

ASSESSMENT AND HIERARCHY OF NATURAL LANDSCAPE FEATURES OF INTEREST FOR TOURISTS IN RURAL DESTINATIONS

Liliana VELEA

*Dept. of Humanities, Ca'Foscari University of Venice, 30123, Italy
National Meteorological Administration, 013686, Bucharest, Romania (permanent address);
liliana.velea@meteoromania.ro*

Anișoara IRIMESCU

*National Meteorological Administration, 013686, Bucharest, Romania
anisoara.irimescu@meteoromania.ro*

Mihaela Tinca UDRIȘTIOIU

*Department of Physics, Faculty of Science, University of Craiova, 200585, Romania;
mtudristoiu@central.ucv.ro*

Silvia PUIU

*Faculty of Economics and Business Administration, University of Craiova, 200585, Romania
silvia.puiu@edu.ucv.ro*

Olga AMARIE

Department of World Languages and Cultures, Georgia Southern University, GA 30460, Statesboro, USA

Abstract

Rural tourism in Romania is a sector with great potential for development, and all stakeholders, from tourists to authorities and investors in this field, are directing their attention toward it. However, an analysis of the number of tourists in rural destinations reveals that not all sites have the same level of attraction among tourists. Factors such as infrastructure and the quality of the services offered are crucial elements that can influence tourists' decisions regarding one destination over another. The natural environment is also a critical factor to be considered in rural tourism and is the focus of our study. The study involved a survey conducted in Romania and Italy in January and February 2023. The results underscore the importance of terrain and vegetation in influencing tourists' choices for spending their holidays in a rural destination. The built environment also holds interest for tourists, which can benefit authorities and investors in enhancing the overall tourism product.

Keywords: *environment, climate product, natural vegetation, Romania, rural tourism*

JEL Classification: Q500, Z300

1. INTRODUCTION

Rural tourism is becoming an increasingly appealing branch of tourism due to its association with the opportunity to connect with nature while still benefiting from essential facilities like electric energy, internet availability, *etc.* It offers a chance to experience an 'old-fashioned' lifestyle, savor fresh food, interact with local culture, and enjoy more affordable prices. However, not all rural destinations experience the same level of tourism. Several factors contribute to the varying degrees of 'success' in rural destinations, including the availability and quality of infrastructure and tourism products, marketing visibility, tourist attractions, and natural assets.

The scientific literature highlights the key

success characteristics of most of these factors. For instance, Neumeier and Pollermann (2014, p.274) emphasize that the development of an economically viable tourism sector necessitates the creation of an attractive and competitive tourist profile. This profile should encompass natural and/or cultural attractions, which are regarded as 'prerequisites,' as well as the quality and quantity of service infrastructure and touristic superstructure. Teodoro et al. (2017; p.136) underscore that 'supply of other services, besides housing, and client satisfaction promote the increase in net occupancy rates.' In a study involving six tourism villages in Indonesia, Utami et al. (2022) identify, 'ten factors for creating a successful sustainable tourism village through rural tourism entrepreneurship.' These factors include income management, business unit

development, economic growth, cooperation, collaboration, innovation, creativity, environmental awareness, resource management, and visitor management. The perception of local residents regarding tourism in their areas has also been demonstrated to play a pivotal role in the success of tourism in mountainous rural areas of the North-East Region of Romania (Saghin et al., 2022).

Nonetheless, as evidenced in the literature, natural resources form the cornerstone of tourist attractions in specific destinations. Manrai et al. (2018) argue that ‘the natural resources and geography of a destination provide an absolute advantage’ for a particular destination. The natural environment, as demonstrated by Fraiz et al. (2020), emerges as a crucial factor influencing active tourists in their selection of travel destinations, regardless of their motivations. Deng et al. (2002), citing Ethos Consulting (1991), elucidate that physical natural resources such as climate, water, mountains, flora, and fauna contribute significantly to the overall appeal of a tourism destination.

