

Assessing the role of environmental elements in sustainability of rural settlements by SWOT method (Case study: the central city Bardaskan)

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Extended Abstract

Introduction

Ecological capability assessment is a process that attempts to offer sustainable development by regulating the interaction of man and nature. In fact, it is an effective step towards formulating a sustainable plan because by identifying and evaluating ecological features of an area, it is possible to draft development plans that are in harmony with the nature. Oftentimes, the nature defines the potentials of a land for development. Hence, the analysis of ecological capability as the basis of logistics or environmental planning for countries that are seeking to achieve sustainable development and protect the interests of future generations seems inevitable (Kashisaz et al., 2010: 44). The major goal of organizing rural development is to promote income and quality of life for rural people and farmers, alleviate poverty, strengthen appropriate infrastructure for production through diversification and development of complementary activities, especially small enterprises, processing industries and rural employment. In this process, sustainable rural development has attracted growing attention. Also, given that women constitute a large portion of rural population, special attention has to be paid to highlighting their role in rural development. To solve problems of rural areas and bring back the elite, the project of supporting rural entrepreneurs should also be taken into consideration. The purpose of this paper is to identify and explain features, capabilities, limitations and problems of rural areas in the central part of Bardaskan with regard to different aspects in order to provide guidelines, strategies and programs to evaluate the effect of environmental factors on the sustainability of rural settlements using SWOT method.

Methodology

In this study, SWOT (Strengths, Weaknesses Opportunities and Threats) was adopted to assess the impact of environmental factors on the sustainability of rural settlements in the central part of Bardaskan city. It is regarded as a key instrument in the process of strategy formulation. Hence, to identify strengths, weaknesses, opportunities and threats in the area under study, SWOT was employed along with views and insights of executive authorities and local elites, experts, local residents and rural studies to gain a deeper understanding about the features, capabilities and problems. In the first step, an

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array of the four aforementioned factors was prepared to study the status quo. Finally, appropriate strategies are developed and presented using SWOT. The central part of Bardaskan is largely situated in the basin of salt desert and a small portion of its north-west side is located in basin of central desert. This stretch of land is in an area of 1061 km², with more than 80 percent of it situated in Bardaskan basin and the remaining 20% in the basin of the Darouneh and Kashmar. Topologically, about 304.7 km² (28.7%) of this area is stretched to the south and 756.3 km² (71%) to the north mountainous areas and Tape Mahour region. The Highlands in the north emanate from Kouh Sorkh Mountains in Kashmar with more than 72% of villages being situated in this area.

Results and discussion

In this paper, attempts have been made to identify natural capacities and opportunities, threats weaknesses and strengths in the study region so that with local and national contribution and partnership, prospective planning for the strengthening and development of existing resources can be made. With the adoption of local empowerment and participation approach, important goals such as planning, ground-making and facilitation of self-supporting and sustainable development in the region can be reached. In the following section, studied are analyzed in two section of weaknesses-threats and opportunities-strengths. The natural resources and capacities in the central region are assessed with regard to different aspects, topographical conditions and characteristics, geological units and formations, climatic factors, hydrological resources, soil resources, erosive factors and natural vulnerabilities in the region

Conclusion

In this study, to provide appropriate strategies and methods to assess the role of environmental factors in sustainability of rural settlements in the central area of Bardaskan, strengths, weaknesses, opportunities were threats analyzed using SWOT model and some strategies to improve the stability of settlement and rural development were proposed. Climatic subsection using a Strategy opportunity (SO): 1) increasing the acreage of rainfed crops in the northern area by using modern irrigation methods. Strength threat: 1) Building proper storage pools for water resources. Weakness opportunity: 1) maximum the use of natural tourism capabilities (ecotourism) in the area. Weakness Threat: piloting the anti-frost plan for crops and fruit trees. Subsection of optimum appropriation of soil resources and vegetation using a Strategy opportunity: effective use of pastures for harvesting herbs, appropriate grazing schedule in the region, watershed protection measures in the entire basin, implementing aquifer management measures and distributing floodwater to recharge ground water, conducting pasture auditing for all grasslands. Strength threat: (1) reducing the number of small livestock and promoting economic finance for promoting new and semi-new animal husbandry. Weakness opportunity: (1) Development and exploitation of forest reserves utilizing proper coverage potentials for its development; (2) effective use of natural potentials for raising livestock in the area (3) organizing environmentalists in form of local groups and non-governmental institutions; Weakness Threat: (1) conducting periodic grazing across rangelands in the region. (2) Formulating and implementing pasture management plans in all grasslands. Strengthening rural economy and agricultural land management (in form of aggressive strategies such as raising the acreage of rainfed horticultural crops in the northern part using modern irrigation methods, development of rainfed horticulture in slopes; Strength threat: Prohibiting cultivation in steep slopes; Weakness Threat: piloting the frostbite protection plan for crops and horticultural products.

Key words: Environmental elements, rural settlements, Bardaskan, SWOT