



Methods for assessing geodiversity

Zbigniew Zwoliński (1), Alicja Najwer (1), and Marco Giardino (2)

(1) Adam Mickiewicz University, Institute of Geocology and Geoinformation, Poznań, Poland (alijas@amu.edu.pl), (2) Dipartimento di Scienze della Terra, Università degli Studi di Torino, Torino, Italia

The accepted systematics of geodiversity assessment methods will be presented in three categories: qualitative, quantitative and qualitative-quantitative. Qualitative methods are usually descriptive methods that are suited to nominal and ordinal data. Quantitative methods use a different set of parameters and indicators to determine the characteristics of geodiversity in the area being researched. Qualitative-quantitative methods are a good combination of the collection of quantitative data (i.e. digital) and cause-effect data (i.e. relational and explanatory).

It seems that at the current stage of the development of geodiversity research methods, qualitative-quantitative methods are the most advanced and best assess the geodiversity of the study area. Their particular advantage is the integration of data from different sources and with different substantive content. Among the distinguishing features of the quantitative and qualitative-quantitative methods for assessing geodiversity are their wide use within geographic information systems, both at the stage of data collection and data integration, as well as numerical processing and their presentation. The unresolved problem for these methods, however, is the possibility of their validation. It seems that currently the best method of validation is direct field confrontation. Looking to the next few years, the development of qualitative-quantitative methods connected with cognitive issues should be expected, oriented towards ontology and the Semantic Web.