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Circular Economy in the tourism sector: a stakeholders' perceptions analysis in the Mediterranean area

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Abstract:

Purpose

Tourism has a significant role to play in the ongoing transition to Circular Economy, also due to its cross-cutting value chain, to its interconnections with other economic activities, and to the interaction it generates between consumers and producers. Moreover, the management of a tourist area is particularly complex, also due to the presence of various stakeholders, who must necessarily cooperate. The purpose of this paper is to identify bottlenecks and challenges of C.E. in the tourism sector through an economic, political, socio-cultural, technological, and environmental perspective, to provide indications of theoretical and practical value to managers and policy makers. More than 100 tourist destinations' stakeholders were involved, including public institutions, representative associations, private companies, and NGOs.

Methodology

The research employed focus groups and a survey as research instruments to understand perceived challenges and bottlenecks for a C.E. transition across major stakeholders of tourism sector in the Mediterranean.

Findings

The lack of adequate economic and financial incentives and funding in the tourism sector by public and private actors, as well as the lack of long-term strategies by public and private actors are perceived as very relevant among the respondents. These, linked with lack of adequate policies, lack of specific knowledge, know-how or competencies of all the actors, are other relevant bottlenecks can constitute a brake for the implementation of the C.E. in tourism. Therefore, from these lacks derives the challenge of creating a well-structured policy framework that considers even regulatory simplifications able to guide and support actions on circular/sustainable issues in the tourism sector. Furthermore, increased involvement of all actors could lead to more competitive advantages and benefits for local economy, environment, and local communities, stimulating the innovative capacity of the tourism sector.

Research limitations/implications

The analysis, although it offers an interesting starting point for understanding tourism stakeholders' point of view on the implementation of C.E. in the sector, can be enriched by deepening the territorial knowledge of the main Mediterranean destinations, through the analysis of individual destinations and a higher segmentation of tourism stakeholders.

Originality/Value

This study sheds light on the main bottlenecks and challenges to C.E. implementation in tourism by its main stakeholders, offering a comprehensive perspective for the circular transition of this sector. This overview is also a useful tool at the level of decision and policy makers of tourist destinations in order to undertake actions aimed at facilitating and pushing the transition towards the Circular Economy of the sector and its players.

Keywords - Circular Economy; tourism; stakeholders perceptions; drivers and barriers.

Paper type - Research paper

1. Introduction:

The tourism sector is one of the most important industries in the world, characterized by an inherent complexity and a multiplicity of levels of analysis and actors involved. These levels and actors are very different from each other, but only together can contribute to its development (Rukmana *et al.*, 2023). Moreover, it is an economic sector capable of generating numerous impacts: not only economic, but also environmental, cultural, and social (Girard *et al.*, 2017; Nedyalkova, 2016). Precisely because of the peculiarity of this sector, characterized by the presence of cross-cutting value chains, numerous studies have highlighted the need to export the concept of sustainability within tourism as well (Pan *et al.*, 2018; Girard *et al.*, 2017; Garrigos-Simon *et al.*, 2018). Tourism, due to its relevant impacts, was one of the first sectors to engage with sustainability concepts and principles, to ensure a "sustainable tourism" (UNWTO 1998). Indeed, thanks to a change in the supply of services and goods, in its management and in related activities, the benefits of sustainability would spread to all levels: from destination management to businesses and their value chains, to local communities, consumers and ultimately, tourists (Rodriguez *et al.*, 2020).

However, despite the ever-growing scientific literature inherent in the introduction of the concept of sustainability in tourism, the literature on Circular Economy in this sector is still underdeveloped (Rodriguez *et al.*, 2020). Yet, the contribution that Circular Economy model can make to this sector has been widely recognized (Rodríguez, *et al.* 2020; Niñerola *et al.*, 2019; UNWTO 2018), as its ability to increase its sustainability. In this context, in fact, Circular Economy stands as a precise sustainability strategy (Ranta *et al.*, 2018), as it aims to establish "closed" production and consumption cycles, in which resource use, waste, and waste generation are minimized in favour of concepts such as reuse, recycling, and regeneration, as well as collaboration, systems approach, and sustainable innovation (Gusmerotti *et al.*, 2019). So, the application of the Circular Economy paradigm can prevent resource depletion across various levels: micro-level entities such as enterprises and consumers (Ormazabal *et al.*, 2018), meso-level economic agents cooperating in symbiosis (Prieto-Sandoval *et al.*, 2018), and city, regions and governments embedded at the macro level (Winans *et al.*, 2017; Prieto-Sandoval *et al.*, 2018; Yuan *et al.*, 2006).

However, such a profound transformation of the current economic system necessarily encounters some barriers to its implementation, just as there are enabling factors that may on the contrary encourage its adoption (Ritzén *et al.*, 2017; Vargas-Sanchez, 2018), especially if attention is turned to the level of tourism destinations (Winans *et al.*, 2017, Prieto-Sandoval *et al.*, 2018; Yuan *et al.*, 2006). Indeed, the actors in this sector, with their dense network of interactions, potentially contribute to increasing the circularity and sustainability of tourism, as well as that of the territories in which Circular Economy is applied or wants to be applied (Girard *et al.*, 2017).

Moreover, the growing pressures on rethinking the current linear economic model in favour of the circular one affects all territorials' stakeholders. Therefore, this phenomenon implies a necessary multilevel collaboration (Pain, 2004) in order to effectively implement actions and initiatives that benefit tourist destinations, businesses, local communities, and tourists themselves (Wondirad *et al.*, 2020). The tourism sector can therefore be defined as a dynamic system, in which each actor contributes to the achievement of a balance that is also dynamic, and which varies as the needs of the stakeholders involved within that system change. Collaboration in this context is therefore a necessity, as is the achievement of a vision of shared value on the three axes of sustainability. Hence the importance of system stakeholders and the need to understand how to foster a systemic vision in the realisation of a circular model.

To do this, it is necessary to understand the views of tourism industry main stakeholders (Baggio, 2011), such as public institutions, representative associations, private companies, NGOs, local action groups (LAGs), etc. As Silva-Santisteban Mondoñedo states, "there is limited research comparing the perceptions of different stakeholder groups in comparison to the amount of research conducted

on individual stakeholder groups” (Silva-Santisteban Mondoñedo, 2021, pag. 47). Moreover, the assessment of public and private actors' awareness is considered in literature to be a first step in understanding the level of C.E. knowledge and an essential tool to better guide C.E. policies and actions both at the level of decision making and of business and civil society (Guo *et al.*, 2017; van Langen *et al.*, 2021).

In order to fill the aforementioned gaps in the literature, this study analyses the perceptions of a sample of stakeholders from some Mediterranean tourism destinations, analysing their perceptions towards the challenges and bottlenecks to the implementation of a new Circular Economy paradigm in tourism.

Finally, this research fits into the broader framework of action research. This methodology favours the active involvement of key actors, such as tourism organisations, local communities, businesses, and other stakeholders, enforcing the relevance of the results, as they are based on stakeholders' knowledge and direct experience (Coughlan and Coughlan, 2002). The application of action research in management, especially in studies on the application of the Circular Economy in the tourism and destination sector, offers numerous benefits, including the involvement of key players, the contextualisation of solutions, the creation of continuous learning cycle, the practical application of findings, stakeholder participation and knowledge co-creation.

2. Bottlenecks and challenges to Circular Economy implementation

This section provides an overview of the main bottlenecks and challenges to Circular Economy implementation found in the literature, integrating them within the framework of institutional theory and stakeholder theory.

2.1 Bottlenecks of C.E. implementation in tourism

The integration of the Circular Economy paradigm in the tourism sector presents several challenges and barriers that need to be addressed to achieve a real sustainable and circular transition, and that involve all levels of this sector. Indeed, overcoming the barriers to the implementation of the Circular Economy in tourism requires a holistic and collaborative approach through joint efforts and the creation of strategic partnerships (Manniche *et al.*, 2017). Because of this need for close collaboration and coordination, much research has been done in the literature on the importance of considering the interests and expectations of all relevant stakeholders in the sector. According to some authors, in fact, the engagement of primary stakeholders plays a pivotal role in tourism management (Todd *et al.*, 2017; Silva-Santisteban Mondoñedo, 2021).

According to stakeholder theory, tourism organisations should consider the interests and expectations of all relevant stakeholders in their decisions and operational activities (Parmar *et al.*, 2010). This approach challenges the traditional view of tourism, where a destination is conceived merely as a geographical location, arguing instead that tourism organisations should pursue balance and harmony among stakeholder interests to ensure a sustainable, long-term management. The local tourism system is in fact to be considered as a set of attractions and factors that together represent a system that enhances local resources and culture with a strategic and managerial vision. Stakeholder theory, therefore, offers a number of benefits in the tourism context, helping to prevent or mitigate conflicts between stakeholders, in managing their interests and in negotiating compromises between parties (Silva-Santisteban Mondoñedo, 2021). Also, according to institutional theory, there is a nexus between governmental actors and tourism enterprises (Delmas and Montes-Sancho, 2011), based on a relationship of interdependence. One of the main sources of coercive pressure postulated by the institutional theory is in fact the role of government policies and regulations. Governments may introduce regulations that require tourism industries to adopt sustainable and Circular Economy practices. Therefore, tourism enterprises depend on government policies and regulations for their

functioning and to ensure the legitimacy of their activities (De Jesus et al., 2018; Govindan et al., 2018). At the same time, governmental actors depend on tourism enterprises for economic development, employment, the provision of goods and services for tourists, and the promotion of the image of the tourist destination.

