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An Investigation of Effective Factors in Forest Road Selection Using GIS (A Case Study in Nowshahr-Mazandaran Province)

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Abstract

In this research, main factors in selection of the most suitable forest roads including slope, aspect, soil, volume of tree per hectare as well as ecological capability have been investigated using GIS. Namkhane district in Khyrudkenar Forest (Tehran University Training and Research Forest) at the east of Nowshahr (Mazandaran Province) has been selected as the area of the research. Digital maps were produced and analyzed through GIS and Arcview software. The maps of slope, aspect, soil and volume of tree per hectare were prepared and classified. Maps were overlaid to obtain ecological capability units. These units were arranged in tables to divide the research area into different units for road selection. Finally, it was decided to select the best area on overlaid map to plan forest road on, with effective factors being taken into account. Designing of the optimal forest road using GIS and Arcview software was concluded and map of road Prepared.

Keywords: Forest road, Road selecting, GIS –Overlying map, Nowshahr

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