# Central Water Commission
# Upper Ganga Basin Organisation, Lucknow
# Daily Flood Situation Report Cum Advisories
# Date: 07 AUGUST, 2020

**FSR No.46** **Dated 07-08-2020**

**1. Weather forecast by IMD**

**I. SYNOPTIC SITUATION:**

- ♦ The Low Pressure Area over southwest Madhya Pradesh & adjoining Gujarat Region has become less marked. However, the associated cyclonic circulation now lies over Kutch and neighbourhood and extends upto 5.8 km above mean sea level.
- The monsoon trough at mean sea level now passes through Naliya, Erinpura Road, Kota, Nowgong, Mirzapur, Daltonganj, Bankura, Digha and thence southeastwards to Northeast Bay of Bengal and extends upto 1.5 km above mean sea level.
- A low pressure area is likely to develop over north and adjoining westcentral Bay of Bengal around 9th August,2020.

**II. a) DETERMINISTIC FORECAST (QPF):**

| Sr. No. | BASIN NAME | SUBBASIN CODE/NAME | QPF (mm) | | |
|---|---|---|---|---|---|
| | | | **Day-1** | **Day-2** | **Day-3** |
| 1 | Alaknanda | Alaknanda | **0.1-10** | **0.1-10** | **11-25** |
| 2 | Bhagirathi | Bhagirathi | **0.1-10** | **0.1-10** | **11-25** |
| 3 | Ganga | Chhatnag to Mirzapur | **0.1-10** | **11-25** | **11-25** |
| | | Narora to Phaphamau | **0.1-10** | **0.1-10** | **0.1-10** |
| | | Phaphamau to Ballia | **0.1-10** | **0.1-10** | **26-50** |
| | | Gomti | **0.1-10** | **0.1-10** | **11-25** |
| | | Sai | **0.1-10** | **0.1-10** | **11-25** |
| | | Upper Ganga | **0.1-10** | **11-25** | **26-50** |
| 4 | Ghaghra | Lower Ghaghra | **0.1-10** | **0.1-10** | **11-25** |
| | | Middle Ghaghra | **0.1-10** | **0.1-10** | **11-25** |
| | | Upper Ghaghra | **0.1-10** | **11-25** | **11-25** |
| 5 | Ramganga | Ramganga | **0.1-10** | **0.1-10** | **26-50** |
| 6 | Rapti | Rapti | **0.1-10** | **0.1-10** | **11-25** |
| 7. | Sharda | Sharda | **0.1-10** | **11-25** | **26-50** |

**II (b) DETERMINISTIC FORECAST (DISTRIBUTION)**

| | BASIN NAME | SUBBASIN CODE/NAME | INTENSITY (I) & SPATIAL DISTRIBUTION (D) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | **Day-1** | | **Day-2** | | **Day-3** | |
| | | | **I** | **D** | **I** | **D** | **I** | **D** |
| 1 | Alaknanda | Alaknanda | L | SCT | M | SCT | M | WS |
| 2 | Bhagirathi | Bhagirathi | L | SCT | M | SCT | M | WS |
| 3 | Ganga | Chhatnag to Mirzapur | L | ISOL | M | WS | M | WS |
| | | Narora to Phaphamau | L | ISOL | L | SCT | M | WS |
| | | Phaphamau to Ballia | L | ISOL | L | FWS | M | WS |
| | | Gomti | L | ISOL | L | SCT | M | WS |
| | | Sai | L | ISOL | M | FWS | M | WS |
| | | Upper Ganga | L | ISOL | M | WS | M | WS |
| 4 | Ghaghra | Lower Ghaghra | L | ISOL | M | FWS | M | WS |
| | | Middle Ghaghra | L | ISOL | M | FWS | M | WS |
| | | Upper Ghaghra | L | ISOL | M | WS | M | WS |
| 5 | Ramganga | Ramganga | L | ISOL | M | FWS | M | WS |
| 6 | Rapti | Rapti | L | ISOL | M | FWS | M | WS |
| 7. | Sharda | Sharda | L | SCT | M | WS | M | WS |

| QPF in Ranges (mm) | UNLISTED | 0 | 0.1-10 | 11-25 | 26-50 | 51-100 | >100 |
|---|---|---|---|---|---|---|---|

