CHANGES OF LAND COVER ABOVE THE TREE LINE IN KRKONOŠE NATIONAL PARK BASED ON LANDSAT DATA

Abstract

This study evaluates land cover changes in the area above the tree line in Krkonoše Mts. National Park. The stress is put on the changes of *Pinus mugo* shrub. Two methods of change detection based on Landsat data in four time horizons from the eighties up to now were tested (years 1984, 1992, 2002 and 2013). The first method was classification of scenes with the Maximum Likelihood Classifier individually and evaluation of changes based on their overlay. Overall accuracies from the oldest scene were 86,04 %, 88,44 %, 86,91 % and 86,43 %. The second method evaluates detection of change above one dataset that consists of scenes for all the time horizons. Overall accuracies were from the oldest 86.63 %, 88.64 % and 86.11 %. The second method was more appropriate for this study of land cover changes. On the map results there can be seen thinning of *Pinus mugo* scrub (between the years 2002 and 2013, 1984 and 1992) as well as its natural thickening and spreading.

Key words