عنوان مقاله:

An Analysis Of The Design With The Aim Of Erosion Control Based On The Geomorphological Pattern

محل انتشار:

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خلاصه مقاله:

Erosion is the gradual destruction process of a material. Erosion is the constant wearing away and loss of soil on the surface of the earth (its transfer or movement from one point to another on the surface of the earth) by water or wind. Erosion is a process in which soil particles are separated from their substrate and transported to another place with the help of a transport agent. In general, the word erosion can be discussed in two ways; The broad meaning of the word includes water, wind, and glacial erosions, and the specific meaning of the word is about erosion in agricultural soils without considering its specific modes. When we talk about erosion, we immediately imagine the signs and symptoms that characterize the type of erosion, which are associated with destruction, removal, transport of materials and deposition or accumulation of materials. Soil erosion is a natural and unnatural negative process that occurs in arid and semi-arid areas and flooded areas. Erosion control is a practice to prevent or control wind or water erosion in agriculture, land development, coastal areas, river banks and construction. Effective controls control surface runoff erosion and are important techniques in preventing water pollution, soil erosion, wildlife habitat destruction, and human property loss. In many regions of Iran, the selection of land use and management is done without considering the land's capabilities and power, which causes a waste of capital and a decrease in environmental capacity. By knowing the state of the land form, one can understand the soil and vegetation of each land form unit and its capacity for human uses in the land. In this research, a slope map was first prepared by combining three maps of the direction of the range, the slope of the range and the elevation classes, and in the next step, the geomorphology map of the Zenozchai watershed was prepared using ERDAS Imagine software And with the statistical test, it was found that the geomorphology map prepared with a Kappa index of ۰.۹ and a total accuracy of ۹۴% is reliable. Then, the map of landform units was created by combining three lithology, geomorphology and slope maps. Finally, by analyzing the limitations and potentials in the catchment area and considering the condition of the landform units, suitable methods for erosion control in the studied catchment area were presented.

کلمات کلیدی:

Geomorphology, landform units, Kappa index, ERDAS Imagine, GIS