

# Investigation on temporal changes of suspended load in Kooshk Abad Watershed, Iran

M. Zirjani<sup>1</sup>, K. Shahedi<sup>2</sup>, K. Solaimani<sup>3</sup>, M. Azami<sup>4</sup>

<sup>1</sup>*M.Sc., Watershed Management, Sari Agricultural Sciences & Natural Resources University, Iran*

<sup>2</sup>*Assistant Prof., Sari Agricultural Sciences & Natural Resources University, Iran. k.shahedi@sanru.ac.ir*

<sup>3</sup>*Professor, GIS & RS Centre, Sari Agricultural Sciences & Natural Resources University, Iran*

<sup>4</sup>*M.Sc., Watershed Management, Islamic Azad University of Torbat-Jam, Iran*

## ABSTRACT

Having information about amount of sediment which is transported by streams comprises a basic and necessary part in study and design of water-related projects. It is one of the important factors that affect any decision making in construction of hydraulic structures over the rivers. Complex nature of sediment load of rivers causes difficulty in precise estimation of its amount which enters reservoirs. This inaccuracy leads to problem in producing long-term data needed for structures' design. Studying temporal variation of sediment and building a model for this variation can help to overcome the above-mentioned problems. The main objective of this study is to analyze the variability in the suspended load at different temporal scales (monthly, seasonal and annual) and investigation on effect of mechanical soil and water conservation measures (e.g., small dams) on suspended load in the Kooshk Abad River located in Northeast of Iran. According to analysis of dataset during 1990-2008 time period and surveying changes in sediment discharge rate due to abovementioned measures, it is seen that 52% of suspended load trapped by built small dams during flooding seasons. The results of estimated suspended sediment in the watershed can be base of other studies to improve the watershed management and soil and water conservation measures.

**Keywords:** Suspended load, sediment rating curve, Kooshk Abad Watershed, Iran