



Spatial scales of geodiversity and taxonomic hierarchy levels of landforms

Zbigniew Zwoliński

Adam Mickiewicz University in Poznań, Institute of Geoecology and Geoinformation, Department of Geoinformation,
Poznań, Poland (zbow@amu.edu.pl)

Over the last quarter of century, the understanding of geodiversity from various points of view has been quite widely discussed. As a result, various methods of geodiversity research have developed. In the multiplicity of methods, there is now a need to standardize the methods of assessing geodiversity. This task is difficult due to the huge diversity of geology and morphology of the earth's surface, two main factors affecting geodiversity. Finding an objective method and at the same time giving comparable results of this assessment is one of the main challenges in the study of geodiversity. Another important aspect and challenge of the standardization of methods for assessing geodiversity is the spatial scale of the area's assessment. There are many such spatial scales in the earth sciences from very small (in mm) to very large (in thousands of km). In general, such scales have 10 levels, which seems too detailed for the assessment of geodiversity. Therefore, it is possible to propose a 6-level scale: local, microregional, mesoregional, macroregional, continental and global. This division of the spatial scale corresponds well to the taxonomic hierarchy of the morphological landscape, which best reflects the geodiversity of any area of assessment. This hierarchy includes: single forms, set of landforms, type of relief, morphosystem, morphogenetic zone, morphoclimatic zone. This presentation depicts couple examples of spatial scales of geodiversity with the taxonomic hierarchy of landforms. This comparison of scale and hierarchy shows the degree of lowering geodiversity from morphoclimatic zone to single form.