolated places over Bihar, West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Strong Wind** (wind speed 40-50 gusting to 60 kmph) very likely over Eastcentral, Northwest, Southwest Arabian Sea, Comorin area, south Sri Lanka Coast. **Squally Weather** (wind speed 40-50 kmph) very likely along & off Kerala coast and Lakshadweep area. **Fishermen** are advised not to venture into these areas.

01 June (Day 2): ♦ ♦ **Thunderstorm with lightning, hail & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Vidarbha; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over East Rajasthan, Punjab and Haryana, Chandigarh & Delhi; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Uttarakhand, Uttar Pradesh, Bihar, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, North Interior Karnataka and Kerala & Mahe and **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan, & Muzaffarabad, Himachal Pradesh, West Madhya Pradesh, Chhattisgarh, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Telangana, Rayalaseema, Coastal & South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm/Duststorm with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over West Rajasthan.

♦ **Heavy to Very Heavy Rainfall** at isolated places very likely over Assam & Meghalaya and **Heavy Rainfall** at isolated places over Odisha, Konkan & Goa, Telangana, Interior Karnataka, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Strong Wind** (wind speed 40-50 gusting to 60 kmph) very likely over Eastcentral, Northwest, Southwest Arabian Sea. **Squally Weather** (wind speed 40-50 kmph) very likely along & off Kerala coast and Lakshadweep area. **Fishermen** are advised not to venture into these areas.

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02 June (Day 3): ♦ **Thunderstorm with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over East Rajasthan; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Jharkhand, Madhya Maharashtra, Marathwada, North Interior Karnataka and Kerala & Mahe and **with lightning** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan, & Muzaffarabad, Himachal Pradesh, Uttarakhand, East Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm/Duststorm with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over West Rajasthan.

♦ **Heavy to Very Heavy Rainfall** at isolated places very likely over Assam & Meghalaya and **Heavy Rainfall** at isolated places over Telangana, Karnataka, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Strong Wind** (wind speed 40-50 gusting to 60 kmph) very likely over Northwest, Southwest Arabian Sea. **Fishermen** are advised not to venture into these areas.

03 June (Day 4): ♦ **Thunderstorm with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over East Rajasthan; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Jharkhand and Kerala & Mahe and **with lightning** at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Madhya Maharashtra, Marathwada, Odisha, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.

♦ **Thunderstorm/Duststorm with lightning & gusty winds (speed reaching 30-40 kmph)** likely at isolated places over West Rajasthan.

♦ **Heavy Rainfall** at isolated places likely over Assam & Meghalaya and Tamil Nadu, Puducherry & Karaikal.

♦ **Strong Wind** (wind speed 40-50 gusting to 60 kmph) likely over Southwest Arabian Sea. **Fishermen** are advised not to venture into these areas.

04 June (Day 5): ♦ **Thunderstorm with lightning & gusty wind (speed reaching 30-40 kmph)** likely at isolated places over Kerala & Mahe and **with lightning** at isolated places over West Madhya Pradesh, Vidarbha, Chhattisgarh, Madhya Maharashtra, Marathwada, Karnataka and Tamil Nadu, Puducherry & Karaikal.

♦ **Heavy Rainfall** at isolated places likely over Assam & Meghalaya and Tamil Nadu, Puducherry & Karaikal.

