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The Environmental Sustainability of Tourist Ports: A Web Communication Analysis

Abstract

Protecting coastal and marine environments is crucial for the sustainable development of a tourist destination. In line with the growing environmental concerns of tourists, various potential environmental impacts caused by tourist ports have consequently stimulated measures to mitigate environmental risks and damages. Nevertheless, there is a lack of research investigating how tourist ports address and communicate environmental issues. This study aims to fill this gap by examining and highlighting the information on environmental issues and green practices presented on the official websites of 93 Italian tourist ports. Our results indicate that Italian tourist ports illustrate low sustainability commitment and disclose limited information about environmental issues on their websites.

Keywords: tourist ports, marina, green sustainability, communication, website

1. Introduction

Tourist ports and marinas are the most important structures for nautical tourism, which includes a "set of tourism activities performed on the sea and coast with a pleasure boat (regardless of the legal title under which the boat is available), which is used both as a means of transport and for self-accommodation" (Benevolo & Spinelli, 2021, p. 134). The construction of tourist ports has significant environmental impacts, and their activities also involve certain environmental risks, such as waste management and water pollution, to name a few. Some ports address these risks by engaging in a voluntary certification process (Spinelli & Benevolo, 2023), which aims to obtain both "general" (e.g. ISO 9001 or ISO 14001) or industry-specific (e.g. ISO 13687, ISO 21406, Blue Flag) certifications. At an industry level, an exciting experience was recently promoted by the Italian National Association of Landing and Tourist Ports (ASSO.N.A.T.); it created a program for the voluntary assessment of sustainability in tourist ports and landings called "Sustainable Port", whose adoption should facilitate the evaluation of the port sustainability and stimulate greater engagement from port managers.

While sustainability issues concerning commercial and cruise ports have been widely investigated (Ashrafi et al., 2019; Caliskan, 2022; Hossain et al., 2019, 2021; Santos et al., 2016), only a few studies have addressed sustainability in tourist ports; some of them adopted an operational approach focused on pollution and contamination while others explored environmental risks resulting from the behaviour of port users (Spinelli & Benevolo, 2022). There is increasing attention from tourists towards environmental issues, and sustainability is an essential factor which can influence consumers' preferences (Tölkes, 2018) as tourists are more oriented to destinations and companies which engage in green practices (Tanković & Mušanović, 2022). Considering this perspective, a new stream of research emerges called "sustainability marketing", which links the two

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concepts of "corporate sustainability management" and "marketing" (Pakseresht & Mark-Herbert, 2016). Through sustainability marketing, companies can communicate their commitment to delivering sustainable and high-quality products (Belz & Peattie, 2012). In this regard, Yang et al. (2010) illustrated how effective sustainability communication can assist companies to achieve a competitive advantage against their competitors and improve their reputation and value, twofold result of strengthening the market position and increasing efficiency levels (Walsh & Dodds, 2017).

Nevertheless, sustainability communication is a complex process which especially requires the use of interactive tools (Lodhia, 2014; Vitellaro et al., 2022); however, despite their significant potential for sustainability communication by tourism firms, their use is still limited (Marchi et al., 2021). Web-based communication of tourist ports has been explored in the literature (Benevolo & Spinelli, 2018a; 2018b), but without a specific focus on sustainability issues. Our research aims to fill this gap by analyzing the web-based communication of environmental sustainability policies and activities of tourist ports in Italy, one of the most relevant destinations for nautical tourism worldwide (Benevolo & Spinelli, 2018b). By assessing how and what tourist ports communicate about environmental sustainability issues, we also indirectly detect the practical commitment of tourist ports to sustainability: it can be assumed that the commitment of a tourist port to a lower environmental impact corresponds to a more significant communication effort to share the results with the external stakeholders.

2. Methodology

Our analysis of environmental sustainability-related contents on the tourist ports' official websites consists of two procedures that we built following the literature on sustainability of commercial and tourist ports (see among others, Ashrafi et al., 2019; Bin Yahya, 2019; Darbra et al., 2009; Hącia & Łapko, 2020; Hossain et al., 2019; Łapko et al., 2019; Puig et al., 2014; Santos et al., 2016). First, we built a checklist of website structural features (see Table 1), which are a proxy for the relevance of environmental issues within the communication strategy of a tourist port. Then, we created a second checklist (see Table 2), which includes the environmental issues most addressed in tourist ports' green practices and sustainability management; this list was later discussed and validated in a focus group with two marina managers. Both indexes were used while exploring the port websites and their contents with a counting approach, widely used in website analysis (Law et al., 2010); the four authors independently assessed the presence of a given feature or content in a website, and then the four outcomes were discussed and consolidated.

To identify the sample for this study, we used the *Yachting Pages Superyacht Directory (Mediterranean, Europe, Africa, and Middle East edition 2021-2022)* – a directory of tourist ports and service providers freely available online and distributed in its paper form in several ports worldwide – and considered the 93 Italian tourist ports listed in the directory.

