Assessing the Capabilities of Geomorphotourism of Geoheritage with an approach to Economic Development and Environmental Sustainability  
(Case Study: Geomorphosites of Badab-e Surt)

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Extended Abstract
1. Introduction
The main approaches of geotourism and geomorphotourism are development-oriented, protective and scientific to assess the capability of geoheritages. Today through the development of studies in this subcategory of geomorphology, several subfields such as geodiversity, geoconservation, geointerpretation, and so forth have been released which their aim is sustainability and regional development in environmental, economic, and social aspects of human society, especially native societies. Thus, the aim of this paper is to assess the geoheritages potential for scientific promotion, regional development, and the protection of geoheritages in the study area.

2. Review of Literature
The values given to a geomorphosite have two important elements: scientific and complementary values, including historical and cultural, environmental, economic, and aesthetic values. Grandeurard (2003) highlights the importance of geomorphosites in the important role of identifying history and rebuilding the Earth’s history. Others scholars, such as Paisente and Paniza (2001), also emphasize cultural, historical, ecological and economic values. In general, a relevant fact in this field is a hybrid vision which not only provides the areas of economic development but also protects the rules. Some landforms, such as karstic

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forms in caves, fossils, springs, etc. will be damaged very soon. The degradation of geomorphic cultures is associated with false tourism activities and their lack of awareness. These issues reveal the necessity and status of the protection of the legacy of the Earth. Geological heritage conservation can take many forms, including the creation of physical barriers in geomorphic space, the establishment of protective laws and regulations, and the establishment of protected areas such as geoparks. The ultimate goal of these methods and policies is to protect, enhance and promote geomorphic processes and samples. In this paper, we attempt to have a comprehensive assessment of geoheritage conservation using a combined model from the current models of geomorphosites potential assessment and field works. We also offer a comprehensive and indigenous model as an organization and a platform for the development and sustainability of the environment.

3. Method
In this paper, we attempt to have a comprehensive assessment of geoheritage conservation using a combined model from current models of geomorphosites potential assessment and field works. The structure of this model is based on effective criteria and components (with a score of 0-10) according to Badab-e Surt springs characteristics following three main topics: geomorphic personal knowledge, tourism infrastructures, and geoheritage protection. They suggest organized actions for using this geoheritage based on the proposed method.

4. Results and Discussion
Results of field and library studies, map analysis, etc. in the study area show the high potentials of Badab-e Surt springs in geomorphological science and personal knowledge with a score of 51.5 (out of maximum 60). In contrast, tourism infrastructures with a score of 25.5 (out of maximum 70) and protection issue with a total score of 27.5 (out of maximum 70) are at a low level. It is notable that the sum of scores is gained from the results of scores obtained from filed and library studies.

5. Conclusion
According to this model assessment, Badab-e Surt geomorphosite has very high value in geomorphological knowledge criteria due to scarcity, geodiversity, educational and beauty values and suitable potentials for tourism planning and investing, but current infrastructures (unsuitable roads and services,...) and protection condition factors (despite the drafting of protective laws) are in very low and far from the optimum condition to protect and even to introduce this phenomenon and there are no effective and organized facilities such as brochure and fence near this sensitive geomorphosite. Therefore, the crowds of tourists on the surface of the springs will lead to destroy Badab-e Surt springs in short time. In addition, a natural hazard such as drought is an extra threatening factor. So it is clear that geoconservation factor, that is, an approach with protective efforts such as physical fences, warning signs, and so on are highly necessary to protect this geomorphosite. The lack of attention to sustainability and conservation issue in the
economic and tourism development program in this area will not lead to much stability to achieve geoconservational goals, and if this geoheritage site has the sustainable development, it will provide the economic development for the local community.

According to the results of this paper and similar research regarding the pathology of tourism policy in the country, we can conclude that economic planning and development in tourism are not along with the protection of land heritage (sustainability perception) and entrepreneurship infrastructure, especially for native societies, and the process of comprehensive attitudes has not been considered in this process. One of the ways to tackle this issue is to design native models appropriate for the conditions of each region, which will be one of the first steps in economic and environmental sustainability. On the other hand, the implementation of such management patterns requires the attention and utilization of interdisciplinary knowledge, especially the geographic sciences. In other words, tourism climate, regional planning, rural planning, and so on are some ways to complement those goals.

Keywords: Geomorphotourism, Geomorphosite, Economic development, Geoconservation, Badab -e Surt springs

References (in Persian)


References (in English)


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