

Tourism and Rural Landscape: Sustainable Development and Territorial Enhancement



Selena Candia, Francesca Pirlone, and Ilenia Spadaro

Abstract Tourism can play a key role in the revitalization and development processes of rural areas. However, not all forms of tourism bring benefits to host communities. Few are in fact the positive impacts, both in economic and social terms, of mass or seasonal tourism, without considering the negative impact it can have on the environment in areas where nature is often still uncontaminated. It is therefore a question of making alternative proposals to the mainstream ones by suggesting tourism solutions attentive to the consumption of resources and to not interfere with the lifestyle of a destination. In order to enhance the rural heritage we need to move from fast-paced tourism activities to a slow-paced travelling style able to immerse tourists in an experience that is first of all cultural. The paper presents a methodology applicable to the Italian and European context for the revival of rural areas through the development of sustainable tourism starting from the Tourism Carrying Capacity concept. In the literature the TCC is applied to try to limit the number of tourists in congested destinations. The paper instead proposes to use TCC to address the development of tourism in not yet mature locations such as rural areas. In this way it is possible to determine the guidelines to support sustainable tourism development and planning because the environmental, social and economic limits of a given destination are already known at the planning stage. This methodology is then applied to a concrete case study, Santo Stefano d'Aveto a rural municipality of the Liguria Region.

Keywords Tourism planning · Rural areas · Liguria · Carrying capacity

Selena Candia studied the role of tourism to organize and promote the growth of a territory, in particular for inland areas. She participated in the application of the proposed methodology.

Francesca Pirlone defined the methodological approach and introduced the TCC concept to support tourist plans for inland areas.

Ilenia Spadaro contributed to the definition of the methodological approach and supervised the case study of Santo Stefano d'Aveto.

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1 The Role of Tourism in Territorial Development

Tourism can play a key role in the revitalization and development processes of rural areas. The tourism industry is a great contribution to the world economy. It is a sector in continuous growth and with a vast potential. But not all forms of tourism bring benefits to host communities. Tourism should be sustainable trying to make a positive impact on the environment, society, and economy. Sustainable tourism has become increasingly important in the last decade even if it was conceptualized in the late 1980s. This form of tourism is characterized by a dual interest on the host destination: the first one is the environment because a sustainable tourist should preserve it avoiding land degradation, waste, water pollution, noise pollution, destruction of landscapes; the second is the local population and its culture. Tourism is not only a factor of environmental pressure, but also an opportunity for its development (Commissione Bruntland 1987). The general principles of responsible tourism are (UNWTO 2017):

- respect and protection of the environment and in particular of the ecosystem and biodiversity, minimizing the environmental impacts related to tourism;
- respect and protection of the traditional culture of the local populations;
- participation of the host community in tourism planning and management
- participation of tourists through real experiences;
- distribution of the incomes among the local population.

At the international level, the term “responsible tourism” is usually used to refer to Third World or developing countries, countries where a large part of the world’s natural heritage is located (virgin forests, wildlife...) and where there are often populations in difficulty (which could be helped by ecotourism). Also according to the United Nations, tourism can represent a way “to the eradication of poverty and the protection of the environment”.

In Italy responsible tourism can contribute to the promotion of natural and cultural resources especially in inland and rural areas, the most socially and economically depressed areas of our country. In Italy there are many abandoned or almost abandoned villages that need to be enhanced as they represent an invaluable and fascinating cultural resource. In the last few years there is the need to recover these villages to regain possession and revive culture and traditions, which, as a result of globalization, are in danger of being lost (Candia et al. 2019). Beyond the contemplative aesthetic aspect, the landscape of the abandoned villages claims scientific, historical, environmental and educational interests. There are many reasons for their protection, conservation and enhancement that lead to consider these villages as a heritage of humanity, a social and cultural resource to be economically enhanced in a sustainable way (Coletta 2008).

However, not all forms of tourism bring benefits to host communities. Few are the economic and social repercussions of mass or seasonal tourism, without considering the negative impact it can have on the environment in areas where nature is often still uncontaminated. It is therefore a question of making alternative proposals

to the mainstream ones, attentive to the consumption of resources and not to interfere with the lifestyle and social habits of the host destination. In order to enhance the rural heritage we need to move from fast-paced tourism activities to a slow-paced travelling style able to immerse tourists in an experience that is first of all cultural. For example greenways are a motor in promoting and developing sustainable and landscape-friendly tourism in rural areas.

