THE ENVIRONMENTAL IMPACTS OF RURAL TOURISM

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Abstract

Tourism development in rural areas has drawn attention not only to its economic and social effects, but also to its ecological impact, being closely related to the quality of the natural and man-made environment. Rural tourism takes place in areas that usually are sensitive to external pressures and the impact of tourism on the ecological environment is more visible in rural areas. Tourism can have a useful influence on the rural tourist destination, but it can also be a detrimental factor. There are various studies claiming that the development of rural tourism can also have both positive and negative consequences. Between tourism and environment is a very close relationship, environmental degradation contributing overwhelmingly to the loss of tourist value. Thus, environmental conservation and protection are more important than some potential economic and social benefits. The negative effects are multiple and their intensity and origin depend on different elements that influence the sustainability of tourism. In general, it is estimated that the positive aspects of rural tourism are much more numerous than the negative ones.

Keywords: rural tourism, environmental impact, sustainability, development

Significant development of tourism in recent decades determined a global impact on many tourist destinations, influencing the sustainability and well-being of local communities (UNWTO, 2018). Tourism is generally perceived as an economic tool for the development of areas that are poor and less attractive for other economic investments (Park D.B. et al, 2012; Moraru R.A., 2019), as is the particular case of rural areas, but its effects are of a more varied nature. Usually, the specialized literature mentions three types of impacts generated by tourism: economic, sociocultural and environmental (Fennell D.B., 2007; (Martin J.M. et al, 2018; Pramanik P.D., Ingkadijaya R., 2018; Moraru R.A., 2019). Wookhyun A., Silverio A. (2020) pointed out that, in the field of rural tourism, the interactions from three aspects must be overall considered and analyzed.

Tourism impacts refer to a set of complex interactions that occurs as a result of tourism activities developed in a certain area or environment (Mathieson A., Wall G., 1982) and depends on the characteristics of the tourist activity (Martin J.M. *et al*, 2017). It can be assessed on the basis of the total number of tourist arrivals and the degree of their concentration at certain times of the year (Martin J.M. *et al*, 2017; Martin J.M. *et al*, 2019). Being one of the fastest growing industries worldwide, tourism can generate, in addition to

many benefits, some negative effects, both at the local and regional/national level (Yoon Y. *et al*, 1999; (Martin J.M. *et al*, 2018). Especially in sensitive rural areas, if there is no careful planning and monitoring of tourist activities, they can have harmful consequences, mainly for the environment (Rattanasuwongchai N., 1998; Pramanik P.D., Ingkadijaya R., 2018).

Tourism development is closely related to quality of the natural and man-made environment (Sunlu U., 2003), and this, especially from the tourist's point of view, is an integral part of the quality of tourist destinations and attractions (Mihalic T., 2000). Therefore, there is a complex relationship between tourism and environment: tourism can increase the attractiveness of the environment (Wall G., 1997), while environmental degradation reduces its tourist value, fact that decreases the interest of tourists and disadvantages the marketing of tourist products (Butler R.W., 1999; Pavaluc C. et al, 2020). This is obvious for rural tourism, as it is mainly based on natural attractions and the rusticity of the countryside. In many countries, rural tourism is on the rise, becoming a basic activity and not a secondary one (Busby R., Rendle S., 2000). The strong increase in the number of rural visitors has led to the transformation of villages and rural communities (OECD, 1994) and, because tourist facilities and infrastructure (accommodation units, recreational

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areas, restaurants etc.) are required to meet the needs of tourists, by setting them up, the natural capital and the sustainability of the tourist destination are reduced (Rattanasuwongchai N., 1998; Butler R.W., 1999). This fact implies the loss of attractiveness for tourists, especially for those particularly interested in natural features, and thus they will turn their attention to less developed areas (Butler R.W., 1999).

MATERIAL AND METHOD

In the present paper, a part of the academic literature associated with the environmental impact generated by the development of rural tourism was reviewed. In order to provide relevant and varied information, this study included publications from a longer period (about 40 years). Journal articles, scientific papers, books and editorial materials were used to collect the data. We analyzed both materials fundamentally related to environmental impact of rural tourism (the main issue of the study) and those in which the research area is not strictly and directly associated with this form of tourism or its ecological effects (the supporting issue of the study). The main ideas were systematized in two directions: favorable and unfavorable effects, being mentioned, in each case, the influencing factors and the generating causes.