At the level of public actors, there is often a lack of clear regulatory frameworks and policy incentives to promote the adoption of the Circular Economy (Kumar, V. et al. 2019; Masi et al. 2017). The lack of specific financial instruments, such as subsidised financing or tax breaks for circular investments, may limit the willingness of companies to engage in such initiatives (Falcone, 2019).

But the barriers that may influence the application of the Circular Economy within the tourism sector are not only of financial and regulatory nature. According to institutional theory, in fact, there are various forms of socio-cultural prescriptions that can influence the behaviour of organisations (Scott, 2008; Gusmerotti *et al.*, 2019). One of the biggest challenges in this context is related to the difficulties in implementing collaboration between businesses and public authorities (Masi *et al.*, 2017; Hart *et al.*, 2019). Indeed, the lack of a robust collaboration network and effective communication channels may hinder the exchange of information, resources and knowledge needed to adopt sustainable and circular practices and strategies (Wondirad *et al.*, 2021), as stated by the stakeholder theory. Furthermore, elements such as lack of mutual trust between parties, reluctance to undertake significant changes in management and operations, lack of awareness and understanding can limit the willingness to cooperate and share experiences and best practices among tourism stakeholders (Wondirad *et al.*, 2021; Masi *et al.*, 2017). In this context of uncertainty, businesses and public authorities may hesitate to implement circular initiatives for fear that visitors will not appreciate or fully understand them, or the importance of the protection of the environment and natural resources can be undervalued (Vatansever *et al.*, 2021; Hina *et al.*, 2022; Kumar *et al.* 2019).

Finally, technological progress (or backwardness) can also be an important element for sustainable and circular development. This can be reflected at the territorial level in a lack of adequate infrastructure that supports the achievement of sustainability goals (Kumar, V. et al. 2019; Masi et al., 2017). This backwardness can also be an obstacle at the level of companies and can be seen not only in purely technological terms, but also from the point of view of a lack of innovative capacity in the supply of products and services (De Jesus et al., 2018).

2.2 Challenges of C.E. implementation in tourism

Although the road to implementing the Circular Economy in the tourism sector is not without obstacles, these can be addressed as opportunities for positive transformation. In this context, therefore, the challenges faced by tourism stakeholders can be defined as possible actions to be implemented in response to expectations and pressures of regulatory, financial, economic and social nature, taking into account the global context.

Since stakeholder theory promotes the creation of shared value between tourism organisations and stakeholders (Sautter et al., 1999; Byrd, 2007), in the context of the application of C.E., collaboration between different actors can lead to the identification of numerous opportunities of varying nature for the tourism sector.

Indeed, several authors have emphasised the importance of the role of economic-financial drivers in promoting the transition towards more circular business models, capable of providing competitive advantages and generating added value (Gusmerotti *et al.*, 2019; Aloini *et al.*, 2020; Geissdoerfer *et al.*, 2017). While the costs to be borne by businesses can be a barrier to the adoption of the circular economy, the adoption of more circular business models at all levels of the tourism sector constitutes an opportunity for the identification of new revenue channels and new markets (Vargas-Sánchez, 2018; Rodriguez *et al.*, 2020), as well as an economic advantage in terms of raw material dependency

of this sector (Williamsland & Ponsford, 2009, Nedyalkova, 2016). As also asserted in the context of the regulatory pressures of institutional theory, companies in every sector have every interest in maintaining a good reputation and a positive relationship with the society and community in which they operate: adapting to social expectations, also adopting circularity practices, can help to ensure the trust of customers and the goodwill of the local community and ultimately gain more competitive advantage (Sorin, F., et al., 2021).

Moreover, through the efficient use of resources, the tourism sector can reduce its environmental footprint contributing to the reduction of operating costs for businesses. This can also act as a lever for repositioning in tourism sector and increase the resilience of territories and tourism destination by reducing dependence on raw materials and energy and improve destination image (Ormazabal *et al.*, 2018). These opportunities and challenges also transpire at the level of local communities, generating economic benefits. This process leads to a more equitable distribution of the economic benefits generated by tourism, favouring social and economic sustainability of tourism destinations (Nedyalkova, 2016). Indeed, the paradigm shift towards a Circular Economy requires new skills and new professional roles, stimulating the creation of local employment opportunities, both directly and indirectly (Govindan *et al.*, 2018; Girard *et al.*, 2017). Maximising the contribution of tourism to the prosperity of tourist destinations and promoting the well-being of communities are two of the goals identified for sustainable tourism by the UNWTO (UNWTO, 2013).

Finally, regulations and policies also play an important driver for the application of C.E., as they can influence its adoption to all levels of tourism destinations. The creation of tailored norms, set at the level of decision makers, can guide the sector's enterprises in adopting more circular practices and business models (Del Vecchio *et al.*, 2022) and promoting a culture of sustainability among local communities and tourists (Manniche *et al.*, 2021).

Taking into account the necessity of stakeholders' engagement to spread the concept of C.E. in tourism, the present study is therefore guided by the following research question:

RQ1: Which are the main bottlenecks and challenges to the implementation of the Circular Economy in the tourism sector perceived by the main stakeholders of tourism destinations?

This research question is then divided into three sub-questions:

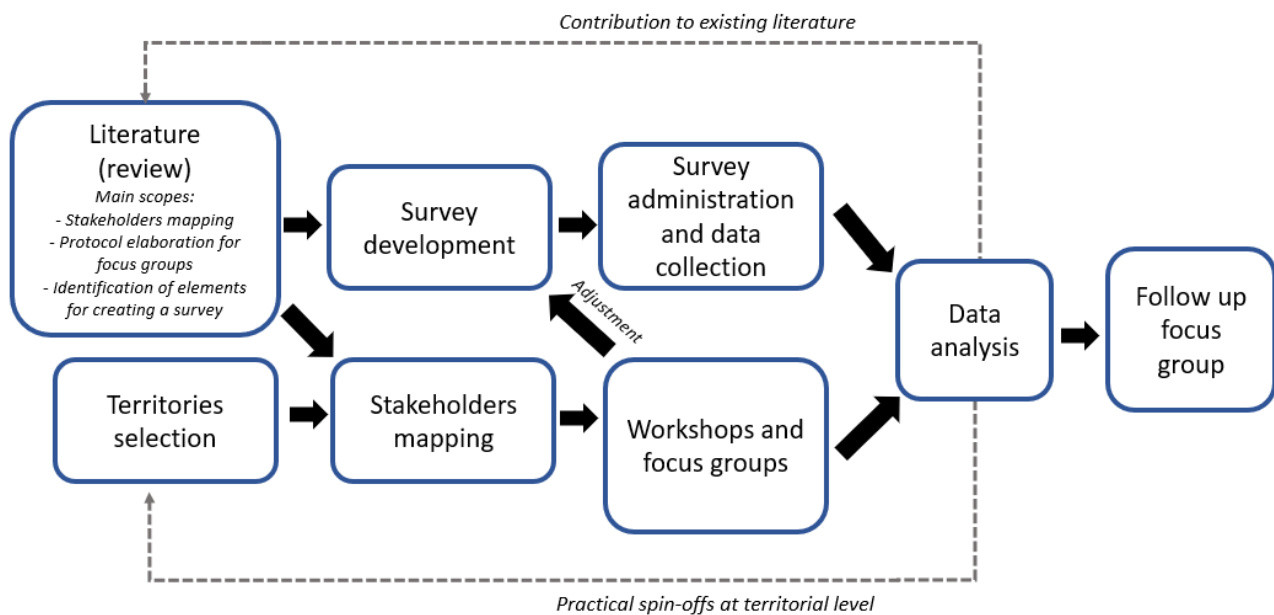
- Sub R.Q.1: Are there similarities in views, per stakeholder category, regarding bottlenecks and challenges to C.E. implementation in tourism?
- Sub R.Q.2: Are there differences in emerging views per stakeholder category on this theme, and in what?
- Sub R.Q.3: Are there common themes by carrying out a cross-sectional analysis of the perceptions of the different categories of stakeholders in the sector on this issue?

3. Methods

In order to answer the research questions posed, this study use the action research methodology, a participative and collaborative approach in which researchers and practitioners work together with a common purpose using a rigorous scientific approach (Hind et al., 2013). Furthermore, action research is characterised by being situation-based and context-specific. Therefore, seven Mediterranean tourist destinations were selected for the purpose of this study. The opportunity for the involvement of the territories under analysis was provided by their involvement in a European Interreg MED project, aimed at promoting and applying the principles of Circular Economy in tourist destinations located in islands and low-density areas in the Mediterranean.

An image depicting the workflow followed by the researchers for the purposes of this study is presented below.

