

COASTAL TOURISM DEVELOPMENT: ANALYZING LAND COVER CHANGES IN EUROPEAN SEASIDE DESTINATIONS DURING 1990-2018

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Abstract

Coastal areas have progressively emerged as centers of tourism and economic development, leading to significant land cover transformations. This paper examines the dynamic interplay between tourism development and environmental sustainability within coastal regions, spotlighting three European seaside resorts: Eforie Sud, Romania; Torremolinos, Spain; and La Grande-Motte, France. Through a comparative case study approach, the research delves into the strategies employed by these destinations to manage tourism growth, with a focus on implementing spatial planning principles and sustainable practices. By analyzing spatial data on land use changes from 1990 to 2018, the study quantitatively assesses the extent of urbanization and its environmental impacts, offering insights into the transformation of coastal landscapes in response to tourism development. The study underscores the importance of sustainable tourism development as a means to balance economic objectives with the preservation of natural and cultural assets. It concludes with recommendations for strategic planning, conservation initiatives, and community engagement to ensure the long-term viability of coastal tourism destinations. This research contributes to the discourse on sustainable tourism, advocating for policies and practices that harmonize development with environmental stewardship and socio-economic benefits.

Key words: *coastal tourism development, environmental sustainability, land cover changes, spatial planning*

JEL Classification: *R52, R58, Z32, Z39*

I. INTRODUCTION

Tourism in coastal areas represents a significant segment of the global tourism industry, known for its rapid growth and substantial economic contributions. However, the environmental impact of tourism development in these regions can have dual implications, with the potential to either enhance or degrade the natural and cultural landscapes that draw visitors (Zahedi, 2008). The relationship between tourism development and environmental sustainability in coastal areas is complex, dependent on the implementation of well-established policies and practices.

This paper aims to explore the development of coastal resorts from the last decades with a special focus on the critical role of tourism and environmental policies. The shift towards sustainability and the equitable management of environmental resources have become principles in the formulation of tourism policies. The approach aims to align tourism development with environmental conservation, ensuring that growth in the tourism sector is both sustainable and fair.

According to World Tourism Organisation, tourism is one of the world's largest industries today, it

is a key to development, prosperity, and well-being for nations. The tourism and business industry are contributing to a positive trade balance for the world's economy (Becker, 2016). Tourism grows internationally in a dynamic way and future prospects suggest continuing growth for the next decade or so. Cultural natural heritage, mild climatic conditions, and visitor friendly societies with long tradition in tourism are strong competitive factors (Coccosis & Koutsopoulou, 2020).

The European Commission defines a coastal tourist destination as an area that attracts tourists who come to enjoy seaside activities as a primary motivation. The need for travel has made tourism the number one industry in several countries worldwide. Coastal tourism is an activity that grew due to the facilities of mass tourism. The increasing number of world's population has as consequence the continuous augmentation of tourists. Along the sea coastline, there are popular activities related directly to the seawater resource that are component of coastal tourism: bathing, swimming, boating and fishing (Briciu, 2023).

Mass tourism developed as a result of technological advances, allowing the transportation of large numbers of people in a short time to places of tourist interest, so that more and more people could

enjoy spending their free time in those localities or resorts. This type of tourism is large-scale, agglomerated, and highly seasonal. It is based on overnight stays in large hotel complexes, where people have consumerist habits, prefer sun-and-sand tourism, and visit very popular destinations such as colonial cities with cultural attractions located in large urban areas (Fig.1), (Sánchez-Sánchez & Sánchez-Sánchez, 2022). Residents of a community may experience impacts in the domains of economics, social, as well as the environment as a direct outcome of activities pertaining to tourism (Ahmed, 2023).

