ABSTRACT

Giant Mountains National Park belongs to the most protected localities in Czech republic. In spite of the proper protection, the area of national park is not avoided by the threat of natural hazards. Some processes are rapidly accelerated by the morphology, slope steepness, weak landcover and rough climatic conditions in the mountaneous regions. The above mentioned factors hastens the erosion processes and therefore affect in bad way the quality of water and soil – the major natural resources.
The main goal of this thesis is to delineate the localities with the most severe soil loss. The input data were processed and layers of input model factors were created firstly. The map of an erosion hazard was produced by the tools of geographical information systems, methods of processing of remote sensing data and by the empirical erosion models USLE / RUSLE. Two scenarios – one with the spatial resolution of 5 m, second with 30 m – were considered. On the basis of the more accurate scenario the zones of erosion hazard were delimited and erosion control practises were suggested in the areas of heavy soil losses. The results of modeling were than verified in terrain.
The creation of erosive zones and the results of modeling could serve either to protection of the most sensitive areas of national park, or like the basis for verification of the amount of soil loss by complex conceptual or physically based models.

Keywords:

Giant Mountains National Park, erosion, erosive threat, GIS, remote sensing