Subject: i) Significant reduction in rainfall activity likely over Uttrakhand from today, the 19th October, 2021

ii) Intense spell of rainfall activity very likely to continue over East & Northeast India very till 20th October, 2021 and reduction thereafter.

iii) Fresh spell of rainfall activity over south peninsular India (Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Coastal & South Interior Karnataka) during next 4-5 days.

Significant Rainfall amount recorded (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm):

- **Uttarakhand**: Nainital, Pantnagar (Udham Singh Nagar)-40; Mukteshwar Kumaon-34; Champawat-32; Almora-22; Pithoragarh-21; Bageshwar-20; Chamoli-19; Kotdwar-14; Deoprayag-12; Rudraprayag-11; Tehri-7; **Himachal Pradesh**: Kinnaur-7; **West Uttar Pradesh**: Bareilly (Bareilly)-54; Nawabganj-26; Rampur, Shahjahanpur-25; Bareilly-18; Pilibhit-14; Hamirpur, Jalaun-11; Bulandshahar, Sambhal-10; Agra-8; Meerut, Amroha-7; **East Uttar Pradesh**: Tirwa (Kannauj)-41; Kheri, Sitapur-23; Farrukhabad-18; Kanpur-13; Maharajganj, Nowgong-7; **Bihar**: Katihar-11; Kishanganj-10; Monghyr, Bhagalpur-9; **Jharkhand**: Koderma-9; Dumka-8; Sahibganj-7; **Odisha**: Dhamnagar, Dhenkanal, Mayurbhanj-7; **Gangetic West Bengal**: Simulia-13; Canning-11; Sagar Island-10; Diamond Harbour, Haldia-9; Suri, Magra, Purulia-8; Basirhat, Kharagpur, Bagati-7; **Sub-Himalayan West Bengal & Sikkim**: Jhalong-20; Darjeeling-17; Mazitar-16; Sukhiaopokhri-15; Kalimpong-14; Khanitar, Soreng-13; Rongli-12; Damthang, Gyalings-11; Gangtok, Pakyong, Contai-10; Ranipool, Mangan, Sankalan, Tadong-9; **East Madhya Pradesh**: Tikamgarh-9; Chhatarpur, Panna-7; **Tamilnadu**: Shivanga-7; **Tripura**: Panisagar-9; **Andaman & Nicobar Islands**: Nancowry-7;

Weather Systems, Forecast and Warnings:

i) As predicted rainfall activity has reduced significantly over northwest & adjoining central India from today, however due to Western Disturbance and its interaction with easterlies at lower levels, fairly widespread rainfall with isolated heavy rainfall very likely over Uttrakhand on today and dry weather subsequent 3 days.

Thereafter, a fresh Western Disturbance is very likely to affect Western Himalayan Region from 22nd and cause scattered to fairly widespread rain/snow over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad on 22nd with isolated heavy rainfall on 23rd; Isolated to Scattered rain/snow over Himachal Pradesh on 22nd & 23rd and Isolated to Scattered rainfall over Uttarakhand, Punjab, Haryana, northwest Rajasthan on 23rd October.

ii) A Low Pressure Area lies over Bihar & neighbourhood. Also due to strong southerly/southeasterly winds from Bay of Bengal, heavy spell of rainfall activity very likely to continue over east & northeast India till 20th October with Fairly wide spread to wide spread light to moderate rainfall with heavy rainfall with thunderstorms and lightning at isolated places is very likely over Odisha and Jharkhand on 19th; over Gangetic West Bengal on 19th & 20th; over Bihar on
20th. Isolated **Very heavy falls** also very likely over Sub-Himalayan West Bengal and Arunachal Pradesh on 20th; over Bihar on 19th; over Assam & Meghalaya on 19th & 20th October. **Isolated extremely heavy falls are also very likely over Sub-Himalayan West Bengal & Sikkim on 19th October.**

iii) A fresh spell of easterly wave is likely to affect **south Peninsular India** and cause fairly widespread to wide spread rainfall with **isolated heavy falls** likely over Kerala & Mahe and Tamilnadu Puducherry & Karaikal during 19th-23rd, over coastal Karnataka during 21st-23rd; South Interior Karnataka during 20th-23rd October. **Isolated very heavy falls** also very likely over Kerala & Mahe and Tamilnadu, Puducherry & Karaikal on 20th & 21st October.

**For detailed forecast and warning refer following page:**

EXPECTED IMPACT & ACTION SUGGESTED due to

(i) Isolated Extremely heavy falls over Sub-Himalayan West Bengal & Sikkim on 19th October, 2021.

(ii) Isolated Very Heavy Rainfall over Bihar on 19th; Sub-Himalayan West Bengal and Arunachal Pradesh on 20th, Assam & Meghalaya on 19th & 20th; over Kerala & Mahe and Tamilnadu, Puducherry & Karaikal on 20th & 21st October, 2021.

A. Impact Expected

- Localized Flooding of roads, inundation and 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 Mudslides/Landslides.
- 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.
Legends:
**Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain** > 204.4 mm.

Region wise classification of meteorological Sub-Divisions:

1) **Northwest India:** Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad; Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.

2) **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.

3) **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.

4) **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

5) **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.

6) **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

**Spatio-Distribution:** (% of Stations Reporting)

<table>
<thead>
<tr>
<th>% Stations</th>
<th>Category</th>
<th>% Stations</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>76-100</td>
<td>Widespread (WS/Most Places)</td>
<td>26-50</td>
<td>Scattered (SCT/A Few Places)</td>
</tr>
<tr>
<td>51-75</td>
<td>Fairly Widespread (FWS/Many Places)</td>
<td>1-25</td>
<td>Isolated (ISOL)</td>
</tr>
</tbody>
</table>

**Warning:**
- **Heavy Rain**
- **Strong Winds**
- **Thunderstorm with Lightning**

**Probabilistic Forecast**

<table>
<thead>
<tr>
<th>Terms</th>
<th>Probability of Occurrence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlikely</td>
<td>&lt; 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>

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.