# NAVIGATING SUSTAINABILITY: DEVELOPMENT OF MARINAS AS SUSTAINABLE TOURISM DESTINATIONS IN THE BALTIC SEA REGION

STUDIA TURISTICA

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ABSTRACT

The article examines sustainable tourism development in cold-water regions, with a focus on rural and remote marinas in the Baltic Sea. Its aim is to deepen understanding of the current state of sustainability in these marinas and explore how they can evolve into sustainable tourism destinations. The study's novelty lies in its macroregional perspective, integrating viewpoints from five countries: Finland, Sweden, Estonia, Latvia, and Poland. By viewing the Baltic Sea region as a shared tourism destination, the research employs a multiple case study approach, drawing on diverse data sources collected from marina-related stakeholders. The findings suggest that marinas could play a pivotal role in promoting sustainable coastal and maritime tourism in the Baltic Sea region. Realising this potential requires coordinated integration into broader tourism strategies, strengthened stakeholder collaboration, and targeted investments in infrastructure and marketing. The article contributes to the discourse on sustainable tourism development in marinas and provides policymakers with recommendations for strategic planning and management.

*Keywords: Baltic Sea region. Destination development. Marinas. Regional development. Sustainable tourism.*

# INTRODUCTION

In the Baltic Sea region (BSR), coastal and maritime tourism is a vital economic driver, generating employment, enhancing social cohesion, and supporting regional development. In general, coastal and maritime tourism is globally one of the fastest-growing sectors of the maritime economy (Papageorgiou, 2016). It includes those recreational activities which have as their host or focus the coastal and marine environment (Orams & Lück, 2025). These activities include recreational boating, cruises, and nautical sports, as well as land-based infrastructure like marinas and cruise ports. Especially, the importance of marinas was increased by the pandemic as local and regional destinations both for travel and leisure. They reached new visitor records when people got interested in their local and regional coastline. In turn, this contributed to raising concerns about the sustainability of marinas.

Particularly in remote and rural regions, regional policies increasingly emphasise the sustainable development of marinas, and sustainability has become a key policy framework (European Union, 2024; Saarinen, 2015). This focus stems from the fact that climate change will profoundly affect the competitiveness and resilience of tourism destinations, including marinas, necessitating adjustments to mitigate risks and capitalise on opportunities (Atstaja & Cakrani, 2024). Furthermore, integrating marinas into regional tourism development and recreational boating is essential to foster sustainable tourism growth. Although the sustainability of marinas has emerged as a research topic, existing studies have lacked a multidimensional perspective to sustainability. This is critical because economic, environmental, and socio-cultural dimensions of sustainability are strongly interconnected in this context (Martínez-Vázquez et al., 2021).

This article offers insights into sustainable coastal and maritime tourism development from a macroregional perspective, focusing on marinas and integrating the viewpoints of five Baltic Sea countries. Its aim is to deepen understanding of the current state of sustainability in marinas and explore how they can evolve into sustainable tourism destinations. The research questions are: What is the current state of sustainability in remote and rural cold-water marinas? How can these marinas become sustainable tourism destinations? In particular, the research provides policymakers with recommendations for strategic planning and sustainable marina management. Additionally, it offers valuable considerations for marina managers, who often face new business challenges and opportunities (Jankovic & Vlasic, 2018).

# LITERATURE REVIEW

Marinas can be regarded as marine tourism destinations. In the remote and rural regions of the Baltic Sea, they are recognised as key assets, functioning both as essential infrastructure and as standalone attractions that offer year-round appeal to tourists. Additionally, marinas have evolved into local service hubs and meeting points for surrounding communities. They attract not only boaters but also inland tourists who visit for various purposes and seek activities from the broad range that marine tourism provides. As such, marinas are complex entities, combining infrastructure with diverse business structures and numerous suppliers offering a variety of tourist services (Martínez-Vázquez et al., 2021; Skaržauskienė et al., 2022).

In previous literature, marinas have also been considered as businesses increasing the prosperity of their destination community and constituting remarkably interesting tourist destinations. Indeed, marina business and marketing studies have emerged with the focus on benchmarking methodology for marina business (Jankovic & Vlasic, 2018), marina services (Skaržauskienė et al., 2022), marina destination experiences (Shen et al., 2021) and customer segmentation for marinas (Paker & Vural, 2016).