As a natural asset, climate plays a significant role, as it is one of the features most recognized by tourists, either through scientific-based information or their own or local knowledge. Research has pinpointed various climate aspects of interest to tourists. While some features are standard and applicable to all types of destinations (e.g., low wind), others are specific to different destination types (urban, rural, mountain, seaside) or particular tourism activities (e.g., trekking, surfing). Based on these characteristics, several climate-based indices for tourism have been developed to synthesize the most important and relevant climate aspects for specific touristic activities or destinations. Some indices aim to describe climate conditions favorable or unfavorable for tourism in general (e.g., Tourism Climate Index (Mieczkowski, 1985); Climate Index for Tourism (de Freitas et al., 2008)). Others target specific aspects of tourism, like urban tourism (Holiday Climate Index (Scott et al., 2016); Urban Climate Comfort Index (Kapetanakis et al., 2022)). Beach tourism is addressed by (Holiday Climate Index: beach; (Rutty et al., 2020); and the data-driven weather index for beach parks tourism (Matthews et al., 2021). Ski tourism is assessed using (Ski Climate Index (Demiroglu et al., 2021)), and even camping activities have the (Camping Climate Index (Ma et al., 2020)). Although no specific climate-based index has been defined for rural tourism, it has been demonstrated that the Holiday Climate Index: urban can also be applied to rural destinations in Romania (Velea et al., 2022).

The climate-based indices for tourism are primarily used in research; however, they can be customized to provide accessible information to tourists and other tourism stakeholders, such as investors or local authorities. This customization has been realized through the development of climate

products within the WeCENT project, which are made available through the project’s website (<https://pric.unive.it/projects/wecent/home#c4213>).

Also part of the natural assets of a tourist destination is the natural landscape, which can be defined as ‘a collection of landforms, such as mountains, hills, plains, and plateaus’ including ‘lakes, streams, soils (such as sand or clay), and natural vegetation’

(<https://education.nationalgeographic.org/resource/landscape/>). Tourism and the landscape are strongly interrelated, as they encompass Social, Aesthetic, and Historical elements (Williams, 2019). Researchers have shown a significant interest in this relationship since 1992, with central themes evolving over time from ‘cultural heritage’ and ‘national parks’ to, possibly, ‘rural’ and ‘spatial analysis,’ among other subjects related to management, conservation, and sustainability (Jiménez-García et al., 2020). In the case of natural vegetation, Osti and Cicero (2018) emphasized in their study that tourists appreciate “the presence of a landscape comprising orchards, flowery/grassy meadows, and vineyards.”

The present study was conducted within the broader context of developing tourist-oriented climate products, an objective that necessitates quantifiable climate and environmental features. This study aims to identify elements related to the natural landscape that are sufficiently relevant and interesting to tourists, making them suitable for inclusion in a product designed for rural destinations. To achieve this goal, the analysis concentrates on identifying the natural environmental features that hold the most interest for tourists when selecting a particular rural destination. The findings can be utilized to develop a climate product that is relevant to both tourists and tourism investors.

2. DATA AND METHODS

This study employs an exploratory approach to address the following research question: What natural features of a rural destination are the most appealing to tourists? To answer this question, an online survey was conducted in Romania and Italy during January and February 2023.

In designing the survey, the definition of a ‘rural touristic destination’ is limited to the following criteria as outlined in Velea et al. (2022): (i) possessing independent administrative status (e.g., village, city); (ii) having a population of fewer than 10,000 inhabitants if its administrative status was ‘city’; (iii) not being associated with mountain sports facilities (i.e., ski slopes) or located by the seaside.

3.1 Study design and population

The survey was conducted online from January 2023 to March 2023. Eligible participants were adults (≥ 18 years old). The survey was made available in English and distributed through social media, particularly within Facebook groups. The primary target audience was individuals associated with the University of Craiova in Romania, and the Ca'Foscari University of Venice (e.g., students, academic personnel, and non-academic staff).

3.2 Data collection

The survey consisted of three questions. The first question employed a five-point Likert-type scale, while the other two were multiple-choice questions. The survey did not collect or require any personal identification data, making it impossible to segment respondents based on factors that might influence their preferences (e.g., age, residence, family, economic status, etc.).

The survey questions revolved around the following aspects:

- The extent of tourists' interest in natural environmental features related to orography, the presence of water, and vegetation associated with a rural destination.
- General tourists' preferences for either built or natural landscapes.
- The significance of population density in the rural destination as a determining factor in tourists' preferences.

