



Central Water Commission
Upper Ganga Basin Organisation, Lucknow
Daily Flood Situation Report Cum Advisories
Date: 22 SEPTEMBER, 2020

FSR No.92

Dated 22-09-2020

1. Weather forecast by IMD

I. SYNOPTIC SITUATION:

- ♦ The Low Pressure Area over north interior Odisha & neighbourhood now lies over north Chhattisgarh & neighbourhood with associated cyclonic circulation extending upto 5.8 km above mean sea level tilting southwestwards with height. It is likely to move west-northwestwards during next 2 days.
- ♦ The monsoon trough at mean sea level now passes through Bikaner, Bhilwara, Sagar, center of low pressure area over north Chhattisgarh & neighbourhood, Baripada and thence east-northeastwards towards Northeast Bay of Bengal and extends upto 0.9 km above mean sea level.
- ♦ A cyclonic circulation lies over Northwest Rajasthan & adjoining Punjab at 1.5 km above mean sea level.

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 | 0.1-10 |
| 2 | Bhagirathi | Bhagirathi | 0.1-10 | 0.1-10 | 0.1-10 |
| 3 | Ganga | Chhatnag to Mirzapur | 11-25 | 0.1-10 | 0.1-10 |
| | | Narora to Phaphamau | 0.1-10 | 11-25 | 0.1-10 |
| | | Phaphamau to Ballia | 11-25 | 11-25 | 11-25 |
| | | Gomti | 0.1-10 | 11-25 | 11-25 |
| | | Sai | 0.1-10 | 11-25 | 11-25 |
| | | Upper Ganga | 0.1-10 | 0.1-10 | 0.1-10 |
| 4 | Ghaghra | Lower Ghaghra | 0.1-10 | 11-25 | 26-50 |
| | | Middle Ghaghra | 0.1-10 | 11-25 | 11-25 |
| | | Upper Ghaghra | 0.1-10 | 11-25 | 11-25 |
| 5 | Ramganga | Ramganga | 0.1-10 | 0.1-10 | 0.1-10 |
| 6 | Rapti | Rapti | 0.1-10 | 11-25 | 26-50 |
| 7. | Sharda | Sharda | 0.1-10 | 0.1-10 | 0.1-10 |

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 | ISOL | L | SCT | L | SCT |
| 2 | Bhagirathi | Bhagirathi | L | ISOL | L | SCT | L | SCT |
| 3 | Ganga | Chhatnag to Mirzapur | M | WS | M | WS | M | FWS |
| | | Narora to Phaphamau | L | FWS | M | FWS | M | FWS |
| | | Phaphamau to Ballia | M | WS | M | WS | M | WS |
| | | Gomti | L | SCT | M | WS | M | WS |
| | | Sai | L | SCT | M | WS | M | WS |
| | | Upper Ganga | L | ISOL | L | ISOL | L | ISOL |
| 4 | Ghaghra | Lower Ghaghra | M | SCT | M | WS | H | WS |
| | | Middle Ghaghra | M | SCT | M | WS | M | WS |
| | | Upper Ghaghra | L | ISOL | M | WS | M | WS |
| 5 | Ramganga | Ramganga | L | FWS | L | SCT | L | ISOL |
| 6 | Rapti | Rapti | M | FWS | M | WS | H | WS |
| 7. | Sharda | Sharda | M | FWS | L | SCT | L | SCT |

| | | | | | | | |
|---------------------------|-----------------|----------|---------------|--------------|--------------|---------------|----------------|
| 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 | | | | | | |
| Bhagirathi | Bhagirathi | | | | | | |
| Ganga | Chhatnag to Mirzapur | | | | | | |
| | Narora to Phaphamau | | | H | ISOL | | |
| | Phaphamau to Ballia | | | H | ISOL | VH | ISOL |
| | Gomti | | | H | ISOL | | |
| | Sai | | | H | ISOL | H | ISOL |
| | Upper Ganga | | | | | | |
| Ghaghra | Lower Ghaghra | | | H | ISOL | VH | ISOL |
| | Middle Ghaghra | | | H | ISOL | H | ISOL |
| | Upper Ghaghra | | | | | | |
| Ramganga | Ramganga | | | | | | |
| Rapti | Rapti | | | H | ISOL | VH | ISOL |
| Sharda | Sharda | | | | | | |

| 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 | | | | | |
|-----------------------|------------------------------|--|----|---------------------|----------|
| MDry | 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