## III. HEAVY RAINFALL WARNING:

| NAME OF BASIN | NAME OF SUB- BASIN | Day-1 | | Day-2 | | Day-3 | |
|---|---|---|---|---|---|---|---|
| | | I | D | I | D | I | D |
| Alaknanda | Alaknanda | | | H | ISOL | H | ISOL |
| Bhagirathi | Bhagirathi | | | | | H | ISOL |
| Ganga | Chhatnag to Mirzapur | | | | | | |
| | Narora to Phaphamau | | | | | | |
| | Phaphamau to Ballia | | | | | H | ISOL |
| | Gomti | | | | | H | ISOL |
| | Sai | | | | | H | ISOL |
| | Upper Ganga | | | H | ISOL | H | ISOL |
| Ghaghra | Lower Ghaghra | | | | | H | ISOL |
| | Middle Ghaghra | | | H | ISOL | H | ISOL |
| | Upper Ghaghra | | | H | ISOL | H | ISOL |
| Ramganga | Ramganga | | | H | ISOL | H | ISOL |
| Rapti | Rapti | | | | | H | ISOL |
| Sharda | Sharda | | | H | ISOL | H | ISOL |

| Spatial Distribution of Rainfall | | |
|---|---|---|
| DRY | Dry | No Station reported rainfall |
| ISOL | One or two Places | 25% or less number of stations recorded rainfall 2.5 mm |
| SCT | At a few Places | 26%-50% number of stations recorded rainfall 2.5 mm |
| FWS | At many Places | 51%-75% number of stations recorded rainfall 2.5 mm |
| WS | At most places | 76%-100% number of stations recorded rainfall 2.5 mm |

| Intensity of Rainfall | | | | | |
|---|---|---|---|---|---|
| M.Dry | NIL | 0 cm | VL | Very Light Rainfall | Trace |
| L | Light Rainfall | Upto 1 cm | M | Moderate rainfall | 02-06 cm |
| H | Heavy rainfall | 07-11 cm | VH | Very Heavy rainfall | 12-20 cm |
| EH | Extremely Heavy rainfall | 21 cm or More | | | |
| ExH | Exceptionally Heavy Rainfall | When the amount is a value near about the highest recorded rainfall at or near the station for the month or season. However, this term will be used only when the actual rainfall amount exceeds 12 cm | | | |

