



## **The Influencing Factors of Discharge and Suspended Sediment Concentrations for the Babao River in Northeast Tibetan Plateau**

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The Babao River is the upper reaches of the Heihe River located in Qinghai Province of the Tibetan Plateau. This study exams the characteristics of the discharge and the suspended sediment concentration according to the records from Qilian gauging station. There are 36 years data in total ranging discontinuously from 1967 to 2012. The corresponding meteorological data are from Qilian meteorological station. Based on the correlation analysis, monthly discharge is significantly related to monthly precipitation and average air temperature while SSC is significantly related to monthly average wind speed and discharge. The results indicate that the river discharge is supplied by both precipitation and snow/glacier melting and the catchment is under the influence of both wind erosion and water erosion. The counterclockwise loops of monthly precipitation vs. average discharge and of average air temperatures vs. average discharge indicate that under the potential impact of soil moisture on the runoff generation, the discharges of the latter half of the year are higher than those in the first half year under the similar precipitation and temperature conditions. The clockwise loop of monthly average suspended sediment concentration vs. average discharge indicates that soil erodibility of the latter half of the year are lower than that in the first half of the year under the similar flow condition.