

عنوان مقاله:

Assessment of the Rainfall Erodibility Factor using Different Statistical Methods

محل انتشار:

فصلنامه ی سنجش از دور راداری و نوری، دوره 2، شماره 3 (سال: 1398)

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نویسندگان:

Hassan Fathizadea - *Ph.D. Student, Yazd University, Yazd, Iran*

Ali Khenamanib - *Faculty Member of Yazd University, Yazd, Iran*

Mohammad Ali Hakimzadeh Ardakanic - *Associate Professor, Department of Natural Engineering, Yazd University, Yazd, Iran*

خلاصه مقاله:

The aim of this research is to evaluate the rain erosion index in Iran by using the rainfall records from ۱۵۰ stations over the period of ۲۵-year (۲۰۱۰-۱۹۸۶), using geo-statistical methods. To calculate the rainfall erodibility, factor, and using Fournier index equation, the R factors for all stations were received. The rainfall erosivity factor map was depicted to show the spatial correlation between rainfall erosivity statistics, depicting of variogram become used that the linear to sill variogram with the value of ۰.۸۰ confirmed the quality correlation the various facts and was used for the interpolation. Also, to evaluate the amount of rainfall erosivity indexes four extraordinary interpolation methods (IDW) had been used: (GPI), (RBF) local, (LPI), and kriging. Moreover, to choose the satisfactory approach of interpolation, correlation of Geo-statistical techniques with the observational data has been estimated. Kriging simple method with $R^2 = ۰.۷۴$ has been chosen as the satisfactory technique. Based on the result of kriging simple and DEM maps of Iran, the area of ۸.۹۸-۲۷.۱۹ has the best stage (۲۲.۵) and is as much as to ۴۷۷۷ m. The lowest level is allocated to regain ۲.۱۲.۴۹, which covers approximately ۴.۲% of the entire area of Iran. The evaluation confirms the immoderate indices of erosivity for the northern strip and the west provinces of country due to the heavy monthly rainfall.

کلمات کلیدی:

GIS, interpolation, Kriging, R factor, Variogram

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