

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI,
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION
LOK SABHA
STARRED QUESTION NO. *66
ANSWERED ON 02.12.2021

EROSION CAUSED BY FLOODS

*66. SHRI K. MURALEEDHARAN
DR. MOHAMMAD JAWED

Will the Minister of JAL SHAKTI be pleased to state:

- (a) whether the Government has assessed the impact of erosion of river banks annually in different States caused by flooding of rivers viz. Mahananda, Mechi and Ratwa rivers in Bihar, Silaboti river in West Bengal, Brahmaputra river in Assam and rivers in Kerala and if so, the details thereof alongwith the reasons for such annual flooding;
- (b) the steps taken by the Government to prevent such flooding;
- (c) whether the Government has conducted consultations with local stakeholders to solve flooding and soil erosion in the above States, if so, the details thereof and if not, the reasons therefor;
- (d) whether the Government has received any proposals from the States particularly Bihar, West Bengal, Assam and Kerala to solve annual flooding and consequent soil erosion; and
- (e) if so, the details thereof including the Government's response thereto and the time by which the annual flooding and consequent soil erosion problems are likely to be solved?

ANSWER

THE MINISTER OF JAL SHAKTI

(SHRI GAJENDRA SINGH SHEKHAWAT)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF STARRED QUESTION NO*66 TO BE ANSWERED IN LOK SABHA ON 02.12.2021 REGARDING “EROSION CAUSED BY FLOODS” ASKED BY SHRI K. MURALEEDHARAN and DR. MOHAMMAD JAWED, HON’BLE MPs.

(a) & (b) Erosion, movement and deposition of sediment in a river are natural regulating functions of a river. Rivers tend to maintain a balance between the silt load carried and silt load deposited, maintaining a river regime. Soil erosion caused by heavy floods is a matter of concern as it leads to several associated problems like changes in river course, loss of land, etc. Floods are a natural calamity that the country faces almost every year, in varying degrees of magnitude. The occurrence of floods can be attributed to various factors, including wide variations in rainfall both in time and space with frequent departures from the normal pattern, inadequate carrying capacities of rivers, river bank erosion and silting of river beds, landslides, poor natural drainage in flood prone areas, snowmelt and glacial lake out-bursts.

Flood management including erosion control falls within the purview of the States. Flood management and anti-erosion schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements efforts of the State Governments by providing technical guidance and also promotional financial assistance for management of floods in critical areas. The Government of India has been making continuous efforts to assist the State Governments in effective flood management and erosion control. Morphological studies by various IIT and NIIT have been carried out for major rivers like Ganga, Sharda, Rapti, Kosi, Bagmati, Subansari, Krishna, Mahanadi, Mahanada. These studies aid in finding the vulnerable spots for bank erosion/deposition, aggradations/ degradation etc. As per the morphological study of Brahmaputra river conducted by Central Water Commission through consultancy from IIT Guwahati, it has been estimated that in the Brahmaputra river, total erosion of 252.6 sq. km. and deposition of 118.6 sq. km. occurred between 2003-05 and 2008-11.

(c) to (e) Government of India has been receiving proposals from the States/Union Territories for inclusion of flood management/anti-erosion projects for central assistance under ongoing Flood Management and Border Area Programme (FMBAP) of Ministry of Jal Shakti. Under FMBAP, provision for central funding has been made during 2017-21 for prioritized completion of ongoing projects. During last five years, central assistance of Rs. 292.63 crore, Rs. 284.07 crore, Rs. 472.64 crore & Rs. 19.05 crore has been released to the States of Bihar, West Bengal, Assam and Kerala, respectively.

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 storage 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 through a combination of structural and non-structural measures.

To strengthen the structural measures of flood management, during XI & XII Plan, Ministry has launched Flood Management Programme (FMP) 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 million hectares and protected a population of about 52.21 million.

For non structural measures, Central Water Commission (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 forecasting stations. The number of forecast stations has increased from 175 in the year 2014 to 331 in the year 2021. These stations cover 20 major river basins in 23 States and 2 Union Territories. In order to provide more lead time to the local authorities to plan evacuation of people and take 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.
