



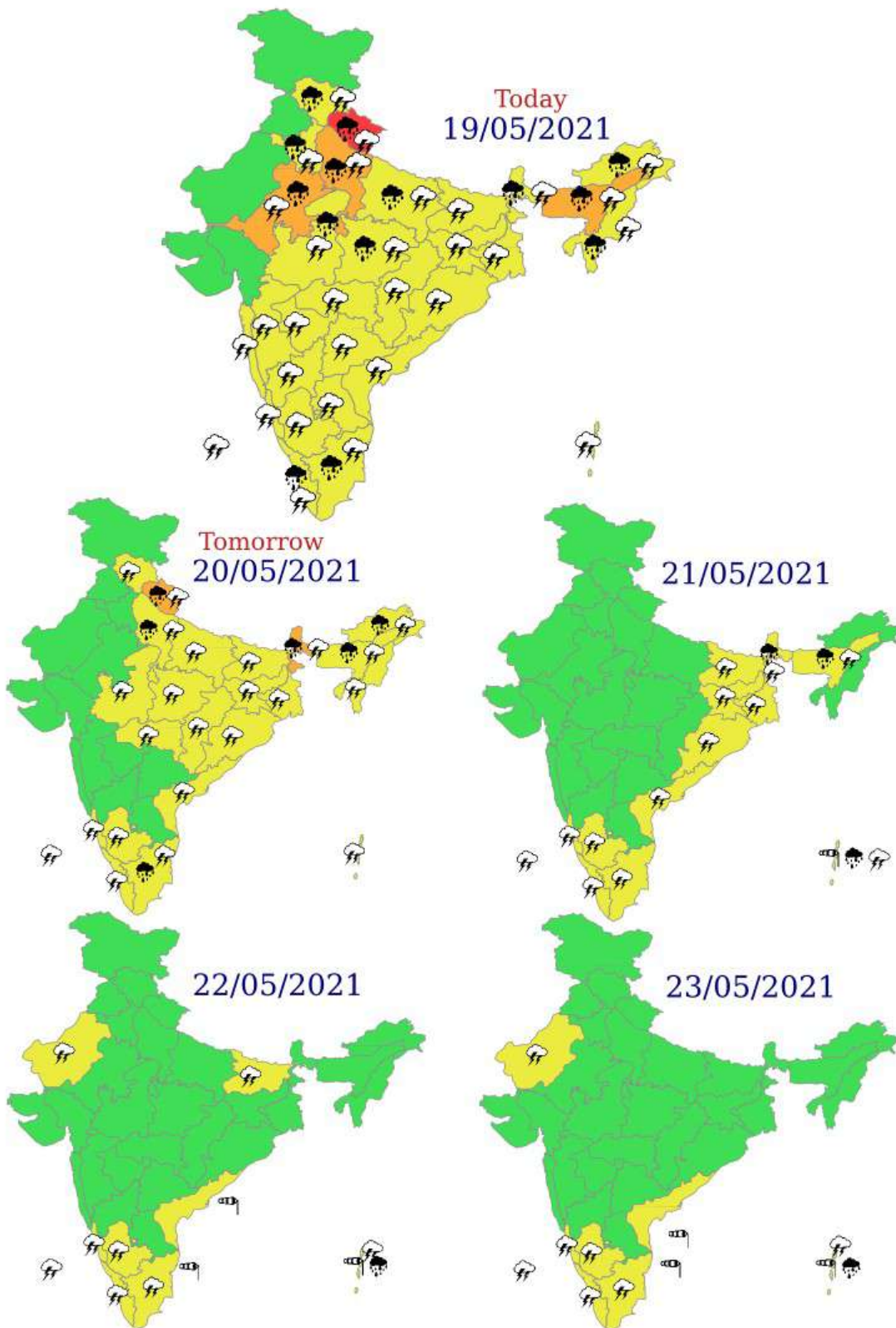
**Government of India
Earth System Science Organization
Ministry of Earth Sciences
India Meteorological Department**

**Press Release
Date: 19th May, 2021
Time of Issue: 1330 hrs IST**

Subject: Wet spell over Western Himalayan Region & plains of Northwest India on 19 & 20 May, 2021

