Utilization of airborne laser scanning data for the detection of agrarian forms of relief in the Giant Mountains

Abstract

This thesis deals with the possible use of airborne laser scanning data for the detection of agrarian forms of relief in the Giant Mountains. The main research method is the analysis of the digital terrain model and digital surface model in the area of the Giant Mountains in the software ArcGIS 10.0. The analysis is based on specific functions in ArcGIS software (*Slope, Curvature*) as well as on combinations of rasters of shaded reliefs which led to the detection of further agrarian forms. To verify the precision of agrarian forms detection field verification was used. Based on verification and accuracy assessment the results can be designated as a very satisfactory. The Administration of the Giant Mountains National Park can use the research results to quantify the agrarian forms of relief, to improve their protection and, possibly also for further research and management.

Keywords: airborne laser scanning, agrarian forms of relief, anthropogenic geomorphology