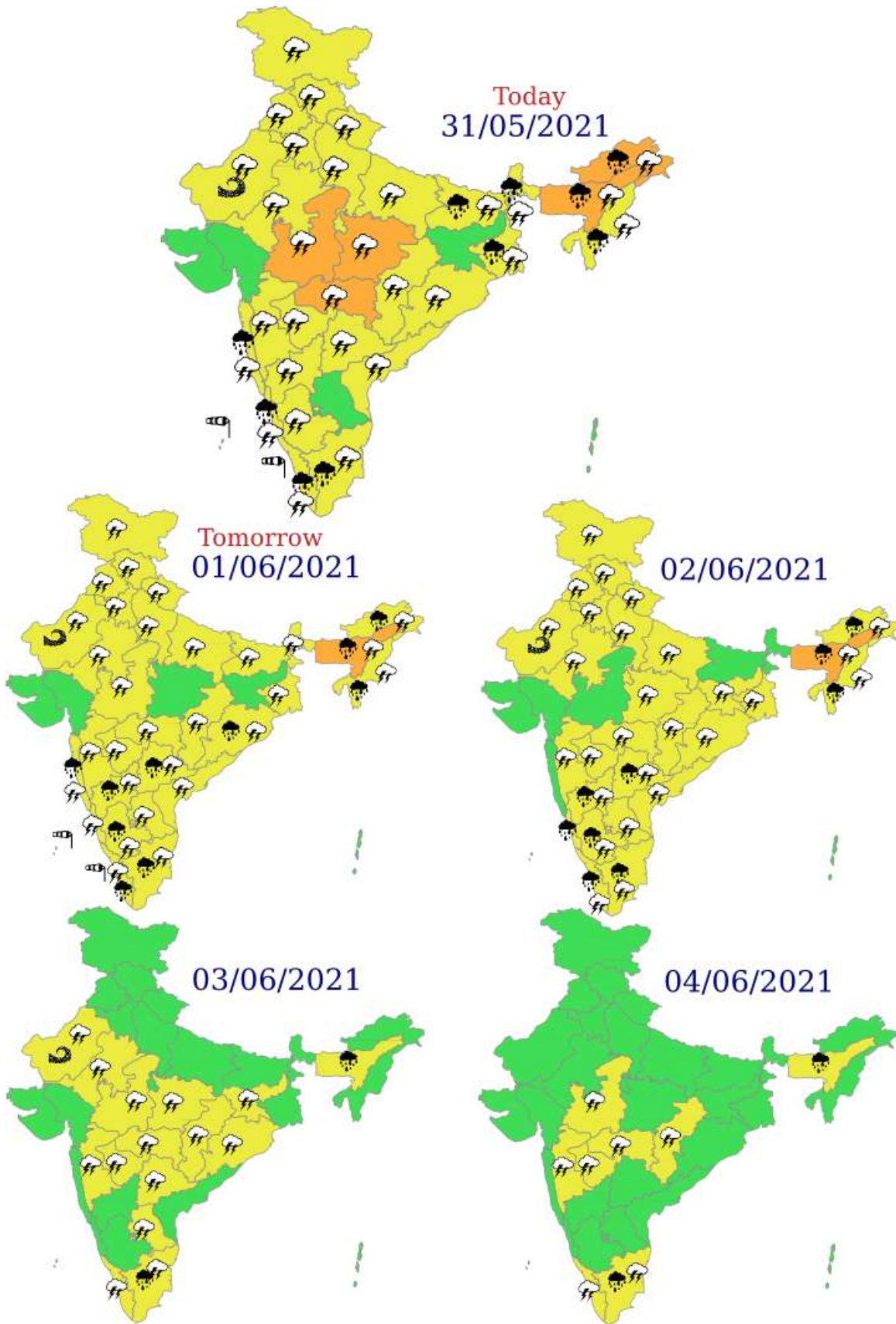
♦ **Strong Wind** (wind speed 40-50 gusting to 60 kmph) likely over Southwest Arabian Sea. **Fishermen** are advised not to venture into these areas.

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Impact based warning & Action suggested for areas likely to be affected

ISOLATED HEAVY TO VERY HEAVY RAINFALL WITH EXTREMELY HEAVY FALLS LIKELY OVER MEGHALAYA ON 31ST MAY; HEAVY TO VERY HEAVY RAINFALL OVER ASSAM & MEGHALAYA DURING NEXT 5 DAYS; OVER ARUNACHAL PRADESH DURING NEXT 3 DAYS.

A. Impact Expected

- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutcha roads.
- Possibilities of damage to vulnerable structure.
- Localized Mudslides(for plain areas) and Landslides (for hill and vulnerable areas)
- Damage to horticulture and standing crops in some areas due to inundation.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

B. Action Suggested

- Check for traffic congestion on your route before leaving for your destination.
- Follow any traffic advisories that are issued in this regard.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

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➤ **Impact expected and action suggested due to Thunderstorm with lightning/hail/gusty winds over Madhya Pradesh on 31st May and over Vidarbha on 31st May & 01st June.**

A. 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.

B. 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.
- Farming operations may be suspended during the event.

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

(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 $\leq -4.5^\circ\text{C}$ or 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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LEGENDS

1. अंडमन और निकोबार द्वीप समूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. मकरांड मणिपुर मिजोरम और त्रिपुरा
5. उप हिमालय पश्चिम बंगाल उत्तरांचल सिक्किम
6. पश्चिम बंगाल
7. ओडिसा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तरांचल
13. हरियाणा हिमाचल प्रदेश दिल्ली
14. राजस्थान
15. हिमाचल प्रदेश
16. जम्मू एवं कश्मीर उत्तरांचल नगरीय
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कर्नाटक
24. मध्य प्रदेश
25. महाराष्ट्र
26. विहार
27. छत्तीसगढ़
28. आंध्र प्रदेश
29. तेलंगाना
30. केरल
31. तमिलनाडु
32. पश्चिम बंगाल उत्तरांचल
33. उत्तरांचल
34. उत्तरांचल
35. उत्तरांचल
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. Karnat & Goa
24. Madhya Maharashtra
25. Maharashtra
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Kerala
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala S. 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

Kindly download **MAUSAM** APP for location specific forecast & warning, **MEGHDOOT** APP for Agromet advisory and **DAMINI** APP for Lightning Warning & visit state MC/RMC websites for district wise warning.

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