عنوان مقاله:

Determine of Correlation Coefficient between EPM and MPSIAC Models and Generation of Erosion Maps by GIS Techniques in Baghmalek Watershed, Khuzestan, Iran

محل انتشار:

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خلاصه مقاله:

Soil erosion is a major threat to global economic and environmental sustainability. Soil erosion is one of the huge propellant and recognized economical, social and environmental factors and has been performed great effort in most country for its struggle and inspection and has been spent exorbitant sums. In this study with the aim of inspection of efficiency of two Erosion Potential methods (EPM) and Modify Pacific Southwest Interagency Committee (MPSIAC) models, we used to estimating of erosion and sediment in Abdullah Baghmalek watershed. The area is about 105 Km2 with annual precipitation about 700-800 mm, sensitive with annual precipitation about 700-800 mm, sensitive related calculations to each model were performed. PSIAC model has been chosen as a target due to lack of sediment testing station. Statistical comparison has been preformed too with SPSS. Results show that MPSIAC together with GIS&RS techniques more solidarity with sediment rate and EPM model just does a brief consideration from erosion and sediment measure in area. According to the results, in MPSIAC and PSIAC, parcel No.1 showed minimum and parcel No.5 maximum sediment yields. While in EPM parcel No.1 showed minimum and parcel No.6 maximum sediment yield rate in area level. Regression lines showed that MPSIAC sediment graph has the highest correlation with control model. R2 for PSIAC is 0.6068, R2 for EPM is 0.4988 and R2 for MPSIAC is 0.5967

کلمات کلیدی:

Soil Erosion, Sediment, GIS, DEM, EPM, MPSIAC