## IV. PROBABILISTIC FORECAST

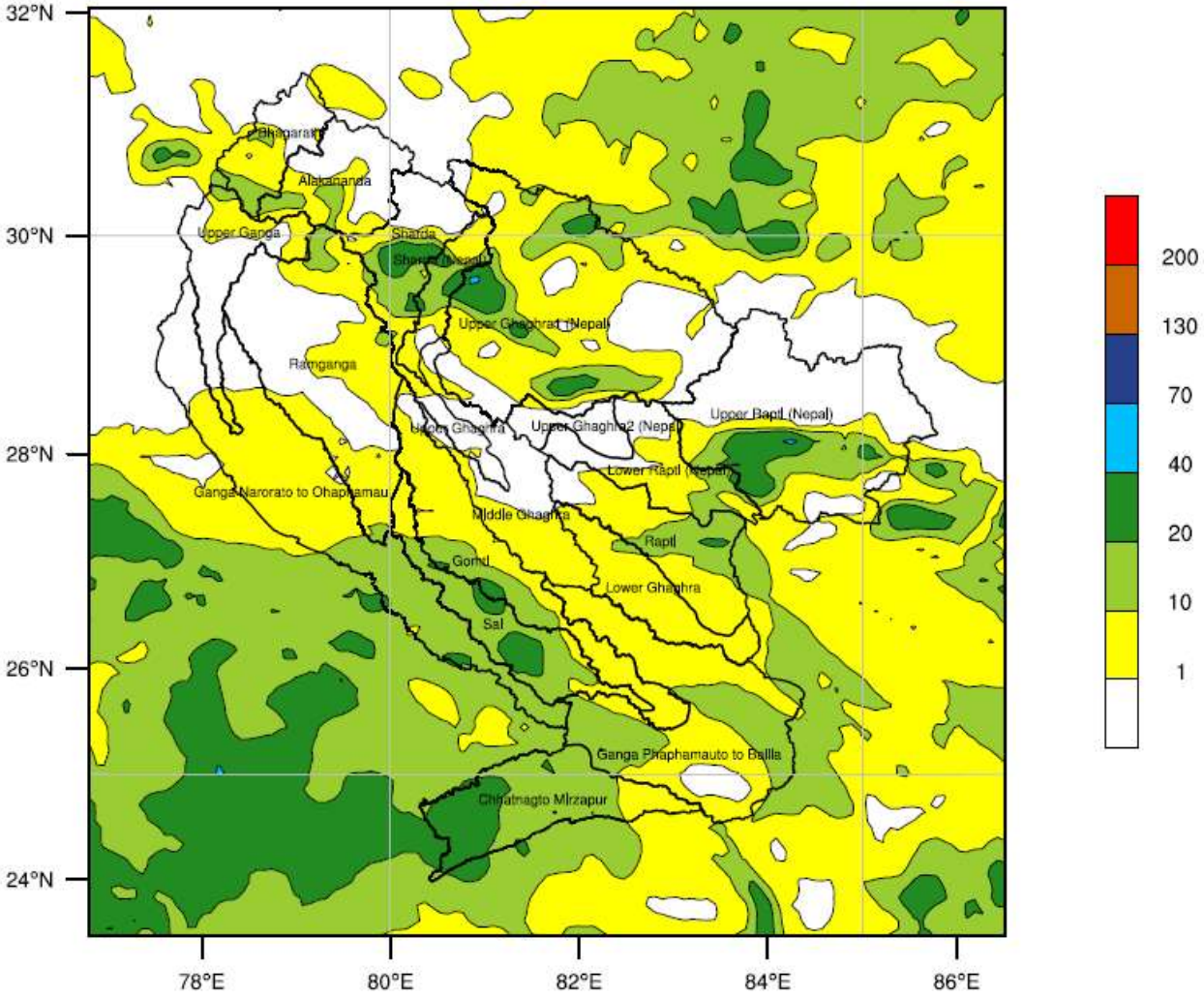
| S. No. | BASIN NAME | SUBBASIN CODE/NAME | Day-1 | | | | | | Day-2 | | | | | | Day-3 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 mm | 0.1-10 mm | 11-25 mm | 26-50 mm | 51-100 mm | >100 mm | 0 mm | 0.1-10 mm | 11-25 mm | 26-50 mm | 51-100 mm | >100 mm | 0 mm | 0.1-10 mm | 11-25 mm | 26-50 mm | 51-100 mm | >100 mm |
| 1 | **Alaknanda** | Alaknanda | | 75-100 | | | | | | 75-100 | | | | | | | 75-100 | | | |
| 2 | **Bhagirathi** | Bhagirathi | | 75-100 | | | | | | 75-100 | | | | | | | 75-100 | | | |
| 3 | **Ganga** | Chhatnag to Mirzapur | | 75-100 | | | | | | 75-100 | | | | | | | 75-100 | | | |
| | | Narora to Phaphamau | | 75-100 | | | | | | 75-100 | | | | | | 75-100 | 5-25 | | | |
| | | Phaphamau to Ballia | | 75-100 | | | | | | 75-100 | | | | | | | 25-50 | 50-75 | | |
| | | Gomti | | 75-100 | | | | | | 75-100 | | | | | | | 75-100 | | | |
| | | Sai | | 75-100 | | | | | | 75-100 | | | | | | | 75-100 | | | |
| | | Upper Ganga | | 75-100 | | | | | | | 50-75 | 25-50 | | | | | | 75-100 | | |
| 4 | **Ghaghra** | Lower Ghaghra | | 75-100 | | | | | | 75-100 | | | | | | | 75-100 | | | |
| | | Middle Ghaghra | | 75-100 | | | | | | 75-100 | | | | | | | 75-100 | | | |
| | | Upper Ghaghra | | 75-100 | | | | | | 25-50 | 50-75 | | | | | | 75-100 | | | |
| 5 | **Ramganga** | Ramganga | | 75-100 | | | | | | 50-75 | 25-50 | | | | | | 25-50 | 50-75 | | |
| 6 | **Rapti** | Rapti | | 75-100 | | | | | | 75-100 | | | | | | 25-50 | 50-75 | | | |
| 7. | **Sharda** | Sharda | | 75-100 | | | | | | 25-50 | 50-75 | | | | | | | 75-100 | | |

| Probability of occurrence (%) | 0-5 | 5-25 | 25-50 | 50-75 | 75-100 |
|---|---|---|---|---|---|