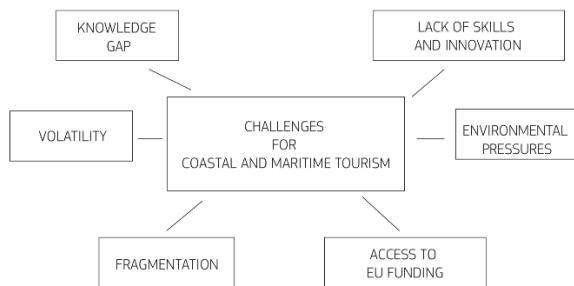


Figure 1 – Coastal tourism challenges
Source: EC-European Commission. (2014)

The prioritization of sustainability and environmental equity in the development of tourism policies marks an essential change towards the valorization of natural resources. These policies are increasingly based on the principles of sustainable development, leading to the diversification of tourism to achieve extended seasons and reduce the environmental footprint. This strategy seeks to harmonize tourism development with conservation and respect for the territories it influences, promoting a sustainable and equitable approach to the growth of the tourism industry (Conti & Perelli, 2005). This industry witnessed significant growth beginning in the 1960s, culminating in its global representation through the establishment of the World Tourism Organization fifteen years later (Paunescu, 2011). Concurrently, environmental awareness and sustainable development gained prominence on the global stage, notably with the United Nations Conference on Environment and Development (UNCED), also known as the 'Earth Summit', held in Rio de Janeiro, Brazil, from 3-14 June 1992. This pivotal event marked a turning point in how environmental considerations would be integrated into various sectors, including tourism.

II. METHODOLOGY

The study's methodological approach began with an in-depth examination of theoretical foundations, which included an extensive review of existing literature. This comprehensive exploration

encompassed a thorough consultation of documents, specialized literature, and case studies, aimed at establishing a robust theoretical framework. The practical phase entailed a systematic approach to documentation and examination of the effects of coastal tourism development.

The research adopted a comparative case study design to conduct an in-depth analysis of the impacts of coastal tourism development on three distinct European seaside resorts—Eforie Sud (Romania), Torremolinos (Spain), and La Grande-Motte (France). This approach facilitated the examination of each resort's strategies for managing tourism development, with a particular emphasis on environmental sustainability and socio-economic benefits. The methodology was structured to evaluate the application of spatial planning principles under the pressures of coastal tourism development and was informed by the principles outlined in the European Charter of Spatial Planning.

Spatial data on land use changes from 1990 to 2018 was collected through satellite imagery provided by the European Environment Agency, subsequently analyzed with Geographic Information System (GIS) technology. This data provided a quantitative measure of urbanization, the encroachment of artificial surfaces, and the alteration of natural landscapes due to tourism infrastructure development. GIS tools were used to analyze the patterns and extent of land use changes over the study period. This analysis revealed the spatial distribution of tourism development and its environmental impacts, highlighting the transformation of coastal landscapes in response to tourism growth.

Through this methodology, the research provided valuable insights into the practices of sustainable tourism development in coastal areas, accentuating the challenges of Eforie Sud, Torremolinos, and La Grande-Motte in balancing tourism growth with environmental preservation and socio-economic benefits.

III. CASE STUDIES

3.1. Eforie Sud, Romania

The Romanian seaside of the Black Sea stretches on a length of approximately 240 km, between Ukraine and Bulgaria, from the Danube Delta, in the North, to the Vama Veche, in the South (Simion et al., 2010).

Tourism on the Romanian coast began to manifest in an organized manner in the last decade of the 19th century, in Constanța and Techirghiol, and then in Eforie Nord and Eforie Sud; the latter being the first seasonal resorts on the coast, which became known in the country for the waters and mud of Techirghiol Lake (Cristea & Tanase, 2014).

Eforie Sud, a renowned summer resort part of the city of Eforie, is located in southeastern Romania

on the coastal strip between the Black Sea and Lake Techirghiol, approximately 5 km from Eforie Nord and 19 km from Constanța (Fig.2). The resort is characterized by a limestone cliff promontory that reaches up to 35 meters in height, offering picturesque views and a unique geographical setting. The proximity to both the sea and the therapeutic Lake Techirghiol contributes to its appeal as a destination for both relaxation and health treatments. The resort's establishment is deeply connected to the therapeutic use of Lake Techirghiol's waters and subsequently to the development of the adjacent seaside beach. (Tănase, 2014).



