



All India Impact Based Weather Warning Bulletin

Tuesday 29 June 2021

Time of Issue: 1315 hours IST

(MID-DAY)

29 June (Day 1): ♦ 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 Bihar, Sub-Himalayan West Bengal & Sikkim and Arunachal Pradesh and **Heavy Rainfall** at isolated places over Gangetic West Bengal and Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm with lightning** very likely at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada and Tamilnadu, Puducherry & Karaikal.

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

♦ **Thunderstorm with lightning** very likely at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, 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.

01 July (Day 3): ♦ Heavy to Very Heavy Rainfall with extremely heavy falls at isolated places very likely over Bihar and Sub-Himalayan West Bengal & Sikkim; **Heavy to Very Heavy Rainfall** at isolated places over Assam & Meghalaya and **Heavy Rainfall** at isolated places over East Uttar Pradesh, Gangetic West Bengal, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal.

♦ **Thunderstorm with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and West Uttar Pradesh and **with lightning** at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema 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.

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

♦ **Thunderstorm with lightning & gusty winds (30-40 kmph)** likely at isolated places over Punjab and Haryana, Chandigarh & Delhi and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Coastal Andhra Pradesh & Yanam, 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.

03 July (Day 5): ♦ Heavy to Very Heavy Rainfall likely at isolated places over Sub-Himalayan West Bengal & Sikkim and **Heavy Rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Uttar Pradesh, Bihar, Assam & Meghalaya, Arunachal Pradesh and Tamilnadu, Puducherry & Karaikal.

♦ **Thunderstorm with lightning** likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal.

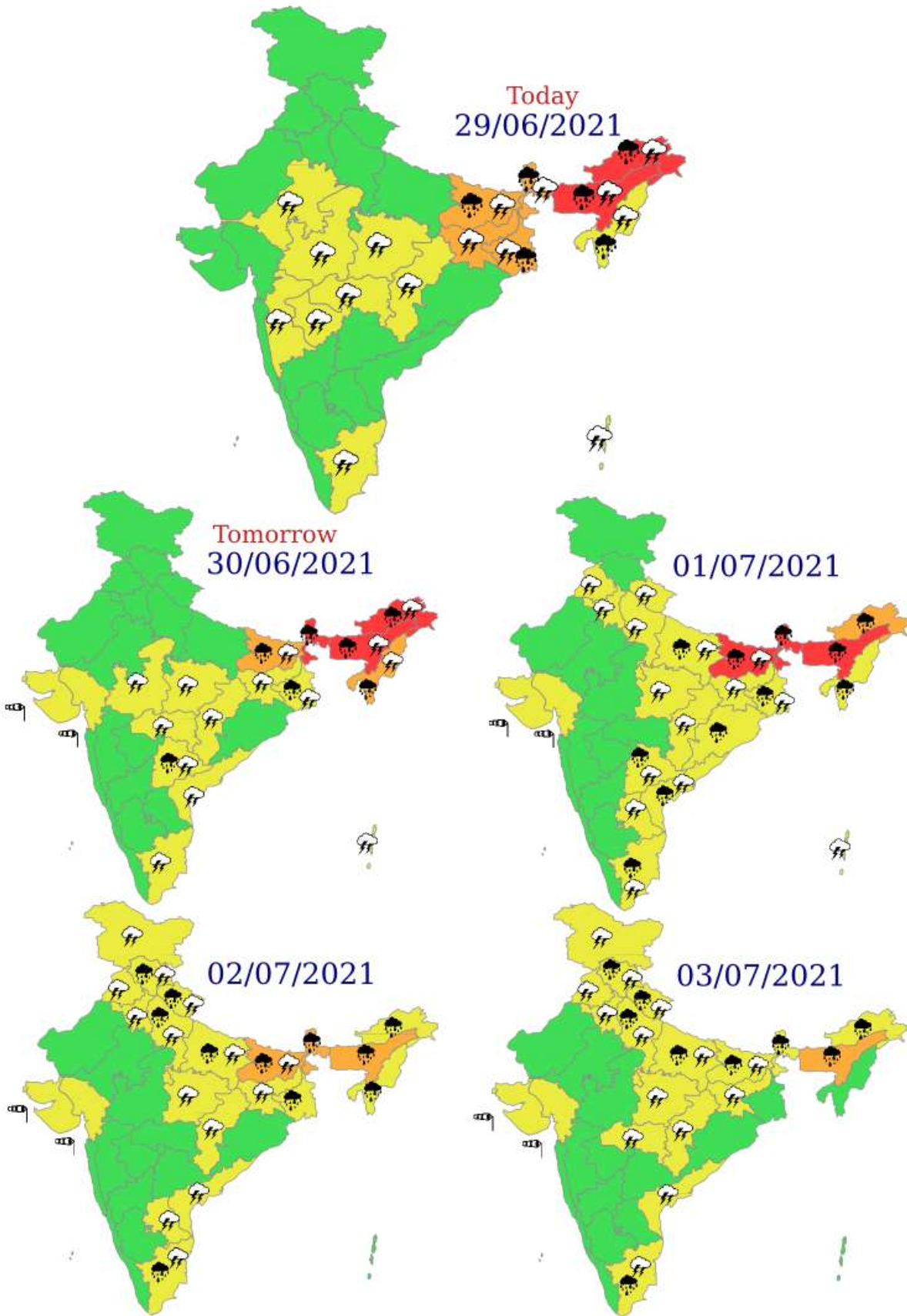
♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** likely over Southwest and Westcentral Arabian Sea, North Arabian sea and along & off Gujarat coast. Fishermen are advised not to venture into these areas.

* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day

For more details kindly visit www.imd.gov.in or contact : +91 11 24631913, 24643965, 24629798

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EXPECTED IMPACT & ACTION SUGGESTED DUE TO:

- ❖ **Isolated extremely falls over Assam & Meghalaya during 29th-30th, Sub-Himalayan West Bengal & Sikkim on 30th June, 01st & 2nd July and Bihar on 01st & 2nd July, 2021.**
- ❖ **Isolated very heavy rainfall over Arunachal Pradesh during 29th-30th June, over Nagaland, Manipur, Mizoram & Tripura on 30th June; over Uttarakhand and Himalayan foothills of East Uttar Pradesh on 02nd July and over Bihar and Sub-Himalayan West Bengal on 29th June, 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 kutcha 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 Gangetic West Bengal, Bihar and Jharkhand on 29th 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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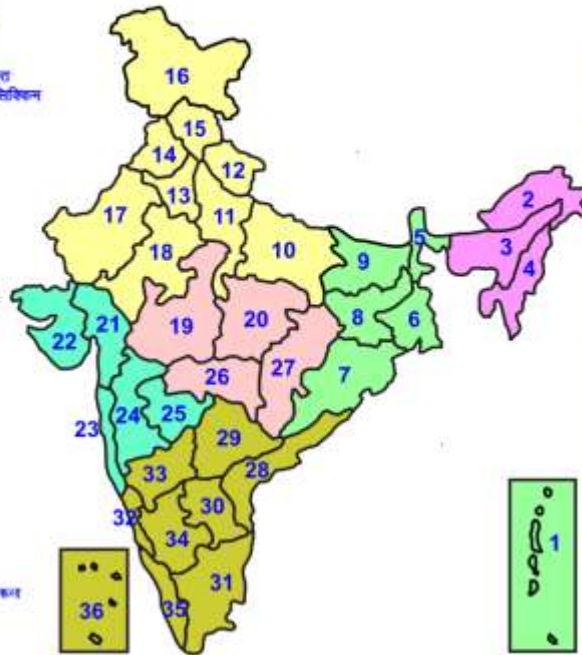
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LEGENDS

- 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 हिमाचल प्रदेश 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 मराठावाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 उत्तरी मध्य प्रदेश एवं बनारस
- 29 तेलंगाना
- 30 दक्षिणतमिष
- 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

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
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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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