Init: 2020-08-06_00:00:00
Valid: 2020-08-07_03:00:00

# FLOOD MET OFFICE LUCKNOW

## IMD WRF Rainfall (mm) Forecast(24hr)




## Sub basin wise Average Rainfall Estimation

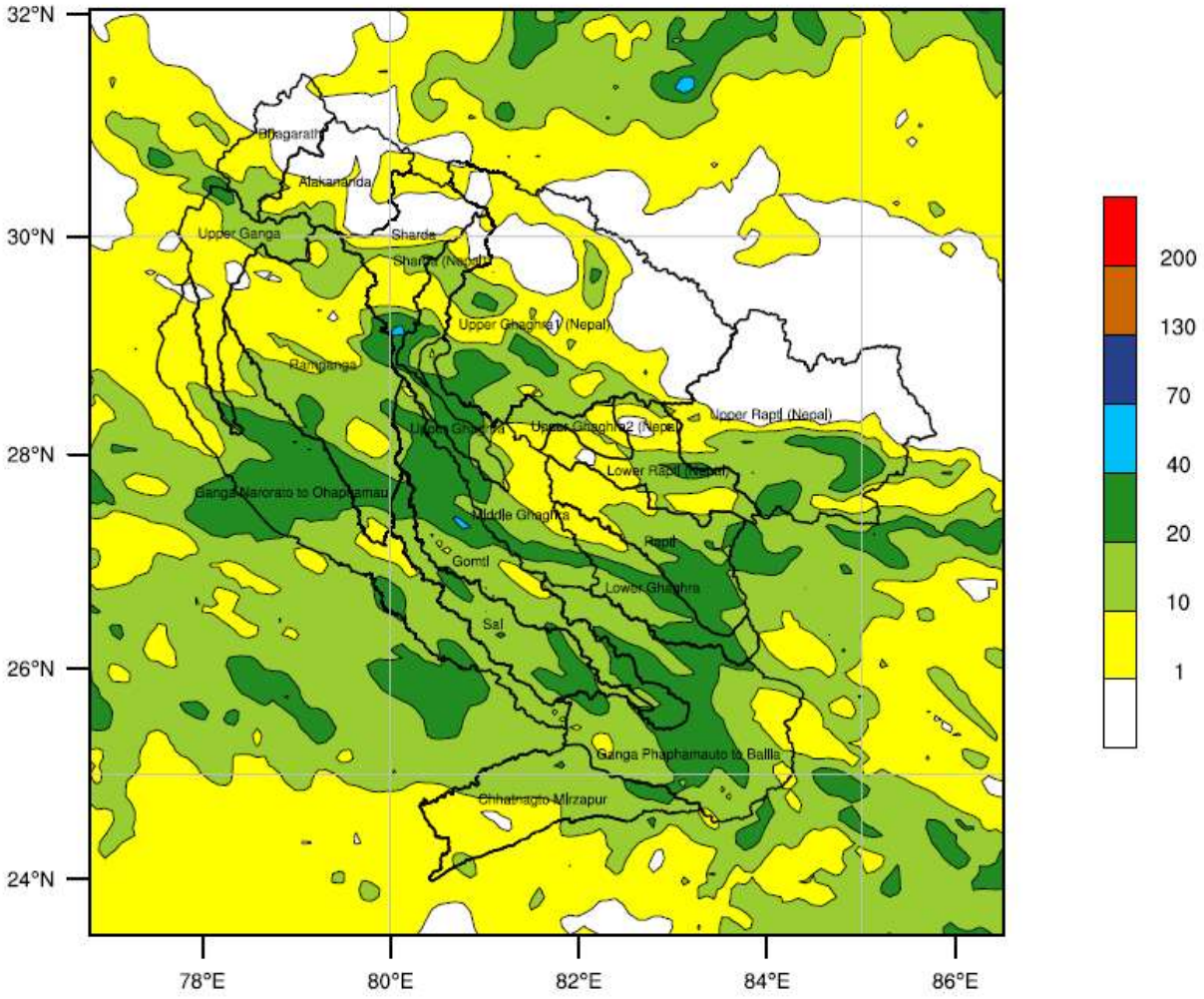
| | | | |
|---|---|---|---|
| Alaknanda = | 3 mm | Raptl = | 8 mm |
| Bhaglrathl = | 4 mm | Sai = | 15 mm |
| Chhatnagto Mirzapur = | 17 mm | Sharda = | 10 mm |
| Ganga Narorato Ohaphamau = | 7 mm | Sharda (Nepal) = | 7 mm |
| Ganga Phaphamauto Balia = | 9 mm | Upper Ganga = | 2 mm |
| Gomtl = | 7 mm | Upper Ghaghra = | 6 mm |
| Lower Ghaghara = | 6 mm | Upper Ghaghra1 (Nepal) = | 0 mm |
| Lower Raptl (Nepal) = | 5 mm | Upper Ghaghra2 (Nepal) = | 0 mm |
| Middle Ghaghara = | 2 mm | Upper Raptl (Nepal) = | 6 mm |
| Ramganga = | 2 mm | | |