Figure 2 – Eforie Sud administrative area

The Eforie Sud resort was established in 1898. The initiative was due to Ion Movilă who set up a joint stock company called "Movilă-Techirghiol", beginning the construction of two hotels. The "Movilă" Hotel, with 80 rooms and an impressive theater hall, built on the plateau towards the sea, was inaugurated in 1904. The "Băi" Hotel had a ground floor and one story, 50 rooms, and a hot bath establishment; it was located on the shore of Lake Techirghiol, with its inauguration taking place in 1903. These two buildings constituted the nucleus of the future resort (Tănase, 2014).

From its foundation to the present, Eforie Sud has experienced significant transformations, evolving from a modest balneary destination into a more comprehensive tourist spot. Initially known for its therapeutic waters and mud from Lake Techirghiol, Eforie Sud's development has been influenced by broader trends in Romanian tourism and shifts in consumer preferences.

Over the years, Eforie Sud, along with Eforie Nord, has seen a variety of development projects aimed at enhancing its attractiveness as a tourist destination.

These developments were not just limited to the construction of new hotels and resorts but also included improvements in local infrastructure and services to accommodate the growing number of visitors. The development and expansion of tourism in Eforie Sud have brought about several challenges, particularly concerning the environment. Coastal areas like Eforie Sud are particularly vulnerable to issues such as coastal erosion, which can be exacerbated by increased tourism activity and infrastructure development.

3.2. TORREMOLINOS, SPAIN

The development of tourism activities along the coast of Spain, began in the 1960s, gradually led to large areas of land being devoted entirely to mass tourism in response to international demand of "sun and sea" holidays. Hotels are used to host visitors in a "package-deal" system, organized mainly by large-scale tour operators who control international demand. Meanwhile, there has been a progressive increase in local demand for holiday accommodation, and this is now giving way to the development of enormous 'holiday towns' based on the construction of large housing estates of villas and apartment blocks (Rebollo & Baidal, 2003).

Torremolinos, a municipality in Andalusia, southern Spain (Fig.3), has seen significant urban development and transformation into a major tourist destination since the late 1960s. The region has faced challenges related to the overexploitation of tourist areas. The growth in tourism, particularly in Mediterranean coastal areas like Torremolinos, reflects broader trends in Spain's position as a leading global tourist destination (Mantiñán & Solla, 2010).



Figure 3 – Torremolinos administrative area

The restructuring and renovation of consolidated tourist destinations is a need widely recognised by public and private agents. Although this need is a very current issue, it has already been present during the last few years in the Spanish tourism policy, which has gradually adapted to the changes experienced on a national and international scale, while at the same time it oriented its strategy regarding tools for the planning and management of tourist activity. In this sense, the great action lines in tourism matters have evolved from competitiveness criteria, *Plan Marco de Competitividad del Turismo Español* (Master Competitiveness Plan for Spanish Tourism) to others based on quality, *Plan Integral de Calidad del Turismo Español* (Quality Overall Plan for Spanish Tourism), (Vera-Rebollo & Rodriguez-Sanchez, 2010). The new strategies now being employed try to promote more value-added projects like investments in quality hotels or a sound network of urban services. But the reality of the mass-production model, with its continuous construction of holiday homes, seriously limits such initiatives (Bramwell, 2004).

3.3. La Grande-Motte, France

The development of La Grande Motte (Fig.4), initially envisioned by General Charles de Gaulle in 1962 as part of the extensive coastal development strategy known as the *Mission Racine*, aimed to cater to the burgeoning tourist demand of the era. This initiative sought to transform the Languedoc-Roussillon coastline into a prime tourist destination, thereby addressing the lack of tourism infrastructure in the region. La Grande Motte emerged as a key project under this plan, designed to attract tourists from Northern Europe and across France, representing a pivotal moment in European urban and tourism project development during the post-war economic expansion known as the *Trente Glorieuses* (Pearce, 1978; Rieucau, 2000).

