

Analysis of environmental sustainability in rural communities around wetland ecosystem based on ecological model village “Case study: villages in the margin of Zarivar Wetland”

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Expanded Abstract

Introduction

Creating a healthy environment in rural areas is one of the most important environmental issues that not only plays a role in rural politics, but also in land politics. Today, the concept of sustainability in community policy has become a model that leads to the sustainability of a city or village, conservation, protection and recycling of the natural environment. The decision in the village should be such that the increase in environmental benefits is reduced or eliminated negative environmental impacts. In such cities or villages, groups and businesses must be aware of the impacts on their natural environment, and they must be held accountable to reduce or eliminate these negative impacts.

In order to achieve sustainability, communities need cultural, institutional, structural and technological changes. Today, the most of the problems come from inertia in life. The consumption-oriented life and the excessive accumulation of wealth, power and land have led to the ecological hazards that human beings face today. With regard to human actions on the planet, the slowdown in the destruction of nature and the use of limited resources should be considered. To overcome these problems, scientists and policymakers have come up with solutions that have not had much impact on eliminating them, unless individual people in a city or village change their lifestyle.

Following the environmental problems arising from the unsustainable pattern, the need for alternative lifestyles and the creation of habitats with environmentally-friendly economic and social life have been considered to minimize environmental impacts during the twentieth century. In this regard, the canvas model of the village has been considered in planning and planning for the sustainability of the communities since the 1980s and is in the process of becoming responsive to the environmental, social and economic challenges posed by unsustainable patterns. Environmental rehabilitation in rural areas today is one of the most important environmental issues not only in rural policy but also in national land-use planning. Also, the regeneration of natural ecosystems and the reestablishment of natural currents and rural design constitute the most important fields of research and enforcement in many countries. The wetland ecosystem has been one of the most important ecosystems in the earth, which has played an important role in the development of its peripheral, environmental, social and social dimensions, but the biodegradable pattern and neglect of environmental issues from wetland communities of this natural ecosystem has a problem. To eliminate this problem, the canvas pattern of the village can be a model for sustainable bioticism and the elimination of environmental, social and economic instability by implementing sustainable structures and methods. An ecosystem is in fact a way of describing the function of nature, and incorporates a complex and dynamic mix of all plant communities, animals and living microorganisms, and interactions with the components and the environment.

Materials & Methods

The present study is an applied and descriptive-analytical method. In order to collect information in the theoretical part, the documentary method and in the field of the field have been used for interviewing method and questionnaire. This research seeks to analyze the sustainable pattern in rural communities of the margin of the wetland ecosystem based on the ecovillage pattern in the villages of the margin of Zarivar wetland located in

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Marivan city. The statistical population of the study is 3389 households, of which 355 households were selected as sample size. The studied villages were selected based on the criteria of distance from the lake by stratified random sampling. Accordingly, the studied villages were divided into three categories: the first group was the villages near the lake, located 0-0 km from the lake (6 villages were selected randomly), the second group was the average distance from the lake, at a distance of 2-4 km from the border (6 villages were selected randomly) and finally, villages far from the lake that were located at a distance of 6-4 km from the border (6 villages were selected randomly). In all villages studied included 18 villages Is. In field studies, to collect the required data, a questionnaire was prepared and completed among the villages with interview and observation, which is the most important part of field studies. For this purpose, a household questionnaire including closed questions was designed using Likert spectrum. The content validity of the questionnaire was confirmed by a set of academic professors and the validity of the questionnaires was 0.93% by Cronbach's alpha test. In order to analyze the data, one-sample t-test and ANOVA test were used in SPSS software, non-statistical barometric techniques and radar method (to calculate the stability level). Also, for spatial analysis and production of maps based on statistical data, low/ high clustering/ spatial self-correlation methods, hot spots analysis and IDW method were used in GIS software.

Results and Discussion

According to the Prescott Allen sustainability classes, the stability level of the ecovillage pattern in the villages of the study area with a score of 0.476 is at a moderate level (0.6-0.4). The dimensional stability dimension was also evaluated. Based on the results obtained in Table 5 and Chart 1, the socio-cultural dimension is at an average level of sustainability. In other words, the socio-cultural dimension with the score of 0.518 has the highest score of sustainability, and the two ecological and environmental aspects are 0.387 and 0.421, respectively, at a low level of sustainability.

According to the results of T-test, in Table 9, the numerical mean of the eco-elite dimensions in the studied villages was lower than the favorable and the moderate conditions, namely, the number 3. This difference is significant at alpha level of 0.05 (meaningful level = 0.000). Of the three dimensions of the ecovillage, the highest average of 2.01 is allocated to the socio-cultural dimension, followed by the economic dimension with an average of 1.84 and the least of which is ecological ecological dimension with an average of 1.77 Is.

The results of one-way analysis of variance in the analysis of environmental sustainability in rural communities of the margin of the wetland ecosystem based on the Ecuadorian model in the distance from Zarivar Lake, is according to the amount of sig in ecological, economic, and socio-cultural variables. The zero hypothesis is rejected. The average of these indices is significantly different in villages with different distances.

Conclusion

According to the results of statistical analysis (T-test, ANOVA) and non-statistical analyzes (barometric and radar methods for determining the stability level) as well as spatial analysis in ARCGIS software (interpolation and stains), the contribution and importance of environmental sustainability indices in the studied villages is that social-cultural indicators have the largest share in this regard which is the result of Iris Kunze in 2015, Soonk wan Hong in 2016, and also with Andy Kirby in 2003. On the other hand, contradicts the results of Honorary and colleagues in 2012. According to the results of his research, ecological indicators have had the largest share in the sustainability of rural communities and wetland ecosystems. On the other hand, according to the analysis of variance and spatial analysis in the villages of the study area, the villages near Zarivar lake have the most stability in the three ecological, ecological, economic and social-cultural dimensions of the village compared to other villages at other distances (2-4 and 4-6 km from Lake Zarivar).

Keywords: ecological sustainability, eco-village, wetland ecosystem, Zarivar wetland.