

ABSTRACT

Taking advantage of Earth Observation (EO) data for monitoring land cover has attracted the attention of a broad spectrum of researchers and end-users in recent decades. The main reason of increased interest in EO can be found mainly in open data of Landsat and Sentinel archive. The main objective of this study is to evaluate the accuracy of the classification algorithms Maximum Likelihood (ML) and Support Vector Machine (SVM) using Landsat 8 and Sentinel-2 data in the case studies of the former military training areas Brdy and Ralsko, which have undergone a very specific land cover development. The study evaluates the land cover in both case studies in 2016 and based on the obtained results discussing a usefulness of the selected data and methods. The results of the land cover classification achieved satisfactory accuracy – the overall accuracy was higher than 85 %. Based on the expectation, the results of accuracy based on SVM algorithm are higher than results obtained by ML algorithm. The highest accuracy has reached in the land cover classes of water bodies and coniferous forests, on the contrary, the lowest accuracy in built-up areas, sparse vegetation and bare soil.

Keywords: Earth Observation, Support Vector Machine, Maximum Likelihood, Czechia, Sentinel-2, Landsat 8