Jean Balladur, the architect behind La Grande Motte, through his projects emphasized the harmony between the built environment and the natural landscape, pursuing a utopian mix of modernism and functionality. His approach to urban planning and architecture was revolutionary, focusing on creating spaces that encourage community and interaction, drawing on his philosophical background and interest in creating a modern, sustainable city that prioritizes human needs and environmental considerations (Pearce, 1978; Rieucau, 2000).

La Grande Motte's commitment to green spaces, with more than 70% of the urban area dedicated to parks and gardens, underlined the project's foresight in sustainable urban planning. This innovative use of green spaces and the integration of unique architectural forms established La Grande Motte as a pioneering example of a *garden city* by the sea (Pearce, 1978).



Figure 4 – La Grande-Motte administrative area

The recognition of La Grande Motte as *Patrimoine du XXème siècle* (heritage of the 20th century) in 2010 underlines its architectural significance and innovative spirit. This distinction highlights its place in France's cultural and architectural heritage, recognizing its unique blend of avant-garde design principles and its role in the evolution of modernist architecture. The design of the resort reflects a successful effort to create a balanced and sustainable urban environment that remains relevant and attractive to both residents and visitors (Rieucau, 2000).

IV. RESULTS AND DISCUSSIONS

The European Spatial Planning Charter, established at CEMAT's 6th session in 1983, set a precedent for regional development aimed at achieving territorial cohesion (Cocean & David, 2012). Authored by senior officials, the Charter outlined principles for balanced development, environmental management, and strategic land use, positioning land-use planning as a crucial tool for achieving these goals. This approach underscores the importance of integrating planning across regions to foster socio-economic balance and sustainable land management (Cocean & David, 2012).

The objective of this paper was to analyze the extent to which the principles outlined in the European Charter of Spatial Planning were implemented in three distinct coastal tourism case studies: Eforie Sud, Torremolinos, and La Grande-Motte. Through this analysis, the paper aimed to highlight the application of spatial planning principles under the pressures of coastal tourism development. Based on the data provided by the European Environment Agency, land cover changes were analyzed (Fig.5).

