



All India Impact Based Weather Warning Bulletin

Monday 28 June 2021
Time of Issue: 1315 hours IST

(MID-DAY)

28 June (Day 1): ♦ Heavy to Very Heavy Rainfall with extremely heavy falls at isolated places very likely at isolated places over Assam & Meghalaya; **Heavy to Very Heavy Rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim and Arunachal Pradesh and **Heavy Rainfall** at isolated places over Uttarakhand, East Rajasthan, West Madhya Pradesh, Vidarbha, Bihar, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Madhya Maharashtra, Marathwada, Konkan & Goa and Telangana.

♦ **Thunderstorm with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over West Uttar Pradesh, Rajasthan, West Madhya and Vidarbha and with **lightning** at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, North Interior Karnataka, Tamilnadu, Puducherry & Karaikal, Lakshadweep, Madhya Maharashtra and Marathawada.

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

29 June (Day 2): ♦ Heavy to Very Heavy Rainfall with extremely heavy falls at isolated places very likely at isolated places over Assam & Meghalaya; **Heavy to Very Heavy Rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim and Arunachal Pradesh and **Heavy Rainfall** at isolated places over Bihar, Gangetic West Bengal and Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm with lightning** very likely at isolated places over Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Tamilnadu, Puducherry & Karaikal, Lakshadweep, Madhya Maharashtra and Marathawada.

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

30 June (Day 3): ♦ Heavy to Very Heavy Rainfall with extremely heavy falls at isolated places very likely at isolated places over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya; **Heavy to Very Heavy Rainfall** at isolated places over Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura and **Heavy Rainfall** at isolated places over Bihar, Gangetic West Bengal and Telangana.

♦ **Thunderstorm with lightning** very likely at isolated places over East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal.

♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** very likely over Southwest and Westcentral Arabian Sea, North Arabian sea and along & off Gujarat coast. Fishermen are advised not to venture into these areas.

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01 July (Day 4): ♦ Heavy to Very Heavy Rainfall with extremely heavy falls at isolated places likely at isolated places over Sub-Himalayan West Bengal & Sikkim; **Heavy to Very Heavy Rainfall** at isolated places over East Uttar Pradesh, Bihar, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura and **Heavy Rainfall** at isolated places over Uttarakhand, Jharkhand, Odisha, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Coastal Karnataka, Telangana and Tamilnadu, Puducherry & Karaikal.

♦ **Thunderstorm with lightning** likely at isolated places over Uttarakhand, Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamilnadu, Puducherry & Karaikal.

♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** likely over Southwest and Westcentral Arabian Sea, North Arabian sea and along & off Gujarat coast. Fishermen are advised not to venture into these areas.

02 July (Day 5): ♦ Heavy to Very Heavy Rainfall with extremely heavy falls at isolated places likely at isolated places over Sub-Himalayan West Bengal & Sikkim; **Heavy to Very Heavy Rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, Bihar and Assam & Meghalaya and **Heavy Rainfall** at isolated places over West Uttar Pradesh, Odisha, Coastal Andhra Pradesh & Yanam, Coastal Karnataka, Rayalaseema, Telangana, Tamilnadu, Puducherry & Karaikal, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm with lightning** likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamilnadu, Puducherry & Karaikal.

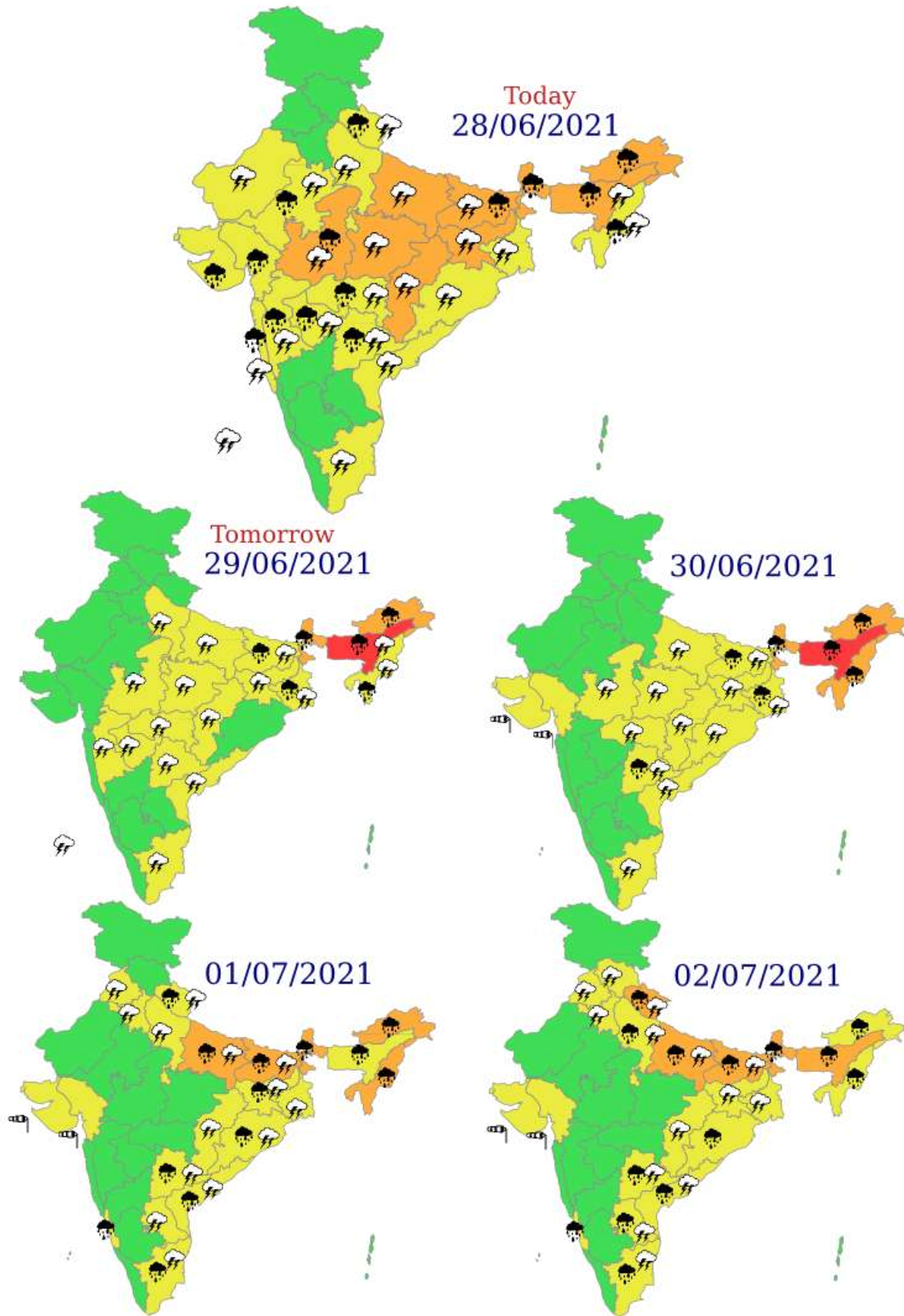
♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** likely over Southwest and Westcentral Arabian Sea, North Arabian sea and along & off Gujarat coast. Fishermen are advised not to venture into these areas.

