

Rethinking Tourism Education for a Sustainable Blue Economy

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Key Themes in Blue Tourism Research

1. A Core Pillar of the Blue Economy

- Largest and most economically significant sector
- Drives job creation and value generation
- Strong link to Sustainable Development Goals (SDGs)

3. Governance, Skills & Collaboration

- Multi-stakeholder governance
- Green skills; Co-creation approaches
- Critical for long-term sustainability and crisis response

2. Sustainability & Environmental Challenges

- Highly dependent on ecosystem health
- Vulnerable to climate change, biodiversity loss and overexploitation
- Requires circular, regenerative, and sustainable practices

4. Resilience & Economic Opportunities

- Supports local livelihoods & regional development
- Key for coastal communities
- Exposed to shocks (e.g. pandemics) → requires adaptive strategies

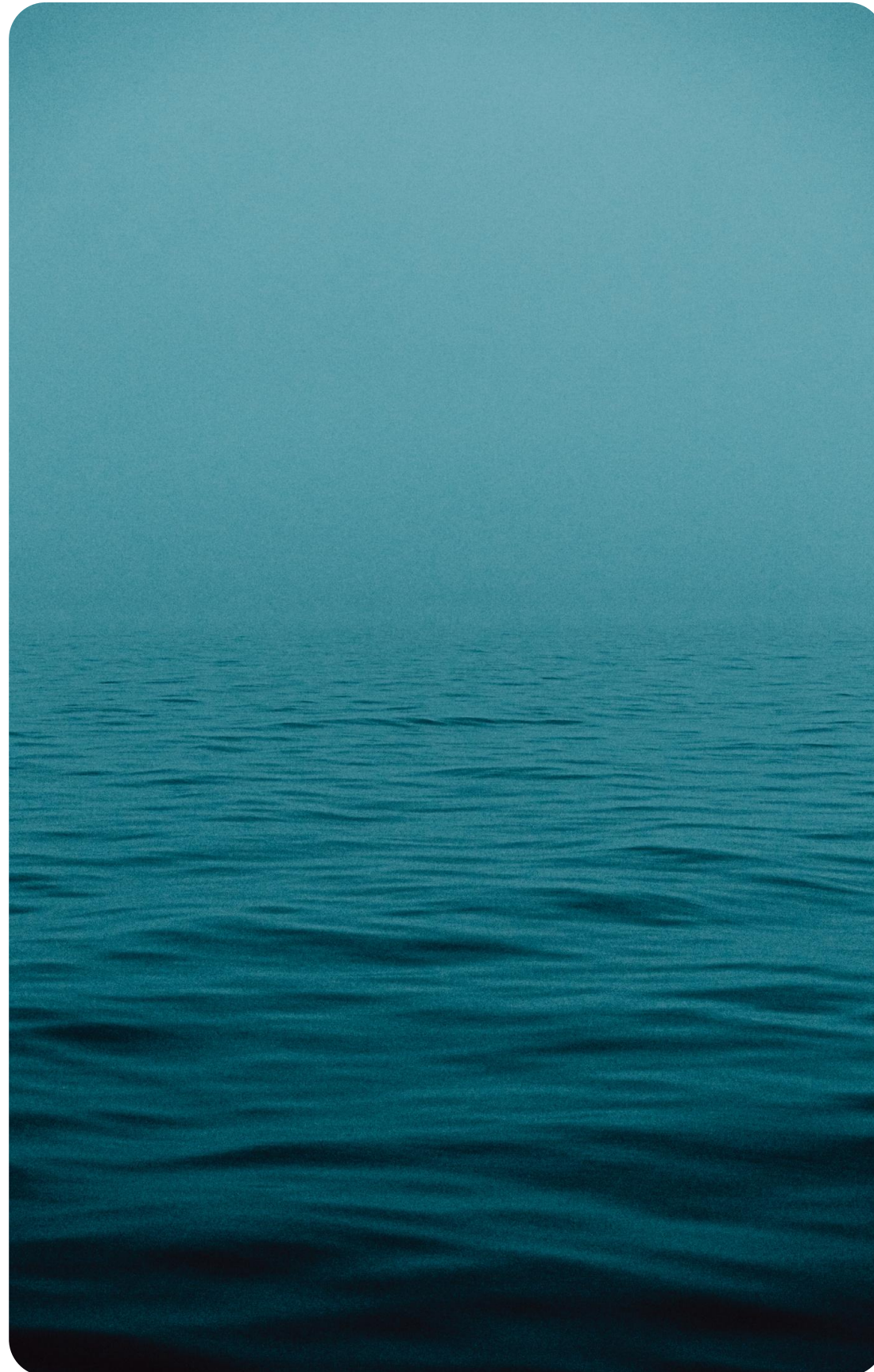
Oceans Assessment Committee



01. Coastal Climate Impacts & Infrastructure

- Sea-level rise, storms, erosion affecting coasts
- Ecosystem degradation reduces natural protection (reefs, wetlands)
- Coastal infrastructure increasingly vulnerable
- Need for systemic, integrated solutions

Source: Schuhmann et al. (2024); Jovane et al. (2024)



02. Tourism, Pressure & Transformation

- Coastal tourism depends on healthy ecosystems
- Tourism contributes to pollution, infrastructure pressure
- Shift toward sustainable & transformative tourism
- Tourists as agents of environmental awareness

Source: Correia (2024); Schuhmann et al. (2024)

