Nishabour Country Geo-morphosites Evaluation Using Pereira Model

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Extended Abstract

Introduction
Geo-morphotourism is a new sub-discipline that relay on nature and try to maintain locality nature identity and introduce geologic phenomenon of a place to tourists. Geo-tourism has a wide audience nowadays all over the world. Geo-tourism is a kind of tourism which try to maintain geographic, environmental, cultural characteristics of visited places or enhanced them; it may have economic development for visited places' citizens, too. It includes visiting places which have special landforms and geologic characters for spending leisure times and amazing feeling, improving their understandings of nature and educational & training purposes. Geo-tourism tries to relay on introducing natural phenomena and attractive geological landscapes to visitors in experimental aspect and in general attractive point of view. Several researches have been done on evaluation of geomorphic landscapes by researchers in Iran and all over the world, we can mention many of them such as Prolong (2005), Comanescu et al (2007), Reynard et al (2011), Mokhtari (2009), Maghsoudi et al (2011), Mani et al (2011).

Research Methodology
We used deductive reasoning in this research. By modification of Pereira model for evaluation of Geo-sites, we make a new model, and then we selected 11 main geomorphic features for implementation of our model. We used these stages to select geomorphic landforms:

a). Preparing a questionnaire based of definite criteria mentioned in model in simple way that a major of questing people can replay its questions.
b). Determining places which have a high potential for geo-tourism based on statistical analysis of replies to questionnaires, for completing the prepared list of sites we used researcher's experiments and field surveys in this stage, too. We find in this stage a mean value for rating every feature in the framework of the prepared model. This questionnaires filled by the regions mountaineers, expertise and local peoples.
c). Preparing an identification card for each Geo-morphosites.

In this model quantitative and qualitative values of every site have been done based on figurative evaluation. Quantitative evaluation includes geo-morphosites selection and its characteristics which done by preparing questionnaires and an identification card. The second evaluation is quantitative in Pereira's model which will be done after final sum of geomorphic touristic capabilities and potentials. We consider personal point of views for completing our data to achieve real evaluation of landscapes.

Discussion and Results
Bojan waterfall get the highest rank (11.52), in our research and were outstanding site in the Nishabour county, we show this waterfall in fig. 7. Bojan Region Tafonys showed in fig. 8, it gets 3rd rank in our research out of 11 geo-morphosites. The least score (7.62) was for Bar waterfalls.

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Roudmian of Kharw and Dareh Hasar gets the highest rank inside scientific values by 2.83 score but the least score was for Haft Ghar (seven caves) in this study. Aerial view of Goring, Kharw have been shown in fig.9.

The highest score for value added was for Kharw and Bojan and the least one for this value was for Baghroud valley and Haft Ghar. Geo-morphologic values were notable in this survey because of that it gets the highest scores by interviewers and all scores for all sites were above 4. Although we see these scores similar to in managing values, but there were statistical skewness in personal points of views. In managing values the highest score is for Baghroud valley (6.08). In values section of our questionnaire Darroud waterfall, and in conservation values, Bojan Tafonys get the highest scores.

Conclusion
Based on results of this research - which have a high validity- and by notice to resulted rankings, mangers and decision makers of this regions geo-morphosites could decide accurately by scientific reasoning. We found Pereira model as an appropriate model for evaluation the study regions geo-morphosites, but we modified it by considering local conditions and modifying it by preparing a new model and questionnaire. Findings of this research can help decision makers to act reasonably based on results of ranks and scores of this evaluation mode.

Keywords: Geomorphology, Geo-morphosites evaluation, Pereira model, Nishabour County.
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