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GEODIVERSITY INDEX MAPS: USES AND DISCUSSIONS

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Presentation Format: *Flash Talk (5 minutes, maximum of 3 slides)*

Presentation Day: **Monday**

Presentation Time: **3:50:00 PM**

Presentation Number/Poster Group: **1**

ABSTRACT:

Geodiversity is the abiotic part of nature, and includes both the materials and the processes that generated them. Either qualitative or quantitative methods can be used to characterize the geodiversity of an area. Qualitative methods deal with the description of geodiversity, whilst quantitative methods represent the variety and the frequency of geodiversity elements. The index map is a quantitative method of spatial analysis that has been used in several types of research on geodiversity. The product of the method is a map whose indexes represent the number of geodiversity elements in a given area. This study intends to verify how the geodiversity index map has been used in research and what are the potential uses of this methodology.

The following methods were used: (i) initial search in the Scopus database with scientific articles written in English that used the keyword “geodiversity index map”; (ii) reading of selected articles; (iii) analysis of these articles to identify how the index map was used in research.

As a result, 18 articles that developed the geodiversity index map were obtained. Nine of them (50%) discussed the spatial distribution of geodiversity elements; five (28%) overlapped the generated map with other types of maps; two (11%) presented a methodological discussion about the possible ways of elaborating the map; two (11%) showed comparison with maps and data referring to biodiversity.

The results indicated the predominance of using the geodiversity index map to discuss the spatial distribution of elements in the physical environment. Nevertheless, the index map, as a spatial analysis tool, has the potential not only to present the study area but also to deepen the knowledge of an area when added to other information. Using the index map overlaid on watershed maps, urban expansion data, and biodiversity data, among others, can help to increase understanding of the study area. This improvement will allow the use of the geodiversity index map as a basis for selecting areas for fieldwork, priority areas for public policies, and priority areas in the identification of ecosystem services provided by geodiversity.