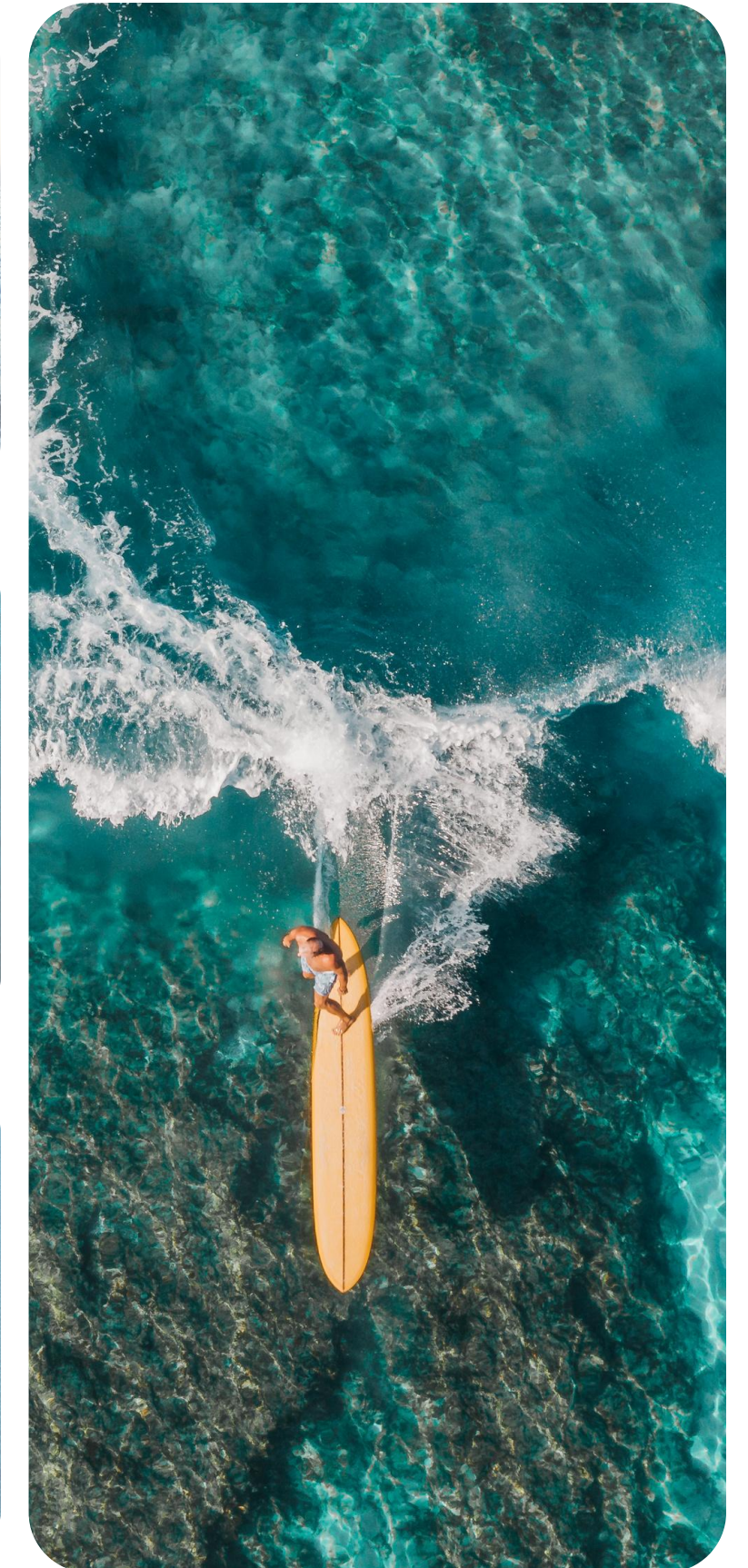
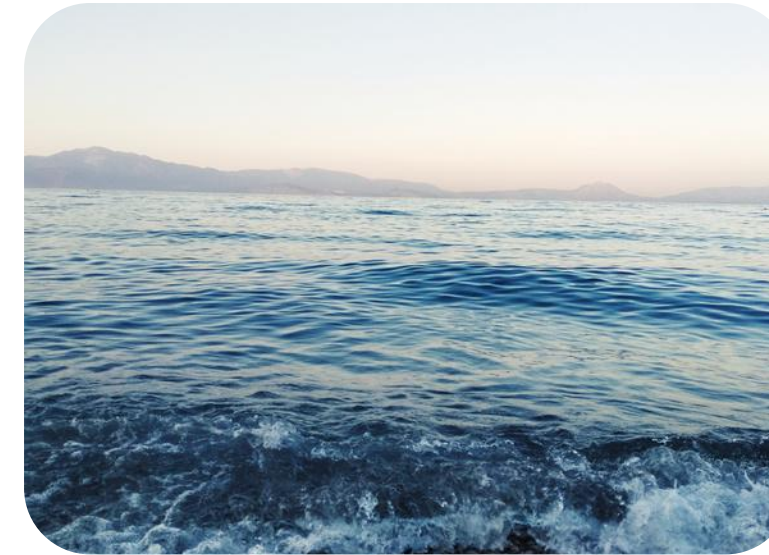
Blue Skills in Numbers

Higher Education Overview in Portugal

- 456,032 students enrolled in higher education
- 5% of students are in the services field
- Of these, 49% study tourism
- 75% Bachelor's degree; 10% Master's degree