Despite their economic significance for regional development, marinas can pose environmental and social challenges (Gómez et al., 2019). In recent years marinas have gained attention amid growing concerns over climate change and sustainability from ecological and social perspectives (Bove & Mazzola, 2023; Lam-González et al., 2023; Marusic et al., 2024). Boating, their core activity, can

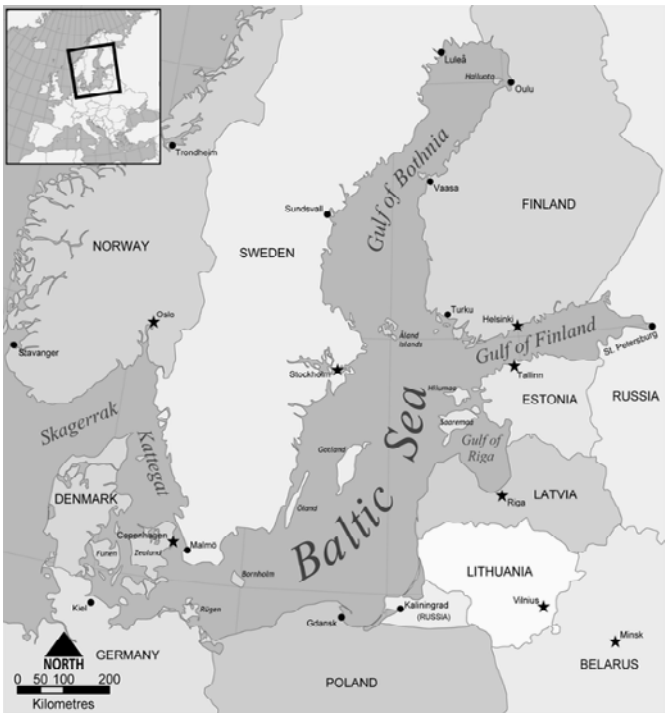
contribute to local-level sustainability issues by transforming ecosystem services into disservices, leading to health risks, financial burdens, and environmental degradation (Seyfi et al., 2022). Emissions from ships and increased watercraft traffic can lead to water pollution, shoreline damage, destruction of plant and animal life. This has a negative impact, not only to climate change, but also to the health of coastal residents and leads to disruptions in local communities (Yiu & Cheung, 2021).

Surely, it should be also noted that coastal and maritime tourism in cold water regions has rather different issues related to sustainable tourism development than their warm-water cousins. In a cold-water region, tourism is often one of several contributors to the economy. Their main appeal is attractive natural environment and direct encounters with nature, unusual terrestrial and marine wildlife, unique geologic and atmospheric features, scenic values, local culture, and special interest activities (Baldacchino, 2006; Schmallegger & Carson, 2010). The most common challenges in these marinas are extreme, climate-induced seasonality, difficult and expensive access, limited tourism infrastructure and facilities, lack of local capital for investments and limited local entrepreneurship (Baldacchino, 2006; Butler, 2006; Schmallegger & Carson, 2010). In many cases, these remote and rural regions are also sparsely populated.

## DATA AND METHODS

The aim of the article is to deepen understanding of the current state of sustainability in marinas and explore how they can evolve into sustainable tourism destinations. The research questions are: What is the current state of sustainability in remote and rural cold-water marinas? How can these marinas become sustainable tourism destinations? To achieve the aim and respond to the questions the Baltic Sea region (figure 1) was chosen to contribute to broader discussions on sustainable coastal and maritime tourism. A multiple case study methodology (Gustafsson, 2017; Yin, 2009) was employed to gain an in-depth, holistic understanding from five countries: Finland, Sweden, Estonia, Latvia, and Poland. While Finland and Sweden include remote archipelagic marinas, Estonia, Latvia, and Poland feature more rural, yet accessible, marinas connected to urban infrastructure.

