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

FSR No.77 **Dated 07-09-2020**

1.Weather forecast by IMD

I. SYNOPTIC SITUATION:

♦ The Monsoon Trough at mean sea level now passes through Anupgarh, Bhiwani, Mainpuri, Fursatganj, Gaya, Malda and thence eastwards to Nagaland across Assam.
♦ The cyclonic circulation over northeast Rajasthan & neighbourhood between 1.5 & 3.1 km above mean sea level persists.
♦ The trough from the cyclonic circulation over northeast Rajasthan & neighbourhood to Jammu region across Haryana and Punjab at 3.1 km above mean sea level has become less marked.
♦ A cyclonic circulation lies over northwest Uttar Pradesh & neighbourhood at 1.5 km above mean sea level.
♦ Under the influence of strengthening of the north-south trough along the east coast, rainfall intensity over peninsular India is very likely to increase from 01st September. South Interior Karnataka, Kerala and Tamil Nadu are very likely to receive Isolated Heavy to Very Heavy falls on 02nd & 03rd September, 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**	**0.1-10**
2	Bhagirathi	Bhagirathi	**0.1-10**	**0.1-10**	**0.1-10**
3	Ganga	Chhatnag to Mirzapur	**0.1-10**	**0.1-10**	**0.1-10**
		Narora to Phaphamau	**0**	**0.1-10**	**0.1-10**
		Phaphamau to Ballia	**0.1-10**	**0.1-10**	**0.1-10**
		Gomti	**0.1-10**	**0.1-10**	**0.1-10**
		Sai	**0.1-10**	**0.1-10**	**0.1-10**
		Upper Ganga	**0.1-10**	**0**	**0**
4	Ghaghra	Lower Ghaghra	**0.1-10**	**0.1-10**	**0.1-10**
		Middle Ghaghra	**0.1-10**	**0.1-10**	**0.1-10**
		Upper Ghaghra	**0.1-10**	**0.1-10**	**0.1-10**
5	Ramganga	Ramganga	**0.1-10**	**0.1-10**	**0.1-10**
6	Rapti	Rapti	**0.1-10**	**0.1-10**	**0.1-10**
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	VL	ISOL	VL	ISOL	VL	ISOL
2	Bhagirathi	Bhagirathi	VL	ISOL	VL	ISOL	VL	ISOL
3	Ganga	Chhatnag to Mirzapur	L	SCT	M	FWS	M	FWS
		Narora to Phaphamau	M.Dry	DRY	L	ISOL	L	ISOL
		Phaphamau to Ballia	L	SCT	M	FWS	M	SCT
		Gomti	L	ISOL	M	SCT	M	SCT
		Sai	VL	ISOL	M	SCT	M	SCT
		Upper Ganga	VL	ISOL	M.Dry	DRY	M.Dry	DRY
4	Ghaghra	Lower Ghaghra	M	SCT	M	FWS	M	FWS
		Middle Ghaghra	M	SCT	M	FWS	M	FWS
		Upper Ghaghra	M	SCT	M	FWS	M	FWS
5	Ramganga	Ramganga	M	SCT	L	SCT	L	ISOL
6	Rapti	Rapti	M	SCT	M	FWS	M	FWS
7.	Sharda	Sharda	M	SCT	L	SCT	L	ISOL

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						
	Phaphamau to Ballia						
	Gomti						
	Sai						
	Upper Ganga						
Ghaghra	Lower Ghaghra						
	Middle Ghaghra						
	Upper Ghaghra						
Ramganga	Ramganga						
Rapti	Rapti						
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					
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	50-75	25-50						75-100						75-100				
		Phaphamau to Ballia		75-100						75-100						75-100				
		Gomti		75-100						75-100						75-100				
		Sai		75-100						75-100						75-100				
		Upper Ganga		75-100					50-75	25-50					50-75	25-50				
4	**Ghaghra**	Lower Ghaghra		75-100						50-75	25-50					50-75	25-50			
		Middle Ghaghra		75-100						50-75	25-50					75-100				
		Upper Ghaghra		75-100						50-75	25-50					75-100				
5	**Ramganga**	Ramganga		75-100						75-100						75-100				
6	**Rapti**	Rapti		75-100						50-75	25-50					50-75	25-50			
7.	**Sharda**	Sharda		75-100						75-100						75-100				