Figure 1: Methodology workflow

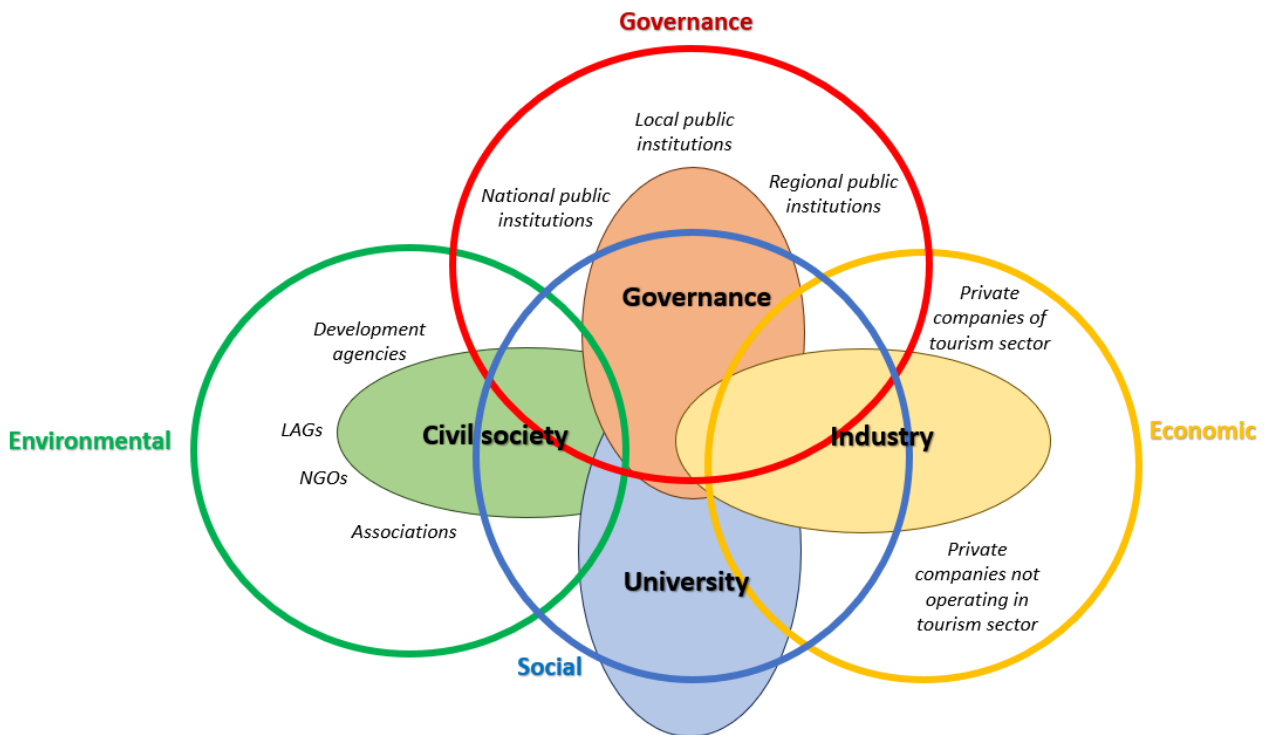


For the purpose of this study, a mapping of the main stakeholders present in the tourist destinations involved was carried out by the researchers. Sources of scientific literature and grey were used to identify stakeholder categories, in particular by referring to the Quadruple Helix model, already theorised in the context of sustainable development (Kimatu 2016; Cai et al., 2022; Hakeem et al., 2023). In addition to the more classical three dimensions of stakeholder involvement, i.e. government, universities and industries, the inclusion of civil society is a key element in meeting above all the social and environmental demands of sustainable and territorial development on a local scale (Saito et al., 2017).

However, the Quadruple Helix model is not sufficient to understand in deep the different views of stakeholders at territorial level with respect to sustainable development. Indeed, different actors have different visions of the priorities to be given to sustainability strategies, according to its three fundamental pillars: economic, social, and environmental (Cai et al., 2022). In addition to these 'interests' of the actors, there is also the sphere of governance, which by its very nature needs to find a framework to incorporate the expectations of the different actors and pursue all three pillars of sustainability (Hakeem et al., 2023).

Furthermore, for the purposes of this study, it was necessary to identify as precisely as possible the stakeholders of the tourist destinations under analysis, selecting those categories that most influence the management of a tourist destination, and in particular in the context of the application of the Circular Economy. Therefore, the consultation of local representatives of the selected territories was requested, in order to select a sample as representative as possible (e.g. tourists were not included in this analysis). The stakeholder's selection was therefore determined from a targeted selection with an emphasis on key players in the transition to the Circular Economy in the tourism sector. A depiction of the approach used for stakeholder mapping and the outcome of the process is shown in Figure 2.

Figure 2: Stakeholders sphere of interests and influence



At the same time, a review of the existing literature concerning the drivers and barriers to the implementation of the Circular Economy was conducted. Given the multiplicity of different types of actors present in a tourist destination, drivers, barriers and enabling factors for the implementation of the Circular Economy in various spheres and not only in tourism were considered at this stage, in order to provide a hopefully complete picture of the state of the art. The search was conducted using Scopus, Web of Science (WoS) and Google Scholar.

The literature review carried out had a twofold purpose within this study:

- the development of a protocol to be used during territorial workshops, described below and used as an opportunity to perform focus groups with territorial stakeholders;
- the creation of a survey with questions concerning bottlenecks and challenges to the implementation of the circular economy in the tourism sector.

Therefore, to explore the drivers and barriers for Circular Economy implementation in the tourism sector, this study has performed a mixed method, using qualitative analysis aimed at identifying, describing, and contrasting bottlenecks and challenges perceived by tourism main actors and quantitative data provided by the survey. The analysis of the survey responses allowed the researchers to gain more insight into the views of the main stakeholders in the sector.

Seven workshops and subsequent focus groups, lasting 2 hours each and held between July 2020 and February 2021 were conducted on a territorial basis. During focus groups stakeholders can freely express their ideas and views, allowing the researchers to gain a comprehensive insight into their perspectives on the bottlenecks and challenges related to the Circular Economy (Gill *et al.*, 2008).

Following the action-research approach (Coughlan and Coughlan, 2002), the researchers engaged in a discussion with stakeholders on the application of the Circular Economy in the tourism sector. A brainstorming tool was used to hold a group discussion and collect information or ideas that emerged

spontaneously from the group discussion. This exercise allowed the researchers to further identify critical areas of particular relevance for the application of the C.E. in the tourism sector.

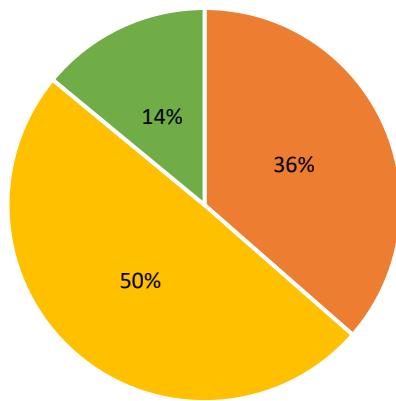
The focus groups were recorded and subsequently transcribed for further data analysis by the research team, who also checked and revised the transcripts to ensure their accuracy. Records were transcribed and supported by the MAXQDA software; all the qualitative data sets were inductively coded. Using an open coding approach (Corbin & Strauss, 2007), we aimed to identify emerging types of bottlenecks and challenges. After the initial open coding, an axial coding exercise was performed (Corbin & Strauss, 2007), combining closely related codes and reducing the total number of identified factors. Finally, a theoretical coding was performed (Walker & Myrick, 2006) to deductively cluster bottlenecks and challenges, guided by previous categorizations from the literature and from the first meeting with territorial stakeholders.

Thanks to the feedback and insights received during the territory workshops, the researchers were also able to modify and improve the survey devised on the basis of the literature, in order to make it more relevant to the tourism sector. The survey was sent to tourism stakeholders via the Survey Monkey platform. The survey was constructed with 5 point Likert scale questions concerning the perception of the different territorial stakeholders with respect to bottlenecks and challenges to the implementation of the Circular Economy in tourism.

Finally, following the analysis of the data from the initial focus groups and the survey, a follow-up plenary focus group was organised, held online via a platform and lasting two hours, in which all the territorial stakeholders involved took part.

The results of this study were obtained by considering a sample of stakeholders who took part in all three main moments of the study: the first round of focus groups, the survey, and the follow-up workshops. The sample of territorial stakeholders reached was 107, and they can be divided in (i) public institutions (55 stakeholders), (ii) private companies working both in sectors related to the tourism industry and not (15 stakeholders), and (iii) representatives of associations, NGOs, local action groups (LAGs) (37 stakeholders) (see Figure 1).

