

# Estimating Dam Removal's Reaction to Accumulated Sediments' Erosion in the Reservoir and Riverbed (Case study: Taham Dam Reservoir)

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## Abstract:

In recent years, the removal of dams lacking economic, social, political and environmental efficiency has gained increasing attention in countries possessing dam construction industry. When a dam was removed, ecological and environmental effects of accumulated sediment in the reservoir and their erosion can impose irreparable damages to the environment of the intended region. In the present study, in order to estimate the dam removal's response to accumulated sediments erosion, the flood zoning of the study area was performed using observed data and *Hec-ras*, *Hec-Georas* and *Gis* software; then, by utilizing the developed models in *Hec-Ras* and *Hec-Hms*, the hydraulic and sediment analysis were performed. Finally, the efficiency of accumulated sediment erosion in *Taham* Dam reservoir from 1980 to 2002 was estimated using the developed formula. The result of the study indicated that if there is more accumulated sediment in the region, then the efficiency of erosion will be enhancing. The result of the study demonstrated that the efficiency of sediment erosion in *Taham* Dam was highest in 1982.

**Keywords:** Dam Removal, Accumulated Sediment, Sediment Analysis, Sediment Erosion Efficiency