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HIERARCHICAL MODELLING BASED ECOLOGICAL LAND CLASSIFICATION IN A FOREST DISTRICT OF MEDITERRANEAN REGION, TURKEY

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Abstract

This study was conducted to generate a hierarchical modelling based on ecological land classification in the Yukarıgokdere forest district of the Mediterranean region, Turkey. Two ways indicator species analysis was applied to obtain response variables from the relevant vegetation matrix at each level. Response variables were modelled by using classification tree technique at each level. Validation tests (i.e. multi-response permutation procedures for determination of differences of plant compositions according to classification tree class) were applied before passing the next level. Elevation was found the most significant factor at the first level distinction. Temperature seasonality and topographic position index were the significant factors at second level distinctions. Two subdistricts and two sections at each subdistrict (totally four sections) were visualized. Indicator species of the sections were also determined by using the classical IndVal analysis. Indicator species belonging Euro Mediterranean communities are present in the lower zone of the district. The remaining area is occupied by Supra Mediterranean and Mountainous Mediterranean communities in the district.

Key words: ecosystem classification, forest site classification, potential vegetation classification, spatial distribution modelling

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