



## All India Impact Based Weather Warning Bulletin

**Saturday 12 June 2021**  
**Time of Issue: 1630 hours IST**

### (EVENING)

**12 June (Day 1):** ♦ **Thunderstorm with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places very likely over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi and Rajasthan; with **lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places very likely over Uttar Pradesh, Kerala & Mahe and Telangana and with **lightning** at isolated places over Andaman & Nicobar Islands, Gangetic West Bengal, Jharkhand, Bihar, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Marathwada, Lakshadweep, Coastal Karnataka and Coastal Andhra Pradesh & Yanam.

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

♦ **Heavy to Very Heavy Rainfall** at a few places with **Extremely Heavy Falls** at isolated places very likely over Konkan & Goa; **Heavy Rainfall** at a few places with **Very Heavy Falls** at isolated places over Chhattisgarh; **Heavy to Very Heavy Rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya, Uttarakhand, East Madhya Pradesh, Vidarbha and Telangana and **Heavy Rainfall** at isolated places over Gangetic West Bengal, Jharkhand, Bihar, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Kerala & Mahe, Coastal Karnataka and Coastal Andhra Pradesh & Yanam.

♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** very likely over Southwest & adjoining Westcentral Arabian Sea and south, Central & North Bay of Bengal and along & off north Andhra Pradesh-Odisha-West Bengal coasts; **speed reaching 45-55 kmph** over Gulf of Mannar and speed reaching 40-50 kmph over North Arabian Sea and along & off Gujarat-Maharashtra coasts. Fishermen are advised not to venture into these areas.

**13 June (Day 2):** ♦ **Thunderstorm with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places very likely over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi and Rajasthan; with **lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places very likely over Uttar Pradesh, Kerala & Mahe and Telangana and with **lightning** at isolated places over Andaman & Nicobar Islands, Gangetic West Bengal, Jharkhand, Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Lakshadweep, Coastal & North Interior Karnataka and Coastal Andhra Pradesh & Yanam.

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

♦ **Heavy to Very Heavy Rainfall** at a few places with **Extremely Heavy Falls** at isolated places very likely over Konkan & Goa; **Heavy to Very Heavy Rainfall** at isolated places over Odisha, Madhya Pradesh, Chhattisgarh, Vidarbha, Madhya Maharashtra, Coastal Karnataka and Telangana and **Heavy Rainfall** at isolated places over Gangetic West Bengal, Jharkhand, Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Marathwada, Kerala & Mahe, Interior Karnataka and Coastal Andhra Pradesh & Yanam.

♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** very likely over Southwest & adjoining Westcentral Arabian Sea and south, Central & North Bay of Bengal and along & off north Andhra Pradesh-Odisha-West Bengal coasts; **speed reaching 45-55 kmph** over Gulf of Mannar and speed reaching 40-50 kmph over North Arabian Sea, Lakshadweep area and along & off Gujarat-Maharashtra-Kerala coasts. Fishermen are advised not to venture into these areas.

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

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**14 June (Day 3):** ♦ **Thunderstorm with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places very likely over Rajasthan; with **lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places very likely over Uttarakhand, Uttar Pradesh, Kerala & Mahe and Telangana and with **lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Jharkhand, Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Madhya Pradesh, Vidarbha, Chhattisgarh, Lakshadweep, Karnataka and Coastal Andhra Pradesh & Yanam.

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

♦ **Heavy to Very Heavy Rainfall** at a few places with **Extremely Heavy Falls** at isolated places very likely over Konkan & Goa; **Heavy to Very Heavy Rainfall** with **Extremely Heavy Falls** at isolated places over Madhya Maharashtra; **Heavy to Very Heavy Rainfall** at isolated places over Odisha, East Madhya Pradesh, Chhattisgarh and Coastal Karnataka and **Heavy Rainfall** at isolated places over West Bengal & Sikkim, Jharkhand, Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Uttarakhand, East Uttar Pradesh, West Madhya Pradesh, Vidarbha, Kerala & Mahe, Interior Karnataka and Telangana.

♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** very likely over Southwest & adjoining Westcentral Arabian Sea and south, Central & North Bay of Bengal and along & off north Andhra Pradesh-Odisha-West Bengal coasts and **speed reaching 40-50 kmph** over North Arabian Sea, Lakshadweep area and along & off Gujarat-Maharashtra-Kerala coasts. Fishermen are advised not to venture into these areas.

**15 June (Day 4):** ♦ **Thunderstorm with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places likely over Punjab, Haryana, Chandigarh & Delhi and Rajasthan; with **lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places very likely over Uttarakhand, Uttar Pradesh and Kerala & Mahe and with **lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Jharkhand, Bihar, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Lakshadweep, Karnataka, Coastal Andhra Pradesh & Yanam and Telangana.