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

Init: 2020-09-07_00:00:00
Valid: 2020-09-08_03:00:00

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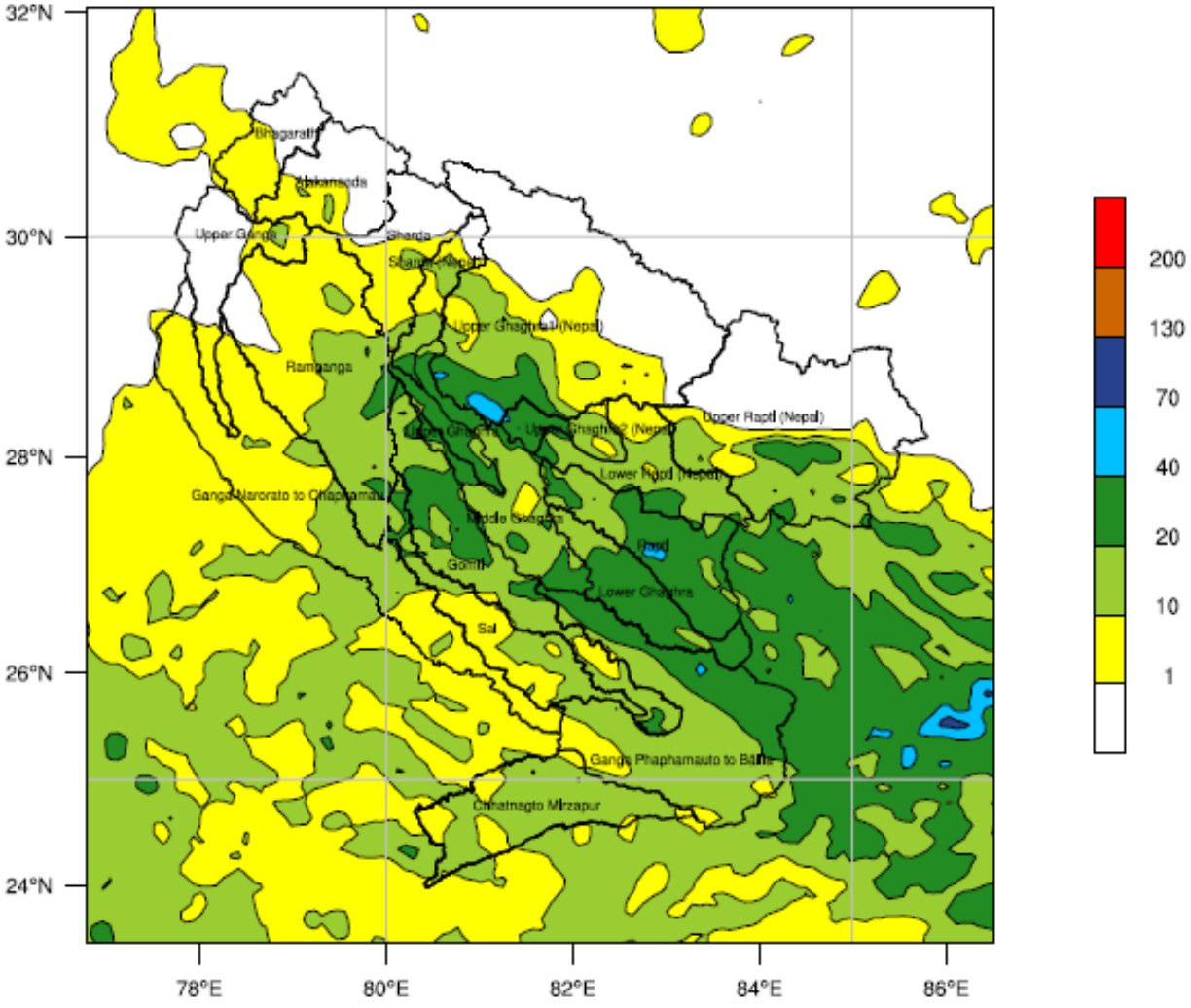
IMD WRF Rainfall (mm) Forecast(24hr)