OUTPUT FROM WRF V3.6.1 MODEL
WE = 1001 ; SN = 945 ; Levels = 45 ; Dis = 9km ; Phys Opt = 16 ; PBL Opt = 2 ; Cu Opt = 5

Init: 2020-08-06_00:00:00
Valid: 2020-08-08_03:00:00

# FLOOD MET OFFICE LUCKNOW

## IMD WRF Rainfall (mm) Forecast(48hr)




## Sub basin wise Average Rainfall Estimation

| | | | |
|---|---|---|---|
| Alaknanda = | 3 mm | Rapti = | 16 mm |
| Bhagirathi = | 4 mm | Sai = | 19 mm |
| Chhatnagto Mirzapur = | 11 mm | Sharda = | 11 mm |
| Ganga Narorato Ohaphamau = | 17 mm | Sharda (Nepal) = | 10 mm |
| Ganga Phaphamauto Balia = | 18 mm | Upper Ganga = | 9 mm |
| Gomti = | 20 mm | Upper Ghaghra = | 7 mm |
| Lower Ghaghara = | 17 mm | Upper Ghaghra1 (Nepal) = | 9 mm |
| Lower Rapti (Nepal) = | 9 mm | Upper Ghaghra2 (Nepal) = | 14 mm |
| Middle Ghaghara = | 16 mm | Upper Rapti (Nepal) = | 8 mm |
| Ramganga = | 12 mm | | |

OUTPUT FROM WRF V3.6.1 MODEL
WE = 1001 ; SN = 945 ; Levels = 45 ; Dis = 9km ; Phys Opt = 16 ; PBL Opt = 2 ; Cu Opt = 5

**v. OUTLOOK FOR SUBSEQUENT FOUR DAYS:-**

| NAME OF BASIN | NAME OF SUB-BASIN | OUTLOOK | | | |
|---|---|---|---|---|---|
| | | Day-4 | Day-5 | Day-6 | Day-7 |
| Alaknanda | Alaknanda | Moderate to heavy rain is likely to occur at most places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. |
| Bhagirathi | Bhagirathi | Moderate to heavy rain is likely to occur at most places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. |
| Ganga | Chhatnag to Mirzapur | Moderate rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. |
| | Narora to Phaphamau | Moderate rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. |
| | Phaphamau to Ballia | Moderate rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. |
| | Gomti | Moderate to heavy rain is likely to occur at most places. | Moderate rain is likely to occur at most places. | Moderate rain is likely to occur at most places. | Moderate rain is likely to occur at most places. |
| | Sai | Moderate to heavy rain is likely to occur at most places. | Moderate rain is likely to occur at most places. | Moderate rain is likely to occur at most places. | Moderate rain is likely to occur at most places. |
| | Upper Ganga | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. |
| Ghaghra | Lower Ghaghra | Moderate rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. |
| | Middle Ghaghra | Moderate rain is likely to occur at most places. | Moderate to heavy rain is | Moderate to heavy rain is likely to occur | Moderate to heavy rain is likely to occur |