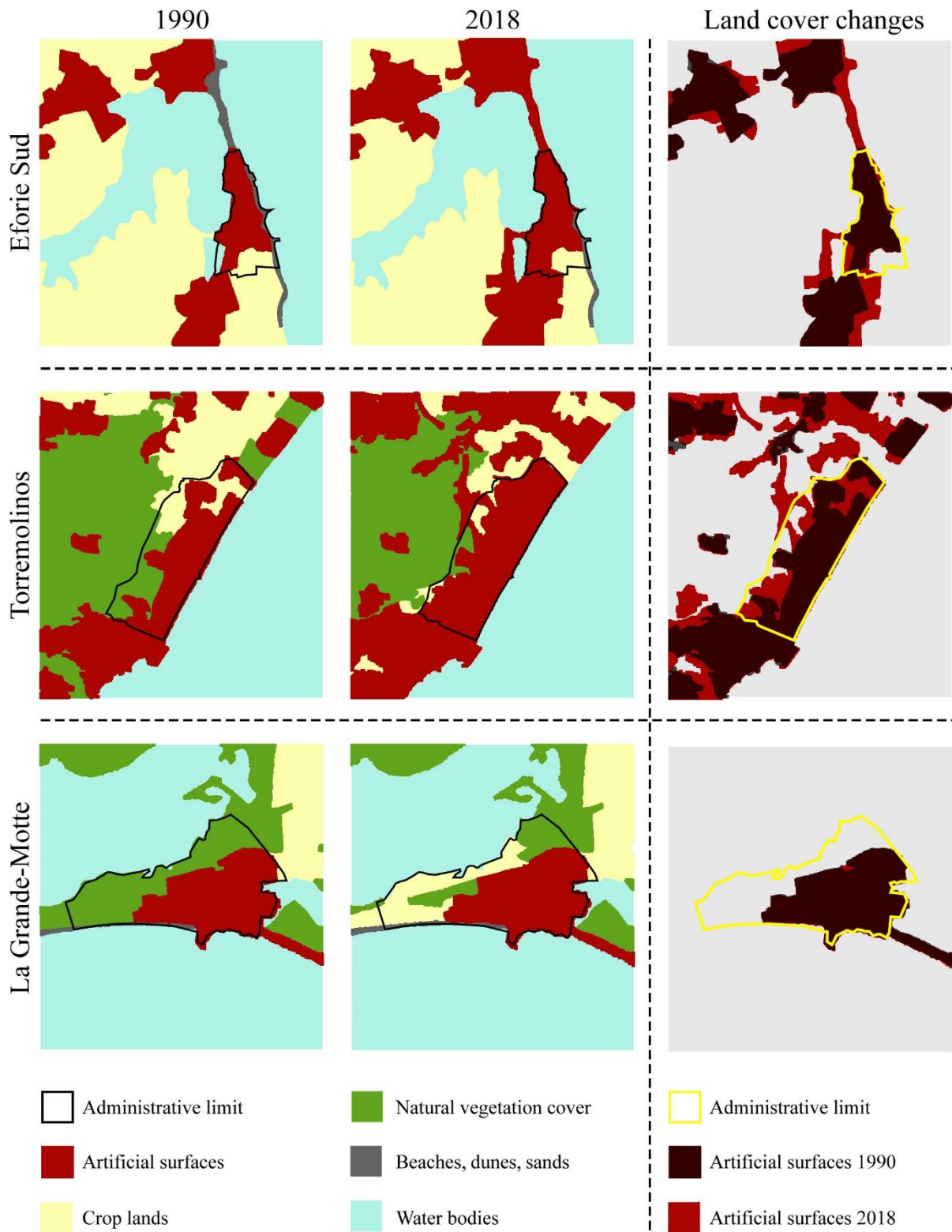


Figure 5 – Land cover changes from 1990-2018

Source: Author's elaboration based on data from Corine Land Cover (CLC) 1990 and 2018

The visual data underscores the pressure between socio-economic progress and environmental preservation, reinforcing the need for strategic spatial planning to achieve sustainable development. The observed land transformations highlight the need for continued efforts in implementing comprehensive land-use plans that align with these principles.

The period between 1990 to 2018 in Eforie Sud indicates a high rise in artificial surfaces, particularly advancing from the resort's southern area towards the Tuzla commune.

This reflects a process of conurbation, where the distinct boundary between two settlements becomes less defined due to urban expansion. Concurrently, the beachfront's enlargement points to tourism's escalating demands driving development. These developments underscore the urgent need for judicious urban management that aligns with environmental conservation, stressing strategic planning to temper the adverse effects of unchecked development for the sustainability of coastal zones.

Moving forward to Spain, between 1990 and 2018, Torremolinos experienced substantial land use changes, with a notable increase in artificial surfaces, as depicted in the provided figure above. This expansion has led to a considerable reduction in green areas. The reduction of natural vegetation cover can have several negative impacts on the local environment and economy, including the loss of biodiversity, increased heat island effects, and a decrease in the aesthetic and recreational value that attracts tourists. The emphasis on development over environmental conservation suggests a deviation from sustainable tourism practices recommended by regional and European planning guidelines. These changes reflect a shift towards urbanization and infrastructure development, potentially at the expense of the natural landscapes that contribute to the region's tourism appeal.

La Grande-Motte is a prime example of strategic urban and tourism planning that carefully balances environmental sustainability with developmental needs. This approach embraces the principles of low-impact development, showcasing an integration of living spaces with the natural environment. The resort serves as a benchmark for sustainable tourism development, proving that economic viability, social inclusivity, and environmental stewardship can be synergistically achieved. La Grande-Motte's evolution presents a case study in the delicate balance between economic development and environmental conservation, emphasizing the vital role of sustainable practices in tourism-centric growth.

