

## **Multiple regressions analysis and model for sediment yield in South Korea**

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**Abstract.** The multiple regression analysis for the estimation of the sediment yield in South Korea is conducted with 35 river stations and 34 parameters about watershed characteristics, soil type, and land use. The Five regression equations model is developed to estimate the mean annual sediment yield for ungauged watershed as functions of river basin characteristics, and it follows the USLE architecture. The meaningful river basin characteristics are: watershed area in square kilometers, mean annual precipitation in millimeters, percentage of urban area, percentage of sand in the soil, and average watershed slope. The proposed regression models were tested and validated with additional river stations data in South Korea.