In Italy there are several strategic plans for tourism at regional level that have among their objectives the promotion of destinations in inland areas (such as the regional tourism plans of the Calabria, Emilia-Romagna, Lazio and Liguria). These plans aim at a diversification of tourism products but their objectives are not supported by adequate strategies at local level.

2 A Methodology for the Revival of Rural Areas Through the Development of Sustainable Tourism

The paper presents a methodology applicable to the Italian and European context for the revival of rural areas through the development of sustainable tourism. The research carried out proposes the definition of a methodological approach and the formulation of guidelines for a new governance aimed at proposing specific actions to improve the level of sustainability of a destination by enhancing it from the tourism point of view. The paper starts from the AlterEco project “Alternative tourist strategies to enhance the local sustainable development of tourism by promoting Mediterranean Identity” (MED Programme 2017–2019) aimed at defining and implementing strategies (supported by public and private entities) to promote the development of sustainable tourism.

The methodological approach is based on the TCC ‘Tourism carrying capacity’ concept. In the literature the TCC is applied to try to limit the number of tourists in congested destinations (Seraphina et al. 2018; Milano et al. 2019). The paper instead proposes to use TCC to address the development of tourism in not yet mature locations such as rural areas. In this way it is possible to determine the guidelines to support sustainable tourism development and planning because the environmental, social and economic limits of a given destination are already known at the planning stage. The tourist load capacity is defined as the maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, socio-cultural environment and an unacceptable decrease in the quality of visitors’ satisfaction (WTO 1981; O’Reilly 1986). Although the concept of carrying capacity is quite clear and immediate, its quantification is far more complex. In fact, it requires a combination of quantitative terms (such as the number of hotel beds, and parking spaces in parking areas) and qualitative parameters (relating to social and environmental impacts). The concept of carrying capacity has been addressed in literature by numerous authors. The Linear Programming method, or the economic method, finds its theoretical foundation in the calculation model

developed by Paolo Costa and Jan Van der Borg in 1988 for the historical centre of Venice (Costa and Van Der Borg 1988). Following this method, the aim is to maximize the income function deriving from the flow of tourists in the locality, assuming however that it does not produce any negative effect on the physical, cultural and social environment. Using this method the calculation of carrying capacity is therefore a mathematical programming problem and, in its simplest form, can be seen as a linear programming problem (Coccosis and Mexa 2004; McCool and Lime 2001). The problem of linear programming, implicit in the evaluation of the tourist carrying capacity, is not always of immediate resolution, given the quantity and nature of the parameters that characterize it (Mohammad et al. 2013). In fact, these are peculiar parameters specific for the location under study. Their evaluation is consequential to the collection and analysis of data related to the destination studied. Where the information concerning the place considered is not easily available, it becomes necessary to apply specific criteria designed to obtain a representative approximation of the missing information (Candia et al. 2020). Once the value of the tourist carrying capacity of the area under study has been calculated, it is necessary to make an appropriate comparison with the real number of tourists that visit a destination in order to determine the maximum level of saturation. It is in determining this level that the qualitative approach reveals its importance. It is essential to collect information, to be carried out in a standardized way on a given sample, in order to create a data matrix necessary to carry out a targeted analysis in accordance with the objectives set. A valid tool in this field is the survey, intended as a structured set of questions whose answers allow an effective collection of information (Figs. 1 and 2).

