



Assessing and Analyzing the Impact of Rural Environmental Quality on Place Attachment in Rural Settlements (Case Study: Umm al-Tamir Village)

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Received Date: 18 December 2025 **Accepted Date:** 09 February 2026

Abstract

Background and Objective: The quality of rural settlement environments is one of the key factors influencing place attachment, population retention, and social sustainability. In recent years, especially in peri-urban villages affected by rapid urbanization processes, attention to the link between environmental conditions and residents' perceptions and attachment to place has gained increasing importance. This study aims to examine and analyze the impact of rural environmental quality on place attachment in rural settlements, with Em al-Tamr village, located on the outskirts of Ahvaz metropolitan area, as a case study.

Methodology: The research is applied in terms of objective and descriptive–analytical in terms of methodology. Data were collected through library studies and field surveys using questionnaires. The study population consisted of the residents of Em al-Tamr village, and the sample size was determined as 356 individuals based on Cochran's formula. For data analysis, the Marcus multi-criteria decision-making model and Pearson correlation test were employed. Findings indicate a positive and significant relationship between rural environmental quality and place attachment. The Marcus model results show that environmental cleanliness and the beauty of the natural landscape have the highest desirability among environmental indicators. Moreover, Pearson correlation results revealed that the strongest associations with place attachment were related to natural landscape beauty, environmental cleanliness, and preservation of the village's traditional texture.

Results and Findings: These findings suggest that environmental and identity-related factors play a more prominent role in shaping residents' place attachment compared to purely physical infrastructure. Overall, this study emphasizes that enhancing rural environmental quality—particularly in its natural, aesthetic, and identity dimensions—can serve as an effective strategy for strengthening place attachment, increasing residential satisfaction, and promoting sustainable development in peri-urban rural settlements, and should be considered by planners and policymakers.

Keywords: Environmental quality, Place attachment, Rural settlement, Em al-Tamr village.

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Cite this article: Soltani,Z. and Goodarzi,M. (2026). Assessing and Analyzing the Impact of Rural Environmental Quality on Place Attachment in Rural Settlements (Case Study: Umm al-Tamir Village). *Journal of Sustainable Urban & Regional Development Studies (JSURDS)*, 6(4), 419-433.

Extended Abstract

Introduction:

Meanwhile, rural environmental quality, as one of the fundamental components of sustainable rural development, plays a key role in either strengthening or weakening residents' sense of place attachment. Rural environmental quality is a multidimensional concept encompassing physical, social, economic, environmental, and service-related aspects. Rural development is achieved when supportive services for economic and social activities are optimally and adequately concentrated in rural centers, as these centers serve as bases for social mobility and reinforce the desire to reside in rural areas. Recent studies have also shown that the quality of public services, access to educational and healthcare infrastructure, and the availability of desirable public spaces are significantly associated with increased population retention and reduced rural out-migration.

Methodology:

This study, based on the nature of its topic and the objectives it seeks to achieve, is applied in terms of purpose and descriptive-analytical in terms of nature and research methodology. The data were collected through both library and field methods. The statistical population of the study consisted of the residents of Em al-Tamr village, whose total number was 5,004 according to the 2016 national population and housing census. The sample size, calculated using Cochran's formula, was 356 individuals. To analyze the research data, the study employed the Marcus multi-criteria decision-making technique and Pearson's correlation coefficient.

Results and Discussion:

Drought zoning based on SPI index on a monthly basis

This study examined the impact of rural environmental quality on place attachment in peri-urban villages, focusing on Em al-Tamr as a case study. Using descriptive analysis, the Marcus multi-criteria decision-making model, and Pearson correlation, results revealed a significant positive relationship between environmental quality and residents' sense of attachment, confirming the study's main hypothesis. Residents rated overall environmental quality highly (4/5), indicating general satisfaction. Among environmental factors, natural landscape beauty showed the strongest correlation ($r = 0.72$) with place attachment, highlighting the role of green spaces, vegetation, and visual aesthetics in fostering emotional bonds and identity. Environmental cleanliness ($r = 0.68$) and preservation of traditional village fabric ($r = 0.66$) also strongly influenced attachment, reflecting the importance of management, order, and cultural heritage. Air quality ($r = 0.63$), architectural quality, street conditions, and lighting further contributed positively. The study emphasized that environmental quality affects place attachment directly through physical and ecological improvements and indirectly by enhancing social interactions and collective identity. For peri-urban development, prioritizing natural, aesthetic, and social dimensions is essential to strengthen residents' attachment, sustain population, and support sustainable rural development.

Conclusion:

Overall, this study emphasizes that improving rural environmental quality—particularly in its natural, aesthetic, and identity-related dimensions—can serve as an effective strategy for strengthening place attachment, enhancing residential satisfaction, and promoting sustainable development in peri-urban rural settlements, and should be considered by planners and policymakers.

Declarations

Funding

There is no funding support for this study.

Authors' Contribution

Authors contributed equally to the conceptualization and writing of the article. All of the authors approved the content of the manuscript and agreed on all aspects of the work declaration of competing interest none.

Conflict of Interest

The authors declare no conflict of interest.

Acknowledgments

We are grateful to all the scientific consultants of this paper.

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