Enhancing Vulture's Territorial Assets Through Tourism Ecosystems for Spatial Development

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Abstract. Tourism is acknowledged as a pivotal sector for fostering the promotion and development of territorial assets supported by European and national policies. Nevertheless, it is fundamental to address pressing concerns pertaining to the management of local resources and institutional capacity for strategic planning to ensure sustainable success in the long-term perspective. Effective monitoring, adaptation, and collaboration play crucial roles in mitigating these challenges and attaining the envisioned goals of the strategy. However, the organization and management of the territorial capitals currently lack a clear definition, exacerbated by a fragmented approach. In the territorial planning process, determining the implications of tourism-based actions remains a challenge in the debate. This study contributes to structure and implement tourist ecosystems through the application of a structured theoretical model at the local level and the introduction of principles inherit smart tourism management in the tourism value chain. The analytical part of the research focuses on spatial identification of the components that structure the complex tourist ecosystem, follows the discussion of the structural matrix of the system, traceable in a case study as result, and finally the principles of smart planning opens to the future perspective of the research. Through the experimentation of this approach, the research aims to critically reassess the role of tourism in public investment decisions and offer innovative directions for planning in the European industrial strategy.

Keywords: Tourism ecosystems · Sustainability · Strategic planning

1 Introduction

The tourism ecosystem [1, 2] represents a general concept underlying the complex structure linking territorial features, cultural and natural values, private and public operators and citizens in defining the tourism phenomena intended as a component of territorial strategic assets. Relevant instance to innovate tourism planning and governance

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as a component of sustainable development policies focusses in the current debate on a dual transition towards becoming a greener and more digitized industry in order to enhance ecosystem resilience and accomplish the objectives outlined by the Green Deal [3] and the EU digital decade. The Commission advocates for a bottom-up approach [4–6], involving stakeholders in the co-creation [7, 8] of a transition pathway for the sector. Despite the efforts by public bodies and operators' network to promote sustainable tourism [9, 10], there remains a fragmented framework for developing effective and sustainable strategies within the context of territorial development. This fragmentation hampers the exchange of information, comparison of approaches, and sharing of insights within the tourism industry. With sustainability as its central focus, the proposed approach study serves as a support for bolstering territorial planning development.

Henceforth, the formulation of sustainable development strategies, aligning with the overarching objectives of the Green Deal, necessitates recognition of the values inherent within a local context. Building upon these initial observations, a concrete strategic vision for territorial development emerges, emphasizing the reinforcement of territorial systems intertwined with cultural dimension.

Digital technologies serve as pivotal tools to enhance existing planning methodologies within a broader, more influential framework.

The local tourism sector can experience substantial benefits through the implementation of smart tourism initiatives. These initiatives encompass integrating online booking systems for accommodations, tours, and activities to streamline the planning process for tourists and enhance revenue generation for local businesses. Additionally, the implementation of digital initiatives aimed at promoting cultural and natural heritage, such as virtual tours, augmented reality experiences, and interactive exhibitions, can further enhance visitor experiences. Moreover, the introduction of sustainable tourism practices serves to minimize the environmental impact of tourism activities while supporting initiatives focused on conserving natural resources and protecting biodiversity.

The work is structured in 3 section: the first, introduce the taxonomy presented in the analytical framework serves to structure the analysis of the area, facilitating a systematic assessment of its components and dynamics; the second, rely on the application of the theoretical and analytical framework aimed at identifying specialized tourism ecosystems, which is a component of the pilot research project conducted by Gatto and Scorza [11]. The proposed case study entails an examination of the specialized adventure tourism system in the Vulture area of the Basilicata region. These territorial assets play a pivotal role in regional development policies pertaining to the revitalization of rural inland areas.

The third section suggests the key components of smart tourism, which are instrumental in incentivizing the digital transition of the industry in the selected areas.

2 The Concept of a Tourism Ecosystem

The tourism ecosystem functions as a network comprising stakeholders, services, and attractions associated with the tourism sector within a local territorial asset. Identifying this ecosystem through its various components and understanding their interconnections serves as a valuable tool for supporting territorial planning, with an increasing emphasis

on sustainability [2, 12–16]. This methodology lays the groundwork for identifying dynamic systems applicable across diverse contexts, structured in two integrated steps. First, by employing a clear taxonomy derived from a literature review, and second, by spatially identifying the components of the micro/macro tourism system [2, 17].

To comprehensively examine potential gaps and overlaps within data sources, a detailed taxonomy has been developed. Taxonomies, in general, depict a hierarchical structure of classes or types of objects within a knowledge domain, utilizing controlled vocabulary to facilitate the retrieval of related information. The primary objective of the developed taxonomy is to unveil connections between data sources, illuminating the expansion of categories and identifying potential gaps that require attention. The role of the taxonomy is to precisely categorize entities into specific classes. The proposed taxonomy is grounded in three main ontological classes:

– "Specialized Tourism Destination Area" (D): It embodies a concentration or cluster of specialized attractions, services, including accommodation, restaurants, and culinary offerings, as well as accessibility factors.
– "Specialized Tourism System" (TS): The concept of a Specialized Tourism System, within the framework of spatial territorial analysis, refers to the spatial identification of one or more specialized destination areas where is dominant a category of tourism.
– "Tourism Ecosystem" (ES): "*A tourist ecosystem is defined as a network of interrelated and interdependent nodes that characterize one or more tourist destinations area providing benefits in a territorial development scenario.*"

  Protagonists of the cluster at the basis of the cooperation and coordination of territorial areas include tour operators, SMEs, institutional stakeholders of the local population and in general of the actors involved in sectors of the tourism dimension.

