

Effectiveness of color hillshade with multiple light sources for geopark guide maps : A case of the North Ibaraki Geopark Project

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Until 2018, 44 geoparks were certified in Japan, and in each geopark, they use a large number of guide maps with geosite which to introduce the characteristic topography and geology of the area for education and sightseeing. For those guide maps topographic features and geological information that is easier for users to understand are emphasized. And there are also guide maps that use various topographic representation with high-precision elevation data and geographical analysis by GIS.

In the North Ibaraki Geopark Project of northern Ibaraki prefecture, they have created geosite maps, but the topography and geological representation were not necessarily sufficient. Therefore, we attempted to create a topographic representation that easy to understand topographic features and geological phenomena spatially for this new geosite guide maps in the project. Topographic representation is to express geo information practically and easily understand and for guide maps, we use color hillshade to make it artistic. According to the reduced scale, and regional features, three kinds of light source were examined, single light source, multiple light sources, multiple light sources with pseudo-shade. In this presentation, we describe its effectiveness, topographic representation and map representation.

*This research is supported by Ibaraki University Geological Information Utilizing Project and KAKENHI (16K01213).

Keywords: Color hillshade with multiple light sources, North Ibaraki Geopark Project, Guide map