

## عنوان مقاله:

The feasibility of ash and spruce forest plantations in the Northeast of Iran

## محل انتشار:

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## خلاصه مقاله:

In the present study, the feasibility of planting ash (*Fraxinus excelsior* L.) and spruce (*Picea abies* L.) tree species was investigated for rehabilitation of the Toroq Watershed in the northeast of Iran. The estimated land suitability indices ranged from ۲۳.۹۵ to ۷۱.۰۵, and ۲۲.۴۷ to ۶۹.۳۸ for ash and spruce plantations by parametric approach, categorized into moderately suitable (S<sub>۲</sub>) in the east to not suitable (N) in the middle and western parts of the study area. The values of land indices by the AHP approach varied between ۳۵.۴۵ to ۹۴.۰۹ and ۳۴.۶۷ to ۸۳.۹۸ for ash and spruce plantations ranging from highly suitable (S<sub>۱</sub>) in the east to moderately suitable (S<sub>۲</sub>) in the middle and scattered parts in the east and not suitable (N) in the north and southwest of the basin. The results showed that the most important limitations were climate, elevation, soil depth, and soil texture. The regression coefficient (R<sub>۲</sub>) of land suitability indices between parametric and AHP approaches for the two species was ۰.۸۹۴ and ۰.۸۶۶ respectively. The results of the two models revealed that the moderately suitable class S<sub>۲</sub> is dominant for ash and spruce plantations in the eastern parts of the basin, while the middle and western parts of the basin were not suitable for plantation of the trees. The findings of this study may help land-use planners to rehabilitate the watershed by expanding forest plantation which ecologically tolerates extreme conditions of the region.

## کلمات کلیدی:

land suitability, Ash, spruce, Zonation, GIS

## لینک ثابت مقاله در پایگاه سیویلیکا:

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