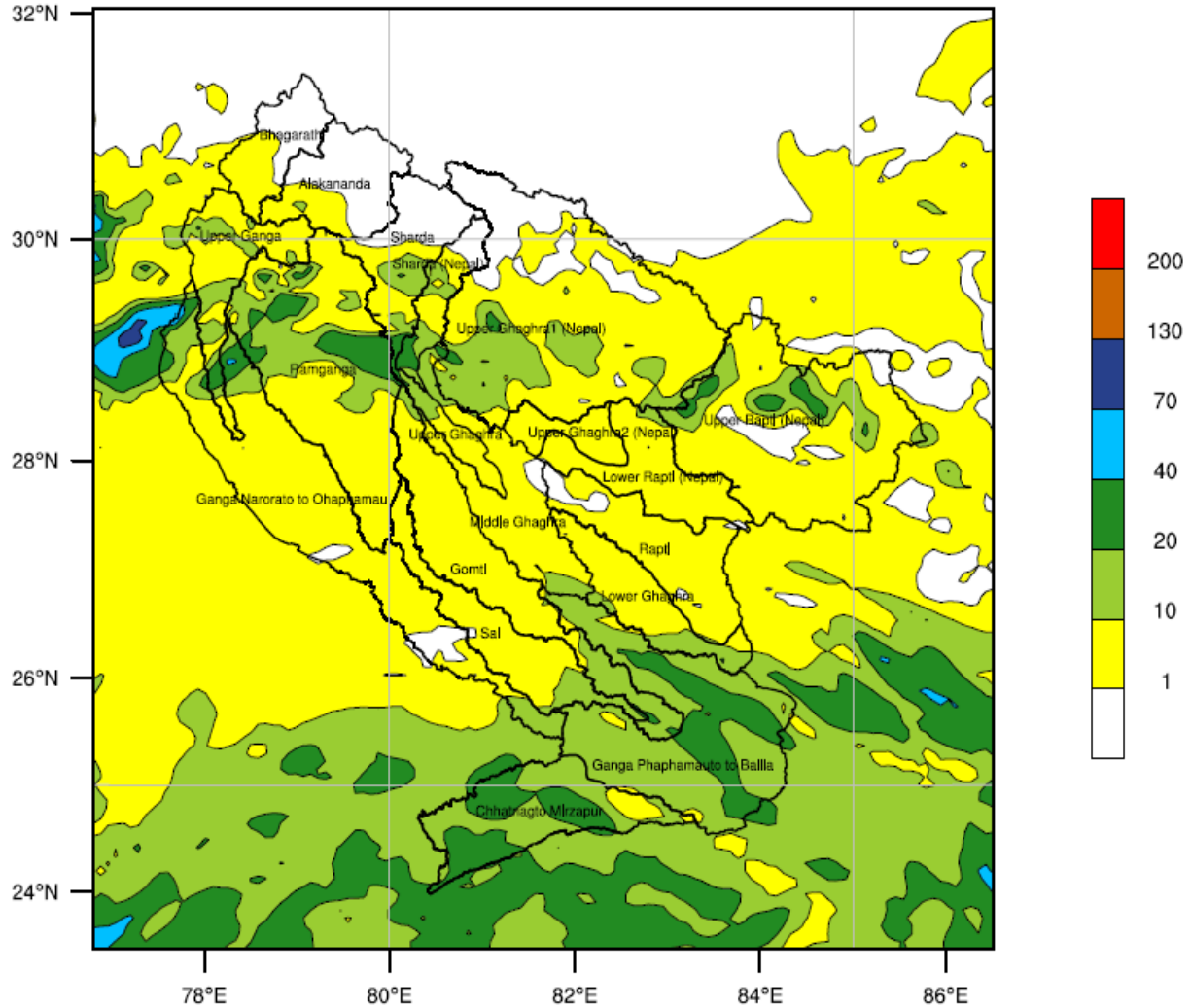
| S. No. | BASIN NAME | SUBBASIN CODE/NAME | Day-1 | | | | | | Day-2 | | | | | | Day-3 | | | | | |
|--------|------------|----------------------|-------|-----------|----------|----------|-----------|---------|-------|-----------|----------|----------|-----------|---------|-------|-----------|----------|----------|-----------|---------|
| | | | 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 | | 25-50 | 50-75 | | | | | 75-100 | | | | | | 75-100 | | | | |
| | | Narora to Phaphamau | | 75-100 | | | | | | 25-50 | 50-75 | | | | | 75-100 | | | | |
| | | Phaphamau to ballia | | 25-50 | 50-75 | | | | | | 75-100 | | | | | | 75-100 | 25-50 | | |
| | | Gomti | | 75-100 | | | | | | 25-50 | 50-75 | | | | | 25-50 | 50-75 | | | |
| | | Sai | | 75-100 | | | | | | 25-50 | 50-75 | | | | | 25-50 | 50-75 | | | |
| | | Upper Ganga | | 75-100 | | | | | | 75-100 | | | | | | 75-100 | | | | |
| 4 | Ghaghra | Lower Ghaghra | | 75-100 | | | | | | | 75-100 | | | | | | 25-50 | 50-75 | | |
| | | Middle Ghaghra | | 75-100 | | | | | | 25-50 | 50-75 | | | | | | 75-100 | 25-50 | | |
| | | Upper Ghaghra | | 75-100 | | | | | | 25-50 | 50-75 | | | | | 25-50 | 50-75 | | | |
| 5 | Ramganga | Ramganga | | 75-100 | | | | | | 75-100 | | | | | | 75-100 | | | | |
| 6 | Rapti | Rapti | | 75-100 | | | | | | | 50-75 | 25-50 | | | | | 25-50 | 50-75 | | |
| 7. | Sharda | Sharda | | 75-100 | | | | | | 75-100 | | | | | | 75-100 | | | | |