RESULTS AND DISCUSSIONS

Rural tourism encompasses a series of activities that have the potential to promote environmental sustainability, encouraging proper environmental management and adding value to the tourism product that constitutes itself a tourist attraction. (Azimi H. et al, 2012). A large number of papers and studies have been carried out in many regions of the world, focused on the development of tourism in rural areas and its impact on the local community and environment. Most of them were conducted in developed countries in Europe and North America, as well as Australia and New Zealand. Only a limited number of studies have investigated this topic in developing countries such as China, Malaysia, Vietnam, Thailand (Henderson J.C., 2009; Srisomyong N., Meyer D., 2015; Nguyen N.T.H. et al, 2018).

An examination of the literature on rural tourism shows the major concern regarding the impact of the development of rural tourism on the environment, being mentioned that this activity can affect the natural environment beauty and the life of the local community. However, because, in most situations, there are no reference data, it is difficult to distinguish between the effects produced only

by tourism and those induced by other activities (Hall C.M., Page S.J., 1999). Rural tourism can have a useful influence on the tourist destination, but it can also be a detrimental factor, because the benefits generated by the tourist activity do not exceed the incurred costs disadvantages (Yoon Y. et al., 1999). For example, on one hand, rural tourism has the potential to increase the income of rural residents and to create jobs, and, on the other hand, it can damage the rural well-being as well as the natural environment (Rattanasuwongchai N., 1998; Mcareavey R., Mcdonagh J., 2011; Chen J. et al, 2018). In the particular case of agritourism, as a form of rural tourism, there are various studies claiming that its development can also have both positive and negative consequences, from the ecological and socio-economic point of view. (Daugstad K. et al, 2002; Frey R.L., Zimmermann H., 2005).

Pozitive effects. The objectives of the sustainable development of rural tourism include primarily the conservation of natural habitats and rural landscapes (Lane B., 1994; Tiraieyari N., Hamzah A., 2012). When the principles of sustainable performance are respected, rural tourism is associated with positive ecological consequences: preservation of heritage sites and rural environment (Morris H., Romeril M., 1986) through rehabilitation of buildings and rural areas, in order to become tourist attractions (Jenkins J., Prin E., 1998); economy of water, energy and other natural resources (Tiraieyari N., Hamzah A., 2012; Mastronardi L. et al. (2015b); conservation of biodiversity (Giaccio V., Mastronardi L. (2011); Tiraieyari N., Hamzah A., 2012); reduced use of pesticides and fertilizers (Giaccio V., Mastronardi L., 2011; Mastronardi L. et al, 2015a). Another beneficial effect frequently mentioned by scholars refers to the education and awareness of local residents and authorities regarding conservation of natural environment (Jenkins J., Prin E., 1998; Tiraieyari N., Hamzah A., 2012; Lupi C. et al, 2017). By interacting with urban visitors, locals could learn from them to preserve natural habitats and man-made heritage, notions of hygiene and about the importance of conserving natural resources (Haldar P., 2007).

Some research has highlighted that South Korean agritourism farms where organic farming is practiced (Choo H., Jamal T., 2009), as well as rural tourism units in Western Australia (Carlsen J. et al, 2001) are properly accommodated with material recycling programs and strategies to preserve nature and minimize the consumption of natural resources, offering tourists information on sustainable agricultural and tourism practices.

The effects generated by the manifestation and development of tourist activities in rural areas are best perceived by the members of local community. The perception of the residents regarding the impact of rural tourism and agritourism, respectively, is the handiest tool for its empirical evaluation. Thus, the study conducted by Muhammad M. et al (2016) on agritourism in fishermen villages on the coast of Malaysia revealed that the locals considered the tourism activities as not harmful to the natural environment of their villages. On the contrary, the impact of agritourism is perceived beneficial by the local community. in terms of: increasing attractiveness and beauty of the area, conservation of the natural environment, upgrading public facilities, better roads, preservation of forests, protected wild life and fauna. This may occur due to the limited construction of accommodation units (hotels, chalets etc.), as most of the villages provided lodging. Being performed slowly and on a small scale, agritourism development caused no significant adverse effects (Muhammad M. et al, 2016). A rapid development of agritourism will lead to important environmental changes, mainly to its degradation (Muhammad M. et al. 2016). This fact is also confirmed by the findings of some studies previously conducted in other rural areas of Malaysia, by Chan N. W. (2009) and Tan W. H. (2000).

