

## **Sub-Theme: Sustainable Water Resource Management**

### **Topic Session: Sediment Management and Recoupment of Storage**

#### Background:

Post independence, Government of India has heavily invested on construction of dams since independence. Yet, due to exponential increase in demand cutting against sectors, not much buffer is available between availability and demand. Thus, sedimentation cannot be allowed to continue reduction in storage capacity, thereby affecting water availability, hydropower, and flood control. Gravity of the issue has been highlighted by the data related to bathymetry surveys compiled by CWC (Aug. 2024) as *Compendium on Sedimentation of Reservoirs*. Based on the data of compendium and data of some of the reservoirs which were surveyed after the publication, analysis has been carried out focusing on live storage of 462 reservoirs. It indicates that the average annual percentage loss of live storage capacity is estimated at about 0.45%. As per the analyzed data, Himalayan region has been found to be the most affected by sedimentation. These 462 reservoirs comprise of 2/3<sup>rd</sup> of the total live storage capacity of the reservoirs of all specified dams of India. Considering this to be a representative sample, the total loss of live storage has been computed as 26 BCM. When it is very difficult to construct new storages on account of land acquisition issues, R&R issues, site specific engineering complexities, we cannot afford to ignore this issue and have to strive hard not only to reclaim the lost storage to the extent possible but also to reduce the influx of sediments into the reservoirs in a sustainable manner.

#### Objective:

- To have an understanding of Sediment Management Methodologies
- To discuss Challenges likely to be encountered in sediment management
- To deliberate on the possible use of desilted sediments
- To share the efforts, experiences and challenges faced at National and international level.

#### Expected Outcome:

- Better understanding of the need for sediment management
- Exposure to the success/failure stories as lessons learnt
- Policy level interventions required to reclaim the lost storage and to mitigate the influx of sediments.

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