GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI,
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION
RAJYA SABHA
STARRED QUESTION NO. *83
ANSWERED ON 06.12.2021

CONDUCTING SURVEY UNDER FPAP

*83 SHRI IRANNA KADADI

Will the Minister of JAL SHAKTI be pleased to state:

(a) whether Government proposes to conduct any survey under the Flood Prone Area Programme (FPAP) across the country;
(b) if so, the details thereof indicating the districts identified as flood prone in the country including Karnataka, State/UT wise; and
(c) the steps taken by Government for development of such areas in north Karnataka region?

ANSWER

THE MINISTER OF JAL SHAKTI

(SHRI GAJENDRA SINGH SHEKHAWAT)

(a) to (c) A statement is laid on the Table of the House.

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STATEMENT REFERRED TO IN REPLY TO PART (a) to (c) OF STARRED QUESTION NO.*83 TO BE ANSWERED IN RAJYA SABHA ON 06.12.2021 REGARDING "CONDUCTING SURVEY UNDER FPAP".

(a) & (b) The Government undertakes assessment of flood prone area in the country from time to time. In the year 1980, Rashtriya Barh Ayog (RBA) estimated the total area liable to floods in the country as 40 million hectare (mha). The extent of maximum area affected by floods in any year during 1953-2010 as per the Working Group Report, 2011 on Flood Management and Region Specific Issues for XII Plan is 49.815 mha, the State-wise break up of which is given at **Annexure-I**.

Under the Disaster Management Support Programme (DMSP), Indian Space Research Organisation (ISRO)/ Department of Space has prepared and released Flood Hazard Atlases using long-term satellite data for Assam (2016), Odisha (2019) and Bihar (2021). These were ground verified by respective States before release. Flood Hazard Atlases of Andhra Pradesh and West Bengal are also prepared and ground verified. For Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Tamil Nadu, Gujarat and Arunachal Pradesh, aggregated flood maps were prepared using the satellite data of 2003 to 2020 and were disseminated to the concerned State Disaster Management Departments. Flood hazard atlases/ aggregated flood maps may be used as input for identifying the flood prone areas.

For scientific assessment of flood prone areas in India, an Expert Committee under Chairman, Central Water Commission (CWC) has been constituted.

(c) Flood protection and flood management measures are broadly classified as under-

(i) Structural Measures - The structural measures for flood control which bring relief to the flood prone areas by reducing flood flows through storages or confining the flows within banks by construction of embankments and thereby reducing the flood levels.

(ii) Non-Structural Measures - Facilitating timely evacuation of the people and shifting of their movable property to safer grounds by having advance warning of incoming flood through setting up a flood forecasting system; discouraging creation of valuable assets/settlement of the people in the areas subject to frequent flooding i.e. enforcing flood plain zoning regulation.

Integrated flood approach aims at adopting judicious mix of structural and non-structural measures to provide protection against flood damages at economic cost.

To strengthen the structural measures of flood management, during XI & XII Plan, Flood Management Programme (FMP) was launched for providing central assistance to States for works related to flood management, flood control, anti-erosion, drainage development, anti-sea erosion, etc. which subsequently continued as a component of "Flood Management and Border Areas Programme" (FMBAP) for the period from 2017-18 and extended up to December, 2021. So far central assistance amounting to

Rs.6,447.76 crore has been released to State Governments/Union Territories under this programme. 415 projects completed under this programme have given protection to an area of around 4.994 mha and protected a population of about 52.21 million.

For non structural measures, CWC is the nodal organisation entrusted with the task of flood forecasting and early flood warnings in the country. Presently, CWC issues flood forecasts for 331 forecasting stations. These stations cover 20 major river basins in 23 States & 2 Union Territories. The number of forecast stations has increased from 175 in the year 2014 to 331 in the year 2021. In order to provide more lead time to the local authorities to plan evacuation of people and remedial measures, CWC has developed basin wise deterministic flood forecasting model based on rainfall runoff mathematical modelling for 5 days advance flood forecast advisory at identified flood forecasting and inflow forecasting stations along rivers of India.

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (a) & (b) OF STARRED QUESTION NO. 83 TO BE ANSWERED IN RAJYA SABHA ON 06.12.2021 REGARDING "CONDUCTING SURVEY UNDER FPAP".

State -wise Maximum Area Affected by Floods in any year during 1953-2010

S. No.	State	Max. Area affected (million ha)
1	Andhra Pradesh	9.040
2	Arunachal Pradesh	0.207
3	Assam	3.820
4	Bihar	4.986
5	Chhattisgarh	0.089
6	Delhi	0.458
7	Goa	0.000
8	Gujarat	2.050
9	Haryana	1.000
10	Himachal Pradesh	2.870
11	Jammu & Kashmir	0.514
12	Jharkhand	0.000
13	Karnataka	0.900
14	Kerala	1.470
15	Madhya Pradesh	0.377
16	Maharashtra	0.391
17	Manipur	0.080
18	Meghalaya	0.095
19	Mizoram	0.541
20	Nagaland	0.009
21	Orissa	1.400
22	Punjab	2.790
23	Rajasthan	3.260
24	Sikkim	1.170
25	Tamil Nadu	1.466
26	Tripura	0.330
27	U.P.	7.340
28	Uttarakhand	0.002
29	West Bengal	3.080
30	Andaman & Nicobar	0.030
31	Chandigarh	-
32	Dadra & Nagar Haveli	-
33	Daman & Diu	-
34	Lakshadweep	-
35	Puducherry	0.050
	Total	**49.815**

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