

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION
RAJYA SABHA

UNSTARRED QUESTION NO. 89

ANSWERED ON 20.07.2026

RESTORATION OF RESERVOIR STORAGE CAPACITY

89. Shri JAGGESH:

Will the Minister of **Jal Shakti** be pleased to state:

- (a) whether Government is aware that excessive silt accumulation has significantly reduced the live storage capacity of the Tungabhadra Reservoir and other ageing reservoirs, adversely affecting irrigation, drinking water supply, hydropower generation and flood management;
- (b) whether any scientific assessment of silt accumulation and the resultant loss of storage capacity has been undertaken during the last five years;
- (c) whether Government proposes to implement a time-bound programme, in coordination with the States, for desilting and restoration of reservoir capacity; and
- (d) if so, the details thereof, including reservoirs covered, estimated cost, funding pattern, implementation timeline and expected outcomes?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) & (b) Yes, the Central Government is aware that sedimentation is a natural process in reservoirs, and over time it leads to reduction in live storage capacity, which may adversely affect the intended benefits of the reservoir, including irrigation, drinking water supply, hydropower generation and flood moderation. The extent of sedimentation varies from reservoir to reservoir depending on factors such as catchment characteristics, land use, rainfall and reservoir operation. Responsibility for monitoring reservoir storage capacity rests with the respective State Governments and other dam owning agencies.

Central Water Commission (CWC), upon the request of project authorities, undertakes sedimentation assessments of selected reservoirs through hydrographic surveys and remote sensing techniques. Based on these studies, CWC has published the “Compendium on Sedimentation of Reservoirs in India–2024”, which analyses sedimentation data for 548 reservoirs. Of these, workable data were available for 439 reservoirs distributed across different regions of the country.

The analysis indicates an overall loss of approximately 15.46% of the gross storage capacity of these reservoirs, equivalent to 30.97 Billion Cubic Metres (BCM).

Further, as per the said Compendium, the Tungabhadra Reservoir in Karnataka has experienced a reduction of 895.28 Million Cubic Metres (MCM) in its gross storage capacity due to sedimentation since the commissioning of the dam in 1953.

(c) & (d) Reservoir desiltation is technically complex, site-specific and environmentally sensitive activity, the feasibility and appropriateness of which depend upon the specific characteristics and conditions of each reservoir. Currently, there is no centrally sponsored time-bound programme for desilting of reservoirs. The responsibility for operation, maintenance and sediment management of reservoirs rests primarily with the respective State Governments and other dam owning agencies.

However, under the externally aided Dam Rehabilitation and Improvement Project (DRIP) Phase-II & Phase-III scheme, provision has been made for need-based sediment management studies and implementation of suitable sediment management measures for selected dams, wherever found technically feasible and economically justified.

At the Central level, several key guidance documents have been prepared and disseminated to all States to facilitate scientific and sustainable reservoir sediment management. These include the Handbook for Assessing and Managing Reservoir Sedimentation (2019), the Operational Procedures for Assessing and Managing Environmental Impacts in Existing Dam Projects (2020) and the National Framework on Sediment Management (2022).

In addition, to promote the adoption of scientific sediment management practices by States and dam-owning agencies, two National Workshops were organized in January and March 2026. The workshops showcased successful desiltation initiatives, including dredging and dry excavation undertaken on a revenue-neutral/no-cost basis, and highlighted other effective measures such as sediment flushing, sluicing, catchment area treatment and integrated sediment management for the long-term sustainability of reservoir storage capacity.