**Figure 1:**The Baltic Sea




**Source:** Norman Einstein, https://en.wikivoyage.org/

Following Yin (2009), the study triangulated data using mixed methods approach. Quantitative data were collected via an online survey distributed to 300 stakeholders in the selected marinas, yielding 121 responses from tourism entrepreneurs, public authorities, and NGOs. These stakeholders were selected by using existing networks and lists of participants of various ongoing and previously implemented marina-related projects. In addition, webpages of DMOs and marinas were also utilised for identifying relevant stakeholders. Next, the survey was designed to get a broad overview about the current state of coastal and maritime tourism and sustainability in Baltic Sea marinas. It explored themes including target groups, business environment and business models, cooperation, and infrastructure as well as sustainability challenges and opportunities in marinas. Most of the respondents were entrepreneurs operating near marinas and local public authorities (e.g., municipality's administration, tourism information centres, port authorities). Many of these entrepreneurs represented the tourism sector, operating in accommodation sector and restaurants, equipment rentals and various leisure services. Other types of stakeholders constituted a relatively lower percentage of respondents.

To complement the survey findings and focus more on sustainable development as well as how to develop it further, qualitative data were gathered through 14 semi-structured interviews with representatives from the selected marinas in five countries. These representatives acted as coordinators of business clusters, local authorities responsible for marina development or marina operators depending on the business models of marinas. These marinas represented both rural marinas connected to urban infrastructure and remote archipelagic marinas accessible by boat along the coastline. Thus, it was deemed essential that the sample included marinas with various profiles. The interviews were essential to deepen the exploration of the research question and to develop comprehensive understanding of economic, socio-cultural, and environmental dimensions of sustainability. The interviews, guided by a common template, addressed sustainability-related themes using open-ended, adaptable questions. In the interviews, questions were also elaborated depending on the specific characteristics of the marinas.

Data analysis followed a two-level approach: within-case (i.e., country-specific) and cross-case synthesis (Yin, 2009). National teams analysed survey and interview data in native languages, producing reports in English. Quantitative responses were reviewed by category. Qualitative responses were inductively coded, thematically grouped, and aligned with theoretical insights. Next, findings were synthesised across countries to identify recurring patterns and contextual differences, offering a comprehensive understanding of the current state of sustainability in marinas and how marinas can become sustainable tourism destinations.

# RESULTS

## ECONOMIC SUSTAINABILITY OF MARINAS

Currently, residents, second-home owners and individuals from nearby regions constitute a significant portion of marina visitors. These individuals are often recreational boaters, families with children, event attendees, cyclists, active couples, and groups. Overnight visitors are particularly important for marinas. International visitors, mainly from neighbouring countries with a shorter distance, are also a key segment in Latvian, Estonian and Polish marinas. Visitors typically arrive at the marinas by car or boat, with limited public transport options in many remote and rural regions. Cycling and motorcycling are also popular means of access. On average, most marinas reported annual visitor numbers between 500 and 5,000, with some marinas attracting between 5,000 and 25,000 visitors, especially during peak summer season or events.

The findings demonstrate that entrepreneurs operating within or near marinas provide diverse services, but services offered depend on the marina's location—whether it is in a remote location or nearer urban areas. In addition, there is a strong desire to increase entrepreneurial activity in marinas to attract more visitors. These include restaurants, service houses, saunas, accommodation, sailing schools, and various maintenance facilities, fuel stations, and tourist information points. Furthermore, off-season offerings are required

to maintain tourism flow year-round and ensure a more economically sustainable marina.

As a solution, stakeholders recognised the need for a sustainable business model, which could improve the economic situation of marinas. To increase economic sustainability and reach a broader target audience beyond residents, joint business strategies, product development, and marketing were emphasised as crucial to be developed further. In particular, marketing and promotion emerged as critical issues needing attention. In addition, effective communication was identified as a major challenge, with fragmented information sources making it difficult for visitors to find organised and detailed information about marinas and their services. Therefore, improving visibility and attracting more visitors were priorities for stakeholders. The need for better marketing strategies was even seen as potentially more impactful than infrastructure investments, suggesting that this could significantly boost visitor numbers.