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EXPECTED IMPACT & ACTION SUGGESTED DUE TO:

- ❖ **Isolated extremely falls over Assam & Meghalaya during 28th-30th and Sub-Himalayan West Bengal & Sikkim on 30th June, 01st & 2nd July, 2021.**
- ❖ **Isolated very heavy rainfall over Arunachal Pradesh during 28th June-01st July; over Nagaland, Manipur, Mizoram & Tripura on 30th June & 01st July; over Uttarakhand and Himalayan foothills of East Uttar Pradesh & Bihar on 01st & 02nd July, 2021.**

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 kutchha roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides
- 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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EXPECTED IMPACT & ACTION SUGGESTED due to **thunderstorms & lightning** over East Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh and Chhattisgarh on 28th June, 2021.

A. Impact Expected:

- Damage to thatched huts and asbestos roofed houses and cars. Roof tops may blow off.
- Unattached metal sheets may fly.
- Damage to power and communication lines due to breaking of tree branches.
- Damage to standing crops.
- Lightning strikes to ground.
- Flash flood due to associated rain

B. Action Suggested

- Farmers should not go in open fields.
- Cattle grazers and animals should not be in open.
- No fishing or boat movement.
- Mango and litchi orchards should be out of bound for any activity specially by children.
- Do not take shelter under isolated trees.
- Immediately get out of and away from ponds, lakes, and outdoor watery area (e.g. paddy transplantation).
- Go indoors or seek safe pukka shelters after hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.
- If no shelter is available, immediately get into the lightning crouch.
- During travel, stay inside car or bus or train when thunderstorm occurs.
- Do not use electric/ electronic appliance.
- Stay away from downed power lines.

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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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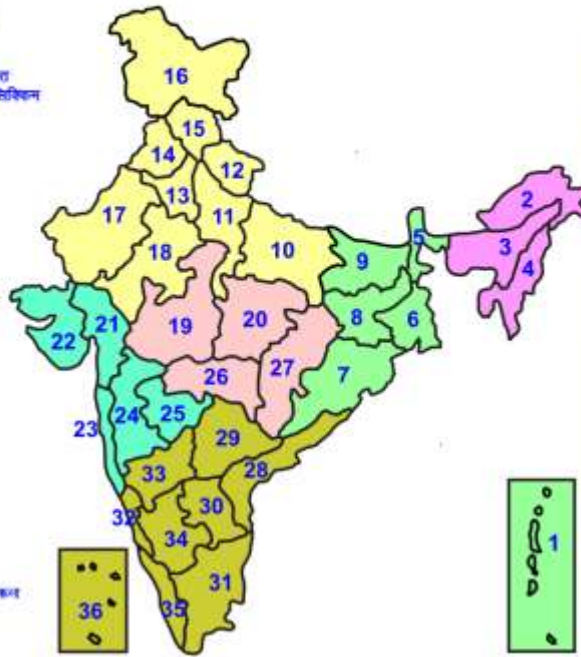
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LEGENDS

- 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 गंगटिक पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा हिडिगढ़ 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 कोकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 उत्तरी आंध्र प्रदेश एवं वनम
- 29 तेलंगाना
- 30 दक्षिणीय
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक पहाड़ी कर्नाटक
- 34 आंतरिक पश्चिमी 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

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Probabilistic Forecast

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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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