



From geodiversity and biodiversity through geoheritage to geoconservation; case study for the Dębnica River drainage basin (Poland)

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The poster presents the geodiversity of morphogenetically youngest Polish areas, which are a part of the North European Plain. The representative study area was the Dębnica River catchment (200 square km), which includes postglacial landforms. The geodiversity is presented spatially, using the spatial units map, varied in terms of their geodiversity indicator. The indicator was determined by a geoinformation analysis, using the quality classification method, and it captures the landscape complexity. The factor maps relating to landform energy, selected geomorphometric parameters, landforms, lithology and hydrography were taken into consideration. The set of factor maps includes also the map of the syngenetic type of real vegetation, as well as land cover and land use maps. The data were extracted from the digital elevation model (DTED 2) and digital geomorphological, geological and hydrographic maps in a scale of 1:50,000. The data on land cover and land use were extracted from the CORINE Land Cover 2006 database. Details were added to the data using field mapping at a scale of 1:50,000, for the period 2012-2014. Spontaneous real vegetation was diagnosed using the phytosociological method, simultaneously with the field mapping procedure. Unified spatial units were assigned for each factor map. Relationships between the geodiversity and biodiversity were established, based on the calculated correlation coefficients. The spatial units which were varied in terms of geodiversity and biodiversity are presented on the final map. The map shows areas of very high geodiversity and biodiversity, which are the hotspots for the local natural and cultural geoheritage. Various geoconservation methods of such areas were also suggested in the study.