Figure 3: Stakeholders categories



- Representatives of associations, NGOs, LAGs, etc.
- Public institutions
- Private companies

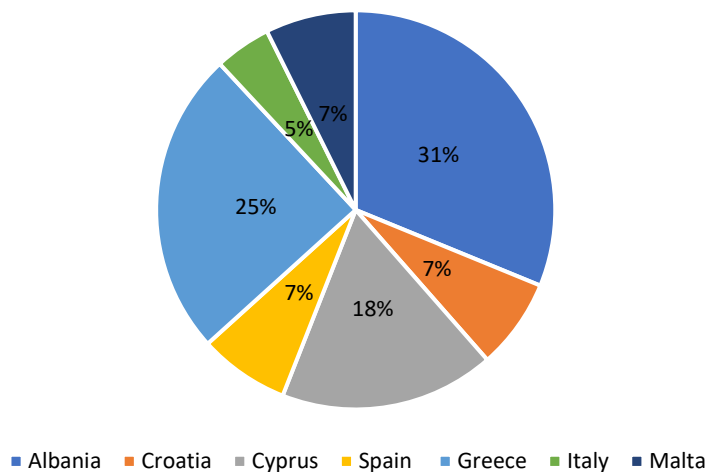
Table 1: Overview of stakeholders involved

CATEGORY OF STAKEHODER	MEMBERS	CODE
Private company (PC)	Three (3) private companies not directly operating in the tourism sector	PC1; PC4; PC7
Private company (PC)	Twelve (12) private companies operating in the tourism sector	PC2; PC3; PC5; PC6; PC8; PC9; PC10; PC11; PC12; PC13; PC14; PC15
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	Nine (9) representatives of associations	AS1; AS17; AS18; AS25; AS26; AS33; AS34; AS35; AS38
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	Three (3) representatives of a social enterprise	AS2; AS16; AS19
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	One (1) representative of a local action group (LAG)	AS15
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	One (1) business support organization representative	AS3
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	One (1) private association for collaborative innovation representative	AS4

Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	One (1) publicly owned, non-profit utility representative	AS6
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	Two (2) university representative	AS5; AS14
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	Four (4) public municipal company for waste management representative	AS20; AS24; AS27; AS28
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	One (1) semigovernmental organization representative (i.e. legal entity of public law)	AS7
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	Two (2) association of tourist guides representatives	AS9; AS13
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	Three (3) development agencies	AS12; AS21; AS23
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS)	Ten (10) representatives of an NGOs for environmental preservation and sustainable tourism	AS8; AS11; AS22; AS29; AS30; AS31; AS32; AS36; AS37; AS39
Representatives of associations, NGOs, local action groups, municipal services providers, etc. (AS).	One (1) Public utility company representative	AS10
Public authorities (PA)	Seventeen (17) local public institutions representatives	PA1; PA2; PA7; PA8; PA9; PA10; PA16; PA17; PA22; PA29; PA32; PA36; PA37; PA38; PA53; PA54; PA55
Public authorities (PA)	Fifteen (15) regional public institutions representatives	PA3; PA5; PA6; PA14; PA15; PA20; PA21; PA25; PA26; PA30; PA33; PA34; PA39; PA42; PA45
Public authorities (PA)	Twenty-three (23) national public institutions representatives	PA4; PA11; PA12; PA13; PA18; PA19; PA23; PA24; PA27; PA28; PA31; PA35; PA40; PA41; PA43; PA44; PA46; PA47; PA48; PA49; PA50; PA51; PA52

The sample represent territorial actors from 7 Mediterranean countries, where the tourism sector plays an important role in the national economy. Specifically, the countries involved in this study are: Italy, Spain, Greece, Malta, Cyprus, Albania, and Croatia (see Figure 4).

Figure 4: Country of the stakeholders



4. Results

After analysing the data, we identified 34 distinctive bottlenecks and 33 challenges, which we clustered into 5 categories: financial and economic, policy and regulations, social and cultural, technological and innovation, and environmental. Appendix I shows the frequencies resulting from the data analysis process of the survey. Below is therefore a description of the main bottlenecks and challenges to the implementation of the C.E. in tourism identified by the stakeholders of the 7 Mediterranean tourist destinations involved in this study. In the following paragraphs, more information will be provided on the perceptions of the stakeholders identified by the researchers. Furthermore, from the point of view of public institutions there is a general unawareness regarding the value of natural capital.

4.2 Perception of different Mediterranean tourism stakeholders' groups on bottlenecks and challenges at the implementation of C.E.

4.2.1 Private companies

The multiplicity of bottlenecks identified by companies in tourism sector suggests a lack of coordination and interaction between the decision-making level of the sector and the business level: there are bureaucratic bottlenecks, a lack of supportive and supportive policies, but also an absence of mandatory requirements and control and assessment mechanisms on the achievement of specific goals. Moreover, at a regulatory level, an important driving force that C.E. offers to tourism is to encourage the creation of performance measurement systems, data collection, systematisation of results and good practices. As stated by a companies' representative: "It's crucial to have accurate data. We see it as an investment, one that ensures we're on the right track and making a real impact." (PC 13). All these elements can help companies in tourism sector to have more awareness and understanding of their positioning in the sustainable transition, and of the opportunities for improvement that they can put into practice.

A large number of challenges emerged from the analysis of private companies' perceptions regarding the social and cultural context. They see in Circular Economy the opportunity to improve and make the territorial management of tourist destinations more efficient, especially in the environmental field, thus increasing the resilience of the territories. Furthermore, they see in Circular Economy the

opportunity to reduce raw materials and energy dependence in the tourism sector. Such far-sighted management could, in their opinion, also create the opportunity to increase the knowledge and skills of all the actors operating at the tourist destination level, also reflecting in an improvement in the reputation and image of the tourism sector. From the point of view of businesses, increased awareness could also translate into minimizing the negative social impacts of tourism activities, promoting a type of tourism that is more attentive to local communities.

4.2.2 Public authorities

Observing the perceptions of stakeholders belonging to public authorities, it is possible to notice sharper and more homogeneous opinions than those expressed by representatives of other stakeholder categories. Indeed, public institutions see the lack of long-term planning of companies as the biggest bottleneck to the implementation of E.C. in tourism. This contrasts with the view of businesses, which attribute multiple shortcomings to the level of decision making, including the absence of incentives, although they also recognise this critical lack of forward planning in the tourism industries.

From a regulatory point of view, public authorities perceive a strong lack of systemic data and information with respect to the application of sustainability and C.E. which, together with a lack of specific knowledge and know-how, leads to a poor capacity of the sector to adapt its services to a more circular tourism.

In addition, public institutions seem to perceive the lack of a general awareness of the value of the environment and natural capital more clearly than the other stakeholders involved in the analysis. Moreover, public institutions perceive the infrastructural deficit of destinations as a strong obstacle to sustainable development: as stated, "Without adequate technologies and infrastructures it is difficult to establish closed cycles of materials at a territorial level." (PA13).

However, these difficulties bring with them major challenges in terms of reducing the environmental impacts of tourism activities, including through technological innovation. Furthermore, the creation of a policy framework capable of guiding and supporting action of the system's actors is an opportunity that sectoral institutions perceive as correlated with opportunities to increase collaboration between territorial actors. This collaboration, in close coordination with businesses, could lead to an increase in the well-being of the local populations who inhabit the tourist destinations, "with important economic, social and environmental impacts." (PA 4).

4.2.3 Associations, LAGs, NGOs etc.

The analysis of the perceptions of civil society actors (LAGs, NGOs, associations, etc.) shows that the main bottlenecks to the implementation of the C.E. in tourism are the absence of incentive mechanisms and the poor capacity of policy makers and public administrators to transpose and enforce circular economy related laws and regulations. However, it reveals a confident attitude towards the possibilities that the C.E. offers to the sector, many of which shared with other stakeholders. From an economic and innovation point of view, the circular transition offers great potential in terms of renewing the tourism offer and its business model, leading to an enhancement of local communities and its products, with new market opportunities and greater employment, which would contribute to increasing the well-being of residents.

It is interesting to note that, if on the one hand one of the critical issues encountered by this category of stakeholders is the lack of awareness of the positive contribution that the environment and natural capital have on human well-being, on the other hand the sustainable transition would allow us to implement conservation and restoration actions, through a renewed awareness also transmitted to tourists through the promotion of more circular tourism. As stated by an NGO representative, "Educating tourists about sustainability and circularity is essential. Through proactive promotion of

these issues along the entire tourism value chain, we empower visitors to make responsible choices that benefit both destinations and our planet.” (AS 32).

4.3 Perception among different Mediterranean tourism stakeholders’ groups on bottlenecks and challenges at the implementation of C.E.

Results relating to the perceived bottlenecks to the application of the Circular Economy in tourism sector divided by stakeholders’ groups are presented below. As can be seen in Table 2, results appear to be quite heterogeneous and reflect the need for coordination and collaboration between actors set out in the literature (Sorin, *et al.*, 2021). If for public institutions, the main difficulty was found in the lack of long-term strategies and objectives of the companies in the sector, the perception of private companies suggests the same lack from public authorities, not guaranteeing incentives and strategies to support this transition for companies. However, also from the perspective of private companies one of the obstacles to the implementation of the Circular Economy in this sector can be associated with a lack of long-term planning on the part of the companies themselves. A lack of adequate economic and financial tools has also been perceived by associations, NGOs, LAGs, etc.