Extending the tourism season and fostering cooperation between enterprises and local communities were seen as critical for enhancing economic sustainability. Most marinas grapple with seasonality, highlighting the need for strategies to extend the tourism season or provide year-round services. Indeed, one of the primary challenges identified is the impact of seasonality on marinas, with a consensus among stakeholders that the short summer season from June until August constrains their operations. Only a few marinas have managed to extend their services off-season, often through unique arrangements and cooperation with different stakeholders. Thus, most marinas face a significant drop in visitors during the off-season.

In addition, there are limited resources for infrastructure development, which hinder economic sustainability in marinas. Infrastructure deficits, particularly in pier capacity, fuel distribution, and service buildings, were identified as the key barriers. For this reason, infrastructure improvements are essential for both accessibility and the overall functionality of marinas. To achieve this, stakeholders underscored the importance of public-private collaboration, with local authorities having a significant role in infrastructure funding and project coordination, often supported by EU financing. Improving infrastructure by adding launching ramps, designated areas for same-day visitors, wintering services for boats, modernising ports, and enhancing camper services were suggested. There is a need for improved wastewater management, better land and water access, and dredging to maintain navigable fairways. Investments are also needed for expansion and maintenance, as stakeholders emphasise the need to expand docks and enhance services (e.g., gas stations, service buildings) and renovating existing facilities to attract more visitors. This also includes upgrading marina amenities to meet contemporary standards and attract more clientele.

## ENVIRONMENTAL SUSTAINABILITY OF MARINAS

The perception of sustainable development from the environmental perspective and its implementation varies across marinas. The interviews show that some marinas have made significant strides, while others have not yet prioritised environmental sustainability in their operations. For example, many marinas have adopted environmentally friendly practices, such as energy-efficient appliances (e.g., LED lights), renewable energy sources (e.g., solar panels) and desalinators to obtain fresh water from the sea water. In addition, waste management, particularly for hazardous materials, was a key concern in marinas.

The findings stress that environmental sustainability is closely connected to economic sustainability. Some stakeholders stated they were concerned about the balance between environmental sustainability and economic growth. More visitors would help the economic situation in the marinas, but it is opposed by concerns about the condition of the Baltic Sea. However, economic sustainability is vital to be able to develop environmental sustainability of marinas as investments are needed. Marinas already utilise green technologies, but they desire further investments to enhance their ecological footprint. This not only aligns with the growing environmental awareness among boaters but also helps reduce operational costs. In many marinas, environmental sustainability was also connected to the attempt to market and profile the marina as a green destination. This is related to the need of the marinas to present themselves to an increasingly “ecological-aware” target group.

Furthermore, awareness of environmental sustainability and implementation of sustainable development at the managerial and operational levels varies across the selected countries. In general, environmental sustainability is an important aspect for the development of marinas, but it focuses on single measures to mitigate problems, not to future-oriented, holistic environmental management. This can be seen in the fact that sustainability certification schemes are not widely implemented, but there is growing interest. The most advanced discussion on sustainability certificates was found in Finland, where this is a very relevant topic due to the national level development activities.

### SOCIO-CULTURAL SUSTAINABILITY OF MARINAS

Analysing the importance of socio-cultural sustainability, the stakeholders deemed it most important to integrate the local community and actors in tourism development. Their involvement is crucial for the sustainable development of marinas. Stakeholders recognise the importance of integrating community input into planning processes to preserve cultural heritage and promote local engagement. Cross-sector partnerships involving NGOs and local communities were also seen crucial. Respecting the local cultural heritage is of paramount importance since marinas value the local maritime and coastal cultural heritage. They have their own historical stories to tell to increase visitors' understanding of their heritage. However, achieving consensus and balancing various interests was perceived to be challenging and the community involvement was still in its early stages. Conflicts between different actors were evident and seen as an obstacle to sustainable development.

## DISCUSSION

This article investigates the current state of sustainability in remote and rural, cold-water marinas and how these marinas can become sustainable tourism destinations. Indeed, the characteristics of tourism typical of cold-water regions are significantly reflected in the sustainability of marinas. Although with different degrees of importance, all dimensions of sustainability are acknowledged and addressed by the marina-related stakeholders. Economic sustainability is the primary concern due to the short season, limited marina infrastructure and facilities, limited local entrepreneurship and capital for investments. Environmental sustainability is mostly acknowledged in connection to economic sustainability and is seen as a possibility to act cost-efficiently. Socio-cultural sustainability in marinas concerns involving locals and reviving cultural heritage in tourism development.

