GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI,

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 3742

ANSWERED ON 23.03.2023

DISCHARGE OF WATER INTO SEA

3742. SHRI KOTHA PRABHAKAR REDDY

Will the Minister of **JAL SHAKTI** be pleased to state:

(a) the details of the rain and flood water discharged into the sea; and

(b) the details regarding the policy decisions taken/proposed to be taken by the Government to strengthen the embankments of the river(s) along the stretches where people live, to minimize the impact of inundation, and address their concerns regarding irrigation projects and water levels, State/UT-wise?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI BISHWESWAR TUDU**)**

(a) The details of average decadal flow as observed by Central Water Commission through its network of hydrological observations stations on the terminal sites of major Rivers in India which may be taken as water flowing into the sea, during the period 2001 to 2021 is at **Annexure-I.**

(b) Flood management including erosion control falls within the purview of the States. Flood management/anti-erosion projects including construction of embankments are formulated and implemented by concerned State Governments 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. Flood management measures are broadly categorized as Structural Measures and Non-Structural Measures. Integrated flood approach aims at adopting judicious mix of structural and non-structural measures to provide a reasonable degree of protection against flood damages at economic cost.

To strengthen the structural measures of flood management, Ministry had implemented Flood Management Programme (FMP) during XI & XII Plan for providing Central Assistance to States for works related to flood management, 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 to 2000-21 and further extended up to September 2022 with limited outlay. So far Central Assistance amounting to Rs. 6977.43 Crores has been released to Union Territories/State Government under FMP component of this Programme since inception. The State-wise details of central assistance released during FY 2019-20 to 2022-23 under FMP component of this Programme are at **Annexure-II.**

For Non structural measures, Central Water Commission (CWC) is the nodal Organisation entrusted with the task of flood forecasting & early flood warnings in the country. Presently, CWC issues flood

forecasts for 333 forecasting stations (199 river level forecast stations & 134 dam/ barrage inflow forecast stations). These stations cover 20 major river basins in 23 States & 2 Union Territories. In order to provide more lead time to the local authorities to plan evacuation of people & take other remedial measures, Central Water Commission (CWC) has developed basin wise flood forecasting model based on rainfall-runoff mathematical modelling for 5 days advance flood forecast advisory at its forecasting stations.

In order to formulate the strategy for flood management works in the entire country and river management activities and works in the border areas, a Committee was constituted by NITI Aayog under the chairmanship of Vice Chairman, NITI Aayog and officials from various Departments/ Ministries of Government of India, Experts from the field and Principal Secretaries from States of Jammu & Kashmir, Uttar Pradesh, Bihar, West Bengal, Punjab, Assam, Arunachal Pradesh, Tripura, Madhya Pradesh and Kerala were included as the members of this Committee.

The major recommendations as per report of the above Committee (January, 2021) are-

- FMBAP scheme to be continued for the period 2021-26, i.e., co-terminus with the period of 15th Finance Commission with the provision of inclusion of new projects for funding under the scheme. The selection of the schemes will be undertaken in consultation with NITI Aayog and State Government.
- Continuous efforts to be made towards modernization in collection of hydro-meteorological data, flood forecast formulation and forecast dissemination. Further simplified data dissemination policy for use of data by the States particularly regarding trans-boundary rivers to be developed.
- Focus on scientific research in development of Model based system to forecast flash flood with sufficient lead time will provide a much-needed relief from menace of flash floods.
- Rule curve/ level for all reservoirs should be prepared & updated accounting change in rainfall trend and changing demand over the years due to rapid increase of population, urbanisation and industrialisation. Rule curves of major reservoirs, where flood cushion is not in-built, need to be reviewed to have some dynamic flood cushion for major part of the flood season.
- The long-term structural solution to floods lies in construction of large storage reservoirs which moderate flood peaks by adopting appropriate reservoir operation schedule.
- To get benefit of flood control, it is essential that tendencies like encroachment of natural detention basins are curbed and these basins are restored to their natural state as a measure for flood control.
- The projects for interlinking of rivers for diversion of flood water to water scarce areas may be taken up in a time bound manner.
- The reclamation of the existing wetlands/ natural depressions should be prohibited by state governments and they should formulate an action plan for using them for flood moderation.

The above recommendations of NITI Aayog Committee have accordingly been taken into consideration while preparing the proposal of continuation of FMBAP for the period 2021-26 and formulation of Policies at central level.

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 3742 TO BE ANSWERED IN LOK SABHA ON 23.03.2023 REGARDING "DISCHARGE OF WATER INTO SEA"

Details of Average Decadal Flow in Major Rivers in India for the period from 2001 to 2021							
S. No.	River	Terminal Discharge Observation Station	State	Year 2001 to 2011		Year 2011 to 2021	
				Average Decadal Flow of River in Cumecs	Average Decadal Flow of River in Million Cubic Meters (MCM)	Average Decadal Flow of River in Cumecs	Average Decadal Flow of River in Million Cubic Meters (MCM)
1	Ganga	Farakka	West Bengal	10002	315423	9832	310062
2	Brahmaputra	Panchratna	Assam	15333	483541	14918	470454
3	Teesta	Domohani	West Bengal	676	21318	764	24094
4	Krishna	Wadenpally	Andhra Pradesh	595	18764	412	12993
5	Godavari	Polavaram	Andhra Pradesh	2563	80827	2734	86219
6	Mahanadi	Tikrapara	Odisha	1601	50489	1630	51404
7	Cauvery	Musiri	Tamilnadu	221	6969	138	4352
8	Brahmani	Jenapur	Odisha	517	16304	523	16493
9	Subernrekha	Ghatshila	Jharkhand	212	6686	233	7348
10	Narmada	Garudeshwar	Gujarat	601	18953	740	23337
11	Baitarni	Anandpur	Odisha	138	4352	332	10470
12	Mahi	Khanpur	Gujarat	144	4541	173	5456
13	Sabarmati	Voutha	Gujarat	84	2649	68	2144

Note: Year has been taken as Water Year from June to May

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 3742 TO BE ANSWERED IN LOKSABHA ON 23.03.2023 REGARDING "DISCHARGE OF WATER INTO SEA"

Central Assistance to States under FMP component of FMBAP during the last three Financial Years

S. No.	States	Funds released during FY:2019-20 (in Cr.)	Funds released during FY:2020-21 (in Cr.)	Funds released during FY:2021-22 (in Cr.)	Funds released during FY:2022-23 (in Cr.) Till date
1	Assam	85.03	-	14.80	214.01
2	Himachal Pradesh	176.41	11.87	6.35	-
3	Jammu & Kashmir	92.74	10.14	116.79	-
4	Manipur	-	-	52.38	76.63
5	Odisha		15.785	2.51	-
6	Uttar Pradesh	39.15	-		-
7	Uttarakhand	35.58	-	2.77	-
8	West Bengal	117.12	-	44.15	-

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