The perception of companies of the sector is related to the lack of commitment of public authorities and private industries, revealing that tourist destinations struggle to think of themselves as an interconnected and compact ecosystem, as suggested by their perception of a lack of a sense of community: “Cultivating a sense of community within the tourism sector is integral to our circular journey. A lack of such cohesion hampers our collective ability to promote sustainable practices and the circular economy ethos.” (AS 11). This consideration is supported by the perception on the part of companies that there is an absence of actors capable of coordinating collaboration actions in the tourism sector. This phenomenon, especially at the businesses level, translates into a strong concern for the difficulties that the sustainable and circular transition brings with it. This transition requires strong guidance and support, not perceived by businesses in the tourism sector.

Governments and public institutions should support businesses to cope with the costs and potential risks associated with this transition (Bjørnbet *et al.*, 2021). This lack of policy is attributed by companies, but also by associations, NGOs and LAGs, to a poor ability of the policy making level of tourist destinations to translate directives at European level into effective binding instruments that could firmly and decisively push tourism industries to a paradigm shift. As stated by a representative of a development agency: “Circular economy laws and regulations, whether at the European or national level, frequently encounter enforcement difficulties within our territory. The limited capacity of our policy makers and public administrators to ensure compliance poses a notable challenge. Additionally, it's disheartening that businesses often fall short of meeting these legal requirements, hindering our efforts to advance sustainable practices within our region.” (AS 12).

At the same time, public institutions in the sector attribute these shortcomings to a lack of monitoring systems and information: “We acknowledge the pressing issue of insufficient data and a reliable monitoring system within the tourism sector. This deficiency severely hinders our ability to craft effective policies and support industry stakeholders in their pursuit of sustainability within the circular economy.” (PA 32).. Once again, it appears clear that awareness and knowledge of the point of view of sector stakeholders at all levels are important enablers to promote an effective multi-level circular transition (Van Langen *et al.*, 2021).

A convergence of opinions of associations, NGOs, LAGs and public authorities was observed on the lack of knowledge and skills of all actors of tourism on the theme of C.E.: “While our commitment to sustainability is unwavering, we recognize the need for training and resources to navigate this transformation successfully.” (PA 41). This could be connected to another bottleneck, perceived both at the level of public authorities and companies in the tourism sector, i.e. a poor ability of the sector

to adapt its offer to comply with the principles of circularity and sustainability. As stated by a representative of a private company: “Rethinking tourism, trying to change the range of services on offer, is a difficult process, and it has not yet been perceived how much of a boost it can be to the circular economy but also to the competitiveness of tourism itself.” (PC 10).

From a purely environmental point of view, a general lack of awareness on the role that environment and natural capital can play in relaunching the image of the tourist destination and, therefore, improve its positioning at the market level is perceived, by all the stakeholders involved.

As regards the bottlenecks and barriers inherent to technological aspects, the all the three categories of stakeholders have identified the poor innovative capacity of the tourism sector, incapable of exploiting the opportunities of sustainable and circular innovation to modify its offer, as an important obstacle to Sustainable Development.

If a relative agreement in opinions among the actors emerged on bottlenecks to the implementation of the C.E. in tourism, greater heterogeneity can be found with regard to the challenges and opportunities that the Circular Economy brings with it, offering a cross-section of the different perceptions among different types of stakeholders.

However, if the creation of jobs is the greatest perceived advantage for businesses and associations, as the opportunity to strengthen and promote local value chains: “Enhancing local supply chains is a game-changer for us. We're all in on this. By sourcing locally, whether it's food, handcrafts, or services, we're not only supporting our community but also reducing our environmental footprint. It's a win-win. We get high-quality, unique offerings while boosting our local economy.” (PC 6).

From the perceptions of associations, NGOs, LAGs and private companies, it emerges that the C.E. could be a driving force to promote an increase in awareness of sustainability and circularity also for tourists, through the promotion of sustainable and circular issues among all tourism value chain. “Educating tourists about sustainability and circularity is essential. Through proactive promotion of these issues along the entire tourism value chain, we empower travellers to make responsible choices that benefit both destinations and our planet.” (AS 32).

Even from the point of view of public institutions, a greater integration and mutual respect between local communities and tourists in the area could be a challenge in this sense, encouraging the establishment of collaborations and initiatives relating to sustainability and circularity.

As far as tourism innovation opportunities are concerned, both companies and associations, NGOs and LAGs have identified the possibility of innovating the business models of the sector as a priority element. According to these actors, this transition allows tourism and its companies to rethink their offer, experimenting with innovations aimed at greater customization of services and products, and greater material and energy efficiency through reuse, recycling or sharing economy. In this context, both public institutions and private companies have identified an important challenge in technological development: C.E. requires a rethinking of current production and consumption models, and tourism sector can take this opportunity to modernize business models and of production systems in accordance with a more sustainable vision, identifying it as a strategy that encourages proactivity and better management environment at all levels. This renewal, from the point of view of companies, must also extend to the development of technologies and innovation: “We're in the midst of a technological shift in our tourism sector. We're using innovation, digital tools, and new technologies to try and make our industry more circular and sustainable for the long run.” (PC 11).

However, private companies, associations, NGOs and LAGs agree on the possibility of using the circular transition as a driving force to improve the territorial management of the natural capital of destinations, improving the management of tourist flows, promoting the conservation and restoration of natural and cultural capital, which represent one of the major assets of a tourist destination. This effort must also be directed in particular towards areas with ecosystems at risk. A representative of a

nature preservation NGO stated that “Restoration and conservation are at the heart of our mission. We champion the protection of biodiversity and cultural heritage, ensuring their vitality for generations to come.” (AS 3).

Finally, both the stakeholders representing the public authorities and private companies of the tourist destinations in question agree on the environmental benefits that C.E. would bring to the tourism sector, in terms of reducing pollution and preserving ecosystems: “Our priority is to minimize the environmental footprint of tourism activities. We have to work on strategies to reduce impacts, embracing practices that promote sustainability while maintaining the allure of our destination.” (PA 45).

Table 2: C.E. Bottlenecks perceptions divided by stakeholders’ category.

	Economic and financial	Policies and regulations	Social and cultural	Technological and innovation	Environmental
Public institutions	Corporate strategies	Poor monitoring system	Know-how and competencies	Tourism offer adaptability	Technologies for recycling, landfilling and incineration. Natural capital value Environment competitive role
Private companies	Public strategies Incentives Corporate strategies	Lack of supporting policies Performance assessment and monitoring CE laws enforcement Lack of police enforcement Normative and bureaucratic obstacles Few mandatory requirements	Public and private commitment Community Coordination	Tourism offer adaptability	Environment competitive role
Representatives of associations, NGOs, LAGs, others	Incentives	CE laws enforcement	Know-how and competencies	Innovative capacity	Environment's benefits for humans Environment competitive role

Table 3: C.E. Challenges perceptions divided by stakeholders’ category.

	Economic and financial	Policies and regulations	Social and cultural	Technological and innovation	Environmental
Public institutions	Local people well being	Policy framework	Collaborations	Innovation and technological development	Environmental benefits
Private companies	Employment	Monitoring framework	Increased knowledge	Business model innovation	Environmental protection

	Local people well-being. Raw materials and energy dependence		Reputation Tourists' awareness Social impacts Tourism sector resilience	Technological transformation Innovation and technological development	Environmental benefits Restoration and conservation
Representatives of associations, NGOs, LAGs, others	Local people well-being. New markets opportunities Employment Local supply chains	Policy framework	Tourists' awareness	Business model innovation	Restoration and conservation

4.4 Bottlenecks and challenges at C.E. implementation in tourism sector: a transversal analysis

By analysing the perceptions of the stakeholders involved in the analysis it is possible to outline a general picture of the main perceived bottlenecks and challenges to the implementation of the Circular Economy in the tourism sector. This exercise is useful not only in order to collect the main opinions of the stakeholders in this sector, but also to identify the differences based on the different types of actors.

The main barriers to the circular transition in the tourism sector appear to be linked to a lack of awareness of the Circular Economy and a lack of objectives and strategies for achieving sustainability objectives. One of the challenges perceived by stakeholders in the tourism sector therefore lies precisely in grasping the commitment to the application of the principles of the C.E. for the structure of a coherent and effective policy framework, capable of supporting the main players of the sector. This result, in the perception of stakeholders, would allow companies and tourism destinations to invest more in more efficient technologies for reducing environmental impacts and in rethinking their business models. Moreover, the perception of a general lack of specific skills, know-how and capabilities useful for promoting the circular transition at destination level is linked to a low understanding the potential that the environment by tourism sector actors, including its role in relaunching the competitiveness of a tourist destination. These shortcomings translate into the immobility of the public and private actors in the sector, who therefore do not adopt a far-sighted approach towards sustainability and the Circular Economy. If on the side of public administrations, the inability to promote and enforce laws and regulations in this area is perceived as the main obstacle, there is also a perceived lack of commitment with respect to long-term planning for a circular transition of private companies. This immobility in both the public and private sectors therefore translates into a poor ability of the tourism sector to reinvent its offer, to find innovative approaches to promotion for the use of more aware and sustainable tourism. One of the challenges most perceived by stakeholders is in fact that of educating and raising awareness among tourists regarding the application of the principles of sustainability and the Circular Economy along the value chains of the sector. Finally, making the Circular Economy a pillar of tourism transformation would give to this sector the opportunity to generate added value for the local communities of tourist destinations. In fact, at an economic and financial level, all categories of stakeholders have shown particular attention to the challenges that the application of C.E in tourism it could bring benefits at community level, thanks to the creation of well-being and economic benefits for tourist destinations, also in terms of working conditions.