The responses to the first question allowed us to quantify tourist interest by assigning a score ranging from 1 (=not at all important) to 5 (= very important) to each of the natural features listed. The last two questions offered three closed-answer options each.

The selection of items in the first question included the requirement of quantifiable features (e.g., terrain height differences), and was based on scientific literature that suggests, for instance, that the presence of a water surface is perceived as a scenic element (e.g., Wartmann and Mackaness, 2020). These items were formulated to encompass threshold values for feature characteristics, enabling further quantitative examination of climate or environmental aspects (e.g., the extent of green vegetation in a specific area). The second question is also grounded in scientific findings that indicate natural landscapes may attract tourists more than the built environment (e.g., Seresinhe et al., 2017). Finally, the population density of the destination, although not a natural feature, was considered a potential factor in tourists' decision-making regarding the selection of rural destinations, particularly in light of altered habits due to the COVID pandemic, which may have, to some extent, redirected tourists' preferences towards more isolated and less

densely populated destinations.

A total of 70 responses were received for the survey. Since no personal data was collected, it is impossible to accurately determine the respondents' country of origin. Therefore, all responses are included and treated equally in the analysis.

3.3 Statistics analysis

The responses were analyzed using descriptive statistical methods (median, mode, frequencies), which are considered more suitable given the Likert-type items used (Boone and Boone, 2012; Guerra et al., 2016).

In the analysis of the survey presented in this study, for the first question, the focus was placed on answers receiving scores of 4 and 5, denoting 'important' and 'very important' responses from the participants. This analytical approach was chosen due to the practical implications of the results. It aims to identify 'attractive' natural features in rural destinations compared to others, with the ultimate goal of developing a climate product based on these findings. The answers to the multiple-choice questions were assessed in terms of the frequencies of each proposed choice. The sample size was deemed appropriate, given the questionnaire's predominantly Likert-type items (e.g., Guerra et al., 2016; Lund, 2021). The estimated target population is around 1 3500 000, based on the (approximative) number of tourist arrivals in 2019 at accommodation units in Romania, as provided by the National Institute of Statistics at www.insse.ro (table TUR104A in TEMPO database). With a required confidence level of 90%, a 10% margin of error, and the above-mentioned population estimate, the sample size derived from the survey responses is considered representative. However, this condition is met at its lower limit.

4. RESULTS

The first question of the survey aimed to assess the natural features of the environment that are of high interest to tourists in a rural destination. It read: '*Please rate how important would be for you the following natural features of a rural destination as contributors to an enjoyable time off (1= not at all important; 5=very important)*'.

The question included seven natural features, as presented in Fig. 1, highlighting the tourists/respondents' ranking (i.e., the number of answers allocating scores of 4 and 5 to each feature).

The results suggest that rural destinations situated near water surfaces and offering views of high relief (e.g., mountains or high hills), along with abundant green vegetation during the warm season or substantial snow cover during the winter, are the most preferred by tourists. In contrast, destinations with

views of low relief (i.e., situated in flat plains) appear to be the least appealing, with only 38% of the respondents expressing interest in this aspect.

It is worth noting that high green cover and natural vegetation are the most attractive natural features for a rural destination, followed by a water surface and views from high relief. This suggests that a climate product focusing on the degree of green vegetation may be an exciting component of a climate service targeting tourism.

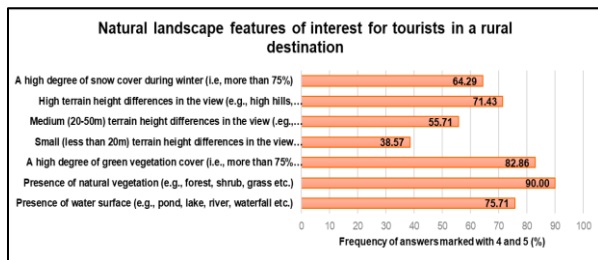


Figure 1 – Tourists’ interest in natural landscape features in a rural destination.

The second question aimed to assess the relative importance of natural and human-built environments as attractiveness features for rural destinations. It read: *‘If you would have to choose from several rural destinations for your vacation, provided all the conditions are similar (e.g., prices, accommodation conditions, leisure opportunities, etc.), what characteristics would be more important for you?’* The question provided three closed-answer options, and their frequency in the respondents’ answers is presented in Fig. 2.

