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Influence of input data on GEOBIA landforms segmentation

Научный руководитель – Minar Jozef Minar

Popov Anton Borisovich
Аспирант
Университет Коменского в Братиславе, Братислава, Словакия
E-mail: pab261294@gmail.com

Recently, a way of spatial analysis became the major tool helping to analyze the surface. One of the most widespread methods of land surface classification is the Geographical Object-Based Image Analysis (GEOBIA). A key parameter that influences the segmentation multi-resolution procedure is Scale Parameter (SP), which is responsible for a measure of internal homogeneity within the segment (and so for the size of resultant segments). In the research, we used the automatic Estimation of Scale Parameter (ESP2) (Drăguţ et al., 2010). For the segmentation the process we used the DEM models, generalized in MatLab software applying the index of concentration around zero (the method of determination kurtosis, K_0 values) by algorithm, proposed by Minar et al (Minár et al.,2013) The research was conducted in three areas (in High Tatras, Slovak Karst, and Malé Karpaty Mts.), using altitude, slope, aspect, profile and plan curvatures as input variables. Our results show a clear dependence of mean local variance on the number of objects and generalization level, and partially confirm the suitability of the K_0 index.

Источники и литература

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