These results of the present study analysis are useful for understanding the issues most felt by stakeholders in the tourism sector, but they are not sufficient to provide a useful tool for integrating the points of view of the different actors who are part of the tourist destinations. To this end, the perceptions of the three different groups of stakeholders identified for this analysis will be analysed below, so as to allow a deeper and more detailed analysis on the topic.

5. Discussion and conclusions

The participation in this study of different stakeholder groups such as associations, private companies and public authorities made possible to gain a variety of perspectives and to compare perceptions between different stakeholder groups. This analysis returned results capable not only of providing a picture of the state of the art, but of identifying relevant elements that can provide indications to sector policy makers to satisfy the needs and opinions of sector stakeholders in the context of circular economy.

Indeed, results show that awareness-raising and education campaigns are needed to improve a more deep and punctual understanding of the Circular Economy and its relevance to the tourism sector at all the levels. Increased awareness would facilitate stakeholder engagement and encourage them to take an active role in adopting circular practices (Van Langen *et al.*, 2020). The concept of circular economy, together with that of sustainable tourism, is gaining more and more relevance in the sector, but knowledge is still too fragmented to trigger a real systemic and participatory transformation of the sector, with active involvement from all levels and actors in tourism (Sorin *et al.*, 2021; Hart *et al.*, 2019; Govindan *et al.*, 2018).

The emerging needs regarding a more coherent supporting regulatory framework to provide clear guidelines, incentives, and enforcement mechanisms for the implementation of circular practices confirms the need for the involvement of sector stakeholders in the policy definition process, to ensure that their needs and concerns are adequately represented (Balsal *et al.*, 2018). In this context, the lack of long-term sustainable and circular policies may slow down the transition to circular business models and the creation of an enabling environment for innovation and adoption of circular practices (Hart *et al.*, 2019; De Jesus *et al.*, 2018). For private actors, on the other hand, policy and regulatory barriers may relate to the lack of clear guidelines and financial incentives to adopt circular practices (Gheñța *et al.*, 2019; Hart *et al.*, 2019), not encouraging innovation and transition towards circular models. Moreover, this lack of clarity and common purposes can also be connected to other elements, that could instead be a lever for the implementation of the Circular Economy in the tourism sector, such as visitors' appreciation of circular tourism initiatives (Vatansever *et al.*, 2021; Hina *et al.*, 2022), or the competitive role of the environment and natural capital for the tourism economy and human well-being (Kumar *et al.* 2019; Rizos *et al.*, 2015).

Finally, there is a need to set up financial and technical support mechanisms to assist companies in implementing circular solutions. This may include financial incentives, capacity building programmes, and access to skills and technologies. One of the main barriers to the implementation of C.E. in tourism appears to be the lack of shared long-term strategies on the part of both private and public actors. While, at the level of companies, short-term goals can take precedence over the importance of developing and structuring long-term sustainable and circular strategies, in the context of public actors there is a need for proactivity, funds and human resources to act in the implementation of policies, programmes and initiatives that push companies and actors in the tourism sector towards the adoption of more circular strategies and practices (Guldmann *at al.*, 2019; Govindan *et al.*, 2018). In this context, fostering collaboration and stakeholder engagement through platforms, networks and partnerships will enable knowledge sharing, resource sharing and collective action towards circularity in the tourism industry.

Overall, this study has helped to highlight the need once again for systems thinking within this sector. Tourism actors recognize numerous growth opportunities thanks to the application of the principles of the Circular Economy, but above all on the part of private companies in this sector there is a sense of confusion given by poor coordination with public actors at destination level and by a lack of clear and peremptory objectives at a regulatory level (Hart et al., 2019; De Jesus et al., 2018).

Thus, this study contributes both to enrich the scarce literature on Circular Economy in tourism with a participatory approach methodology, and on the identification of bottlenecks and challenges in the for the implementation of Circular Economy in tourism. The multi-perspective and participatory approach when defining the main bottlenecks and challenges allowed for a more comprehensive view of the bottlenecks and challenges than what could emerge from single different perspectives within the sector (Coghlan, 2020). This approach also fostered a better mutual understanding between researchers and stakeholders.

However, the present study is not without limitations. Firstly, interactions between different types of stakeholders could be further detailed per type of actors: indeed, this study involved three main types of stakeholders, and a greater segmentation of the types of stakeholders present at the tourist destination level, or the inclusion of further categories, would allow to detect more insights. Then, a deeper analysis of the stakeholders' networks present within individual tourist destinations in the Mediterranean would lead to a better understanding of the perceptions of Circular Economy in each territory. Moreover, further analysis at territorial level could be carried out to identify similarities and differences among Mediterranean tourism destinations. Finally, this study focused on the territorial stakeholders of tourist destinations in the Mediterranean area. Further studies considering different tourist destinations with different characteristics would allow for greater generalisability of the results obtained.

6. References

- Aloini D, Dulmin R, Mininno V, Stefanini A, Zerbino P. (2020), "Driving the Transition to a Circular Economic Model: A Systematic Review on Drivers and Critical Success Factors in Circular Economy", *Sustainability*, 12(24):10672.
- Baggio, R (2010) "Collaboration and cooperation in a tourism destination: a network science approach", *Current Issues in Tourism*, 14
- Bansal P. (Tima), Sharma G. (2021), "Three Different Approaches to Impact: Translating, Cocreating, and Performing". *Business & Society*. <https://doi.org/10.1177/00076503211015926>
- Byrd, E.T. (2007), "Stakeholders in sustainable tourism development and their roles: applying stakeholder theory to sustainable tourism development", *Tourism Review*, 62 (2): 6-13.
- Cai, Y., Lattu, A. (2022). "Triple Helix or Quadruple Helix: Which Model of Innovation to Choose for Empirical Studies?". *Minerva* 60, 257–280.
- Coghlan, A., (2020) "Mobilising knowledge: an action design research case study of using technology to safeguard an endangered nature-based tourism attraction". *Journal of Sustainable Tourism* 1-20.
- Coughlan, P., Coghlan, D., (2002), "Action research for operations management". *International Journal of Operations & Production Management*, 22 (2): 220-240.
- de Jesus, A., Mendonçab, S., (2018) "Lost in Transition? Drivers and Barriers in the Eco-innovation Road to the Circular Economy", *Ecological Economics* 145: 75–89

- del Vecchio, P., Malandugno, C., Passiante, G. and Sakka, G. (2022), "Circular Economy business model for smart tourism: the case of Ecobnb", *EuroMed Journal of Business*, Vol. 17 No. 1, pp. 88-104.
- Delmas, M., & Montes-Sancho, M., (2011), "An Institutional Perspective on the Diffusion of International Management System Standards: The Case of the Environmental Management Standard ISO 14001", *Business Ethics Quarterly*, 21(1), 103-132.
- Ellen MacArthur Foundation (2015), "Towards a Circular Economy: Business Rationale for an Accelerated Transition, available at: <https://ellenmacarthurfoundation.org/towards-a-circular-economy-business-rationale-for-an-accelerated-transition>".
- Eshliki, S. A., & Kaboudi, M. (2017), "Perception of Community in Tourism Impacts and their Participation in Tourism Planning: Ramsar, Iran", *Journal of ASIAN Behavioural Studies*, 2(4), 59–69.
- Falcone, P. M., (2019), "Tourism-Based Circular Economy in Salento (South Italy): A SWOT-ANP Analysis", *Social Sciences* 8, no. 7: 216.
- Garrigos-Simon F., J., Narangajavana-Kaosiri Y., Lengua-Lengua I. (2018), "Tourism and Sustainability: A Bibliometric and Visualization Analysis". *Sustainability*, 10(6): 1976.
- Geissdoerfer, M., Savaget, P., Bocken, N. M. P. and Hultink. E. J. (2017), "The Circular Economy – A New Sustainability Paradigm?" *Journal of Cleaner Production* 143: 757–768.
- Ghența, M., Matei, A., (2018), "SMEs and the circular economy: From policy to difficulties encountered during implementation", *Amfiteatru Economic Journal*, 20: 294-309
- Gill, P., Stewart, K., Treasure, E., Chadwick, B., (2008), "Methods of data collection in qualitative research: interviews and focus groups.", doi: 10.1038/bdj.2008.192. PMID: 18356873.
- Girard & Nocca (2017), "From linear to circular tourism". *Aestimum*, 70: 51-74.
- Govindan, K, & Hasanagic, M. (2018), "A systematic review on drivers, barriers, and practices towards circular economy: a supply chain perspective", *International Journal of Production Research*, 56
- Guldmann, E., Huulgaard, R. D., (2020), "Barriers to circular business model innovation: A multiple-case study", *Journal of Cleaner Production* 243: 118160
- Guo, H., Tang, J., Su, Z., Katz, J. A., (2016), "Opportunity recognition and SME performance: the mediating effect of business model innovation", *R&D Management*
- Gusmerotti N. M., Testa F., Corsini F., Pretner G., Iraldo F. (2019), "Drivers and approaches to the Circular Economy in manufacturing firms". *Journal of Cleaner Production* 230, 314-327.
- Hakeem, M. M., Goi, H. C., Frendy & Ito, H. (2023) Regional sustainable development using a Quadruple Helix approach in Japan, *Regional Studies, Regional Science*, 10:1, 119-138.
- Hart, J., Giesekam, J., Tingley, D. D., Pomponi, F., (2019), "Barriers and drivers in a circular economy: the case of the built Environment" *Procedia CIRP* 80 (2019) 619–624
- Hina, M., Chauhan, C., Kaur, P., Kraus, S., Dhir, A., (2022), "Drivers and barriers of Circular Economy business models: Where we are now, and where we are heading", *Journal of Cleaner Production* 333, 130049
- Hind, P., Smit, A., & Page, N. (2013). "Enabling Sustainability through an Action Research Process of Organisational Development". *The Journal of Corporate Citizenship*, 49, 137–161.