Comparing the findings with those of previous studies, they are in accordance with Cruz-Pérez et al. (2021) and Mundula et al. (2020) who perceive marinas as catalysts for regional development stimulating local economies and acting as agents of revitalisation. They are also in line with Martinez-Vasquez et al. (2022) who claim that as the services in marinas are provided by small entrepreneurs with NGOs having a significant role, it is vital to bring together all the public and private actors operating in the marinas. In addition, tourism service diversity was highlighted as vital for competitiveness and broad visitor appeal, which is also suggested by Skaržauskienė et al. (2022). Indeed, if the marina is developed as a tourist attraction, there must be a reason for visitors to visit it.

In sum, it can be concluded that economic sustainability is the main concern in all the participating countries. Environmental concerns vary more between countries and are also dependent on the pressure and development schemes set by the government. Socio-cultural sustainability can be seen as the weakest sustainability dimension lacking the necessary tools to improve it all over the Baltic Sea region. Otherwise, what differentiates marinas and their sustainable development is accessibility. It is interesting to notice how, even though the identified marinas are all in remote destinations, there seems to be a broad difference between an "on-land" and "island" location. The island destinations are facing additional challenges, especially when it comes to infrastructure available, funding and accessibility as well as limited service providers. This has a major impact on their sustainability from multiple perspectives.

Based on the findings, the following practical implications can be made about how marinas can become sustainable tourism destinations:

1. Strategic planning and management: Jointly developed strategic visions, objectives and plans should integrate economic, environmental, and socio-cultural priorities to guide sustainable development.
2. Public-private partnerships: Strengthening ties among operators, authorities, enterprises, NGOs and communities can promote investments and innovation. The formation of maritime, thematic clusters around the Baltic Sea marinas, for example in neighbouring countries, should be advanced.
3. Entrepreneurship and services: Encouraging new local entrepreneurs to provide and develop innovative services in marinas and increasing the variety of existing services in collaboration can stabilise revenues and increase competitiveness as well as extend operational season.
4. Marketing: Targeted marketing strategies and actions to increase the visibility and attractiveness of marinas are vital. Training related to product development and effective marketing communication are required.
5. Environmental management: Changing the focus from environmental problem mitigation and single actions to improve resource-efficiency should be transformed into future-oriented, holistic environmental management.
6. Community engagement: Active and open community participation in decision-making can enhance authenticity, social inclusion, and cultural value.

Certainly, there are also limitations. The findings are context-dependent, reflecting the Baltic Sea's status as a cold-water region. Most of the respondents were entrepreneurs, which is also reflected in the results. Variations in marina location, accessibility, and development level limit generalisability as they have an impact on sustainability. Nonetheless, the study advances understanding of marinas as multifaceted agents of sustainable tourism development.

As all three sustainability dimensions are interrelated in sustainable tourism development in cold-water regions (Renfors, 2021), more research is needed to understand more closely these interrelationships. Based on the findings, marinas are also systems of multiple actors with their varying interests, which could be also further explored by applying systems thinking.

## CONCLUSION

Despite existing sustainability challenges, marinas are seen as key attractions in remote and rural coastal regions of the Baltic Sea. The findings present marinas as multifunctional service hubs offering both leisure and ancillary functions, challenging the perception of marinas solely as tourist infrastructure. Indeed, marinas could play a central role in advancing sustainable coastal and maritime tourism in the Baltic Sea region. Realising this potential requires coordinated integration into broader tourism strategies, strengthened stakeholder collaboration, and targeted investments in infrastructure and marketing. However, securing investments and coordinating efforts among diverse actors remain major challenges. Tensions in balancing economic growth and environmental sustainability persist, highlighting the need for a shared development vision. Future success depends on integrated governance models that align public and private interests across all dimensions of sustainable marina development. Therefore, the article underscores the importance of public-private partnerships in addressing structural challenges, such as seasonality and infrastructural deficits. In addition, the article identifies a need for greater local involvement in planning and governance positioning marinas as community assets that reinforce social cohesion and identity. Enhanced local participation is seen as key to realising marinas' full socio-cultural potential.

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