Sub basin wise Average Rainfall Estimation

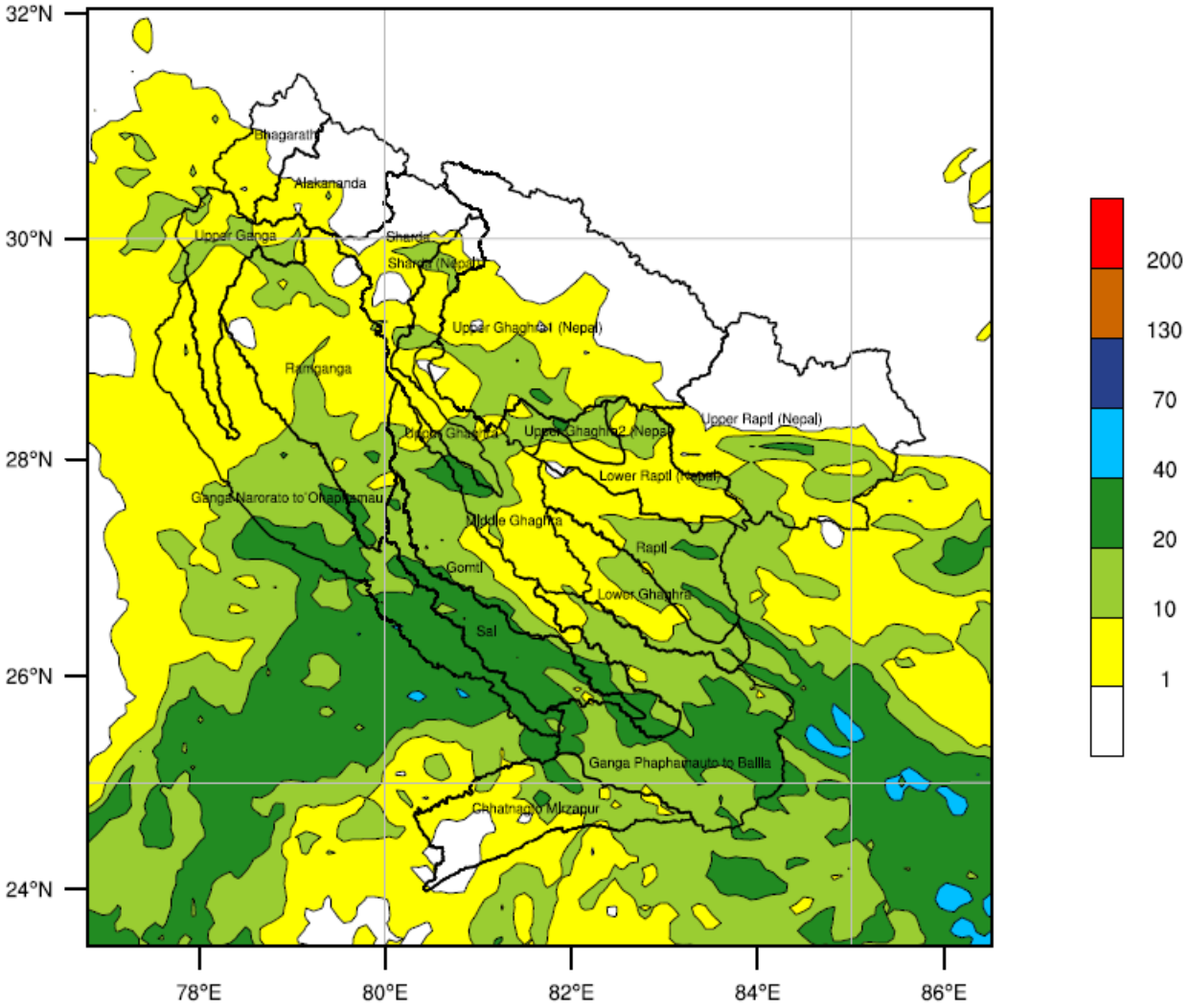
Alaknanda =	2 mm	Rapti =	24 mm
Bhagirathi =	2 mm	Sai =	12 mm
Chhatnagto Mirzapur =	13 mm	Sharda =	10 mm
Ganga Narorato Ohaphamau =	8 mm	Sharda (Nepal) =	9 mm
Ganga Phaphamauto Balla =	18 mm	Upper Ganga =	2 mm
Gomti =	17 mm	Upper Ghaghra =	7 mm
Lower Ghaghara =	27 mm	Upper Ghaghra1 (Nepal) =	19 mm
Lower Rapti (Nepal) =	14 mm	Upper Ghaghra2 (Nepal) =	24 mm
Middle Ghaghara =	17 mm	Upper Rapti (Nepal) =	7 mm
Ramganga =	9 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: 2020-09-07_00:00:00
Valid: 2020-09-09_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(48hr)



Sub basin wise Average Rainfall Estimation

Alaknanda =	1 mm	Rapti =	12 mm
Bhagirathi =	2 mm	Sai =	23 mm
Chhatnagto Mirzapur =	8 mm	Sharda =	6 mm
Ganga Narorato Ohaphamau =	16 mm	Sharda (Nepal) =	5 mm
Ganga Phaphamauto Balia =	18 mm	Upper Ganga =	8 mm
Gomti =	15 mm	Upper Ghaghra =	4 mm
Lower Ghaghara =	10 mm	Upper Ghaghra1 (Nepal) =	11 mm
Lower Rapti (Nepal) =	7 mm	Upper Ghaghra2 (Nepal) =	9 mm
Middle Ghaghara =	9 mm	Upper Rapti (Nepal) =	5 mm
Ramganga =	8 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

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

Flood Situation on 07 SEPTEMBER, 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)
Haridwar (U.K)	60.0

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)	04
Total Numbers of Sites above Warning Level (A+B+C)		04
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
Ghaghra	Elgin Bridge	Barabanki	U.P	106.07	105.07	107.616	2014	105.226	0800	F	105.15	08.09.20	0800	F
Ghaghra	Turtipar	Ballia	U.P	64.01	63.01	66.00	1998	63.38	0800	S	63.25	08.09.20	0800	F
Ganga	Ballia	Ballia	U.P	57.615	56.615	60.39	2016	57.66	0800	F	57.31	08.09.20	0800	F
Ganga	Kachhla bridge	Budaun	U.P	161.00	162.00	162.79	2010	161.35	0800	S	161.20	08.09.20	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

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 07.09.2020

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

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

As per rainfall pattern given in section II, Alaknanda, Bhagirathi rivers are expected to receive very light rain at isolated areas in next 48 hrs. Ganga river is expected to receive light to moderate rain at scattered areas in next 48 hrs. Ghaghra, Ramganga, Sharda & Rapti river basins are expected to receive light to moderate rain at scattered to fairly widespread areas in next 48 hours. Water level at most of CWC stations are expected to 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, Above normal flood like situation is expected in Ganga, Ghaghra, Rapti & Sharda river basins.

अधिशासीअभियंता

मध्य गंगा मण्डल -1 लखनऊ