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TOURISM AND THE BLUE ECONOMY – PROSPECTS FOR INNOVATIONS AND NEEDS FOR COOPERATION

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Purpose of the article: Sustainable tourism is an integral element in blue growth as it supports economic development while protecting marine and coastal ecosystems. Innovation drives this, but tourism and related services in the Black Sea Basin are still insufficiently knowledge- and technology-intensive, which entails economic, environmental and social losses. The region faces challenges such as overdevelopment, pollution, waste, seasonality and limited knowledge transfer to create effective business solutions. This decreases the added value of the sector and makes its improvement overvulnerable to various global shocks.

To address these challenges, the project INTERSMARTS seeks to improve the sustainability performance and innovation absorption of tourism and services via interdisciplinary research, networking, co-creation and holistic knowledge generation. This is achieved through establishing an open network for applied research, technology transfer and valorizing novel context-relevant solutions for smart and sustainable tourism and services.

INTERSMARTS' long-term goal is to change the traditional perceptions and to raise awareness about tourism as a knowledge-intensive sector within blue growth, fostering innovation. The project follows the quintuple innovation helix model, which integrates academia, business, government, civil society, and the environment to create a collaborative knowledge economy.

Keywords: blue growth, Black Sea Basin, innovation, interdisciplinarity, knowledge.

Introduction

The blue economy and blue growth are contemporary concepts that refer to the development based on the sustainable use of the oceans and seas (European Commission, 2012; World Bank, 2020) and emphasize the need for holistic management of the complex marine-related social and ecological systems (Anne Maria Eikeset, et al., 2018). Blue growth defines the process of sustainable development of marine-related industries while blue economy refers to the economic activities related to the oceans, seas, and coasts, including a range of established and emerging sectors (European Commission, 2021). EU Blue Growth Strategy has identified five marine-related sectors as potential champions for sustainable growth - aquaculture, tourism, marine biotechnology, ocean energy and seabed mining, hence the focus on these sectors from the macro-regional perspective, including for the Black Sea Basin (European Commission, 2012). Sustainable tourism has emerged as a critical component of blue growth strategies, particularly due to its dual capacity to promote economic development while safeguarding marine and coastal ecosystems (European Commission, 2021).

This review explores the interconnectedness of sustainable tourism and blue growth, focusing on the challenges and opportunities in the Black Sea Basin, highlighting the role of innovation, and discussing regional solutions to enhance the sector's sustainability and resilience based on the interdisciplinary applied research along the four main challenges to sustainable tourism development performed within the NEXT INTERREG initiative *"INTERSMARTS: Interdisciplinary Solutions for Smart Sustainable Tourism and Services for Blue Growth in the Black Sea Basin"*.

Integrating sustainable tourism into blue growth strategies is fundamental for leveraging marine and coastal resources without compromising their ecological integrity. Sustainable tourism fosters economic diversification, reduces dependency on traditional industries, and emphasizes the resilience of marine ecosystems (United Nations Environment Programme and World Tourism Organisation, 2005).

Scholars argue that while the economic perspective is often viewed as dominant in policy documents, substantial research emphasizes the sustainability perspective and highlights the necessity of potential growth limitations to preserve the marine environment's natural resources in view of environmental and social justice (Ertör & Hadjimichael, 2020). Hence the need for multi-disciplinarity

perception when researching the practical implications of blue economy and blue growth prospects across regions while tailoring the efforts to the concrete circumstances of the areas.

Despite its potential, tourism in the Black Sea Basin faces considerable challenges. The sector is characterized as knowledge- and technology-non-intensive, leading to economic inefficiencies, environmental degradation, and social disparities (European Commission, 2023; Haller & Tacu Hârsan, 2023). Key issues include:

Overdevelopment: Unchecked urbanization and infrastructure expansion threaten natural habitats and biodiversity;

Pollution and Waste Management: Inefficient waste disposal systems and marine pollution are persistent problems;

Seasonality: A seasonal influx of tourists creates uneven economic activity and resource use;

Knowledge and Technology Gaps: Limited adoption of innovative practices and technologies reduces the sector's adaptability to emerging challenges.

Innovation is central to transforming Black Sea tourism into a sustainable and resilient sector. Cross-disciplinary solutions that integrate social, natural, and engineering sciences can address regional challenges effectively (Darbellay & Stock, 2012; Wisz, Mary S., et al., 2020) For instance, the use of digital platforms for resource management, eco-friendly transportation systems, and smart waste management technologies are promising innovations.

Moreover, fostering partnerships among stakeholders, including academia, local governments, and businesses, can enhance knowledge transfer and technology adoption (World Bank World Bank and United Nations Department of Economic and Social Affairs, 2017). These collaborations create opportunities for contextualized solutions tailored to the specific socio-economic and ecological conditions of the Black Sea Basin.

