

UfM 17th Regional Platform for the Sustainable Blue Economy

Side Visit 20 February 2025

Agenda



Union for the Mediterranean
Union pour la Méditerranée
الاتحاد من أجل المتوسط



9:00-9:15

Arrival Blue Tech Port Sant Bertrand (BTPSB)

9:15-9:45

Coffee and networking

09:45-11:00

Short presentations from BTPSB and Sustainable Blue Economy sectors; lighting round EMFAF-funded GREEN MARINE MED project

WOC: Stewart Sarkozy-Banoczy, CEO

GREEN MARINE MED: Lisa Simone de Grunt, Coordinator

Port of Barcelona: Javier Garrido, Innovation Manager

Barcelona Activa: Elisabet Juarez, Head of Strategic Sectors

Centro Tecnológico Naval y del Mar: Noelia Ortega, CEO

SEAstainable Ventures: Ignasi Ferrer, CEO

DG MARE: Christos Economou, Deputy Head of Unit and Acting Director

11:00 | Walk to World Trade Center

11:30 | Boat tour from WTC – maritime visit

12:30 | Visit to Escola Europea

13:30 | End at WTC - bus picks up delegates to return to hotel

GREEN MARINE MED

Mediterranean Green Shipping Network:
Linking Ports, Industries, Investment and Innovation for Monitoring
and Technology Foresight on Green Shipping in the Mediterranean

GREEN MARINE MED
MEDITERRANEAN GREEN SHIPPING NETWORK



- **Maritime transport:** essential for global trade, is under increasing pressure to cut its significant GHG emissions
- **Diverse Maritime Fleet:** The industry's varied fleet, including merchant ships, cruise ships and ferries, fishing boats, yachts and recreational boating, support vessels, etc., significantly contributes to environmental impact
- **Stakeholder Involvement:** GMM spans complete Green Shipping value chain, from corporates like vessel owners and operators, ports and marinas, fuel and energy actors, to cities and infrastructure, to entrepreneurs and start-ups with innovative technologies as well as public and private financiers
- **Comprehensive Green Shipping:** "Green Shipping" extends beyond 'just' decarbonisation, it's also about ship adaptations, route optimisation, infrastructure for alternative fuels, electrification, resilience, circular economy and circularity, digitalisation, smart technologies, etc. etc.
- **Innovation & Support:** The launch of an International Call for Green Shipping Innovation aims to provide targeted support for start-ups and entrepreneurs, thereby catalyzing innovation and accelerating Green Shipping across the Mediterranean.
- **Lasting impact:** WOC to coordinate Centre of Excellence on Green Shipping



01.10.2023 – 01.10.2025



1,165,587.38 €



Consortium

Geography

18 partners representing 7 countries in Europe (Spain, France, Italy, the Netherlands) and Southern Mediterranean (Türkiye, Israel, Morocco)

Variety of partners

The consortium includes different types of relevant Green Shipping actors:

- 4 clusters and maritime technology centres
- 4 accelerators and business support programmes
- 3 Ports
- 3 educational partners
- a marine engineering company
- a Blue Economy event organiser
- a coastline development company
- a research group on innovation in transport
- a global maritime business alliance

ITESFRNLTRILMA



Co-funded by
the European Union

GREEN MARINE MED

Mediterranean Green Shipping Network:
Linking Ports, Industries, Investment and Innovation for Monitoring
and Technology Foresight on Green Shipping in the Mediterranean

GREEN MARINE MED
MEDITERRANEAN GREEN SHIPPING NETWORK



OBJECTIVES



Deliver clear
assessment of
status quo
Mediterranean
Green Shipping



Create strong
and lasting
network of key
players
Mediterranean
Green Shipping
ecosystem