A similar perception was found in rural Vietnam by Nguyen N.T.H. et al (2018). The residents appreciated that the positive aspects of agritourism are much more numerous than the negative ones, and its economic and socio-cultural effects outweighed the environmental impacts. Improving the public infrastructure (parking plots, roads, sanitation) and the landscape of the area, raising the level of awareness of the local authorities and community regarding contribution of agritourism on the conservation of the natural environment – all these are benefits perceived by Vietnamese locals. Previous studies conducted by Srisomyong N., Meyer D. (2015) in Thailand and Lupi et al (2017) in Italy confirmed these findings.

Not less important are the attitude and approach of entrepreneurs in rural tourism and agritourism towards environmental protection. For example, the farmers involved in tourism activities may influence the outcome of the impact of their actions from an environmental perspective. By analyzing the characteristics of Italian farms and their production systems, Mastronardi L. et al (2015a) compared the ecological performances of agritourism farms with those of the farms not involved in tourism activities. The research

highlighted that well-consolidated agritourism, such as the Italian one, has a lower environmental impact than non-agritourism farm. This is due to the fact that agritourism farms have the tendency to resort to the production of energy by renewable sources, to apply more environmentally friendly agricultural production methods and to adopt certification systems of biological type. Therefore, agritourism puts less pressure on natural resources, uses less inputs in productive processes (water, fertilizers, pesticides etc.) and contributes to the conservation of landscape, ecosystems and biodiversity. This conclusion is in line with the results of another previous research-of Giaccio V., Mastronardi L. (2011) and Mastronardi L. et al (2015b).

Also, the management of rural luxury tourist units is considered less harmful for environment, compared to that of the inferior category units. Thus, while in the first case, entrepreneurs have more resources and, based on the excellence rating of their establishments, do not have to make large promotional efforts to attract and retain customers, in the other case, there is a greater sensitivity to ecological problems, with more concern for the economy of resources and energy (Martin J.M. *et al*, 2017).

Negative effects. Numerous academic papers have drawn attention to the negative impacts that tourism can generate. In general, the number of visitors to rural areas is relatively low and it is assumed that they are interested in aspects and respect natural environmental phenomena. However, as Butler R. W. (1994) claims, depending on the types of activities practiced, small groups of tourists can also cause damage to the natural environment. The negative effects are multiple and their intensity and origin depend on different elements that influence the sustainability of tourism (Martin J.M. et al., 2018). Among them, more important in the case of rural tourism would be: environmental pollution, use of natural resources, human behaviour (Holden A., 2007), land use, establishing infrastructure and tourist facilities (Rattanasuwongchai N., 1998), tourism seasonality (Manning R.E. et al, 1984; Martin J.M. et al, 2018). Roberts L., Hall D. (2001) mention that the extent of unwanted effects is related to: the fragility of the local environment; the number of tourist arrivals; the annual level of concentration of visitors in the tourist destination; the nature of the activities carried out by rural tourists.

Environmental pollution. The development of tourism in rural areas can be accompanied by numerous harmful effects on the environment, such as: soil and footpaths erosion (Grant M. et al,

1997), trampling of vegetation (Almeida F. *et al*, 2016), increase in waste production and littering problems (Grant M. *et al*, 1997; Almeida F. *et al*, 2016), noise and architectural pollution, disruption of wildlife (Grant M. *et al*, 1997; Tiraieyari N., Hamzah A., 2012; Pramanik P.D., Ingkadijaya R., 2018;), changes in natural processes (Glyptis S.,1992; Hall C. M., Page S.J., 1999); air pollution (Haldar P., 2007; Pramanik P.D., Ingkadijaya R., 2018).

Studying rural tourism in Thailand, Rattanasuwongchai N. (1998) observed that inadequate management of some of the tourist activities (e.g. trekking, diving, camping etc.) causes environmental pollution and rural degradation as result of littering problems, inadequate and unsanitary disposal of human waste and the discharge of sewage into water sources.

The excessive use of natural resources. is a major problem caused by the overcrowding of rural areas. In the peak periods, when the carrying capacity of the tourist destination is exceeded, a pressure is created on the use and consumption of local natural resources that leads to their exhaustion (Manning R.E. et al, 1984; Butler R.W., 1994; Haldar P., 2007; Tiraieyari N., Hamzah A., 2012; Almeida F. et al, 2016).