Source: DGEEC, 2024-2025 statistics

Only 28% of students are exposed to blue skills or related courses



Pathways Forward: Solutions & Skills

01. Hybrid Solutions

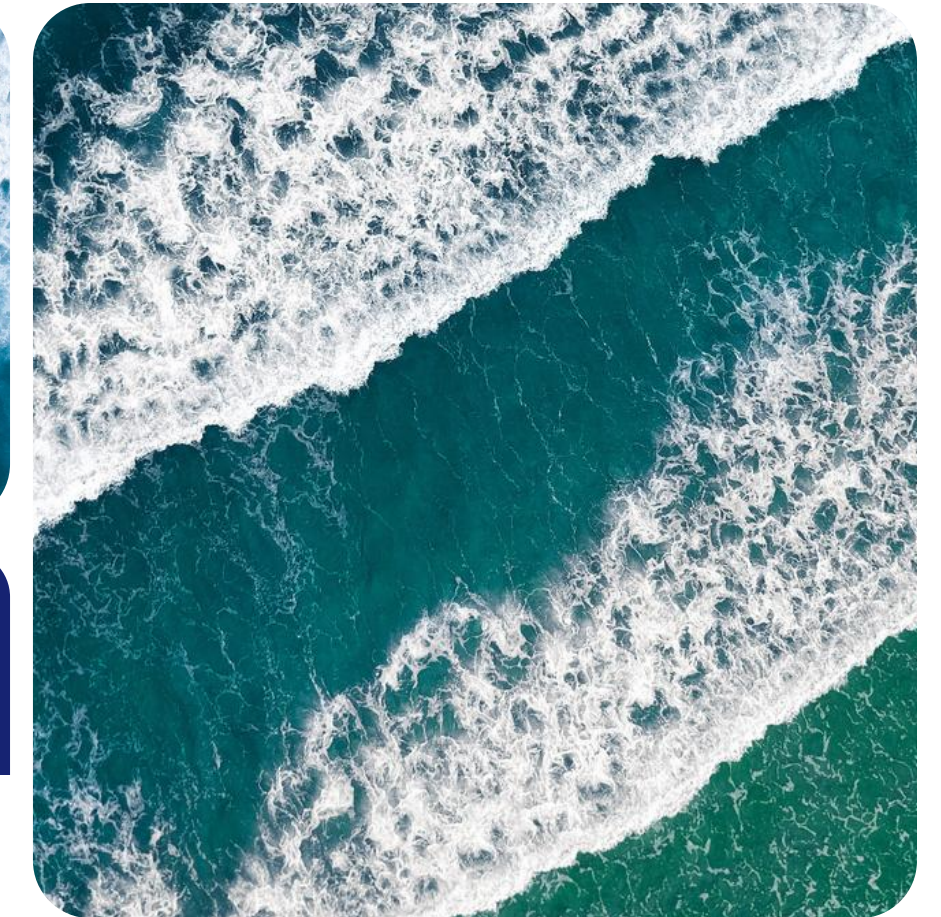
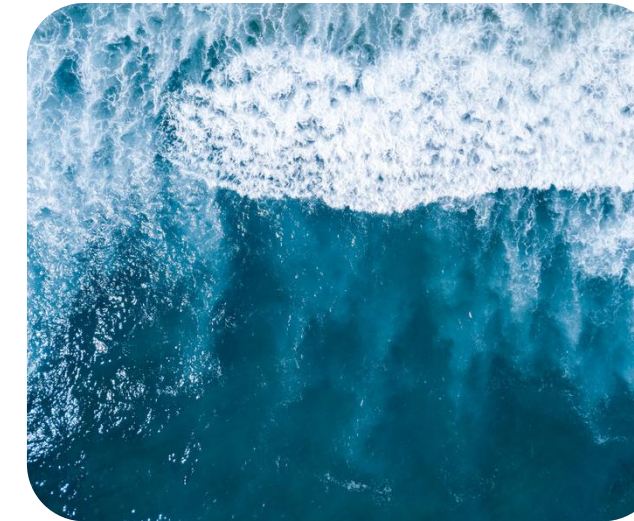
Engineering + ecosystem
restoration