The case studies of Eforie Sud, Torremolinos, and La Grande-Motte provide unique insights into the application of sustainable tourism principles. The Eforie Sud's resort development has necessitated a balance between bolstering tourism and preserving the Black Sea's natural allure. Torremolinos experienced rapid urban growth driven by intense tourism demand, which outpaced efforts to maintain a sustainable equilibrium between tourist influx and the preservation of its natural resources. La Grande-Motte stands out for its strategic planning, which prioritizes environmental conservation alongside tourism and urban growth.

All three locations underscore the need for sustainable approaches that encompass environmental stewardship, cultural authenticity, and equitable socio-economic benefits.

V. RECOMMENDATION

Sustainable tourism has become a key issue for tourism policies and management and is becoming increasingly important because of its widespread social acceptance. In spite of the prolific use of the term *sustainable tourism* and the numerous scientific definitions proposed for it, the ambiguity inherent in the concept and its rhetorical and often inappropriate use have not yet been overcome (Ivars, 2001).

The principles of sustainability refer to the environmental, economic, and socio-cultural aspects of tourism development, and an appropriate balance must be established between these three dimensions to guarantee its long-term sustainability (Candia et al., 2018).

Sustainable tourism should adhere to the following principles:

- **Strategic Spatial Planning:** Advocacy for strategic spatial planning is paramount, aiming to equilibrate tourism development with environmental conservation.
- **Conservation Initiatives:** Urgent implementation of conservation measures is essential to safeguard and rejuvenate natural landscapes and biodiversity, particularly in locales undergoing rapid urbanization.
- **Cultural Integrity:** Promotion of tourism practices that venerate and conserve the distinct cultural heritage of coastal communities is recommended.
- **Sustainable Development:** Encouragement of eco-friendly tourism infrastructure development is essential, minimizing environmental footprints.
- **Inclusive Community Engagement:** It is advised to inclusively engage local communities in tourism planning and management, ensuring developments are congruent with their needs and cultural preservation.
- **Rigorous Monitoring:** The establishment of comprehensive monitoring and evaluation frameworks is crucial to appraise the impacts of tourism development and facilitate necessary policy adjustments.

VI. CONCLUSION

Analysis into coastal tourism development across Eforie Sud, Torremolinos, and La Grande-Motte has highlighted the complex interplay between tourism expansion and environmental sustainability.

This paper underscores the imperative of integrating sustainable methodologies to ensure that tourism development acts as a catalyst for positive economic and environmental outcomes.

The comparative analysis points out a marked transformation within the coastal landscapes of the examined regions, propelled by the demands of tourism.

Collectively, these case studies illuminate the

spectrum of approaches toward managing tourism development's impact and underscore the critical need for sustainable integration.

The research outcomes indicate that tourism development, while a potential engine for economic enhancement and urban progression, needs meticulous management to avert environmental and cultural degradation. La Grande-Motte's successful equilibrium between development and conservation provides insightful implications for sustainable urban planning. In contrast, the experiences of Eforie Sud and Torremolinos accentuate the pressing requirement for policies that foreground long-term ecological

sustainability over immediate economic benefits.

In conclusion, the juxtaposition of Eforie Sud, Torremolinos, and La Grande-Motte presents a nuanced narrative on the intricacies of coastal tourism development. The findings affirm that sustainable practices are not merely advantageous but imperative for the enduring success of tourism in coastal areas.

This approach ensures the sustainable future of coastal tourism, preserving the natural and cultural legacies that define these distinctive landscapes for generations to come.

