

عنوان مقاله:

SUITABLE SITE SELECTION FOR GABION CHECK DAMS CONSTRUCTION USING ANALYTICAL HIERARCHY
PROCESS AND DECISION MAKING METHODS

محل انتشار:

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خلاصه مقاله:

Nowadays, soil erosion and sediment production are one of problems facing human communities, which lead to lesser land productivity, low surface water quality, decrease dam reservoir and poor food production. Third world and developing countries are not except from this case, in the other hand, In these countries because of leakage of financial resources, scientific and meticulous planning is essential to combat problems and to prioritize areas for efficient use of limitation. Therefore, in this research it has tried to determine proper location for check dam construction. Due to information required for decision-making in selecting appropriate regions and due to high intricacy of the effective parameters and to high heterogeneity of area, the spatial analysis in ARC GIS have been used for Siazakh basin in Kurdistan province . So that, for determining proper location of check dams, the required basic data, field surveying, maps and other information produced using ARC-GIS, Autodesk-map, ENVI, Expert choice. After that, dendritic model was designed, which, consists of determining hierarchical levels. This hierarchical level contains a set of objects, criteria and Sub criteria. Later, standardization of factors, weighting the criteria and sub criteria was done based on AHP method. Paired test of criteria and sub-criteria (1-9 value) performed using Expert choice software. Then, quantitative criteria (including: erosion, run off, watershed accessibility & watershed related characteristics criteria) combined with qualitative criteria (socio-economic criteria). Each of these criteria includes sub-criteria. Basin's prioritizing map was produced in GIS software by preparation of criteria and sub-criteria map. Waterway map overlaid .with prioritizing map and then among 946 waterways, 36 waterways were prioritized using Expert Choice software

کلمات کلیدی:

SIAZAKH watershed, AHP, GIS, Expert Choice software, check dams

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