3 Key Components of Smart Tourism

Smart tourism, which leverages technology to enhance tourism experiences and destination management, is evolving rapidly. To understand the benefits of integrating new technologies in tourism, we analyze its key components:

– digitization for improved accessibility of sites: initially, smart tourism focused on digitizing tourism services and improving connectivity through platforms and applications, with the development of tourism websites, mobile apps and QR codes for easy access to information. As smart tourism progressed, so did the collection and analysis of data to personalize experiences and improve decision-making, predicting tourism trends and optimizing resource allocation, to the integration of emerging technologies such as AI, IoT, AR/VR and blockchain for intelligent destination management and monitoring, and new immersive cultural experiences and virtual tours.
– sustainability for resilience and risk management: with growing concerns about environmental impact, smart tourism is increasingly focusing on sustainability and responsible practices with the promotion of environmentally friendly transport options, implementation of measures to mitigate over tourism with destination diversification. Resilience and risk management have become an integral part of smart tourism strategies, with real-time monitoring and early warning systems.

– community engagement and co-creation for heritage enhancement: the increasing emphasis on involving local communities and tourists in the co-creation of tourism experiences encourages community participation in tourism planning and development, with the implementation of platforms to share feedback and contribute to destination improvement and the facilitation of cultural exchange and immersive experiences through community-based tourism initiatives.

The evolution of smart tourism involves moving from basic digitisation to a more holistic approach that integrates advanced technologies, sustainability practices, community engagement and resilience planning. By focusing on these strategic keys, destinations can adapt and thrive in a changing tourism landscape, such as in Vulture - Alto Bradano.

4 Vulture - Alto Bradano, a Relevant Case Study

The area under study is part of the Vulture-Alto Bradano territory in Basilicata Region (Italy). Specifically the route runs through the area of the municipalities of Barile, Rionero in Vulture, Atella and Filiano. These municipalities are part of the Vulture Regional Natural Park, a protected natural area established in November 2017 that covers a total of 57 496 hectares. The area is characterized by diverse landscapes and rich biodiversity, alternating between mountains and hills, flowering meadows and rivers, lakes and dense forests. The main attractions of the area are Mount Vulture, Mount S. Michele, the Abbey of San Michele Arcangelo and the Monticchio Lakes.

The taxonomy proposed in the analytical framework structures the analysis of the area. It emerged that the accessibility sector (15%) appears weaker compared to the attractions (39%) and services (46%) sectors, which are more or less balanced. From stakeholder and SWOT analyses, it is evident that the natural, scenic, and cultural potential provided by the Vulture area contrasts with the lack of valorization of the territory itself. Additionally, it presents an organized system of protected areas (Natura 2000 Network), excellent quality-to-price ratio of local services, and a local tourist identity. Under the lens of the downscaling of the New Urban Agenda (NUA) [18–21] key sustainability dimensions were extracted. The second phase rely in the design of action for strategic tourism planning based on two categories. The result is a territorial intervention plan comparable with other running projects of the same study-area highlighting the alternative perspective for sustainable development centered on residents' and tourists' well-being.

In the next figure it represented the analytical territorial interpretation, based on a site specific identification of the tourism ecosystem including attractors, services and accessibility nodes. It is the results of the methodological approach proposed by Gatto et al. [1, 2] as a result of a wider research funded by Italian Ministry "Tech 4 you".

The result is a comprehensive design based on site-specific features mapped and analyzed in a systemic perspective. Additionally, it could represent a way to generate a territorial strategic design based on a specialized tourism offer describing a territorial tourism system. The opportunity to discuss and to co-design with local actors this preliminary scheme will realize in practice the tourism ecosystem according to our

methodology. Such perspective represents the next stage of the research and a way to realize an inclusive territorial design process (Fig. 1).

