GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI,

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

STARRED QUESTION NO. *239

ANSWERED ON 08.08.2022

LOSS OF LAND DUE TO EROSION IN BIHAR

*239 PROF. MANOJ KUMAR JHA

Will the Minister of JAL SHAKTI be pleased to state:

(a) whether it is a fact that every year Bihar experiences land loss due to erosion;

(b) if so, the details thereof and the total square km of land Bihar has lost due to erosion and the number of people affected;

(c) whether Government has devised any plan to protect Bihar from erosion; and

(d) the number of schemes for protection from erosion presently pending for approval before Government so far as the same relates to Bihar?

ANSWER

THE MINISTER OF JAL SHAKTI

(SHRI GAJENDRA SINGH SHEKHAWAT)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF STARRED QUESTION NO. *239 TO BE ANSWERED IN RAJYA SABHA ON 08.08.2022 REGARDING "LOSS OF LAND DUE TO EROSION IN BIHAR" ASKED BY PROF. MANOJ KUMAR JHA, HON'BLE M.P.

(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 & 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, causing loss of land, etc. 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 the efforts of the States 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 Brahmaputra, Ganga, Sharda, Rapti, Subansari, Krishna, Tungbhadra, Mahanadi Mahanada, etc. These studies aid in finding the vulnerable spots for bank erosion/deposition, aggradations/ degradation etc. The morphological study of river Ganga (from Devprayag to Farakka) using remote sensing, has been conducted through consultancy by IIT Roorkee for Central Water Commission (CWC). The total length of the river Ganga studied is 1,824 km. As per the study, the estimated erosion, deposition and net erosion/deposition that occurred in the reaches of river Ganga in Bihar from 1970 to 2010 is given at **Annexure.** State-wise data of land lost due to erosion and the number of people affected due to erosion is not maintained centrally.

(c) Integrated flood management 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, Union Government had implemented Flood Management Programme (FMP) during XI & XII Plan for providing central assistance to States for works related to 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 to 2020-21 and further extended up to September 2022. From the State of Bihar, 47 projects were included during XI & XII Plan for central assistance under FMP component of ongoing Flood Management and Border Areas Programme (FMBAP) of Ministry of Jal Shakti. The 42 completed projects have given protection to an area of around 28.67 lakh ha and protected a population of about 22.34 million. Central assistance amounting to Rs. 924.41 crore has been released to the State of Bihar under FMP. One project of Bihar namely "Extension of left Bhutahi Balan embankment from km 25.00 to km 31.610 (up to Ghoghardiha to Nirmali Railway line near Parsa halt) with Revetment” (estimated cost: 48.44 crore) has been included for funding under FMBAP for the period 2021-2026 based upon the recommendations of Inter-Ministerial Committee (IMC) in March, 2022.

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 332 forecasting stations (199 river level forecast stations & 133 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 and take other remedial measures, CWC has developed basin wise flood forecasting model based on rainfall-runoff mathematical modelling for 5 days advance flood forecast advisory at identified flood forecasting and inflow forecasting stations. CWC has 43 flood forecasting (FF) stations in Bihar (40 level forecasting stations and 3 inflow forecasting stations) and 121 gauge stations in the state of Bihar. During flood season 2021 ending 31st December 2021, 3,317 forecasts have been issued for Bihar State.

(d) Based upon the recommendations of Ganga Flood Control Commission (GFCC), Patna, entrusted with responsibility of techno-economic appraisal of flood management projects of Ganga Basin, Advisory Committee of Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR) has accepted 19 flood management/anti-erosion projects of State of Bihar during last five years period. Further, out of 23 DPRs of flood management/anti-erosion projects received for techno-economic appraisal since 2019 from the State of Bihar, observations of GFCC on 22 numbers have already been conveyed to the State Government for compliance.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF STARRED QUESTION NO. *239 TO BE ANSWERED IN RAJYA SABHA ON 08.08.2022 REGARDING "LOSS OF LAND DUE TO EROSION IN BIHAR".

Estimated erosion, deposition and net erosion/deposition that occurred in the reaches of river Ganga in Bihar from 1970 to 2010

Chainage (in km) w.r.t Farraka (0 chainage)	Location	Erosion (in sq km) (-) indicates	Deposition (in sq km) (+) indicates	Net Erosion/Deposition (in sq km)
50-100	Budhboria to Lakshmipur	-53.82	46.58	-7.24
100-150	Lakshmipur to Kahalgaon	-41.46	109.73	68.27
150-200	Kahalgaon to Mathurapur	-30.05	132.32	102.27
200-250	Mathurapur to Munger	-21.18	100.00	78.82
250-300	Munger to Khutaha	-14.04	10.64	-3.41
300-350	Khutaha to Achauara	-15.80	56.53	40.73
350-400	Achauara to Daudnagar	-10.44	21.62	11.17
400-450	Daudnagar to Dhanaura	-16.29	11.36	-4.93
450-500	Dhanaura to Nauranga	-25.28	39.42	14.14
500-550	Nauranga to Arjunpur	-15.07	46.76	31.69
550-600	Arjunpur to Saraia	-8.99	16.95	7.96
Total		**-252.43**	**591.90**	**339.47**