

## عنوان مقاله:

Geomorphic effects of gravel mining on coastal plain rivers in Mazandaran, Iran

## محل انتشار:

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## خلاصه مقاله:

Rivers in Iran are heavily influenced by human activities, so that they have undergone many changes. In the meantime, gravel mining is one of these activities that has several environmental impacts on the various aspects of river environments. The study area is located in the plain of Mazandaran Province in Iran. The concerned rivers originate from the northern slopes of the Alborz Mount and flow into the Caspian Sea. Most of the mountainous areas are covered with thicket forests, and in the plain section, agricultural lands and human habitats are the dominant land uses in the region. The geomorphic effects of sediment mining from river have been investigated in four aspects including river longitudinal profile and transverse profile, as well as river pattern and changes in sediment size and amount. In Mazandaran Province, there are more than  $F_0$  rivers in which there are more than  $\Lambda_0$  active gravel mines. These mines are run by governmental, cooperative and private sectors. Currently, the dependence of the construction and development activities of the province on these gravel resources has seriously threatened the river bed with excessive exploitation, so that these exploitations would be of the most destructive activities imposed on the aquatic ecosystems. The results also show that the unauthorized sediments removal from the river bed and the construction of engineering structures to control its geomorphic consequences only delay the performance of river processes and, .consequently, delay the morphological adjustments

کلمات کلیدی:

River bed Gravel mining Degradation Coastal Plain Mazandaran

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