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

Init: 2020-09-22_00:00:00
Valld: 2020-09-23_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(24hr)



Sub basin wise Average Rainfall Estimation

| | | | |
|----------------------------|-------|--------------------------|------|
| Alaknanda = | 1 mm | Rapti = | 2 mm |
| Bhagirathi = | 2 mm | Sai = | 6 mm |
| Chhatnagto Mirzapur = | 19 mm | Sharda = | 9 mm |
| Ganga Narorato Ohaphamau = | 6 mm | Sharda (Nepal) = | 6 mm |
| Ganga Phaphamauto Ballia = | 17 mm | Upper Ganga = | 9 mm |
| Gomti = | 7 mm | Upper Ghaghra = | 6 mm |
| Lower Ghaghara = | 7 mm | Upper Ghaghra1 (Nepal) = | 5 mm |
| Lower Rapti (Nepal) = | 4 mm | Upper Ghaghra2 (Nepal) = | 6 mm |
| Middle Ghaghara = | 5 mm | Upper Rapti (Nepal) = | 7 mm |
| Ramganga = | 11 mm | | |

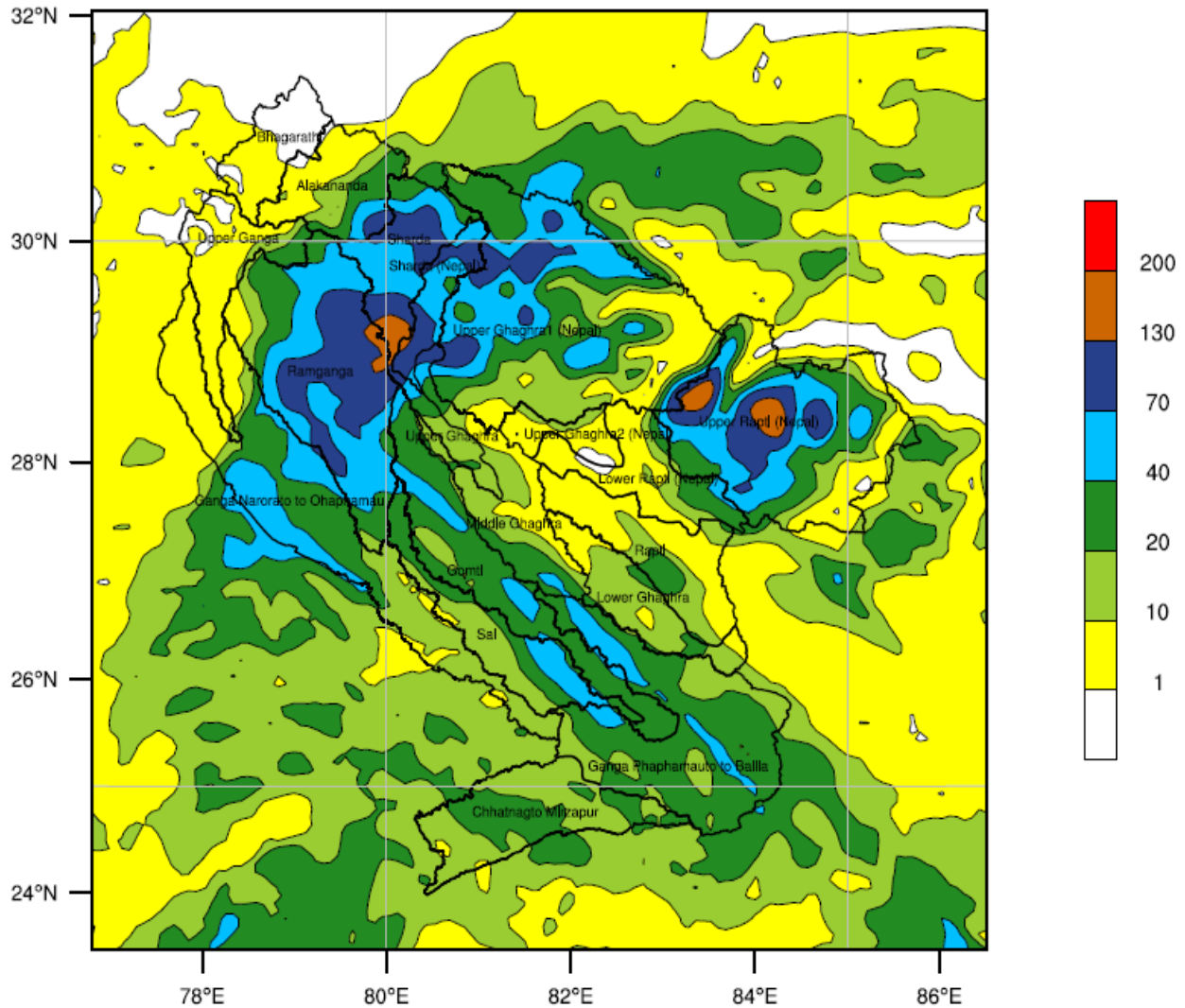
OUTPUT FROM WRF V3.6.1 MODEL

WE = 1001 ; SN = 945 ; Levels = 45 ; Dls = 9km ; Phys Opt = 16 ; PBL Opt = 2 ; Cu Opt = 5

Init: 2020-09-22_00:00:00
Vald: 2020-09-24_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(48hr)



Sub basin wise Average Rainfall Estimation

| | | | |
|----------------------------|-------|--------------------------|-------|
| Alaknanda = | 19 mm | Rapti = | 10 mm |
| Bhagirathi = | 2 mm | Sai = | 26 mm |
| Chhatnagto Mirzapur = | 19 mm | Sharda = | 73 mm |
| Ganga Narorato Ohaphamau = | 24 mm | Sharda (Nepal) = | 63 mm |
| Ganga Phaphamauto Balia = | 28 mm | Upper Ganga = | 6 mm |
| Gomti = | 32 mm | Upper Ghaghra = | 34 mm |
| Lower Ghaghara = | 14 mm | Upper Ghaghra1 (Nepal) = | 5 mm |
| Lower Rapti (Nepal) = | 13 mm | Upper Ghaghra2 (Nepal) = | 12 mm |
| Middle Ghaghara = | 18 mm | Upper Rapti (Nepal) = | 46 mm |
| Ramganga = | 60 mm | | |

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

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