REFERENCES

- Ahmed, N. (2023). *Residents support towards cultural heritage tourism: the relevance of heritage proximity and tourism perceived impacts*. Revista de turism-studii si cercetari in turism, (35).
- Baidal, J. A. I. (2001). *La planificación turística de los espacios regionales en España* (Doctoral dissertation, Universitat d'Alacant-Universidad de Alicante).
- Becker, E. (2016). *Overbooked: The exploding business of travel and tourism*. Simon and Schuster.
- Bramwell, B. (Ed.). (2004). *Coastal mass tourism: Diversification and sustainable development in Southern Europe* (Vol. 12). Channel View Publications.
- Briciu, A. E. (2023). *A graphic review of studies on coastal tourism and bathing water quality*. Revista de turism-studii si cercetari in turism, (36).
- Candia, S., Pirlone, F., & Spadaro, I. (2018). *Sustainable development and the plan for tourism in Mediterranean coastal areas: Case study of the region of Liguria, Italy*. WIT Transactions on Ecology and the Environment, 217, 523-534.
- Coccosis, H., & Koutsopoulou, A. (2020). *Measuring and monitoring sustainability of coastal tourism destinations in the Mediterranean*. Tourism: An International Interdisciplinary Journal, 68(4), 482-498.
- Cocean P., David Nicoleta (2012), *Territorial Cohesion – Major Desideratum of Spatial Planning*, Revue Roumaine de Geographie/Romanian Journal of Geography, 56 (2), 97-104, București.
- Conti, G., & Perelli, C. (2005). *Traditional mass tourism destinations: The decline of Fordist tourism facing the rise of vocational diversification*. Gov. Sustain. New Tour. Trends Planum, 11, 1-20.
- Cristea, N., & Tanase, G. (2014). *The Coordinates of Local and Central Policy to Develop the Romanian Seaside Terminal Between 1878-1941*. Year-Book „Petre Andrei” University from Iasi, Fascicle: Law, Economic Sciences, Political Sciences, (14), 215-244.
- EC-European Commission. (2014). *A European strategy for more growth and jobs in coastal and maritime tourism*.
- European Environment Agency — Corine Land Cover (CLC) 1990
- European Environment Agency — Corine Land Cover (CLC) 2018
- Paunescu, C. (2011). *Periplu prin istoria hotelului și turismului*. EIRP Proceedings, 3.
- Pearce, D. G. (1978). *Form and function in French resorts*. Annals of Tourism Research, 5(1), 142-156.
- Piñeira Mantiñán, M. J., & Santos Solla, X. M. (2010). *Impact of tourism on coastal towns: from improvisation to planification*. The Open Urban Studies Journal, 3(1).
- Rebollo, J. F. V., & Baidal, J. A. I. (2003). *Measuring sustainability in a mass tourist destination: pressures, perceptions and policy responses in Torrevieja, Spain*. Journal of Sustainable Tourism, 11(2-3), 181-203.
- Rieucou, J. (2000, November). *La Grande-Motte, Ville permanente, ville saisonnière/La Grande-Motte, a town for all seasons and summertime resort*. In Annales de géographie (pp. 631-654). Armand Colin.
- Sánchez-Sánchez, F. J., & Sánchez-Sánchez, A. M. (2022). *Evaluating the efficiency and determinants of mass tourism in Spain: a tourist area perspective*. Portuguese Economic Journal, 1-35.
- Simon, T., Mazilu, M. E., Andrei, M. T., Severineanu, R. C., & Dumitrascu, C. (2010). *Aspects of the tourist development on the Romanian Black Sea coastline*. CUHT2010, Corfu, Greece, 65-70.
- Tănase, G. (2014). *Aspecte ale turismului la Eforie Nord și Eforie Sud (1878-1941)*. ISTRO - PONTICA no. 2.
- Vera-Rebollo, F., & Rodriguez-Sanchez, I. (2010). *Tourism strategies for the renovation of mature coastal tourist destinations in Spain*. WIT Transactions on Ecology and the Environment, 139, 21-33.
- World Tourism Organization (2013), *Sustainable Tourism for Development Guidebook - Enhancing capacities for Sustainable Tourism for development in developing countries*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284415496>, (accessed on February 2024)
- Zahedi, S. (2008). *Tourism impact on coastal environment*. WIT Transactions on The Built Environment, 99, 45-57.
- 6th Conference of the Council of Europe of Ministers Responsible for Spatial Planning (CEMAT), *Prospects of development and of spatial planning in maritime regions*, 19-20 MAY 1983. <https://www.coe.int/en/web/conference-ministers-spatial-planning/6th-cemat>, (accessed on February 2024)