

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI,
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION
LOK SABHA
UNSTARRED QUESTION NO. 2052
ANSWERED ON 22.09.2020

FLOOD MANAGEMENT

2052. SHRI SANGAM LAL GUPTA
SHRI MANOJ TIWARI
SHRI JOHN BARLA

Will the Minister of JAL SHAKTI be pleased to state:

- (a) the details of the action taken so far by the Government for the effective management of floods during the last three years;
- (b) the number of the existing Flood Assessment Centres set up in the country, State/UT-wise including Bihar and Uttar Pradesh; and
- (c) whether it is a fact that the Flood Monitoring and Forecasting Department of Central Water Commission (CWC) is making exact and proper forecast and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI & SOCIAL JUSTICE AND EMPOWERMENT
(SHRI RATTAN LAL KATARIA)

(a) The schemes for flood control and anti-erosion works are formulated and implemented by concerned States as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas. Government of India launched Flood Management Programme (FMP) during XI Plan for providing financial assistance to the State Governments for taking up works related to river management, flood control, anti-erosion, drainage development, flood proofing works, restoration of damaged flood management works and anti-sea erosion works which was continued during XII Plan and further extended up to March 2021 as a component under Flood Management and Border Areas Programme (FMBAP). State-wise central assistance released to States/UTs under FMBAP during the last three years is at **Annexure-I**.

(b) Central Water Commission (CWC) has established a flood forecasting network across the country and issues flood forecasts at 328 locations (198 Level Forecast for Villages/Town on the bank of the rivers and 130 Inflow Forecast Stations for Dams and Barrages) in various parts of the country. There are 43 stations in Bihar and 44 Stations in Uttar Pradesh for which forecasts are issued for taking proper mitigation measures by respective State Governments. The State-wise details are given in **Annexure-II**

(c) Flood Forecasts are evaluated on the following criteria-

Level Forecast: If the forecasted level is within +/-0.15 m of the actual level attained at the time of forecast, then the forecast is taken as correct.

Inflow Forecast: If the forecasted inflow is within +/- 20% of the actual inflows attained in the reservoir the forecast is taken as correct.

The overall accuracy of Flood Forecasts issued by CWC during the last 5 years is 94%, details are given in **Annexure -III**.

**ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO.2052
TO BE ANSWERED IN LOK SABHA ON 22.09.2020 REGARDING “FLOOD MANAGEMENT”**

State-wise central assistance released to States/UTs under Flood Management and Border Areas Programme (FMBAP) during last three years

Rs in crores

S. No.	States	2017-18	2018-19	2019-20	Total funds released
1	Arunachal Pradesh	21.18	0	0	21.18
	Assam	245.49	142.12	85.03	472.64
2	Bihar	52.57	132.27	65.29	250.13
3	Himachal Pradesh	87.5	162.6	176.41	426.51
4	Jammu & Kashmir	119.17	55.0325	97.058	271.2605
5	Kerala	19.05	0	0	19.05
6	Mizoram	0.48	0	0	0.48
7	Nagaland	0	10.84	0	10.84
8	Uttar Pradesh	103.98	87.87	39.15	231
9	Uttarakhand	0	4.63	35.58	40.21
10	Punjab	7.4725	0	0	7.4725
11	West Bengal	65.03	89.3	117.12	271.45
	Total	721.923	684.663	615.638	2022.223

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO.2052 TO BE ANSWERED IN LOK SABHA ON 22.09.2020 REGARDING “FLOOD MANAGEMENT”

State-wise Flood Forecasting Stations of Central Water Commission

S.No	State	Level Stations	Inflow Stations	Total Stations
1	Andhra Pradesh	10	10	20
2	Arunachal Pradesh	3	0	3
3	Assam	30	0	30
4	Bihar	40	3	43
5	Chhattisgarh	1	2	3
6	Gujarat	6	7	13
7	Haryana	1	1	2
8	Himachal Pradesh	1	0	1
9	Jharkhand	2	15	17
10	Karnataka	1	14	15
11	Kerala	3	2	5
12	Madhya Pradesh	2	10	12
13	Maharashtra	8	13	21
14	Odisha	12	7	19
15	Rajasthan	3	11	14
16	Sikkim	3	5	8
17	Tamil Nadu	4	11	15
18	Telangana	5	8	13
19	Tripura	2	0	2
20	Uttar Pradesh	39	5	44
21	Uttarakhand	4	2	6
22	West Bengal	12	4	16
23	Jammu and Kashmir	3	0	3
24	NCT Delhi	2	0	2
25	Daman & Diu	1	0	1
	Total	198	130	328

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO.2052 TO BE ANSWERED IN LOK SABHA ON 22.09.2020 REGARDING “FLOOD MANAGEMENT”

Flood Forecasting performance from 2015 to 2019

Year	Number of Level Forecasts issued			Number of Inflow Forecasts issued			Total Number of Forecasts issued		
	Total	Within +/-15 cm of deviation from actual	Accuracy (%)	Total	Within +/-20% cumec of deviation from actual	Accuracy (%)	Total	Within +/-15 cm or +/-20% cumec of deviation from actual	Accuracy (%)
2015	3500	3429	97.97	572	562	98.25	4072	3991	98.01
2016	4969	4891	98.43	1270	1057	83.23	6239	5948	95.34
2017	5085	4975	97.84	1212	926	76.40	6297	5901	93.71
2018	4969	4871	98.03	1882	1624	86.29	6851	6495	94.80
2019	6004	5773	96.15	3750	2678	71.41	9754	8451	86.64
Average	4905	4788	98	1737	1369	83	6643	6157	94