Facilitate
improved
access to
finance for
Mediterranean
Green Shipping



Foster and
facilitate
innovation in
Mediterranean
Green Shipping



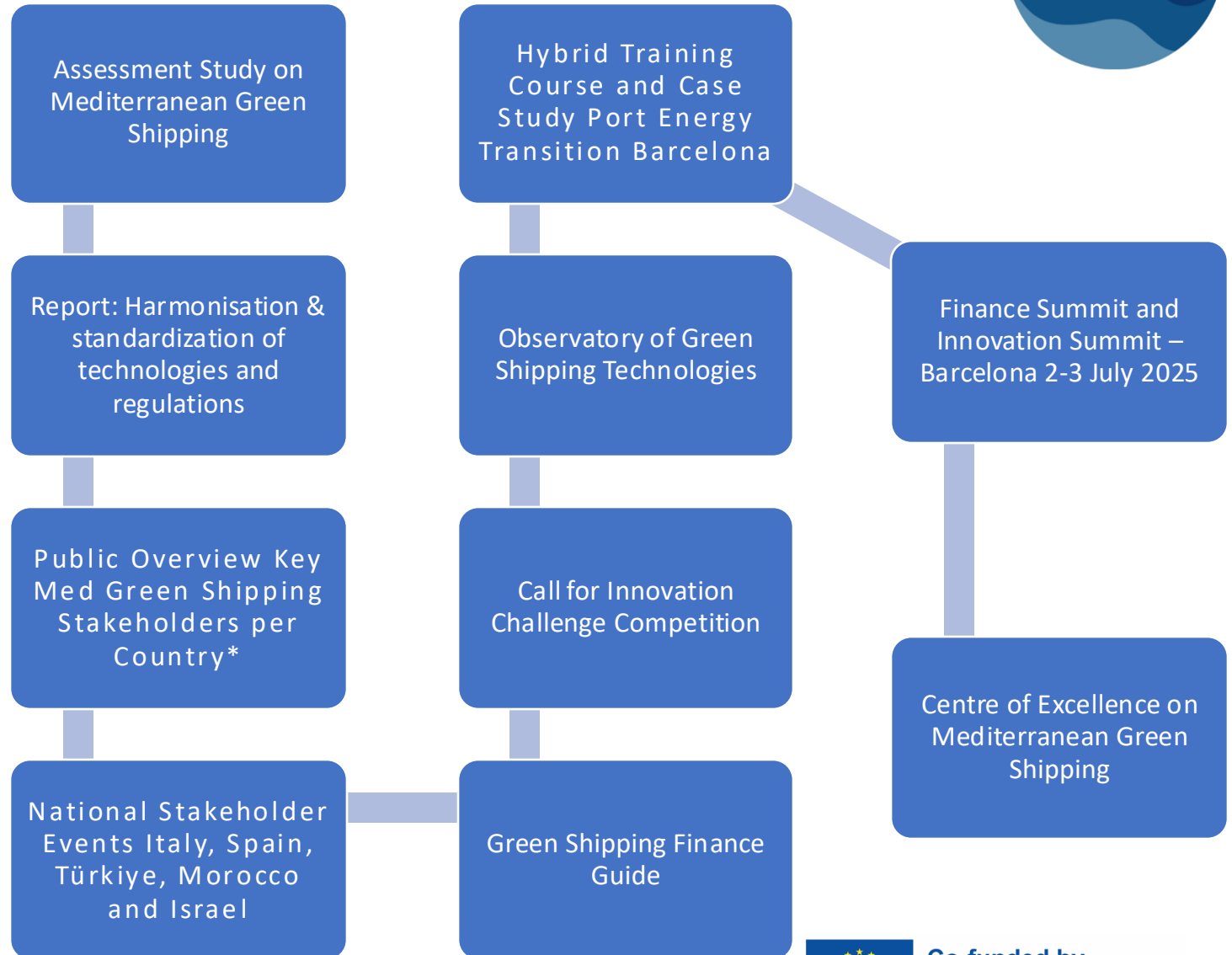
01.10.2023 – 01.10.2025



1,165,587.38 €



Activities



D2.1. CONSOLIDATED ASSESSMENT REPORT

TABLE OF CONTENTS



1. INTRODUCTION	5
2. METHODOLOGY	7
3. GREEN SHIPPING CHALLENGES AND POTENTIAL FROM GLOBAL TO THE MEDITERRANEAN REGION	7
3.1. Overview of regulatory and policy challenges	10
3.1.1. Global action 2023 IMO Greenhouse Gas Strategy	10
3.1.2. EU Action in reducing emissions from the shipping sector	12
3.1.3. Regulation framework in the Mediterranean region	16
3.2. Overview of technical, technological and financial challenges	19
3.2.1. From Retrofitting to Renewable Energy transition	20
3.2.2. Ports transition	22
3.2.3 New technological equipment and sources	23
3.2.4 Financial dynamics and investments	27
4. STATE OF THE ART OF THE DECARBONIZATION PATHWAY IN THE SHIPPING INDUSTRY	29
4.1. Developments in Green Shipping technologies, practices and infrastructures	30
4.2. Impact Assessment of relevant past EU-funded projects	34
5. POTENTIAL FUTURE OF THE GREEN SHIPPING INDUSTRY	38
5.1. Forecasting the Energy Transition in the Mediterranean	38
5.2. Case Study: The environmental benefits of ZEETUG All-Electric Tugboats	40
6. CONCLUSIONS	44
7. ANNEX	46
8. BIBLIOGRAPHY	1

https://drive.google.com/file/d/1UYCbRYS8Wb_LJC0aXcCEcvczcDy8i_vR/view?usp=sharing

D2.2. HARMONISATION AND STANDARDISATION OF TECHNOLOGIES AND REGULATIONS



1 Introduction	6
2 Emerging technologies in the maritime industry	7
2.1 Technologies within Port	9
2.2 Mediterranean Experience	11
2.3 Summary of Technologies	20
3 Green Shipping Corridor	22
4 Regulations in the maritime sector	26
4.1 Regulation EU 2023/1804 – Shore Power Connection Requirements	26
4.2 Regulation EU 2023/1805 – Renewable and Low-carbon fuels	28