Sustainable tourism is integral to blue growth due to its potential to harmonize economic development with environmental stewardship. The Black Sea Basin, with its unique challenges, provides a critical case for innovation-driven sustainable tourism. Cross-disciplinary approaches, localized solutions, and enhanced stakeholder collaboration are essential to addressing regional issues and unlocking the sector’s potential for economic and ecological resilience.

Results and discussions

The project *INTERSMARTS* represents a pioneering initiative aimed at addressing the pressing challenges associated with tourism and services in the Black Sea region. Recognizing the critical role of interdisciplinary collaboration, innovation, and sustainable practices, the project seeks to enhance the sustainability performance and innovation absorption capacity of tourism and related services sectors. Through an integrative approach that combines applied research, networking, co-creation, and holistic knowledge generation, INTERSMARTS aspires to reshape the way tourism contributes to blue growth.

The overarching goal of INTERSMARTS is to establish an open, interdisciplinary network for applied research and technology transfer while valorising novel solutions tailored to the specific challenges of the Black Sea Basin. The project emphasizes cross-border cooperation, reflecting the transnational nature of both the challenges and opportunities within the region. Key aspects of its implementation include challenge-specific studies, interdisciplinary interventions, and the active engagement of citizens as co-researchers, ensuring open civic participation in the knowledge-generation process.

INTERSMARTS operates under the premise that sustainable tourism and blue growth are interlinked issues that transcend national boundaries. The project aims to foster informed participation and collaboration among diverse stakeholders—including academia, businesses, policymakers, and civil society—across neighbouring countries that share the Black Sea as a common resource. By addressing the unique regional challenges, the project seeks to elevate the knowledge-intensive nature of tourism within the blue economy framework.

INTERSMARTS's intervention logic is anchored in the Quintuple Innovation Helix Model, a framework that integrates academia, business, government, the civil sector, and the environment into a

cohesive knowledge economy. This approach underlines the necessity of a collaborative and multi-sectoral strategy to achieve sustainable outcomes in tourism and blue growth. By aligning efforts across these five domains, INTERSMARTS promotes systemic innovation and the dissemination of sustainable practices.

Key Outputs and Deliverables

The project is structured to deliver impactful outcomes, including the following:

1. **INTERSMARTS Network for Interdisciplinary Solutions for Smart Tourism and Services:** This network will unite project partner organizations to address key issues such as sustainable infrastructure, resource management, pollution and waste reduction, seasonality, and technology transfer. By fostering knowledge sharing and collaboration, the network aims to raise the sustainability performance of tourism and services in the Black Sea Basin.
2. **Needs Assessment Research:** Comprehensive studies will be conducted to assess tourism and related services' sustainability and blue growth perspectives. These assessments will identify critical sectoral challenges, laying the groundwork for targeted interventions.
3. **INTERSMARTS Innovation Management Platform:** This platform will serve as a repository of novel solutions and technological advancements, demonstrating practical pathways for improving sustainable tourism entities. The platform will also include functionalities for idea generation and crowdsourcing, facilitating stakeholder engagement and co-creation.
4. **Transnational Interdisciplinary Research and Networking Events:** Four major events will be organized in Bulgaria, Moldova, Greece, and Türkiye, creating spaces for stakeholders to collaborate on smart sustainable tourism initiatives. These events will catalyse the exchange of knowledge, experiences, and innovative practices.

In the long term, INTERSMARTS aims to transform traditional perceptions of tourism by positioning it as a knowledge-intensive and innovation-driven sector within the blue growth framework. The project underscores the importance of tourism not only as an economic driver but also as a catalyst for technological advancements and environmental stewardship. By celebrating and disseminating innovative tourism initiatives, INTERSMARTS seeks to inspire widespread recognition of the sector's potential in the Black Sea Basin.

Moreover, the project highlights that sustainability is not confined to specific tourism niches such as eco-tourism but rather represents a comprehensive philosophy influencing both the supply and demand sides of tourism businesses. This perspective ensures that sustainability becomes an integral part of all tourism activities, contributing to the resilience and vitality of the region.

Conclusion

INTERSMARTS addresses critical regional challenges through an innovative, interdisciplinary approach that prioritizes sustainability, technology transfer, and stakeholder engagement. By establishing robust networks, promoting knowledge generation, and delivering actionable solutions, the project aims to strengthen the resilience and competitiveness of the tourism sector in the Black Sea Basin. Its alignment with the quintuple innovation helix ensures that the benefits extend beyond immediate stakeholders, contributing to broader socio-economic and environmental gains in the region. Through INTERSMARTS, the Black Sea Basin is poised to become a model for smart, sustainable tourism and blue growth.

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