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

♦ **Heavy to Very Heavy Rainfall** with **Extremely Heavy Falls** at isolated places likely over Konkan & Goa and Madhya Maharashtra; **Heavy to Very Heavy Rainfall** at isolated places over Jharkhand, Kerala & Mahe and Coastal & South Interior Karnataka and **Heavy Rainfall** at isolated places over West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Vidarbha and North Interior Karnataka.

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

**16 June (Day 5):** ♦ **Thunderstorm with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places likely over Rajasthan; with **lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places very likely over Uttarakhand, Uttar Pradesh and Kerala & Mahe and with **lightning** at isolated places over Jharkhand, Bihar, Arunachal Pradesh, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Madhya Pradesh, Vidarbha, Chhattisgarh, Lakshadweep, Karnataka, Coastal Andhra Pradesh & Yanam and Telangana.

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

♦ **Heavy to Very Heavy Rainfall** at isolated places likely over East Uttar Pradesh, Kerala & Mahe and Coastal & South Interior Karnataka and **Heavy Rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Uttarakhand, West Uttar Pradesh, West Madhya Pradesh, Chhattisgarh, Konkan & Goa, Madhya Maharashtra and North Interior Karnataka.

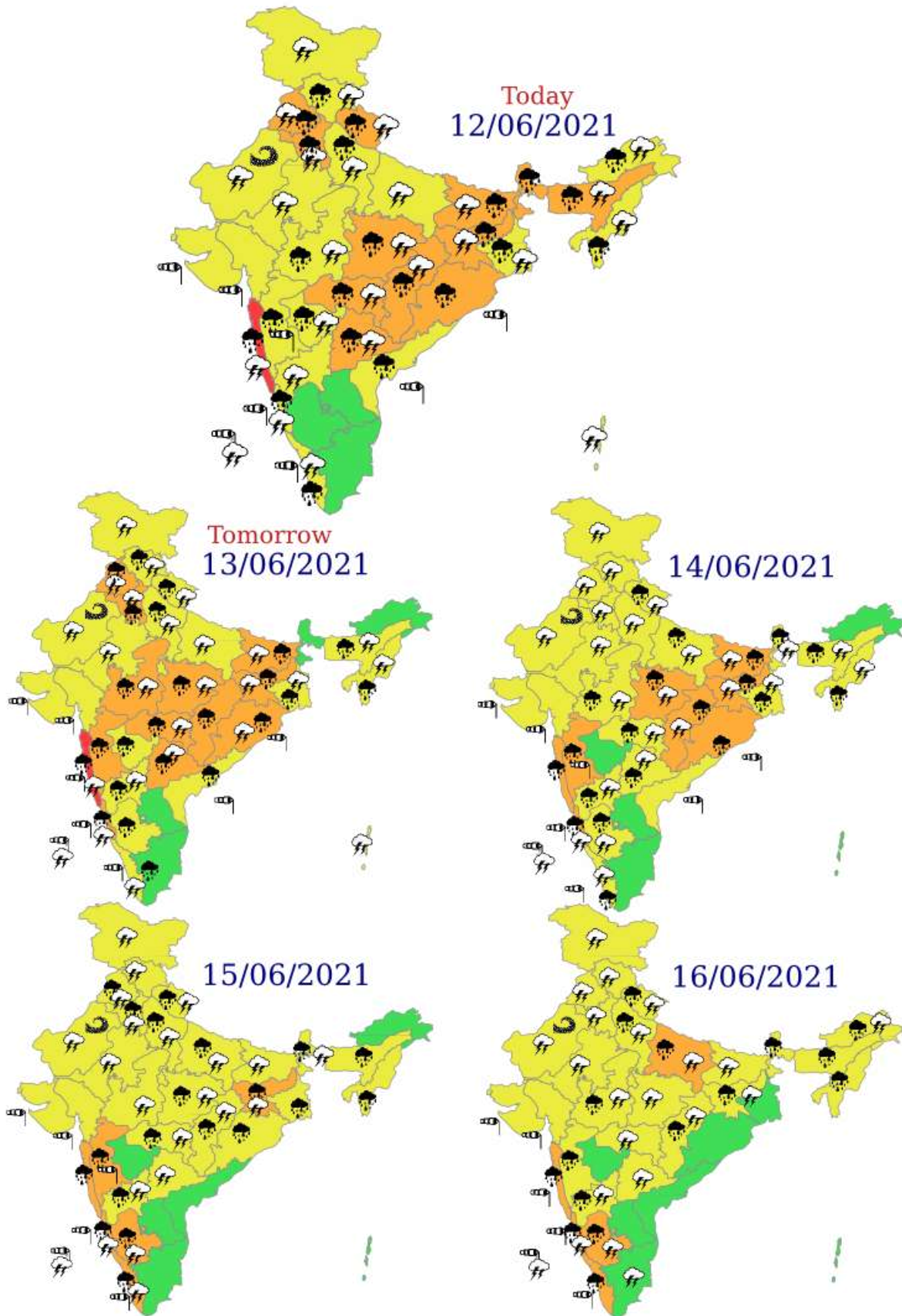
♦ **Strong Winds (speed 40-50 kmph gusting to 60 kmph)** very likely over Southwest & adjoining Westcentral Arabian Sea and **speed reaching 40-50 kmph** over North Arabian Sea, Lakshadweep area and along & off Gujarat-Maharashtra-Kerala coasts. Fishermen are advised not to venture into these areas.