03. Education & Blue skills (CodeBLUE)

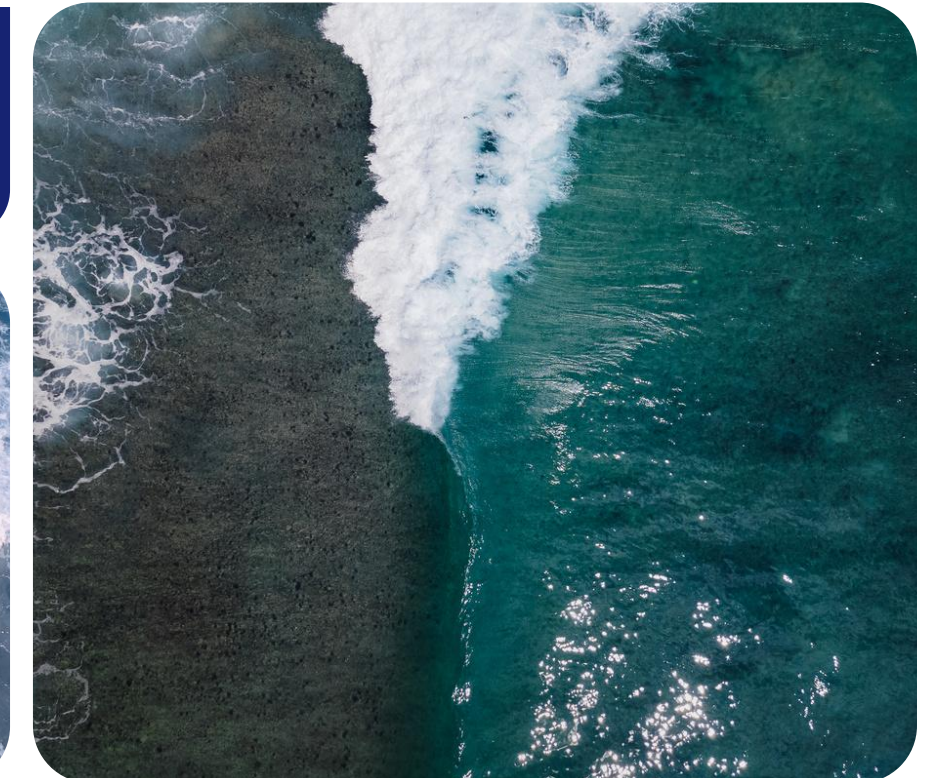
02. Sustainable tourism planning and governance

04. Collaboration

Academia, industry, policy
(KIPT COLAB)



CodeBLUE



What is Code BLUE project?

CodeBLUE is an Erasmus+ cooperation project coordinated by Varna University of Management, focusing on transforming tourism and services education by embedding sustainable blue economy principles, fostering interdisciplinary learning, and strengthening the capacity of education systems to support resilient and sustainable coastal development.



Our Vision

To transform tourism and services education by embedding blue economy principles at the core of learning and teaching.



Objectives

1. Enhance the relevance of tourism education through a blue economy perspective
2. Develop a flexible, modular, and cross-disciplinary curriculum adaptable to HE, VET, and lifelong learning
3. Upskill educators, students, and practitioners
4. Strengthen collaboration between academia and industry
5. Support resilient, inclusive, and sustainable blue economy ecosystems



Preliminary Results

Each country conducted 60 surveys (30 students, 30 educators/experts) and 10 interviews with blue economy stakeholders, from which selected insights are presented.

“Most people working in coastal tourism do not have sufficient knowledge about the ecosystem they operate in.” (Mission Ocean Board & Former Director General of Maritime Policy)

“There is a clear lack of scientific knowledge, especially when communicating the maritime heritage to tourists.” (Vice-president of turismo do Algarve)

“Environmental and marine science skills are clearly the most lacking in the sector.” (Marine & Environmental Sciences Expert, Emeritus Professor, University of Algarve)



Preliminary Results

Most frequently recommended courses:

1. Marine Ecology & Ocean Literacy
2. Marine Regulation & Governance
3. Sustainability & Environmental Impact
4. Integrated Blue Economy & Systems Thinking
5. Sustainable Innovation & Entrepreneurship
6. Digitalization & Automation
7. Science Communication & Interpretation
8. Soft Skills



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CodeBLUE



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