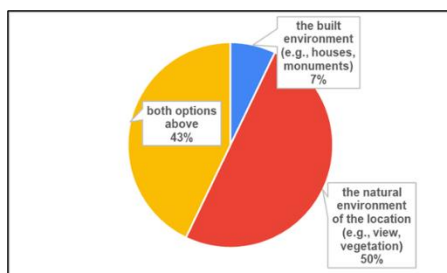


Figure 2 – Tourists’ interest in a rural destination’s natural or built environment.

The higher preference for natural elements compared to the built ones aligns with findings in other studies (e.g., Fyhri et al., 2009; Cebrián and Sánchez, 2016; Burgui-Burgui et al., 2022). In conjunction with the results from the first question, this finding reinforces the idea that a climate product related to natural vegetation (e.g., green cover) could enhance the user uptake of tourism climate service. Cong et al. (2019) emphasize the willingness of tourists to pay more for tourist destinations with an enhanced rural landscape. Other authors (e.g., Wang et al., 2018, p. 1679) stress the importance of preserving the natural

beauty of a rural destination to increase tourist numbers and improve marketing campaigns related to tourism: “images of natural scenes may attract more visual attention than those of built scenes.” Vehbi and Doratli (2010, p. 1485) underline “the need... to minimize negative impacts on the physical environment” in tourism.

Finally, the third question aimed to estimate the relative importance of population density at the destination as a factor in tourists’ decisions regarding a rural destination, and it read: *‘If you would have to choose from several rural destinations for your vacation, provided all the conditions are similar (e.g., prices, accommodation conditions, leisure opportunities, etc.) you would choose.’* As with the second question, it allowed for three closed answers, and the frequency in the respondents’ answers is presented in Fig. 3.

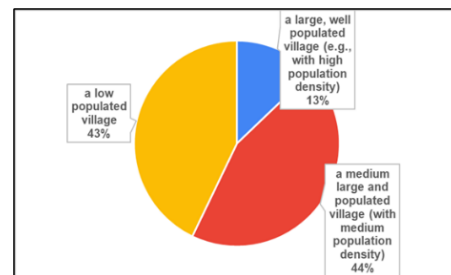


Figure 3 – Tourists’ preferences about the population density of a rural touristic destination.

The answers suggest that tourists would prefer medium-low population villages over large, well-populated rural localities. Although the question is not directly related to natural features, the findings from the survey may help explain the relatively higher success of some rural destinations compared to others, assuming that the natural features are similar and other factors influencing tourism flow (e.g., variety and quality of services) do not significantly differ. This preference for medium-low population villages might be attributed to changes in tourists’ behavior during the COVID-19 pandemic, when travel restrictions led people to seek less populated or less frequented areas. Once such preferences are formed, people tend to maintain these habits and new behaviors. Marques et al. (2022) underscore the importance of rural tourism, particularly during the COVID-19 waves, though they do not specifically emphasize distinctions based on rural destination density. Abellán and García Martínez (2021) analyze low-density rural mountainous destinations in Spain and highlight the crucial role played by the natural environment and landscape for these regions and their tourism potential. Majdak and de Almeida (2022) address the issue of over-tourism and propose measures for better promoting rural destinations with lower population density, thus

fostering a more balanced distribution of tourists, benefiting both tourists and local communities from a sustainable perspective.

5. DISCUSSION AND CONCLUSION

The survey offers valuable insights into the hierarchy of natural features that appeal to tourists when considering a rural tourist destination, thus contributing to the research on rural tourism. The results underscore that green natural vegetation cover stands atop tourists' preferences for a rural destination, indicating the potential for developing tourism-oriented climate products centered on this feature. The survey also emphasizes the significance of water surfaces and proximity to high relief as important natural assets for such destinations. In general, natural features pique the interest of 44% of the respondents, while an equal attraction to both the natural and built environment is noted in 43% of cases in rural destinations. Moreover, population density in the destination may influence tourists' choices, with 87% of respondents favoring medium-low population localities. These findings may offer some insight into the varying tourism flow among different rural tourist areas.