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Scattered **heavy to very heavy falls** with isolated **extremely heavy falls** ( $\geq 20$  cm) over Konkan & Goa during 12<sup>th</sup> to 15<sup>th</sup>, Madhya Maharashtra on 14<sup>th</sup> & 15<sup>th</sup>; Isolated to scattered **heavy to very heavy falls** over East Madhya Pradesh on 13<sup>th</sup>, West Madhya Pradesh during 12<sup>th</sup> to 13<sup>th</sup>, Vidarbha on 12<sup>th</sup> & 13<sup>th</sup>, Chhattisgarh during 12<sup>th</sup> to 14<sup>th</sup>, Jharkhand on 15<sup>th</sup>, Sub-Himalayan West Bengal on 12<sup>th</sup>, Odisha during 12<sup>th</sup> to 14<sup>th</sup>, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 12<sup>th</sup>, Telangana on 12<sup>th</sup> & 13<sup>th</sup>, Coastal Karnataka during 12<sup>th</sup> & 16<sup>th</sup> and South Interior Karnataka and Kerala & Mahe on 15<sup>th</sup> & 16<sup>th</sup>, 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** in association moderate to severe thunderstorms Jharkhand, Bihar, Madhya Pradesh, Chhattisgarh, Punjab, Haryana, Northwest Indian Himalayas and will be accompanied by frequent cloud to ground lightning and strong gusty winds.

#### **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**

- 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



**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 \*



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  $4.5^\circ\text{C}$  to  $6.4^\circ\text{C}$ .

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  $40^\circ\text{C}$

Warm Night: When minimum temperature departure  $4.5^\circ\text{C}$  to  $6.4^\circ\text{C}$ .

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  $-4.5^\circ\text{C}$  to  $-6.4^\circ\text{C}$ .

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  $-4.5^\circ\text{C}$  to  $-6.4^\circ\text{C}$ .

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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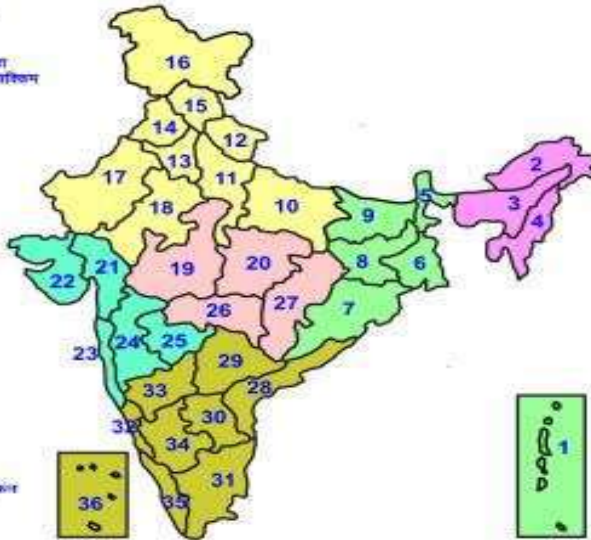
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## LEGENDS

1. अंडमान और निकोबार द्वीप समूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयन पश्चिम बंगाल और सिक्किम
6. पश्चिम बंगाल
7. ओडिशा
8. झारखण्ड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखण्ड
13. हरियाणा, चंडीगढ़, राजस्थान
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू & कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कर्नाटक
24. मध्य महाराष्ट्र
25. महाराष्ट्र
26. कोणकण, पुणे, मराठवाड़ा
27. चम्पारण
28. मध्य प्रदेश
29. तमिलनाडु
30. केरल
31. आंध्र प्रदेश
32. तेलंगाना
33. उत्तरांचल प्रदेश
34. उत्तर प्रदेश
35. बिहार
36. जम्मू & कश्मीर



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. West Bengal
7. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chand & 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. Maharashtra
26. Vidarbha
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)
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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