Possibilities of object based image analysis for monitoring of meadow vegetation and management in the Krkonoše Mountains National Park

Abstract

The main aim of the thesis was to evaluate possibilities of Object Based Image Analysis (OBIA) of WorldView-2 satellite image data and aerial optical scanner for meadow vegetation and managment types classification in Krkonoše Mountains National Park. The classification was based on legend prepared by botanist of the national park. The second goal was to compare classification accuracy of Object Based Image Analysis and neural net classification method that was used by Pomahačová (2012) for the same area and the same WorldView-2 data. OBIA for meadow vegetation was conducted using SVM algorithm and „Decision Tree" algorithm. The classification accuracy was estimated using reference points from the field. The thesis puts the requirements (optimal parameters and conditions) for successfull object based classification of mountain meadow vegetation into a new perspective.

Key words: Object based classification, meadows, WorldView-2, aerial optical scanner, SVM, KRNAP