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Full Length Research Paper

A GIS model for determination of water resources suitability for goats grazing

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Abstract

Proper use from water resources, especially in arid and semi arid of Iranian rangeland are very important. In this area water is one of a valuable ecosystem component. The study was conducted in Ghareh Aghach watershed region is located, Isfahan province, in central part of Iran. Four criteria's of water quality, water quantity, water distance and livestock information were integrated to water resources suitability for goats grazing. According to the results, water distance and accessibility to water is a most declining factor for suitability. A quality and quantity factor is a no limiting factor in part of study area. The results show that from 7158.69 ha of studied rangelands, 6245.93 ha (87.25%) classified as S₁ class (with no limitation), 810.58 ha (11.32%) classified as S₂ class (with low limitation), and 102.3 ha (1.43%) classified as N class (non suitable). Based up on slope classes, areas that far from water point more than 75% of slope is not suitable and less than 15% are very suitable. Good distribution of water resources increases water suitability and cause better and monotonous utilization of rangeland.

Key words: Water resources suitability, rangeland, FAO, goats, GIS, Iran.

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