

Forecasting dams silting by Algiers-Hodna-Soummam river systems method

This work introduces a concept of neural network to estimate suspended sediment in catchments the hydrometric data of which are absent for forecasting a silting of dams. The adopted methodology consists in estimating and forecasting the suspended sediment for the best management of the waterground supplies. Two methods are used: the first one is parametric, linear regression and PCA, the second one is not parametric; a method of neural network. The last-mentioned is used to predict the specific erosion on “Algiers-Hodna-Soummam” watershed, relying not only on the hydrometric and pluviometric data, but also on the hydromorphometric characteristic and vegetable cover of catchments in the site of dams and small dams of the study area.

Keywords: erosion; suspended sediment; siltation; dams; neural network; hydromorphometric characteristic.