

***Effect of Eco- Geomorphological Factors on  
Physical and Chemical Quality of Groundwater Resources  
(Case Study: Bandargaz City)***

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**Abstract**

Groundwater resources play a major role in providing drinking water. Geomorphological parameters are one of the factors that affect the quality of water resources. Physical and chemical quality of water can be affected by ecological factors such as geological formations and human activities, including agricultural, industrial and urban activities. The combination of these fields is studied under the term eco-geomorphology. This study consists of analyzing 48 samples in the year 1391. Physical and chemical parameters including EC, TDS, pH, color, turbidity, total hardness, amount of cations (sodium, calcium, iron, magnesium, potassium and magnesium) and anions (fluoride, chloride, nitrite, nitrate, sulfate and carbonate) were measured. The purpose was to assess the likely influences of the eco-geomorphological factors on physical and chemical properties of groundwater sources in Bandargaz city. The results show that according to the allowable water quality standards, the concentration of ions in the samples is desirable. In the well no. 2, the turbidity was 22 NTU and the fluoride concentration in the well no. 5 was 0.15 mg per liter which is the least amount. Considering the results of this study and the amount of rainfall in the area, planning for continuous monitoring of water resources, prevention of human activities and agricultural development around the wells, and sanitary disposal of the wastewaters, are the important factors in the quality management of the water sources.

**Keywords:** Eco-geomorphologic, Physical and chemical Quality, Water resources, Bandargaz

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***Investigating the Quantitative and Qualitative Characteristics and Management of Industrial Waste in Industrial Units of Isfahan Province***

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**Abstract**

Developing industries and population growth along with higher consuming materials and therefore higher solid wastes are the topics that are associated with recent great crises in the world. Considering the importance of industrial waste, this investigation was carried out to characterize quantity and quality of waste and determine contribution of industrial wastes in some industrial units located in Isfahan Province. The questionnaire method was utilized to study the quantitative and qualitative aspects of the industrial waste. After visiting some industrial units and filling in the questionnaire, the data were analyzed to determine the present situation of industrial waste and also waste management in those industries. The result showed that amount of the total waste from production activities of 20 active industries was 21285.48 tons per year, out of which 20340.8 tons is associated with production line. Of this amount, nearly 91% is recycled. This is a sign of appropriate management of the waste in the studied industrial units. Moreover, the average daily production of household wastes resulting from food for laborers is 482.8 per capita, and the average daily production of industrial waste in production line by each laborer is 9650 gram per day. It was concluded that the programs for reducing waste from the beginning are performed only in 10% of the studied industrial units. As a result, these units could implement some programs through seeking advices by experts to reduce waste production in the long term.

**Keywords:** Quantitative and qualitative characteristics, Industrial waste, Questionnaire method, Isfahan province

## *An Approach to the Concept of «Identity» in Natural Landscape and Evaluation Methodology*

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### **Abstract**

Although the concept of «identity» in its general and overall sense dates back to the emergence of human civilization, discussing this subject in the field of natural landscape studies is a relatively recent topic. The concept of natural landscape identity in cognition and perception involves complicated and multi-dimensional phenomena. There are two different perspectives about the relationship between man and nature. In the first perspective the man is defined as the protector of nature or even its savior; while in the second perspective, the man is defined as a violation factor. Therefore, the aims, causes and development plans to exploit nature and natural resources will be very different from each other considering these perspectives. According to the increase in degradation of nature, international institutions and organizations have decided to present guidelines, recognizing natural landscape identity in order to spatially and practically preserve and develop these areas. Improving the guidelines to perceive natural landscape identity will help effectively conserve natural areas. In this article a descriptive - analytical method is used to recognize the natural and man-made landscapes identities. The main objective of this research is to present the European Union Resolution with an emphasis on the matrix provided by the EU to protect the landscape of villages and small towns. The approach recommended by ECOVAST is based on identifying the identity of natural areas by attaining layers that shape the landscape. The results of the study show that focusing and adapting the design to specific values of natural areas is one of the main principles in efficiency and sustainability of these landscapes. Recognizing the landscape units and layers plays an important role in finding the development potential and its correct direction.

**Keywords:** Conservation; Identity; Natural landscape; Evaluation; ECOVAST

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***Visitor Satisfaction Assessment Using Gap Analysis & MUSA  
(Case Study: Hamoon Protected Area)***

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**Abstract**

The preferences of visitors have begun to play a major role as regards the decisions made by regional recreation managers. The ever increasing significance of applying participatory processes in decision-making management signifies a new approach towards management of protected areas. The goal of development is satisfaction of the managers and the users. In order to improve the current management methods, one of the important steps is to record the views, preferences and satisfaction of people visiting such area. The present study was conducted using questionnaires to determine visitors' satisfaction of recreation facilities in Hamoon Protected Area. In this regard, various factors, such as the region's natural characteristics, recreation facilities, infrastructure and information for visitors were considered. The relevant data was processed using Gap Analysis technique and the MUSA (Multi-criteria Satisfaction Analysis) methodology and the Winqsb, Spss & Excel software. The emerging results focus on identifying the factors affecting visitors' satisfaction level, as well as the critical points that the management authority of the region must concentrate on for improvement of its actions. We found that the natural characteristics and recreational facilities have significant effect on visitor's satisfaction. Also, ancient sites absorbing 97% of the attention of the recreationists were ranked in the higher level of satisfaction and water drinking facilities with 42/1% could provide the lowest level of visitors' satisfaction.

**Key words:** Visitors satisfaction, Gap analysis, Hamoon protected area, Recreation