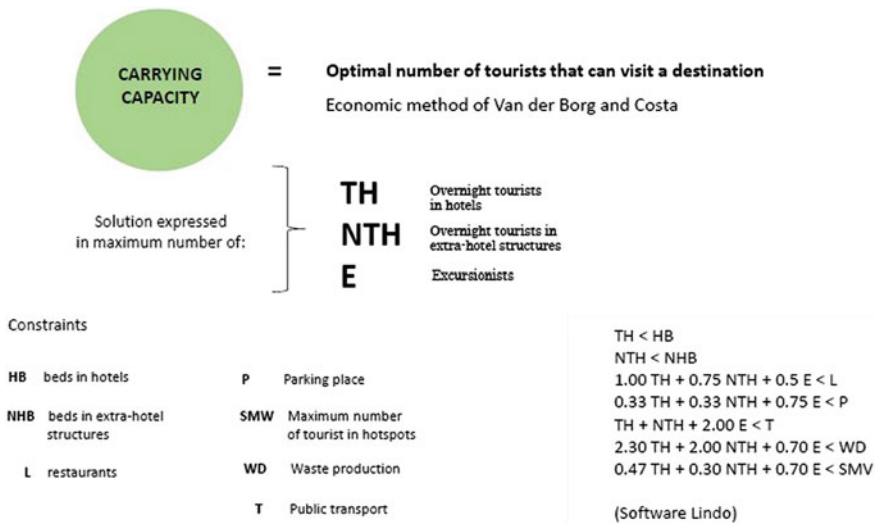


Fig. 1 The TCC ‘Tourism carrying capacity’ concept (Costa and Van Der Borg 1988)

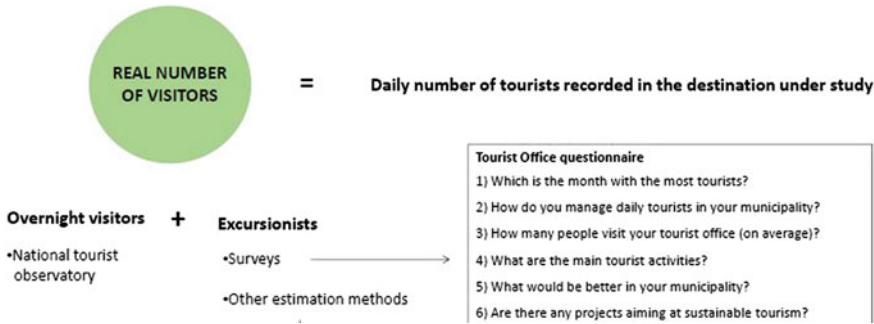


Fig. 2 Methodological approach to compute real number of visitors

The aim of the research is to draw up some guidelines to support the existing regional tourism plans by proposing actions that can be easily developed and implemented starting from the level of tourist carrying capacity of the destinations under study. The methodology identifies three different level of saturation: high—if the number of tourists is higher than the carrying capacity; medium—if the number of tourists is lower than the carrying capacity; low—if the number of tourists is equal to the carrying capacity. In particular, the Guidelines consist in defining actions and good practices to promote sustainable tourism development for each of the three saturation levels. These actions have been outlined in the tables (Tables 1, 2, 3) below that consider some priority areas such as mobility, waste, energy and tourism, in order to facilitate the identification of actions applicable to the destinations studied, which in this case are rural areas.

Table 1 Guidelines application—high level

Guideline application—high level	
Draw up a detailed Tourism Management Plan Decongest the areas affected by mass tourism by managing tourist flows Improve connections with alternative and sustainable destinations Define Time Plans to manage tourist flows Establish new policies to manage tourism seasonality Promote sustainable waste management Place energy-saving systems in accommodation facilities Support civic participation and environmental education Increase local authorities controls Use of sustainable means of transport in and between tourist destinations	1. Create dedicated apps that show real-time arrivals and queue status to access tourist attractions 2. Diversify tourist flows by promoting new destinations in nearby towns through daily offers 3. Promote the advertising of alternative and experiential activities ...

Table 2 Guidelines application—medium level

Guideline application—medium level	
Draw up a detailed Tourism Management Plan Establish marketing activities through the dissemination of advertising material and multimedia service Increase the tourist offer Make all destinations accessible and safe for all users Promote renewable energies Promote and encourage the purchase of locally produced goods Increasing sustainable mobility by enhancing sustainable means of transports (bike sharing/electric scooter) for tourists and citizens	1. Enhance wellness tourism 2. Promote outdoor activities and hiking trails and routes 3. Create apps to encourage tourists to visit alternative routes 4. Promote new destinations within organized trips 5. Support sport events ...

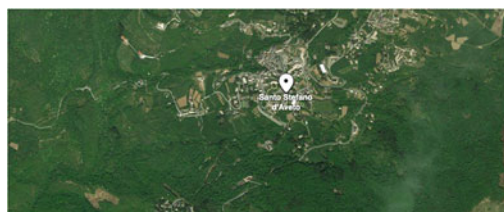
Table 3 Guidelines application—low level

Guideline application—low level	
Draw up a detailed Tourism Management Plan Promote Reduction, Reuse, Waste Recycling Encourage the purchase of local products and objects Install charging columns for electric cars in accommodation facilities Promote interventions to improve the energy efficiency of buildings Donate the unused material of the accommodation facilities	1. Implement a domestic composting programme 2. Assess the possibility of reuse of water for agriculture 3. Create apps to encourage tourists to be sustainable

