Upper Svaneti land use analysis by using digital technologies

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Upper Svaneti is mountainous region with limited land resources and activated geodynamic processes, which triggers new flows of ecological migrants. Therefore I think that research and evaluation of land resources is quite important, as well as determination of their qualitative and quantitative characteristics.

This scientific work was funded by Shota Rustaveli National Science Foundation and was implemented in 2012-2013. The goal of the research was analysis of land use by using digital technologies. In which I mean digital mapping and geostatistical analysis of land use area. For implementation of the research I used software ArcGIS, satellite images, topographic maps, digital landscape bases (landscape species and elementary natural-territorial complexes), field research blanks and etc.

Research revealed factually used arable lands, pastures and gardens, as well as hypothetical land use areas. Each of them were classified and analyzed. Thematic maps were created. For factually used lands were determined some morphometrical characteristics (height, slope and aspect) and were done their farther spatial analysis. Within the study were also determined risk zones and sustainable areas.

Entirely, the results of the research tells us about land use characteristics of Mestia district and their spatial distribution, potential of land resources and existing risks.