

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI,
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION
LOK SABHA
UNSTARRED QUESTION NO. 1819
ANSWERED ON 11.02.2021

FLOOD PATTERN

1819. SHRI FEROZE VARUN GANDHI

Will the Minister of JAL SHAKTI be pleased to state:

- (a) whether the Government has observed any flood pattern since the last three years in the country and if so, the details thereof;
- (b) whether the Government is using any new technology with respect to tackling floods in the country and if so, the details thereof;
- (c) whether the Government has common flood assistance programme for the affected areas in the country and if so, the details thereof and if not, the reasons therefor; and
- (d) the details of the crop area affected due to floods in country, State-wise?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI & SOCIAL JUSTICE AND EMPOWERMENT

(SHRI RATTAN LAL KATARIA)

(a) Central Water Commission (CWC) is the nodal Organisation entrusted with the task of flood forecasting & early flood warnings in the country on interstate rivers. Presently, CWC issues flood forecasts at total of 328 forecasting stations (198 river level forecast stations & 130 dam/ barrage inflow forecast stations). These stations cover 20 major interstate river basins & 25 States/Union Territories & National Capital Territory of Delhi. As per CWC, during the last 3 years, in addition to the flood prone states of Assam, Bihar & Uttar Pradesh, instances of extreme floods were witnessed in the states of Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Telangana, Odisha, Maharashtra, Chhattisgarh, Madhya Pradesh & Rajasthan due to 'excess' to 'large excess' rainfall in these states combined with extremely heavy rainfall in short duration.

(b) CWC has taken initiative to adopt all the latest technology including remote-sensing, Geographical Information System (GIS), Internet, Artificial Intelligence and Machine Learning in development/ running/ formulation and calibration of Mathematical models for flood forecasting and for providing Inundation Alerts which are closely at par with international standards. CWC is formulating 3 day advisories of flood using Satellite based real time rainfall estimates and 3 day rainfall forecast through Numerical Weather Prediction models being shared by IMD on a seamless fashion.

(c) The flood management & anti-erosion schemes are planned, investigated and implemented by the State Governments with their own resources as per priority within the State. The Union Government supplements the efforts of the States by way of technical guidance and promotional financial assistance for flood management in critical areas. Government of India launched "Flood Management Programme (FMP)" during XI Plan period for providing central assistance to the State Governments for taking up works related to river management, flood control, anti-erosion, drainage development, restoration of damaged flood management works and anti-sea erosion works which was continued during XII Plan. A scheme viz. "Flood Management and Border Areas Programme (FMBAP)" for flood management works in entire country and River Management activities and works related to Border Areas with an outlay of Rs.3342 crores was under implementation during 2017-18 to 2019-20 later extended upto March, 2021. Central Assistance amounting to Rs.6409.96 crores has been released since XI Plan till March, 2020 under this Programme.

(d) The State-wise details of losses due to floods are compiled by Central water Commission (CWC) based on the data provided by the States. The State-wise details of the crop area affected due to floods in country during the years 2017, 2018 and 2019 are given in **Annexure- I**.

Annexure referred to in reply to part (d) of Lok Sabha Unstarred Question No.1819 to be answered on 11.02.2021 on 'FLOOD PATTERN'.

State	Damage to Crops (Area in M.Ha.)		
	2017	2018	2019
Andhra Pradesh	*	0.170	0.004
Arunachal Pradesh	0.041	0.743	*
Assam	0.280	0.031	0.233
Bihar	0.810	0.001	*
Chhattisgarh	Nil	0.004	*
Gujarat	0.891	0.054	Nil
Goa	Nil	Nil	Nil
Haryana	0.001	0.079	Nil
Himachal Pradesh	0.003	0.411	0.040
Jammu & Kashmir	*	*	*
Jharkhand	Nil	*	0.005
Karnataka	Nil	0.232	1.02
Kerala	0.001	0.087	0.013
Madhya Pradesh	Nil	Nil	6.047
Maharashtra	Nil	*	
Manipur	0.089	0.005	Nil
Meghalaya	Nil	Nil	Nil
Mizoram	0.046	*	Nil
Nagaland	0.568	0.002	*
Odisha	0.021	0.026	0.038
Punjab	0.006	0.057	0.152
Rajasthan	0.739	0.002	2.390
Sikkim	0.001	*	*
Tamil Nadu	Nil	0.191	Nil
Tripura	0.047	0.025	0.001
Uttar Pradesh	0.396	0.383	0.650
Uttarakhand	Nil	0.001	0.000
West Bengal	1.033	0.011	0.095
Andaman & Nicobar	Nil	Nil	*
Chandigarh	Nil	Nil	*
Daman & Diu	Nil	*	*
Dadra & Nagar Haveli	Nil	Nil	*
Delhi	Nil	*	*
Lakshadweep	Nil	*	Nil
Puducherry	*	Nil	*

* Not Reported