- Kimatu, J.N. (2016). "Evolution of strategic interactions from the triple to quad helix innovation models for sustainable development in the era of globalization". *J Innov Entrep* 5, 16.
- Kumar, V., Sezersan, I., Garza-Reyes, J. A., Gonzalez, E. D. R. S., AL-Shbou, M., (2019), "Circular Economy in the manufacturing sector: benefits, opportunities and barriers", *Management Decision*, 57 (4): 1067-1086
- Manniche, J., Topsø Larsen, K., Brandt Broegaard, R., & Holland, E. (2017), "Destination: A circular tourism economy: A handbook for transitioning toward a Circular Economy within the tourism and hospitality sectors in the South Baltic Region.", Centre for Regional & Tourism Research (CRT): Bornholm, Denmark.
- Masi, D., Kumar, V., Garza-Reyes J. A., & Godsell, J., (2018), "Towards a more circular economy: exploring the awareness, practices, and barriers from a focal firm perspective", *Production Planning & Control*, 29:6, 539-550.
- Nedyalkova, S. (2016), Applying Circular Economy principles to sustainable tourism development. In *PM4SD European Summer School—Abstract and Conference Proceedings*, 38–44. Akureyri.
- Niñerola, A., Sánchez-Rebull, M.V, and Hernández-Lara, A.N., (2019), "Tourism Research on Sustainability: A Bibliometric Analysis", *Sustainability*, 11, 1377
- Ormazabal, M., Prieto-Sandoval, V., Puga-Leal Rogerio, Jaca C., (2018), "Circular Economy in Spanish SMEs: Challenges and opportunities", *Journal of Cleaner Production*, 185: 157-167
- Pain, R. (2004), "Social geography: participatory research". *Progress in Human Geography* 28,5: 652 – 663.
- Pan, S.Y., Gao, M., Kim, H., Shah, K.J., Pei, S.L., & Chiang, P.C. (2018), "Advances and challenges in sustainable tourism toward a green economy", *Science of the Total Environment*, 635, 452-469.
- Parmar, B. L.; Freeman, R. E., Harrison, J. S., and al., et, "Stakeholder Theory: The State of the Art" (2010). Management Faculty Publications. 99
- Prieto-Sandoval V., Jaca C., Ormazabal M. (2018), "Towards a consensus on the circular economy". *Journal of Cleaner Production* 179 (1): 605-615.
- Ranta, V.; Aarikka-Stenroos, L.; Ritala, L.; Mäkinen, S. J. (2018), "Exploring institutional drivers and barriers of the circular economy: A cross-regional comparison of China, the US, and Europe". *Resources, Conservation & Recycling* 135, 70 – 82, Elsevier.
- Ritzén, S.; Sandström, G. Ö. (2017), "Barriers to the Circular Economy – integration of perspectives and domains", *Procedia CIRP* 64 , 7 – 12, Elsevier.
- Rizos, V., Behrens, A., van der Gaast, W., Hofman, E., Ioannou, A. Kafyeke, T., Flamos, A., Rinaldi, R., Papadelis, S., Hirschnitz-Garbers, M., Topi, C., (2016), "Implementation of Circular Economy Business Models by Small and Medium-Sized Enterprises (SMEs): Barriers and Enablers", *Sustainability*, 8, 1212
- Rodriguez, C., Florido, C.; Jacob, M. (2020), "Circular Economy contributions to the tourism sector: a critical literature review", *Sustainability*, 12(11), 4338.
- Rukmana, N. S., Syam, F., (2023), "The Role of Actors in Managing Collaborative Tourism in Indonesia" in *IAPA 2022 International Conference and International Indonesia Conference on Interdisciplinary Studies (IICIS)*, KnE Social Sciences, 104–113.
- Saito, O., Managi, S., Kanie, N. et al. (2017). "Sustainability science and implementing the sustainable development goals". *Sustain Sci* 12, 907–910.

- Sautter, E. T., Leisen, B. (1999), "Managing stakeholders a Tourism Planning Model", *Annals of Tourism Research*, 26 (2): 312-328
- Scharp, K. M. & Sanders M. L., (2019), "What is a theme? Teaching thematic analysis in qualitative communication research methods", *Communication Teacher*, 33 (2)
- Scott, W.R., 2008. Approaching adulthood: the maturing of institutional theory. *Theor. Soc.* 37 (5), 427
- Sharma G., Bansal P. (T.), (2020), "Cocreating Rigorous and Relevant Knowledge". *Academy of Management Journal*, 63 (2): 386–410.
- Silva-Santisteban Mondoñedo, M. E., (2021), "Stakeholder theory and the sustainable recovery of the tourism sector", *Revista Atlántida*, 12: 31-56
- Sorin, F., & Sivarajah, U., (2021), "Exploring Circular Economy in the hospitality industry: empirical evidence from Scandinavian hotel operators", *Scandinavian Journal of Hospitality and Tourism*
- Todd, L., Leask, A., Ensor, J., (2017), "Understanding primary stakeholders' multiple roles in hallmark event tourism management", *Tourism Management*, 59: 494-509
- United Nations World Tourism Organization (UNWTO) (2013), "Sustainable tourism for development guidebook". World Tourism Organization, European Commission, Madrid. Available at: <https://www.e-unwto.org/doi/book/10.18111/9789284415496>
- United Nations World Tourism Organization (UNWTO) (2018), "Tourism and the Sustainable Development Goals – Journey to 2030". Available at: <https://www.eunwto.org/doi/book/10.18111/9789284419401>
- United Nations World Tourism Organization (UNWTO) (2018), "Tourism and the Sustainable Development Goals – Journey to 2030". Available at: <https://www.eunwto.org/doi/book/10.18111/9789284419401>
- United Nations World Tourism Organization (UNWTO), 1998. "Guide for Local Authorities on Developing Sustainable Tourism". In UNWTO E-Library. Available at: <https://www.e-unwto.org/doi/book/10.18111/9789284402809>
- Van Langen S., K., *et al.*, (2021), "Promoting Circular Economy transition: A study about perceptions and awareness by different stakeholders groups" *Journal of Cleaner Production*, 316: 128166.
- Vargas-Sanchez, A. (2018), "The unavoidable disruption of the Circular Economy in tourism. Worldwide", *Hospitality and Tourism Themes*, 10(6), 652-661.
- Vatansever, K., Akarsu, H., Kazançoğlu, Y., (2021), "Evaluation of Transition Barriers to Circular Economy: A Case from the Tourism Industry", *International Journal of Mathematical, Engineering and Management Sciences* Vol. 6 (3), 824-846
- Williams P. W., Ponsford I. F., (2009), "Confronting Tourism's Environmental Paradox: Transitioning for Sustainable Tourism". *Futures*, 41(6):396-404.
- Winans, K.S., Kendell, A. and Deng, H. (2017), "The history and current applications of the Circular Economy concept". *Renewable and Sustainable Energy Reviews*, 68: 825-833.
- Wondirad, A., Denis Tolkach, D., King, B., (2020), "Stakeholder collaboration as a major factor for sustainable ecotourism development in developing countries", *Tourism Management*, 78: 104024
- Yuan Z., Bi J., Moriguichi Y. (2006), "The circular economy: a new development strategy in China". *Journal of Industrial Ecology*, 10: 4-8.

