Subject: (i) Intense spell of rainfall likely over Uttar Pradesh & Uttrakhand on today, the 16th September and reduction thereafter. Increase in rainfall activity over East Rajasthan and Gujarat state from 18th September, 2021. 
(ii) A fresh spell of heavy rainfall likely over East India from 18th September, 2021.

Rainfall amount recorded (from 0830 hours IST of yesterday to 0830 hours IST of today) (7 cm or more): Given at annexure

Weather Systems:
 ✓ A Well marked Low Pressure Area lies over central parts of north Madhya Pradesh & neighbourhood with associated cyclonic circulation extending upto mid tropospheric levels. It is very likely to weaken gradually during next 2 days. However, the associated cyclonic circulation is very likely to persist during subsequent 2-3 days.
 ✓ A trough runs from Northwest Arabian Sea to the cyclonic circulation associated with the well marked Low Pressure Area over central parts of north Madhya Pradesh and extends upto lower tropospheric levels.
 ✓ The monsoon trough lies south of its normal position. It is very likely to remain south of its normal position during next 4-5 days.
 ✓ A cyclonic circulation lies over Eastcentral Bay of Bengal & adjoining Myanmar coast and extends upto mid tropospheric levels tilting south-westwards with height. It is very likely to move west-northwestwards and reach Northwest Bay of Bengal off north Odisha-West Bengal coasts around 18th September, 2021.
Weather forecast and Warning:

- Widespread rainfall with **isolated heavy to very heavy & extremely heavy falls** very likely over Uttar Pradesh today, the 16th September, scattered rainfall with isolated heavy falls on 17th September and decrease thereafter. Fairly widespread rainfall with **isolated heavy to very heavy falls** very likely over West Madhya Pradesh on 16th & 17th and isolated heavy falls from 18th to 20th September. Fairly widespread rainfall with **isolated heavy to very heavy** falls very likely over Uttrakhand on today, the 16th September and with isolated heavy falls on 19th & 20th September. Fairly widespread with isolated heavy falls is also likely over Haryana & Chandigarh on today, the 16th September and decrease thereafter. Light to moderated isolated/scattered rainfall activity likely over rest parts of northwest India during next 5 days.

- Rainfall activity is likely to increase over Odisha & Gangetic West Bengal with fairly widespread to widespread rainfall & isolated heavy falls over above areas from 18th to 20th September, 2021.

For detailed forecast and warning refer:
https://mausam.imd.gov.in/imd_latest/contents/all_india_forecast_bulletin.php
EXPECTED IMPACT & ACTION SUGGESTED due to Extremely Heavy Rainfall over Uttar Pradesh on 16th and Very Heavy Rainfall over Uttarakhand on 16th; West Madhya Pradesh on 16th & 17th; East Rajasthan during 18th-20th and Gujarat Region on 19th & 20th September, 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 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.
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.

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**SPATIAL 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**

- **WARNING (TAKE ACTION)**
  - ALERT (BE PREPARED)
  - WATCH (BE UPDATED)
  - NO WARNING (NO ACTION)

**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>
24 hours accumulated significant realised rainfall over country during 0830 hours IST of 15th to 0830 hours IST of 16th Sep., 2021 (in cm)

✓ East Uttar Pradesh: Ayodhya & Pratapgarh-20 each, Fursatganj-19, Basti & Chitrakoot-17 each, Rae Bareilly-16, Mirzapur-15, Prayagraj, Amethi & Fatehpur-13 each, Lucknow & Sultanpur-12 each, Gorakhpur-11, Varanasi-10

✓ West Uttar Pradesh: Sambhal-11, Jhansi-9

✓ West Madhya Pradesh: Raisen & Ratlam-7 each

✓ East Madhya Pradesh: Jabalpur-13, Mandla-11, Satna-8, Rewa-7

✓ Chhattisgarh: Korba & Balrampur-11 each, Kothigaora-10, Pali & Surajpur-9 each

✓ Odisha: Keonjhangarh-12, Ganjam & Mayurbhanj-7 each

✓ Gangetic West Bengal: West Midnapore-10

✓ Jharkhand: Hazaribagh-8

✓ Gujarat Region: Surat-10

✓ Vidarbha: Gadchiroli-7

✓ Kerala & Mahe: Alapuzha-9, Thiruvananthapuram-8, Pathanamthitta-7

✓ Tamil Nadu: Tiruvannamalai-10