

Examining the Sustainability Status of Pol-e Dokhtar Villages According to Environmental Attitudes

Mehrshad Toulabi Nejad ¹

*PhD Candidate in Geography and Rural Planning, University of Sistan and
Baluchestan, Zahedan, Iran*

Javad Bazrafshan

*Associate Professor in Geography and Rural Planning, University of Sistan and
Baluchestan, Zahedan, Iran*

Sirus Ghanbari

*Associate Professor in Geography and Rural Planning, University of Sistan and
Baluchestan, Zahedan, Iran*

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Extended Abstract

1. Introduction

Today, the destruction of natural resources is one of the most important environmental issues and a major problem in human life. One of the causes of environment destruction in the world includes humans' environmental behaviors. The status of the environment during the past few decades demonstrates such a destruction caused by humans with the so-called intention of achieving a better life; however, this has been unfortunately counterproductive and humans themselves are faced with numerous issues. On the other hand, the environment also involves a set of limitations; lack of attention to these constraints during economic development processes leads to environment destruction. Subsequently, rural areas in developing countries have also become subject to limitations and their environmental sustainability are faced with serious risks. Therefore, it is vital to pay special attention to the conservation and sustainability of the environment in rural areas. In this study, the environmental sustainability of the rural areas around Pol-e Dokhtar City is examined.

2. Review of Literature

Following the industrial revolution, humans has entered the age of technology and their relation with environment as well as their perception of environmental resources have been transformed. In this regard, dominant scientific paradigms of each period specify the framework and relationship between humans and the utilization of environment and resources. Environmental attitudes can be classified into two groups: *general* and *specific*. In the former, it is believed that individuals have different attitudes toward various components of environment and such attitudes should be considered with respect to the status of the environment in general. In the latter, it is believed that the attitudes of individuals toward a specific subject are more determinant so that these attitudes could be concentrated on

1. Corresponding author. E-mail: mehrshad_t65@yahoo.com

specific aspects. According to numerous researchers, if such attitudes are conceptualized correctly, then they can contribute to predicting individual behaviors. For instance, Ghroob (1995) states that environmental behavior is majorly influenced by personal attitudes and the values of individuals. Therefore, it is vital to examine the scientific perspective on how to use resources along with humans' relation with the environment.

3. Method

The present, descriptive-analytical study was conducted with applied purposes. Theoretical studies were collected using documents. To collect the field data, the questionnaires including quantitative items (Likert scale) were employed. The population of the study included households living in the rural areas of Pol-e Dokhtar City (N=11289). In addition, a sample population of 400 was selected using Cochran's formula. One sample t-test was used to examine the environmental sustainability factors. Analysis of variance (ANOVA) and post hoc analysis were also employed to examine the status and differences between the rural areas of each village in terms of environmental sustainability factors. A pattern of the environmental sustainability was also presented in order to offer the model of the study using structural equation modelling (SEM).

4. Results and Discussion

The examination of environmental sustainability factors using one sample t-test showed that none of the factors are in a sustainable state. According to the findings, water resources (2.82), forests and woods (2.74), and pastures (2.56) are in unsustainable conditions. The only somewhat sustainable factor is the soil (3.03). According to the environmental unsustainability model, with a coefficient of 0.82 the factor for pastures (Y1) involves the highest load factor, and it is the most significant latent factor in this area. Forests and woods (Y3), water resources (Y4) and soil (Y2) occupy subsequent positions with load factors of 0.68, 0.63, and 0.51, respectively. The findings also showed a significant difference between various regions of Pol-e Dokhtar City in terms of environmental unsustainability factors (water resources, soil, woods, and pastures). Meanwhile, despite the unsustainable status of Jayder Village, it is in a better condition compared to other regions, whereas the lowest sustainability levels belong to Western and Eastern Miankooch Villages.

5. Conclusion

The results demonstrate that the majority of examined factors are in unsustainable conditions. In this regard, the highest extent of unsustainability belongs to pastures. There is also a significant difference between rural regions in terms of rural environmental unsustainability factors. The most important recommendation in line with reducing unsustainability is that any program capable of empowering rural residents in all economic, social, cultural, and environmental dimensions could bring about a healthier, more sustainable environment in rural regions. It is essential to provide the means for a better growth of rural areas using every tool and organizations as well as the rural residents themselves. This suggests that in

analyzing and assessing rural areas as sustainable or unsustainable, special attention should be paid to the problems and issues of rural residents. Employing a one-dimensional view toward these subjects similar to the one used in our country until now fails to provide the means for a sustainable development of rural areas.

