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The potential of geotourism to meet the challenges of geoconservation in Oman

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Geoconservation as well as the concept of geological heritage has been understood as a new challenge for geological research in the last decades. Traditionally, the approach to geology has been more often linked to the exploitation of resources rather than to preservation of sites of geological value. In many countries the protection of geological sites is connected to the protection of biodiversity.
The Sultanate of Oman is situated in the north-eastern part of the Arabian Peninsula. During Late Cretaceous large parts of former Tethyan oceanic crust were obducted onto the Arabian plate to form one of the world's best exposed and best studied ophiolites (Searle and Cox, 1999). The Semail Ophiolite might be the best known example of Oman's geological heritage. However, the country offers far more geological features which are spectacular or unique. To name just a few, there are e.g. Neoproterocoic glacial sediments (Allen, 2007); surface piercing salt-domes (Al Siyabi and Newall, 2005); huge sand-deserts (Goudie et al., 1999); a mountain-range 3000 m high with spectacular canyons as Wadi Nakhr (Kusky et al., 2005); as well as outcropping Moho (Boudier and Nicolas, 1995). As the country is located in the arid to semiarid climatic zone, soil-development is very limited as is vegetation cover. Therefore the geology is easy accessible - a fact that attracts more and more geosciences students to study geology in the field, as well as tourists to enjoy the spectacular scenery.
However, concerning the whole field of nature conservation, Oman just started facing the fact of increasing destruction of landscapes including endangering of biodiversity. The country's economic development mainly took place within the last 40 years. Large infrastructure projects are under construction to meet the needs of ongoing development of land and resources. As a consequence thereof geological heritage is in danger of being destroyed due to lack of awareness.
The aim of this study is to compile data about locations and areas in Oman being of high scientific interest as well as being unique outcrops and landscapes. To achieve this goal we set up a database which contains information on locations in terms of geographic coordinates, their main point of interest, stratigraphy and references. At the moment the database contains 160 locations of geological interest, but is continuously growing. Furthermore, with the help of a GIS interface areas can be identified which are worth to be protected. This data can then be introduced to assimilate geological heritage into education. Furthermore, proposals for conservation areas can be carried over to policymakers. This strengthens the public awareness of the necessity to protect unique geological sites and landscapes. Another issue could be the intensification of geotourism and adventure tourism, which could be future main pillars of sustainable tourism concepts in Oman.
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