4.3 Regulation EU ETS (Directive 2003/87 Consolidated)	29
4.4 IMO - MEPC 81 & 80 highlights	30
4.5 IMO Highlights Annex	31
5 Analysis	33
5.1 Gaps in Adoption and Implementation	33
5.2 Effectiveness in Reducing Environmental Impact	36
6 Recommendations	39
7 Bibliography	41

https://drive.google.com/file/d/1bLk817XJFoGxhKc3iHIYCr_JMI5K02Ot/view?usp=sharing



Centre of Excellence on Green Shipping – Phase 1: Mediterranean

GREEN MARINE MED
MEDITERRANEAN GREEN SHIPPING NETWORK



unesco

Intergovernmental
Oceanographic
Commission



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

MISSION AND VISION

The mission of the Centre of Excellence is to drive transformation in the maritime sector towards a sustainable future by **promoting green shipping innovations** that significantly reduce environmental impacts. Its vision is to **establish the Mediterranean as a global leader in sustainable maritime practices**, influencing international standards and policies.

- The Centre of Excellence will unite **diverse maritime sectors** across both shores of the Mediterranean to **catalyse innovation, drive collaborative solutions**, and **attract strategic investment** in cutting-edge Green Shipping practices.
- Until October 2025, it is one of the activities of the GREEN MARINE MED project (Phase 1)
- **And then it will live on! (Phase 2)**



Why Us, Why Now?

Multi-sectoral: We bring together diverse maritime industries – from shipping to ports, fuel providers to marine engineering.

Wide Scope: Our efforts extend beyond decarbonization, addressing broader environmental challenges.

International Impact: The Centre unites partners across both shores of the Mediterranean and beyond to set global standards for Green Shipping.

Full Spectrum Focus: From deep-sea vessels to ports and urban waterfronts, we tackle all aspects of sustainable maritime practices.