Keywords: Environmental factors, Sustainable development, Environment, Structural equations, Pol-e Dokhtar City

References (in Persian):

- Anabestani, A. A., & Khosro Beighi Barcheloi, R. (2013). سنجش و ارزیابی پایداری زیست محیطی در مناطق روستایی با استفاده از تکنیک تصمیم‌گیری چندمعیاره پرومتی [Measuring and evaluating environmental sustainability in rural areas using the multi-criteria decision-making technique of Promet], *Geographic Preparation Space*, 2(3), 51-72.
- Habibi, K., Rahimi Kakajo, A., & Abdi, M. H. (2013). ارزیابی جابای بوم‌شناختی وسایل حمل و نقل شهری؛ رویکردی نوین به منظور برنامه‌ریزی حمل و نقل پایدار، نمونه‌موردی: شهر ارومیه [Evaluation of urban transport ecological footprint a novel approach to sustainable transport planning (Case Study: Orumiyeh)]. *Journal of Geo-Spatial Planning Golestan*, 2(5), 105-116.
- Nouri, H., Amini, A., & Rahimi, H. (2017). ارزیابی رابطه کشاورزی پایدار و توسعه پایدار روستایی (مطالعه موردی: نواحی روستایی شهرستان فسا). [Evaluation of the Sustainable Agriculture Relationship and Sustainable Rural Development (Case Study: Rural areas in Fasa)]. *Rural Research*, 7(4), 688- 703.
- Payedar, A. (2014). ارائه الگوی سیاست مطلوب بهره‌برداری از منابع آب زیرزمینی برای فعالیت‌های کشاورزی در نواحی روستایی (حوزه جغرافیایی- فرهنگی هلیل رود- دشت جیرفت) [Presenting a pattern of favorable policy for utilization of underground water resources for agricultural activities in rural areas (Hial-Rood-geographic-cultural area-district Jiroft)], (Unpublished doctoral dissertation). Tarbiat Modarres University, Tehran.
- Pur, S., & Seadat Yar, F. (2013). تحلیل و بررسی نگرش‌ها و نیات رفتاری مسئولانه زیست- محیطی با توجه به شهروند زیست محیطی [Analyzing responsible behavioral attitudes and negative behaviors with regard to environmental citizens]. *Journal of Yas Strategy*, 29(1), 188-211.
- Riyahi, V., Azizpur, F., & Nouri, A. (2016). تحلیل سطح پایداری محیطی سکونتگاه‌های روستایی در شهرستان خرمدره [Environmental sustainability analysis of rural settlements in Khoramdar City]. *Rural Development Strategies*, 3(3), 955- 973.
- Sharafi, L., & Ali Beighi, H. (2016). سنجش الگوی پایداری محیط‌زیست روستایی مورد: [Rural environment sustainability model case: روستای شروینه در شهرستان جوانر

- Shriven Village in Java Rood County]. *Space Quarterly Journal of Economics and Rural Development*, 4(2), 115-132.
8. Taghi Zadeh Ansari, M. (1996). *حقوق محیط زیست در ایران* [Environmental rights in Iran]. Tehran, Iran: SAMT.
 9. Taj Bakhsh, H. (2008). *فرهنگ‌سازی برای جلوگیری از تخریب و انهدام محیط زیست* [Culture to prevent the destruction of the environment]. *Journal of Veterinary Research*, 62(3), 223-226.
 10. Toulabi Nejad, M., Toulabi Nejad, M., & Tabatabai, A. (2018). سازگاری کشاورزان با تغییرات آب و هوایی و نقش آن در امنیت غذایی خانوارهای روستایی شهرستان پلدختر، [Adaptation of farmers to climate change and its role in food security of rural households in Poldokhtar]. *Natural Environmental Hazards*, 6(13), 67- 90.

References (in English):

1. Bicknell, K. B., Ball, R. J., Cullen, R., Bigsby, H. R. (1998). New methodology for the ecological footprint with an application to New Zealand economy. *Ecological Economics*, 3(27), 149-160.
2. Boggia, A., Rocchi, L., Paolotti, L., Musotti, F., & Greco, S. (2014). Assessing rural sustainable development potentialities using a dominance-based rough set approach. *Journal of Environmental Management*, 37(114), 60-67.
3. Clements, J. M., McCright, A. M., Dietz, T., & Marquart-Pyatt, S. T. (2015). A behavioural measure of environmental decision-making for social surveys. *Journal Environmental Sociology*, 1(1), 27-37.
4. Coutts, C., Forkink, A., & Weiner, J. (2014). The portrayal of natural environment in the evolution of the ecological public health paradigm. *International Journal of Environmental Research and Public Health*, 11(1), 1005-1019.
5. Dallmeyer, D. G. (2006, October). *Incorporating environmental ethics into ecosystem-based management*. Paper Presented at the Sixth Marine Law Symposium, Roger Williams University, Bristol, Rhode Island, England.
6. Dunlap, R. E., Van Liere, K. D., Mertig, A. G., & Jones. R. E. (2000). New trends in measuring environmental attitudes: Measuring endorsement of the new ecological paradigm. *Journal of Social Issues*, 56(3), 425-442.
7. Filoso, S., Do Carmo, J., Fernanda Mardegan, S., Rafaela Machado Lins, S., Figueiredo Gomes, S., & Antonio Martinelli, L. (2015). Reassessing the environmental impacts of sugarcane ethanol production in Brazil to help meet sustainability goals. *Renewable and Sustainable Energy Reviews*, 6(52), 1847-1856
8. Fu, M., Exeter. D. J., & Anderson, A. (2015). The politics of relative deprivation: A transdisciplinary social justice perspective. *Social Science and Medicine*, 133(5), 223-232.
9. Gentle, P., & Maraseni, T. N. (2012). Climate change, poverty and livelihoods: Adaptation practices by rural mountain communities in Nepal. *Environmental Science and Policy*, 15(1), 24- 34.