3 Case Study: Santo Stefano D'Aveto (Liguria)

The methodology proposed in the second paragraph has been applied to the case study of Santo Stefano d'Aveto, a rural municipality in the Ligurian Apennines. Santo Stefano d'Aveto is located in the province of Genoa (Fig. 3) and is the largest municipality in Val d'Aveto (Pirlone et al. 2019). The history, as well as the flora and fauna, of this territory make it a destination of interest in the Liguria Region, a region mostly known for its coastal attractions such as Portofino, the Cinque Terre or Porto Venere which instead boasts a vast hinterland.

Thanks to its altitude above sea level (1,012 m), Santo Stefano d'Aveto benefits a purely Apennine climate, with cool summers and cold winters. Although Santo Stefano d'Aveto is a tourist destination known only at regional level, it has great potential for sustainable tourism development. In order to exploit this potential, it is necessary to develop programmes and policies that pays attention to the environment and local traditions. The municipality can count on traditional economic activities such as agriculture and livestock farming, activities to be promoted through the development of tourism interested in food and wine. Thanks to its climate, Santo Stefano d'Aveto can host tourists interested in outdoor sports/



Country: Italy; Region: Liguria
 Population: total 1255; density 2/kmq
 Area: 55,4 kmq
 The town was given the honor of "Orange Flag" in 2006 by the Italian Touring Club, an award given to smaller inland communities distinguished for excellence and hospitality.

Fig. 3 Information about Santo Stefano d'Aveto

activities both in winter and in summer. Since 1995 this municipality has been part of the regional natural park of Aveto, which boasts some of the most important naturalistic areas of the Ligurian Apennines. Inside the park there are many hiking, cycling and horse riding trails. In Santo Stefano d'Aveto it is also possible to rediscover ancient farming traditions. In the valley some ancient production techniques have undergone processes of innovation through the introduction of new technological solutions thanks to the involvement of younger generations who have opened new farms.

The authors, following the methodology presented in the previous section, initially calculated the tourism carrying capacity for the municipality of Santo Stefano d'Aveto estimating that 371 visitors can be hosted daily. At present, however, the number of tourists who visit the valley every day is lower: in fact, 152 people on average stay in the accommodation facilities and about 90 excursionists for a total of 242 visitors. According to the guidelines proposed in the second section, it can therefore be stated that Santo Stefano d'Aveto has a medium level of saturation and therefore a tourist potential to be exploited. The low number of tourists in the area is partly due to the lack of fame of the destination. This situation has a negative impact on the economy of the valley, especially considering that they are mostly seasonal tourists attracted by the cool summer climate or the winter ski resort. In order to make the most of the tourist potential of Santo Stefano d'Aveto the authors propose a series of specific actions (Fig. 4).

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- 1 Draw up a Tourism Management Plan in order to coordinate all actions for the development of the destination
 - 2 Creating thematic hiking networks, for example, between the historic villages in the valley
 - 3 Increasing the tourist offer by introducing new services and/or improving existing services
 - 4 Enhance domestic composting
 - 5 Marketing activities: advertising material, multimedia services, websites, mobile apps....
 - 6 Promote and encourage the purchase of local products...
-

Fig. 4 Specific actions to improve the tourism infrastructure of Santo Stefano d'Aveto

4 Conclusion

The sustainability of tourism in a given destination depends on the balance of multiple factors such as environmental features or socio-demographic or economic aspects. In order to achieve sustainable tourism planning it is necessary to actively involve all local actors (public and private entities, associations, citizens...). The Tourism Carrying Capacity is a valid tool not only to analyze the state of the art of a destination, but also as an objective parameter to improve the tourist sustainability of a destination. Sustainable tourism represents an opportunity for the growth and the development of poor contexts, such as rural areas, depressed destinations that deserve special attention and the definition of specific quality objectives.

As a result of the global emergency caused by Covid-19, national restrictions on travel abroad and fear of contagion have led to a sharp reduction in travel. This change has had positive repercussions in environmental terms but disastrous from an economic and social point of view. Tourism has been one of the most affected sectors. In this period focusing on the development of tourism in inland areas is even more important as it allows people to continue to travel safely, visiting destinations with low population and visitor density.

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