



Enhancing the role of geodiversity and geoheritage in environmental management and policy in a changing world: challenges for geoscience research

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Geodiversity delivers or underpins many key ecosystem processes and services that deliver valuable benefits for society. With a growing recognition of the wider economic, social and environmental relevance of geodiversity, it is timely to consider the research requirements and priorities that are necessary to underpin a broader interdisciplinary approach to geodiversity that incorporates the links between natural and human systems in a changing world. A key challenge is to develop the scientific framework of geodiversity and at the same time to enhance the protection of geoheritage. Research that helps to support environmental policy and meet the wider needs of society for sustainable development and improved human wellbeing is fundamental both to improve the recognition of geodiversity and to demonstrate the wider relevance and value of geoheritage and geoconservation. Within this wider context, priorities for research include: 1) assessment of geoheritage and best-practice management of geosites for multiple uses including science, education and tourism; 2) evaluation of geodiversity and the ecosystem services it provides, both in economic and non-economic terms, to help build policy support and public awareness; 3) understanding the functional links between geodiversity and biodiversity across a range of spatial and temporal scales to help assess ecosystem sensitivity and inform management adaptations to climate change, particularly in dynamic environments such as the coast, river catchments and mountain areas; 4) providing a longer time perspective on ecosystem trends and services from palaeoenvironmental records; 5) applications of geodiversity in terrestrial and marine spatial planning.