Flood Situation on 22 SEPTEMBER, 2020



Note - No station is in flood situation Dated 22.09.2020

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) |
|-----------------------|------------------|
| NIL | |
| | |

Note - No Station is in this situation Dated 22.09.2020

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) | 0 |
| C. | Above Normal Flood Situation: | |
| | (Site (s) where water level touching or exceeding the warning Level but below Danger Level) | 0 |
| Total Numbers of Sites above Warning Level (A+B+C) | | 0 |
| | | |
| INFLOW FORECAST | | |
| Number of Sites for which inflow forecasts issued: | | 0 |
| (Where inflow are equal or exceed the specified Threshold Limit for a particular reservoir/ barrage) | | 0 |

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 |
| | | | | | | | | | | | | | | |

Note - No Station is in this situation Dated 22.09.2020

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 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Note - No Station is in this situation Dated 22.09.2020

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 22.09.2020

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 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Note - No Station is in this situation Dated 22.09.2020

Advisory on Hydro Meteorological Situation Expected from 23-09-2020 to 24-09-2020

As per rainfall pattern given in section II, Alaknanda, Bhagirathi & Ganga rivers are expected to receive light to moderate rain at scattered to fairly widespread areas in next 48 hrs. Ghaghra, Ramganga, Sharda & Rapti river basins are expected to receive moderate to high rain at scattered to fairly 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, Normal situation is expected in Ganga, Ghaghra, Rapti & Sharda river basins.

अधिशालसीअभियंता

मध्य गंगा मण्डल -1 लखनऊ