Annex I

Table 1: C.E. bottlenecks frequencies

TYPE OF BARRIERS	BOTTLENECKS	BRIEF DESCRIPTION	PUBLIC INSTITUTIONS	PRIVATE COMPANIES	ASSOCIATIONS, NGOs, LAG, etc.
Economic and financial	Corporate strategies	Lack of long-term strategies in the tourism sector from private actors, e.g. achieving short term targets prevails on structuring long term sustainable and circular strategies	49	12	33
	Public strategies	Lack of long-term strategies in the tourism sector from public actors, e.g. lack of funding and personnel to take actions in implementing policies, programs, and initiatives	46	12	32
	High costs	Presence of high costs, e.g. high investments for advanced technology and updating facilities and equipment	32	8	26
	Organizational risks	Increasing organizational risks related to the shift towards the adoption of circular business models, e.g. difficulties in identifying suppliers compliant to more sustainable/circular standards	30	6	20
	Incentives	Lack of adequate economic and financial incentives and funding for tourism industries to support their transition towards new circular business models	41	12	34
	Insurance instruments	Lack of adequate insurance and financial instruments for tourism organizations, e.g. covering risks related to the shift to a circular business model	33	8	29
Policies and regulations	Performance assessment and monitoring	Lack of standard system or instruments for circular performance assessment to monitor performance over the years and to make adequate policy decisions	38	10	27
	CE laws enforcement	Poor capacity of policy makers and public administrators to transpose and enforce circular economy related law and regulations, both provided by European and national institutions (e.g., too often business organizations do not ensure legal compliance).	39	10	32

	Poor monitoring system	Lack of data based on adequate monitoring system to support private and public actors in tourism sector	42	8	27
	Lack of police enforcement	Lack of police enforcement regarding laws and regulations related to environmental aspects	35	10	29
	Lack of supporting policies	Lack of adequate policies that may inspire and support the implementation of circularity actions	36	10	30
	Normative and bureaucratic obstacles	Presence of normative and legal obstacles, bureaucratic slowness and administrative burdens that may hinder the implementation of circular economy strategies in the tourism sector	33	10	30
	GPP	Lack of Green Public Procurement (GPP) since public bodies do not spend money on sustainable and circular goods and services (e.g., purchases of recycled goods or goods with a low environmental impact, etc)	24	8	27
	Few mandatory requirements	Few mandatory requirements (e.g., obligation for companies to reach certain levels of circularity)	31	10	26
Social and cultural	Know-how and competencies	Lack of specific knowledge, know-how or competencies of all the actors – public and private – operating within the tourism destination	41	10	33
	Public and private commitment	Lack of commitment and interest to undertake a transition towards circular economy from the owners of tourism industries and public authorities	37	11	31
	Resistance to change	Resistance to change toward the circular economy model in tourism	31	8	31
	Lack of resources	Lack of resources in terms of staff, capital and time to effectively investigate and put into practice circular opportunities	40	10	31
	Visitor awareness	Uncertainty regarding visitors' awareness and commitment about circular economy	26	8	23
	Visitor appreciation	Uncertainty regarding visitors' appreciation of undertaken initiatives related to circular tourism	28	7	20
	Cultural identity	Lack of strong cultural identity of the tourism destination (e.g. lack of local high-quality handicraft or agri-food production, etc)	19	7	14
	Collaboration networks	Difficulties in implementing network collaboration for enterprises as well as for public authorities (e.g. unavailability to establish	34	10	30

		collaboration regarding the exchange of materials/infrastructures or other forms of collaboration related to circular issues)			
	Coordination	Lack of actors able to coordinate collaboration actions in the tourism sector	36	11	27
	Trust	Lack of trust among tourism actors	21	9	15
	Community	Lack of sense of community	27	11	18
Technological and innovation	Innovative capacity	Low innovative capacity of tourism sector	30	10	27
	Tourism offer adaptability	Low adaptability of the tourism offer (e.g. poor ability to provide high customization into tourism offer in terms of sustainable/circular issues)	32	13	24
Environmental	Natural capital value	Lack of awareness about natural capital value	37	8	23
	Environment competitive role	Lack of awareness on the competitive role of the environment (e.g., the presence of a good quality environment may improve the positioning of the tourism destination in the market)	37	10	29
	Environment's benefits for humans	Lack of awareness on the benefits that environment provides to human beings (e.g., drinking water provision, climate regulation, recreational opportunities, etc.)	34	9	29
	Natural capital quality	Poor quality of the natural capital in the area	17	4	7
	Naturalistic activities	Impossibility to carry out naturalistic activities in the tourism destination	15	3	7
	Environmental protection	Inadequate level of environmental protection and natural resources regulations (e.g., lack of laws or regulatory instruments for the protection of local ecosystems, for avoiding soil erosion and cementing, etc)	31	9	25
	Technologies for recycling, landfilling and incineration	Lack of adequate high-tech technologies performing recycling, landfilling and incineration activities	37	7	28

Table 2: C.E. challenges frequencies

TYPE OF CHALLENGES	CHALLENGES	BRIEF DESCRIPTION	PUBLIC INSTITUTIONS	PRIVATE COMPANIES	ASSOCIATIONS, NGOs, LAG, etc.
Economic and financial	Ad hoc incentives	Establishing ad hoc economic and financial instruments, incentives and funding for adopting sustainable/circular solutions	46	12	34
	New markets opportunities	Providing competitive advantages by entering into new markets and by identifying opportunities for	45	12	36

		new revenue channels for the tourism industries and for the tourism destination itself in relation to a more sustainable and circular tourism (e.g., increase of efficiency, cost reduction, lower input prices, etc)			
	Tourists WTP	Taking the opportunity of tourists' willingness to pay for goods and services that consider sustainable/circular issues (e.g. offering services that are designed avoiding or reducing environmental impacts, etc)	47	12	30
	Raw materials and energy dependence	Reducing raw materials and energy dependence in the tourism sector	51	14	33
	Local people well being	Generating economic benefits for local people through the enhancement of well-being of host communities and improvement of working conditions	53	14	36
	Employment	Creating employment opportunities	52	14	36
	Local supply chains	Enhancing local supply chains (e.g. local food chains, local handcraft, local services, etc)	49	13	36
Policy and regulations	Future legal obligations	Anticipating future legal obligations	40	8	31
	CE regulations compliance	Enabling organizations to operate in accordance with regulations thanks to circular economy principles	51	13	33
	Regulatory simplifications	Improving regulatory simplifications and streamlining of bureaucracy	49	13	31
	Policy framework	Creating a well-structured policy framework able to guide and support actions or other form of policies focused on circular and sustainable issues in the tourism sector	52	13	35
	Monitoring framework	Creating robust measurement systems and continuous monitoring frameworks for data collection and elaboration (e.g. waste collection)	46	14	33
Social and cultural	Reputation	Improving reputation and image of the tourism sector	43	14	33
	Attract new tourists	Increasing the ability to attract new tourists through a better alignment between tourism sector and customers' needs	48	13	34
	Local products and services	Increasing the public procurement of local products and services	41	11	33
	Tourists' awareness	Increasing tourists' awareness through the promotion of sustainable and circular issues among all tourism value chain	51	14	35
	Tourism industries commitment	Increasing commitment and interest to undertake a transition towards circular economy from the owners of tourism industries	49	13	34

	Public authorities commitment	Increasing commitment and interest to undertake a transition towards circular economy from public authorities	50	12	31
	Collaborations	Improving mutually beneficial relationships and collaborations between all the actors (public and private ones) in the tourism sector regarding sustainable and circular issues (e.g. establishing a collaboration regarding the exchange of materials/infrastructures, etc)	53	13	33
	Local communities involvement	Involving local people in decisions making processes	49	13	34
	Social impacts	Minimizing negative social impacts of tourism activities (e.g. enhancing tourism inclusion and respect between tourists and locals, etc)	51	14	32
	Increased knowledge	Increasing the level of specific knowledge, know-how or competencies of all the actors – public and private – operating within the tourism destination	49	14	34
	Tourism sector resilience	Increasing the tourism sector resilience in case of shocks and disruptive events through environmentally management practices	49	14	34
	Less sanitary risks	Lowering the level of sanitary risks	46	13	30
Technological and innovation	Technological transformation	Technological transformation of the tourism sector (e.g. using innovation, digitalization, computer technology and other technologies to implement circular and sustainable solutions)	49	13	32
	Innovation and technological development	Better vision about tourism sector's evolution through the development of technologies and innovation processes, even related to circular economy (such as eco-design, eco-label, cleaner production)	51	13	34
	Supply chain optimization	Optimizing logistics and supply chain through the adoption of new technologies (e.g. integrated systems, improving transparency and traceability of materials, blockchains)	48	11	32
	Business model innovation	Business model innovations in rethinking the tourism sector in a more circular and sustainable way (e.g. enhancing servitization and product as a service with leasing/hire/rent services and goods, considering reuse, recycle, repair of goods,	50	13	36

		enhancing sharing systems, etc)			
	Competitive advantage	Taking the opportunity to stand out from other competitors and to survive in the tourism sector thanks to sustainable and circular innovations	48	11	31
Environmental	Impacts reduction	Reducing environmental footprint and impacts of the tourism activities	51	13	35
	Restoration and conservation	Providing a positive contribution to the restoration and conservation of natural and cultural heritage and maintenance of biodiversity	52	14	37
	Environmental protection	Increasing environmental protection, especially with regards of fragile ecosystems or other natural places where tourism presence may cause damages	54	14	33
	Environmental benefits	Saving energy and resources consumption, reducing pollution and reducing the costs of inaction (e.g. implementing now sustainable and circular solutions may avoid future environmental regeneration and restoration costs to bear)	55	14	36