- **Multi-Sectoral Approach:** Beyond just decarbonization, focus on wide range of vessels and technologies
- **Broad Scope:** Focuses on the entire Green Shipping spectrum from deep-sea to hinterland, including ports and cities.
- **Comprehensive and Inclusive:** Bringing together various stakeholders from across maritime industries, and from across geographies, incl. both EU and non-EU, MENA, and beyond



Co-funded by
the European Union

Activities 2025 and beyond



2025

- Updating and expanding Assessment Studies
- Observatory of Green Shipping Technologies: Online resource portal to share innovation and opportunities
- Capitalization of Case Study: Port Energy Transition Barcelona
- Green Shipping Finance Guide – public and private funding
- **Stakeholder event in Tanger, Morocco 23 April 2025**
- **Call for Green Shipping Innovation**
- **Barcelona: 2 and 3 July 2025 – Innovation Summit and Finance Summit**

After 2025

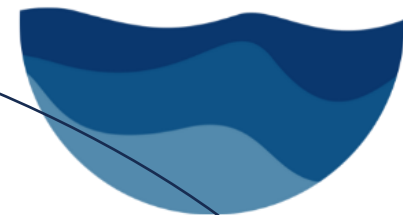
- *Building consortia for funding opportunities*
- *Continued Stakeholder Mapping*
- *Webinars and Workshops*
- *Match-making, networking and mentoring*
- *Joint projects and Trainings*
- *Sustainability Showcase Series*

**Activities from before
October 2025 may be
built on and
improved in years
after**

**SAVE
♦THE♦
DATE**

**The Centre's
members determine
the priorities and
activities!**





Core Partners



Executive Board



Port de Barcelona



External Members

Countries involved:

- France
- Spain
- Italy
- Morocco
- Israel
- Türkiye
- Netherlands
- Portugal
- Croatia
- Algeria
- Malta
- Egypt
- Greece
- Cyprus



Join the Centre of Excellence!



- **Shape the Strategic Direction:**
Influence the development and direction of the Centre, placing your organization at the forefront of sustainable maritime practices.
- **Access to Cutting-Edge Research and Innovations:**
Benefit from the latest findings and projects in green shipping.
- **Networking Opportunities:**
Connect with a network of influential maritime leaders and stakeholders who are committed to environmental responsibility.
- **Leadership Opportunities:**
Gain strategic visibility and leadership opportunities within the Centre's governance.
- **Drive Sustainable Initiatives:** Ability to spearhead projects and initiatives that align with your organization's environmental and corporate goals.
- **Community of Practice:** Join a diverse community comprising industries, governments, academia, and NGOs, all dedicated to fostering a sustainable maritime future.

What Do We Offer?



Access to a **network of industry leaders, innovators, and policy-makers**



Opportunities for investment and **collaboration in cutting-edge projects**



A platform to **drive innovation in Green Shipping technologies**



Access to the sandbox of the Port and City of Barcelona



Participation in pilots that can **shape the future of the maritime industry**

The Centre of Excellence on Mediterranean Green Shipping embodies a dynamic approach where the Community of Practice drives the agenda. Emphasizing a Joint Industry Project (JIP) model, the Centre fosters an environment where participants from across the maritime spectrum determine the priorities and activities. This participatory approach ensures that the initiatives are directly relevant and beneficial to the stakeholders involved, allowing for tailored solutions that address specific industry needs.

What Do We Ask of You?

Join the Centre of Excellence as a partner! Engage with us to shape the future of Green Shipping in the Mediterranean. Whether you're a maritime business, investor, innovator, or policy-maker, your participation is crucial to creating a legacy of environmental stewardship and economic opportunity. *Joining the Centre of Excellence is on a voluntary basis, contributing your time and resources as fitting to your circumstances.*





**Sign up and join the
Centre of Excellence on
Mediterranean Green
Shipping Today!**

<https://mailchi.mp/4f72136bfb89/centre-of-excellence>



Co-funded by
the European Union