10. Gottlieb, D., Kissinger, M., Vigoda-Gadot, E., & Haim, A. (2012). Analyzing the ecological footprint at the institutional scale: The case of an Israeli high school. *Journal of Ecological Indicators*, 1(18), 91-97.
11. Ifegbesan, A. P., & Rampedi, I. T. (2018). Understanding the role of socio demographic and geographical location on pro-environmental behavior in Nigeria. *Applied Environmental Education and Communication*, 4(14), 1- 17.
12. Ihuah, P. W., Kakulu, I. I., & Eaton, D. (2014). A review of critical project management success factors (CPMSF) for sustainable social housing in Nigeria. *International Journal of Sustainable Built Environment*, 3(1), 62-71.
13. Kaiser, F. G., Wolfing, S., & Fuhrer, U. (1999). Environmental attitude and ecological behavior. *Journal of Environmental Psychology*, 19, 1-9.
14. Kanamaru, M. (2005). *Approaches for systematic planning of development projects*. Dehli: Kodrige.
15. Kates, R. W., Parris, T. M., & Leiserowitz, A. A. (2005). What is sustainable development? Goals, indicators, values, and practice. *Environment*, 47(3), 10-21.
16. Katungi, E., Sperling, L., Karanj, D., Farrow, A., & Beebe, S. (2012). Relative importance of common bean attributes and variety demand in the drought areas of Kenya. *Journal of Development and Agricultural Economics*, 3(8), 411-422.
17. Kifle, S., Teferi, B., Kebedom, A., & Legesse, A. (2016). Factors influencing farmers decision on the use of introduced soil and water conservation practices in the Lowland's of Wenago Woreda, Gedeo Zone, Ethiopia. *American Journal of Rural Development*, 4(1), 24-30.
18. Kissinger, M., & Gottlieb, D. (2010). Place oriented ecological Footprint Analysis: The case of Israel's grain supply. *Journal of Ecological Economics*, 69(8), 1639- 1645.
19. Kwadwo, A. O., & Samson, J. (2012). Increasing agricultural productivity and enhancing food security in Africa: New challenges and opportunities. *Increasing Agricultural Productivity and Enhancing Food Security in Africa*. Addis Ababa: International Food Policy Research Institute.
20. Lee, Y. B. (2017). Exploring the relationship between E-government development and environmental sustainability: A study of small Island Developing States. *Sustainability*, 9(5), 1-16.
21. Lu, T. (2007). *Research of domestic water consumption: A field study in Harbin* (Unpublished master's thesis). Laughborough University, England.
22. Morse, S., & Vogiatzakis, I. N. (2014). Resource use and deprivation: Geographical analysis of the ecological footprint and Townsend index for England. *Sustainability*, 6(8), 4749-4771.
23. Moseley, M. J. (2002). *Local rural development principles and practice*. Manchester, England: Gloucestershire University Press.
24. Palmer, C., McShane, K., & Sandler, R. (2014). Environmental ethics. *Annual Review of Environment and Resources*, 39(1), 419-442.
25. Payne, P. G. (2010). Moral spaces, the struggle for an intergenerational environmental ethics and the social ecology of families: An 'other' form of environmental education. *Environmental Education Research*, 16(2), 209-231.

26. Ponisio, L. C., & Kremen, C. (2016). System-level approach needed to evaluate the transition to more sustainable agriculture. *Proceedings of the Royal Society B: Biological*, 283(2), 1-4.
27. Pugliese, P. (2002). Organic farming and sustainable rural development: A multifaceted and promising convergence. *A Manifested and Promising Governance in Sociologica Ruralist*, 41(1), 112-130.
28. Robinson, G. M. (2008). *Book cover sustainable rural systems (perspectives on rural policy and planning)*. London: Ashgate Publishing Ltd.
29. Stern, P. C., Dietz, T., & Guagnano, G. (2016). The new ecological paradigm in social-psychological context. *Environment and Behavior*, 27(6), 723-743.
30. Toro, J., Requena, I., & Zamorana, M. (2009). Environmental impact assessment in Colombia: Critical analysis and proposals for improvement. *Environmental Impact Assessment Review*, 30(4), 79-86.
31. Wackernagel, M., & Rees, W. E. (1996). *Our ecological footprint: Reducing human impact on the earth*. Gabriola Island, BC: New Society Publishers.
32. Willer, H., & Kilcher, L. (2009). *The world of organic agriculture: Statistics and emerging trend*. Switzerland: International Federation of Organic Agriculture Movements Publishing.

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