

The study and analyze of erosion and production of sediment in the Shalmanrood sub-basin

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In this study, EPM method was used to study erosion and sediment yield in Shalamanrood basins in eastern Guilan province. To do this, the required maps including geomorphology, lithology and slope of the basin were prepared in ARCGIS software environment and then by overlaying layers, the basin map units with different facies and slope classes were obtained. Finally, by scoring each of the four factors in the EPM method, the basin erosion classes map was determined and by applying the presented experimental relation, the erosion intensity and sediment yield were estimated. The results showed that the highest amount of sediment belonged to higher altitudes in the Shalamanrud catchment; however, in places the slope was lower and in the base mountain parts there was sedimentation and erosion as well. This area has been involved. The zonation of erosion and sedimentation in Shalamanrood basin indicated that the highest amount of sediment production belonged to the city of Otaghvar and then Komle and since the city of Langroud was located in the plain there was no erosion in this area.

Keywords : Erosion, EPM Method, Shalamanrood Basin, Guilan Province, GIS.

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