- A Depression (**remnant of the Extremely Severe Cyclonic Storm “Tauktae”**) lay centred at 0830 hours IST of today, the 19th May, 2021 near latitude 24.9°N and longitude 73.7°E over southeast Rajasthan, about 30 km south-southwest of Udaipur (Rajasthan). It is very likely to move northeastwards and weaken gradually into a **Well Marked Low pressure area** during next 12 hours. The remnant of the system is very likely to move further northeastwards across Rajasthan to Uttar Pradesh during the next two days.
- A Western Disturbance lies as a cyclonic circulation over Jammu & Kashmir between 3.1 & 3.6 km above mean sea level with trough aloft at 5.8 km above mean sea level roughly along longitude 70°E to the north of latitude 27°N.
- **The depression (remnant of Cyclonic Storm “Tauktae”)** would interact with the above Western Disturbance. **In addition, high moisture feeding from Arabian Sea is also likely over northwest India.** As a result, fairly widespread to widespread rainfall activity likely over northwest India (except Jammu & Kashmir) **with heavy to very heavy rainfall and extremely heavy falls at isolated places over Uttarakhand; heavy to very heavy rainfall at isolated places over northwest Uttar Pradesh; and heavy rainfall at isolated places over Himachal Pradesh Haryana, Chandigarh & Delhi, rest parts of Uttar Pradesh, northeast Rajasthan and north Madhya Pradesh on 19 May, 2021.**
- **Light to moderate rainfall/ thundershower is very likely over Delhi NCR on 19 May, 2021**
- Rainfall activity is very likely to decrease from 20 May with fairly widespread to widespread rainfall over Uttar Pradesh & Uttarakhand; and isolated to scattered rainfall over rest parts of northwest India. **Heavy to very heavy rainfall at isolated places also likely over Uttarakhand and heavy rainfall at isolated places over West Uttar Pradesh on 20th May.** Rainfall activity is very likely to decrease significantly over the region from 21st May, 2021.
- **Multi-Hazard warnings for next 5 days are given in following page:**

Multi-Hazard warnings for next 5 days are given below:



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

Heavy to very heavy rainfall & extremely heavy falls at isolated places very likely over Uttarakhand on 19th and heavy to very heavy at isolated places on 20th; heavy to very heavy rainfall at isolated places over northwest Uttar Pradesh on 19th and isolated heavy on 20th; heavy rainfall at isolated places over Himachal Pradesh Haryana, Chandigarh & Delhi, rest parts of Uttar Pradesh, northeast Rajasthan and north Madhya Pradesh on 19th May, 2021.

A. Impact Expected over Uttarakhand and northwest Uttar Pradesh:

- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in hilly & urban areas.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in cities due to water logging in roads leading to increased travel time.
- Minor damage to kutchha 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.

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.

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 *



Heat Wave

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



Warm Night

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



Cold Wave

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



Cold Day

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



Fog

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

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



Thunderstorm

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



Dust/Sand Storm

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



Frost

Ice deposits on ground

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



Squall

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



Sea State

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



Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)

Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

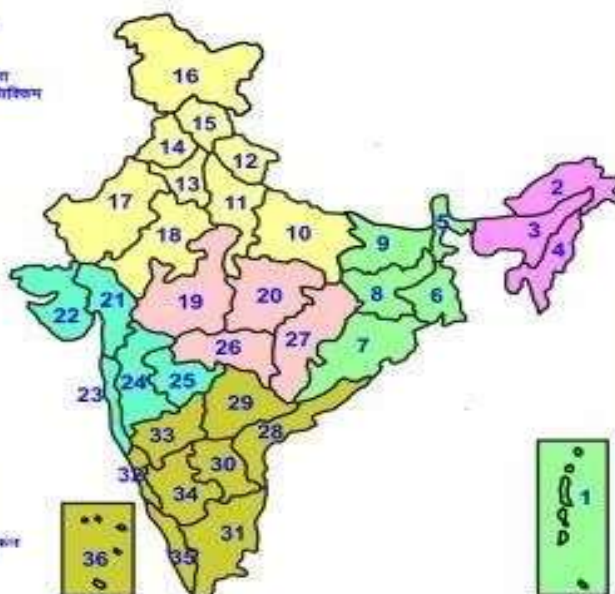
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Super Cyclone Strom: Wind speed > 220 kmph (> 119 knots)

LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागलैंड, मणिपुर, मिजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 गंगेयि पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखण्ड
- 13 हरियाणा, चंडीदाह और दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर (एवंक 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 मराठवाड़ा
- 26 विदर्भ
- 27 उत्तरांचल प्रदेश
- 28 उत्तर प्रदेश
- 29 उत्तरांचल प्रदेश एवं जम्मू
- 30 तमिलनाडु
- 31 तमिलनाडु, पुदुचेरी एवं कर्नाटक
- 32 तमिलनाडु
- 33 उत्तरांचल प्रदेश एवं कर्नाटक
- 34 उत्तरांचल प्रदेश एवं 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. Marathwada
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnada, 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)

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 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.