| | | | | | |
|---|---|---|---|---|---|
| | | | likely to occur at most places. | at most places. | at most places. |
| | Upper Ghaghra | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. |
| Ramganga | Ramganga | Moderate to heavy rain is likely to occur at most places. | Moderate rain is likely to occur at most places. | Light to moderate rain is likely to occur at many places. | Light to moderate rain is likely to occur at many places. |
| Rapti | Rapti | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. |
| Sharda | Sharda | Moderate to heavy rain is likely to occur at most places. | Moderate to heavy rain is likely to occur at most places. | Moderate rain is likely to occur at most places. | Moderate rain is likely to occur at most places. |

**2. Summary of flood situation as per CWC flood forecasting network**

## Flood Situation on 07 AUGUST, 2020

1. River Ghagra at Ayodhya in FAIZABAD district of Uttar Pradesh continues to flow in SEVERE SITUATION at 15:00 hrs today. At 15:00 hrs, it was flowing at a level of 92.92 m with Falling trend which is 0.19 m above its Danger Level of 92.73 m and 1.09 m below its previous HFL of 94.01 m (2009-10-11).
2. River Sarda at Paliakalan in KHERI district of Uttar Pradesh continues to flow in SEVERE SITUATION at 15:00 hrs today. At 15:00 hrs, it was flowing at a level of 154.36 m with Steady trend which is 0.26 m above its Danger Level of 154.1 m and 0.96 m below its previous HFL of 155.32 m (2014-07-21).
3. River Ghagra at Elginbridge in BARABANKI district of Uttar Pradesh continues to flow in SEVERE SITUATION at 15:00 hrs today. At 15:00 hrs, it was flowing at a level of 106.276 m with Falling trend which is 0.21 m above its Danger Level of 106.07 m and 1.34 m below its previous HFL of 107.616 m (2014-08-18).
4. River Ghagra at Turtipar in BALLIA district of Uttar Pradesh continues to flow in SEVERE SITUATION at 15:00 hrs today. At 15:00 hrs, it was flowing at a level of 65.17 m with Falling trend which is 1.16 m above its Danger Level of 64.01 m and 0.83 m below its previous HFL of 66.0 m (1998-08-28).
5. River Rapti at Birdghat in GORAKHPUR district of Uttar Pradesh continues to flow in SEVERE SITUATION at 15:00 hrs today. At 15:00 hrs, it was flowing at a level of 75.64 m with Falling trend which is 0.66 m above its Danger Level of 74.98 m and 1.90 m below its previous HFL of 77.54 m (1998-08-23

**2.1 Rainfall Situation**

**Amount of rainfall recorded at 8:30 hours IST of today ((≥ 50 mm or more)**

| Name of Place (State) | Rainfall (in mm) |
|---|---|
| | |

**Note - No Station is in this situation Dated 07.08.2020**

**2.2 LEVEL FORECAST**

| **LEVEL FORECAST** | | |
|---|---|---|
| S.No. | Flood Situations | No. of Forecasting Sites |
| A. | **Extreme Flood Situation:** | |
| | **(**Site (s) where the previous Highest Flood Level (HFL) is exceeded or equalized**)** | 0 |
| B. | **Severe Flood Situation :** | |
| | (Site(s) where water Level touching or exceeding the Danger Level but below Highest Flood Level(HFL) | 4 |
| C. | **Above Normal Flood Situation:** | |
| | (Site (s) where water level touching or exceeding the warning Level but below Danger Level) | 3 |
| Total Numbers of Sites above Warning Level (A+B+C) | | 7 |
| | | |
| **INFLOW FORECAST** | | |
| Number of Sites for which inflow forecasts issued: | | 3 |
| (Where inflow are equal or exceed the specified Threshold Limit for a particular reservoir/ barrage) | | 3 |