Several limitations affect the relevance of these findings. One constraint relates to the number of responses, which, despite ensuring the statistical significance of the results, may be considered too low for broader applications (e.g., at a national level). The limited dissemination of the survey in English in Romania and Italy may have contributed to this constraint, as only individuals with a good command of English may have been inclined to participate. The absence of personal information (e.g., country/region of origin, age, social status, etc.) restricts the depth of insights the survey can provide. Furthermore, a subsequent analysis of the relief height in the vicinity of the Romanian tourist destinations revealed that the relief within 5 km of the localities is typically much greater than those indicated in the survey (i.e., less than 20m, 20-50m). However, this limitation in setting these thresholds in the survey is likely offset by the inclusion of relief categories such as 'only plain,' 'small hills,' 'high hills, and 'mountain walls' (Figure 1).

The survey results, while considered within the constraints imposed by its limitations, offer valuable insights into the appeal of natural features in rural tourist destinations and support the development of climate products based on these insights. The findings suggest that three natural features are highly preferred by tourists in rural destinations – natural vegetation cover, presence of water surface, and proximity to high relief areas. Natural vegetation cover represents a land-use type with relatively stable characteristics over time (e.g., the area covered by forests near a locality may be diminished from one year to another but not sufficient

to disappear or even to be observed by a tourist). Hence, for the purposes of a climate product, it may be considered constant over time and be updated only in certain conditions (e.g., if the area falls below a predetermined threshold). The same principle applies to the relief height and the presence of water surfaces – these features remain practically constant over time and are intrinsic characteristics of a location. Consequently, for the purposes of a tourism-oriented climate product, these natural features of 'rural natural beauty' may be deemed irrelevant as their variations are not related to climate on the temporal scale of interest to tourists (e.g., monthly or seasonally).

However, the green vegetation cover, which was highly rated by respondents in the survey, exhibits seasonal variation and serves as a foundation for a climate product for rural destinations. Similarly, snow cover information can be used to develop tourist-oriented products, due to its seasonal variability and high ranking among respondents' preferences. These climate products hold interest and utility in both the short and long term. In the short term, they can assist tourists in planning their vacations and aid tourism investors in building/enhancing their business strategies by integrating these elements, along with relevant climatic data, into their promotional and operational planning. In the long term, the variability of natural vegetation cover and type, as well as changes in snow cover extent and snow layer depth, are of interest in studies related to climate change impacts (e.g., Quante et al., 2021; Räisänen, 2021; Niklas et al., 2021; Hinze et al., 2023). Customized information drawn from this research can be provided to tourism stakeholders as additional insights for the long-term planning of their businesses.

Other natural features identified as appealing through the survey could prove valuable for the long-term planning of localities, thereby influencing the tourism industry (e.g., by altering/improving tourism potential due to natural assets). As highlighted by Abellán and García Martínez (2021) and Majdak and de Almeida (2022), governmental authorities can craft public policies and implement adequate measures to preserve the natural landscape, distribute tourists across various regions, and create a more sustainable and balanced form of tourism. This becomes increasingly critical due to the potential negative impacts of tourism on the natural environment, such as the reduction of cropland and forest areas (Chu et al., 2020; Yasin et al., 2023) or the loss of dense and medium natural vegetation (Rafa et al., 2021). Consequently, rural tourism should be actively promoted, both by small village housing accommodations and in national marketing campaigns. The development of rural tourism has the potential to boost a region's economic growth and diminish regional disparities within a country.

As for future research directions, we intend to

explore how tourists' preferences regarding natural features correlate with tourism intensity in rural areas, aiming to provide quantifiable insights into this relationship. This knowledge could significantly contribute to long-term planning and development in rural areas. Additionally, we plan to investigate how age, education, and income influence tourists' preferences for sustainable rural tourism. Expanding the survey to encompass more variables related to rural tourism, such as traditional cuisine, immersive local experiences, participation in local customs, and coping with challenges related to limited facilities or mobile

and internet connectivity, may reveal variations in tourists' preferences for different aspects of rural tourism. Such analyses hold the potential to refine the understanding of tourists' evolving preferences in this context.

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