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Geomorphological map as a tool for visualisation of geodiversity - example from Cave Park Grabovaca (Croatia)

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Cave Park Grabovaca is located near Perusic in Lika region (central Croatia). It was established in 2006 at the area of 5.95 km2 (protection category: significant landscape). The main task is management and protection of Samograd, Medina and Amidzina caves that were declared as geomorphological monuments, and 6 other caves located close to each other. Owing to the central geographic location in Croatian Dinaric karst area, good traffic connections between central Europe and tourist centres of the Adriatic coast, preserved nature and easy accessible karst features typical for the Dinaric Karst, it has good potential to develop as an research, educational and tourist centre. In 2013. Cave Park management and the Department of Geography (University of Zagreb, Faculty of Science) established a core team that started to develop the project of Geoeducational centre (GEC) with following goals: exploration-evaluation-presentation-education. According to the accepted strategy, the first step in the project process is to enlarge the area and change the protection category. During the consultation process team members take into account protection, environmental, local economy, tourism and local population issues and proposed that protected area should be increased to 52,2 km2. This enlargement provides more efficient protection, greater geodiversity and biodiversity by occupying geotope, biotope, and landscape units typical for the whole Lika karst region. The next step was inventorying, evaluation, analysis and visualisation of geological, geomorphological and speleological phenomena. This 2 year task was made in cooperation between Croatian Geomorphological Society, Department of Geography, Speleological Society Karlovac and Caving Club Samobor. The inventory was made using field-work mapping and geotagged photographs, cave mapping and DEM analysis. It resulted in GIS oriented geodatabase consisting of geomorphological forms, processes and cave inventory. From those data geomorphological map 1:25.000, morphometrical maps (hypsometrical, slope, relative relief) and speleological maps were produced. Cartographic model of the geomorphological map is defined by 5 groups: geological structure, morphogenetic, morphographic, morphometric and morpho-chronological data. The geodatabase and maps were used for preparing the study as a part of regulated legal procedure for protected area enlargement. It is also a plan to use it for karst and landscape geodiversity presentation and education. For that purpose general geomorphological map, with professional symbology understandable only to professionals, must be didactically transformed to media that is visually and contextually acceptable to wider non-professional audience.