**2.3 Above Normal (Water Level touching or exceeding the warning Level but below Danger Level)**

| Name of river | Flood Forecasting Sites | District | State | Danger Level(m) | Warning Level (m) | Previous Highest | | Actual Level | | | Forecast | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date | Level (m) | Time | Trend | Level (m) | Date | Time | Trend |
| | | | | | | | | | | | | | | |
| Ganga | Kachhla bridge | Budaun | U.P | 161 | 162 | 162.79 | 2010 | 161.97 | 0800 | F | 161.90 | 08.08.20 | 0800 | F |
| Ganga | Fatehgarh | Farukkhabad | U.P | 137.6 | 136.60 | 138.14 | 2010 | 137.00 | 0800 | S | 136.92 | 088.08.20 | 0800 | F |

**2.4 Severe Flood Situation (Water Level touching or exceeding the Danger Level but below Highest Flood Level (HFL))**

| Name of river | Flood Forecasting Sites | District | State | Danger Level(m) | Warning Level (m) | Previous Highest | | Actual Level | | | Forecast | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level(m) | Date | Level(m) | Time | Trend | Level (m) | Date | Time | Trend |
| Rapti | Birdghat | Gorakhpur | U.P | 74.98 | 73.98 | 77.54 | 1998 | 75.72 | 0800 | F | 75.55 | 08.08.20 | 0800 | F |
| Ghaghra | Elgin Bridge | Barabanki | U.P. | 106.07 | 105.07 | 107.616 | 2014 | 106.376 | 0800 | F | 106.25 | 08.08.20 | 0800 | F |
| Ghaghra | Ayodhya | Faizabad | U.P | 92.73 | 91.73 | 94.01 | 2009 | 93.02 | 0800 | F | 92.80 | 08.08.20 | 0800 | F |
| Ghaghra | Turtipar | Baliya | U.P | 64.01 | 63.01 | 66.00 | 1998 | 65.20 | 0800 | F | 65.05 | 08.08.20 | 0800 | F |

## 2.5 Extreme Flood Situation (Water Level exceeded or equalized Highest Flood Level (HFL))

| Name of river | Flood Forecasting Sites | District | State | Danger Level(m) | Warning Level (m) | Previous Highest | | Actual Level | | | Forecast | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level(m) | Date | Level(m) | Time | Trend | Level (m) | Date | Time | Trend |
| | | | | | | | | | | | | | | |

**Note - No Station is in this situation Dated 07.08.2020**

## 2.6 Inflow Forecast

| Name of river | Flood Forecasting Sites | District | State | HFL(m) | FRL(m) | Previous Highest | | Actual Level | | | Forecast | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Discharge (Q) | Date | Discharge (Q) | Time | Trend | D (Q) | Date | Time | Trend |
| Ghaghra | Katerniaghat Barrage | Bahraich | U.P. | | 138 | | | 3723.042 | 0800 | R | 3600.00 | 08.08.20 | 0800 | F |
| Rihand | Rihand dam | | U.P. | | | | | | 0800 | S | 1525.0 | 08.08.20 | 0800 | R |
| Sone | Bansagar Dam | Harda | M.P. | | 341.64 | | | | 0800 | R | 884.0 | 08.08.20 | 0800 | R |

**Advisory on Hydro Meteorological Situation Expected from 08-08-2020 to 09-08-2020**

As per rainfall pattern given in section II, Alaknanda, Bhagirathi, rivers are expected to receive moderate rain at fairly widespread areas in next 48 hrs. Ganga river is expected to receive light rain at scattered areas in next 48 hrs. Ghaghra, Ramganga, Sharda & Rapti river basins are expected to receive heavy to moderate rain at scattered to widespread areas in next 48 hours. Water level at most of CWC stations are expected to steady/fall in next 48 hours. Level forecast will be issued if the level of river at stations are likely to touch or cross warning level. From the given QPF, severe flood like situation is expected in Ghaghra, Rapti , Sharda river basins.

अधिशासीअभियंता

मध्य गंगा मण्डल -1 लखनऊ