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:

Today
19/05/2021

Tomorrow
20/05/2021

21/05/2021

22/05/2021

23/05/2021
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 19\textsuperscript{th} and heavy to very heavy at isolated places on 20\textsuperscript{th}; heavy to very heavy rainfall at isolated places over northwest Uttar Pradesh on 19\textsuperscript{th} and isolated heavy on 20\textsuperscript{th}; heavy rainfall at isolated places over Himachal Pradesh Haryana, Chandigarh & Delhi, rest parts of Uttar Pradesh, northeast Rajasthan and north Madhya Pradesh on 19\textsuperscript{th} 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 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.

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.
### Probabilistic Forecast

<table>
<thead>
<tr>
<th>Terms</th>
<th>Probability of Occurrence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlikely</td>
<td>≤ 25</td>
</tr>
<tr>
<td>Likely</td>
<td>25 - 50</td>
</tr>
<tr>
<td>Very Likely</td>
<td>50 - 75</td>
</tr>
<tr>
<td>Most Likely</td>
<td>&gt; 75</td>
</tr>
</tbody>
</table>

#### Legends

- **Rain/Snow**: Heavy: 64.6 to 115.5 mm; Very Heavy: 204.4 mm; Extremely Heavy: > 204.4 mm.
- **Heat Wave**: Maximum Temperature Departure from normal: ≥ 4.5°C; Severe Heat Wave: Maximum Temperature Departure from normal: ≥ 6.5°C; (c) Criteria for heat wave for coastal stations: When maximum temperature departure is ≥ 4.5°C from normal, Heat Wave may be described provided maximum temperature ≥ 37°C.
- **Warm Night**: When minimum temperature departure 4.5°C to 6.4°C; Severe Warm Night: When minimum temperature departure ≥ 6.4°C.
- **Cold Wave**: Cold Wave: Minimum Temperature Departure from normal: ≥ 4.5°C; Severe Cold Wave: Minimum Temperature Departure from normal: ≥ 6.5°C; (c) For Coastal Stations: When Minimum Temperature Departure is ≥ 4.5°C or actual Minimum Temperature is ≥ 15°C.
- **Colc Day**: Cold Day: Maximum Temperature Departure from normal: ≥ 4.5°C; Severe Cold Day: Maximum Temperature Departure from normal: ≥ 6.5°C.
- **Fog**: Moderate Fog: When the visibility between 500–2000 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 as sharp rumbling sound (Thunder).
- **Dust/Sand Storm**: An ensemble of particles of dust or sand energetically lifted to great heights by strong and turbulent wind.
- **Ice deposits on ground**: Air temperature ≤ 4°C (over Plains).
- **Squall**: A strong wind that rises suddenly, lasts for at least 1 minute. Moderate: Wind speed 52–61 km/h; Severe: Wind speed 62–87 km/h; Very Severe: Wind speed > 87 km/h.
- **Sea State**: Cycloonic Storm: Wind speed 62–87 km/h (34–47 knots); Severe Cycloonic Storm: Wind speed 88–117 km/h (48–63 knots); Very Severe Cycloonic Storm: Wind speed 118–165 km/h (64–89 knots); Extremly Severe Cycloonic Storm: Wind speed 166–220 km/h (80–119 knots); Super Cycloonic Storm: Wind speed > 220 km/h (> 119 knots).

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### When maximum temperature of a station reaches ≥ 40°C for plains and ≥ 38°C for hilly regions (a) Based on Departure from normal
- **Heat Wave**: Maximum Temperature Departure from normal: ≥ 4.5°C; Severe Heat Wave: Maximum Temperature Departure from normal: ≥ 6.5°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°C.

### When minimum temperature of a station ≥ 10°C for plains and ≥ 0°C for hilly regions (a) Based on departure
- **Cold Wave**: Minimum Temperature Departure from normal: ≥ 4.5°C; Severe Cold Wave: Minimum Temperature Departure from normal: ≥ 6.5°C; (c) For Coastal Stations: When Minimum Temperature Departure is ≥ 4.5°C or actual Minimum Temperature is ≥ 15°C.

### When minimum temperature of a station ≤ 10°C for plains and ≤ 0°C for hilly regions Based on departure
- **Cold Day**: Maximum Temperature Departure from normal: ≥ 4.5°C; Severe Cold Day: Maximum Temperature Departure from normal: ≥ 6.5°C.

### Phenomenon of small droplets suspended in air and the horizontal visibility < 1km
- **Fog**: Moderate Fog: When the visibility between 500–2000 metres; Dense fog: when the visibility between 50–200 metres; Very Dense Fog: when the visibility < 50 metres.

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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.