3. Results

We conducted our analysis from February to April 2022; 80 out of 93 Italian tourist ports' websites were active and consequently considered in this study. The following Tables present the findings of our analysis, showing the number and share of websites where a specific feature or content was detected.

As illustrated in Table 1, there is limited disclosure of environmental issues on the official websites of the tourist ports. Only a few references to environmental problems are disclosed on the home pages and in the strategic statements. Most websites do not have a separate or specific section on environmental sustainability, and no websites provide environmental reports and indicators. One in every 6 six ports disclosed specific environmental management regulations on their respective website; however, more than a third of all the websites disclosed their environmental certifications.

Table 1
Corporate commitment towards environmental issues

Features	Number of ports	% of ports
Port perspective on environnemental issues		
Environmental issues in mission, vision and value statement	6	7.5
Reference to environmental issues on the homepage	7	8.8
Autonomous section addressing environmental issues	6	7.5
Environmental regulations		
Environmental certifications	31	38.8
Codes, manuals, or rules on environmental issues	14	17.5
Disclosure of environmental issues		
Environmental indicators	0	0.0
Environmental annual report (or a specific section in the annual report)	0	0.0

Notably, there is a small presence of good practices, with six ports illustrating at least 3 of the seven structural features considered. On the contrary, 41 ports do not comply with the seven features. Regarding the presence of specific environmental-related contents, Table 2 indicates that waste management is the most frequently addressed issue.

Table 2
Coverage rate of specific environmental topics

Topics	Number of ports	% of ports
Waste management		
Waste sorting	53	66.3
Used oil collection	6	32.5
Special waste management	30	37.5
Waste separation area	25	31.3
Bilge and ballast water recovery	25	31.3
Sea cleanness		
Use of sea bins	8	10.0
Recovery of wastewater from boat washing	3	3.8
Prevention of accidental discharge of oils, petroleum, paints, etc.	3	3.8
Prevention of antifouling pollution	1	1.3
Monitoring of air and water quality	5	6.3
Green mobility		
Use of green means of transport in the port	15	18.8
The presence of charging stations for electric cars	8	10.0
Staff management		
Designated environmental staff	0	0,0
Staff training on environmental issues	1	1.3
Other		
Fire prevention systems	25	31.3
Energy efficiency measures	7	8,8
Prevention of noise pollution	0	0.0
Prevention of odoUr pollution	0	0.0

Most tourist ports demonstrated their commitment towards waste sorting. In contrast, more than a third of all ports focused on more industry-specific topics, such as the recovery of used oil and bilge and ballast waters. There is relatively less attention on other issues since they are presumably less prioritized by the ports. The information regarding actions for sea cleanness was presented in less than 10% of all the websites. Less than 20% of ports provided green means of transport, and only 10% of ports offered charging stations for

electric cars. Notably, staff training on environmental issues was absent, and all the tourist ports did not specify the presence of staff fully in charge of environmental services. The disclosure of fire prevention systems was standard, but all the ports did not disclose their measures for preventing noise and odor pollution. Overall, the four best-performing ports engaged in at least 8 of all the 18 considered activities. Forty-nine ports were involved in at least three environmental topics, but it is worth noting that 14 ports did not disclose any information about environmental issues.

4. Conclusions

Tourist ports should fully engage to achieve their corporate sustainability targets and, simultaneously, should widely communicate their green strategies and results to stakeholders (Caliskan, 2022; Vitellaro et al., 2022). Green communication is potentially able to trig a virtuous mechanism because, when communicating their commitment towards environmental sustainability, ports can raise the awareness of nautical tourists and, in turn, attract those segments of customers who are concerned about environmental issues and are available to pay a premium price for more sustainable services (Tanković & Mušanović, 2022; Tölkes, 2018). Despite this, our results suggest that there were low and heterogeneous levels of environmental communication by Italian tourist ports, with many ports not developing measures or actions for environmental protection except for simple tasks such as waste sorting. The first reason which may explain this limited commitment may be cultural. Managers are not fully aware of the environmental impacts caused by tourist ports despite the increasing concerns of tourists and their demand for sustainable engagement in tourist ports. Another reason is the technical difficulties and high costs associated with implementing green practices. Tourist ports are commonly managed by small or medium-sized enterprises with limited resources and a relatively lower capability to engage in measures and actions for environmental sustainability (Benevolo & Spinelli, 2018a), so their commitment to disclose sustainability information on their websites is equally limited. In addition, there is a lack of regulatory frameworks that promote and encourage the sustainability management of tourist ports.

Future research should involve port managers and investigate their knowledge of environmental sustainability issues and their role in addressing the limited implementation and communication of environmental problems.

Finally, there is a need for future research to extend to an international context and level. This approach would be beneficial for a cross-country comparison analysis with Italian tourist ports and their competitors in the Mediterranean Sea on the topic of environmental sustainability, which is rapidly becoming a crucial factor in nautical tourism.

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