Geophysical Research Abstracts
Vol. 12, EGU2010-7549, 2010
EGU General Assembly 2010

Suspended Sediment Forecasting in Gao-Pen River Using Artificial Neural Network

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River suspended sediment yield has a strong relationship to the river discharge. Linear regression and exponential regression models were most commonly used approaches to estimate sediment yield from river discharge. However, the accuracy is not precise enough, and the same discharge may have different sediment concentrations due to discharge rise and recession. In these years, Artificial Neural Networks(ANN) are applied for forecasting and classification in many fields and lead to good performance. Multilayer perceptrons of back propagation(BP) develop completely and are used for forecasting successfully in the past researches.
In this study, Artificial Neural Network (BP) was used to build discharge-sediment model for forecasting suspended sediment in Gao-Pen river. The results show that ANN outperformed linear regression model and power regression model.