Deviations of tourists' behavior. Negative environmental behaviours refer to the actions of those tourists who are not interested in environmental protection and conservation of natural resources, not taking into account the fact that tourist services are public goods (Hultman M. et al, 2015). Cater E. (1993) warns that various activities carried out by tourists can have a potentially harmful ecological effect and they must show an environment-friendly behaviour during their stay.

Inappropriate land use and inadequate construction of tourist facilities. For sustainable development of rural tourism, the quality of the natural and man-made environment is essential (Sunlu U., 2003). Many activities involved in developing the infrastructure intended to support tourism (roads, hotels, restaurants, shops etc.) can gradually destroy or disrupt the resources on which it largely depends: local flora and fauna, natural ecosystems and wildlife habitat (Speirs L.S., 2003). Also, the congestion of buildings with touristic functions, the construction of high-rise buildings or with a design incompatible with the local architectural style have greatly spoiled the local landscape (Rattanasuwongchai N., 1998).

The seasonality of tourism is also a key factor that conditions the impact and sustainability of tourism activity on the rural tourist destination. Tourism seasonality has a negative impact in all

aspects: economic and labor-related, during the valley seasons, when the flow of tourists is very low; ecological and socio-cultural, at the peak of the season, when the number of visitors is very high (Martin J. M. *et al*, 2018), and thus, it causes a great pressure on the carrying capacity of the tourist destination (Manning R.E. *et al*, 1984).

Butler R. W. (1994) argues that tourist seasonality exerts pressure on the environment by overcrowding the rural areas and excessive consumption of local resources. To avoid this, it is recommended to limit the number of tourists and visits to a level that ensures a minimal ecological impact, but this restriction will not allow the local economy to benefit significantly from the tourist flow (Wall G., 1997). As a result, local authorities and tourism operators are not expected to resist the temptation to accept more tourists than the tourist destination could bear without unpleasant consequences (Butler R.W., 1994; Wall G., 1997). In addition, it is difficult to identify the carrying capacity of tourism destinations and to limit the number of tourists before the optimal threshold is exceeded (Rattanasuwongchai N., 1998).

On the other hand, the study conducted by Martínez J.M.G. et al (2019) showed that the level of seasonality in some rural tourist destinations from Spain is not high, being almost similar to the level of seasonality in urban destinations. This gives stability to the tourist activity throughout the and contributes to the sustainable development of tourism in all aspects, including the environment. At the same time, the authors show that, taking into account the heterogeneity of destinations (different degrees rural of accessibility, weather conditions, levels of development etc.), this conclusion can not be generalized.

Despite some potential negative aspects from the point of view of environmental protection, tourism is, compared to other options of rural development strategy, more eco-friendly (Ceballos-Lascurain H., 1996; Master D., 1998). Moreover, according to specialized literature, it seems that agritourism, both as a strategy for farm diversification and as a practice for developing tourist activities, is the most sustainable alternative (Barbieri C., 2012), generating a less unfavorable impact on the environment and rural society (especially in terms of water consumption and conservation and enhancement of wildlife habitat) (Barbieri C., 2012; Naidoo P., Sharpley R., 2015).

CONCLUSIONS

Rural tourism has, like other forms of tourism, the potential to produce environmental

consequences but with less intensity. Taking place in areas that are usually sensitive to pressures, its impact on the ecological environment is more visible. In rural regions where tourism is in its beginnings, there are no significant effects on the environment. The small size of visitor groups may provide a minimal ecological impact, but local economies will not benefit substantially from the restriction of tourist flow. In general, it is estimated that the positive aspects of rural tourism are much more numerous than the negative ones. Also, environmental protection is more important than some potential economic and social benefits.

Knowing and understanding the perceptions of host communities towards tourism activities will allow the development of future strategies and policies to maximize the benefits and minimize the potential negative effects generated by the development of tourism in rural areas. The attitude of entrepreneurs in the rural tourism towards conservation of the natural environment and responsible use of natural resources can contribute to that, as well. Last, but not least, the tourists should be aware that certain actions carried out during their stay can cause damage to the environment, and on their behavior depends, to a large extent, the amplitude and direction of the ecological consequences.

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