

## **Hydrological description of Mediterranean watersheds in Turkey**

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### **Abstract**

Mean annual runoff is needed to establish the total water resources of a watershed. Other parameters such as variability and skewness are also important flow attributes. Seasonality is important as well. The most important measure of variability is the coefficient of variation defined as the standard deviation divided by the mean value. Annual flow changes with variability. Usually, flow decreases with increasing precipitation (and hence runoff). The persistency is another important characteristics, which shows the effect of one event on the following event in a time series. One measure of this is the serial correlation coefficient. For a watershed with a large water carry-over from year to year, it was postulated that high values of serial correlation coefficient should be associated with low values skewness coefficient; i.e., the higher persistency, the lower skewness is. Characteristics of maximum and minimum streamflow data of the watersheds are also considered.

In this study, hydrological description of Mediterranean watersheds in Turkey is investigated. The investigation is based on annual streamflow data collected in the watersheds. Also sediment characteristics are analysed. The sediment data are analysed at annual time scale as in the streamflow case. In this part of the study, it is aimed to develop a regression equation between sediment discharge and streamflow. It is also aimed to develop a regression equation calculating sediment discharge of the watershed as a function of watershed characteristics; drainage area, for instance. The equation will greatly help in practical problems such as determination of the sediment discharge of the watershed.

For the implementation of the study, all hydrometric stations available in the data inventory of the State Hydraulic Works of Turkey are considered.