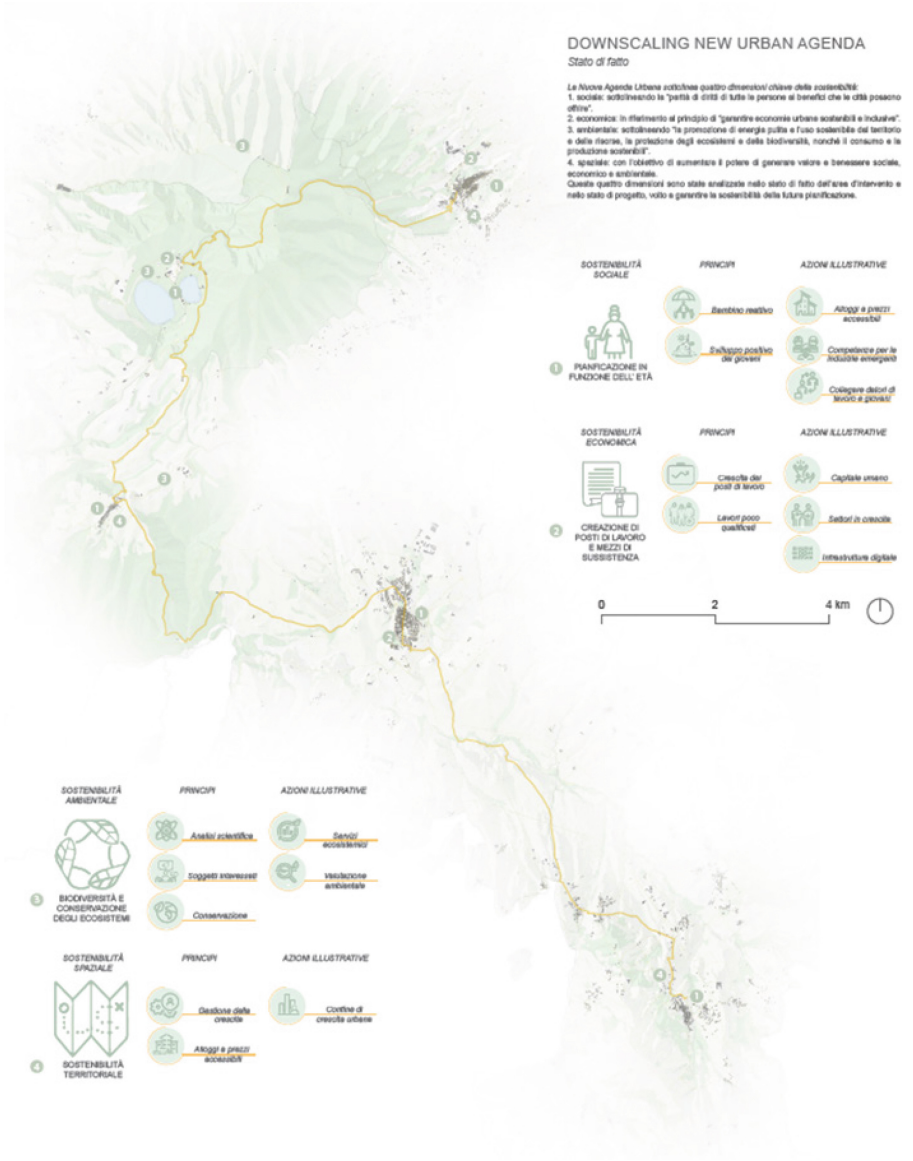


Fig. 1. Evaluation of the tourism system through the principles of the new urban agenda and identification of actions along the identified trekking route.

5 Conclusions

The proposed approach, grounded in the "tourism ecosystem" framework, serves as a facilitative platform to underpin tourism policies and guide multi-stakeholder decision-making processes in the planning of public investments for tourism development, with a focus on achieving greater effectiveness and sustainability. Despite the prevailing narrative within current regional development programs [22–24], which advocate for the development of inland areas through tourism by proposing new public investments in territorial attractions, facilities, and services, there remains a need for a more comprehensive assessment of local tourism ecosystems. Such an assessment could bolster both the quality of territorial planning and the efficacy of income generation derived from local tourism chains.

Concerning the specific case study, it is possible to underline that for the identified trekking route, it integrates the system of natural and cultural attractions, developing greater sensitivity to the issue of environmental sustainability with project actions that deal with:

1. Regeneration and design of thematic routes
2. Design of hotspots (flexible in uses) and free campsites.
3. Regeneration and enhancement of existing natural and cultural attractions.
4. Creation of new types of free services and enhancement of existing services.
5. New modes of sustainable mobility in strategic locations.

The recent implementation of the national policy, known as the "Borghi-call by Italian Ministry of Culture," illustrates this concept vividly. This policy allocates significant investments (20 million euros per project) to targeted competitive initiatives, which are evaluated through a robust impact monitoring matrix. The findings from the selected case study demonstrate how a tourism ecosystem approach can yield more targeted impacts with relatively minor public investments. This initial conclusion serves as a catalyst for broader discussions on the pivotal role of tourism in driving local development universally, regardless of specific structural features inherent to particular locations. It underscores a fundamental concern within planning disciplines, highlighting the potential benefits of adopting the proposed structured approach as a Decision Support System for future mainstream policies and programs.

By implementing these smart tourism initiatives, Vulture Alto Bradano can improve its competitiveness as a tourist destination, enhance visitor satisfaction and contribute to sustainable economic development while preserving its cultural and natural heritage. Promoting partnerships with local communities, businesses and stakeholders ensures that economic benefits are distributed fairly, without neglecting the safety and well-being of tourists and residents.

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