



Cultivating Green Skills in The Maritime Sector

UP-SAILING

POLICY RECOMMENDATIONS



ERASMUS+

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1. INTRODUCTION

This document has been developed under the project ERASMUS+ “Up-Sailing – Cultivating Green Skills in the Maritime sector” (KA220-VET-0000347000) as final result of opinions, inputs and feedback collected through interviews, workshops, administration of questionnaires and the participation to events with shipowners, VET providers and stakeholders of the maritime sector.

The results obtained and fully described in Up-sailing PR4 Deliverable have constituted the ground to define some key Policy Recommendations towards a meaningful change with regard to green skills in the maritime sector.

The Recommendations are ready for dissemination to core national and EU representatives and stakeholders and will be uploaded on the project website.

The final set of Recommendations reflects the current status in terms of green skills, as resulted from the project activities conducted under all PRs. In order to be effective and respondent to the skills need of the industry, it will need to be periodically revised and updated to ensure that skills and maritime curricula are kept up to date.

The Recommendations focus on EU level and aim also at supporting the long-term visibility and sustainability strategy of the project.

For more information on the Up-Sailing project please visit the official website:
[UP-SAILING – Cultivating Green Skills in the Maritime Sector \(upsailing.eu\)](https://upsailing.eu)



UP-SAILING Cultivating Green Skills in the Maritime Sector

KA220-VET – Cooperation partnerships in vocational education and training

Up-Sailing project aims at introducing a new training strategy for the development of green skills in maritime studies, in compliance with the most current and pioneering environmental policies as expressed in the EU and member states policy dialogue. In that sense, it focuses on designing future-oriented curricula that better meet the needs of the modern maritime sector. Centered on the idea of helping current and future employees build their competences and personal awareness in green maritime economy, it will contribute to their better adaptation in future market demands, mitigation of climate change and enrichment of environmental protection strategies.

Almost 90% of goods transportation globally is done by ship, making shipping the most efficient as well as the greenest mode of commercial transportation as it accounts for less than 2.2% of the world's CO2 emissions. However, the shipping industry could achieve even greater results, by responding to the European Green Deal which aspires to fight climate change and environmental degradation by turning Europe into a climate-neutral region by 2050. Within this context, the EU plans for zero emissions of greenhouse gases and endorses investment in environmentally friendly technologies, moving a step further from IMO's Initial GHG Strategy which envisages a reduction of international shipping emissions to 50% by then.

2. POLICY RECOMMENDATIONS

Key words:

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- Need for adequate training
 - Need for Funding
 - Matching skills demand and offer
 - Bridge the gap
 - Forum and platforms
 - Upskilling and Reskilling
 - Promote consultation mechanisms
 - Greater cooperation among the key stakeholders of the sector
 - Dialogue and cooperation
 - Sharing of best practices and knowledge

Why the need for Policy Recommendations?



Policy Recommendations will be the ground for the project's sustainability strategy.

Policy Recommendations aim to: **maximise** the potential of Up-Sailing outputs by attracting companies and policy makers to the benefits of the methodologies developed within the Up-Sailing project and other EU projects on skills for the maritime sector; to **raise awareness** among maritime and shipping companies as well as Policy Makers about the results of the project and how the sector can benefit from them; to **support** policy makers in adopting strategies for integrating maritime curricula with the latest trends in skills; to **shed light** on the importance of adapting education and training to new advances and challenges in the sector, increasing its **competitiveness** and enhancing **employment** opportunities for workers in the sector; to **stimulate public debate** and dialogue towards green transition and in line with latest EU policies; to **address challenges** and provide viable responses for the benefit of the entire sector; to **make positive use** of project results developed on the

basis of input received from industry, VET providers and all maritime stakeholders involved in the research and debate.

Policy Recommendation no. 1

EU and National Governments to invest in initiatives that promote effective dialogue between social partners, National Governments, EU Institutions, VET providers with the aim to anticipate skills needs and address the new challenges posed by the green transition in the maritime sector.



The first key Recommendation is to strengthen at European level the effective dialogue between the “key actors” in the sector, i.e., industry, National Authorities and EU Institutions, as well as VET providers, as an effective measure to anticipate and match the skills needs in the maritime sector. Dialogue and cooperation are **key catalysts** for skills development and innovation in the sector. By investing in initiatives that promote collaboration between the key players of the sector, it will be possible to effectively anticipate and close the skills gap to the benefit of seafarers, the industry and the sector as a whole.

The purpose of this Recommendation is to support and promote a **culture of cooperation** and **networking** through knowledge sharing and exchange of best practices across Europe. By adopting such initiatives, it will be possible to improve cooperation, build relationships, share expertise, anticipate challenges, facilitate reciprocal updates and bridge the skills’ gap, integrating VET Curriculum according to the skills needs.

To reach the target is essential to involve in the dialogue EU recognised Social Partners’ organisations representing the interests of employers and employees, National Authorities, EU Institutions, VET providers. The constant interaction

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between those actors will exploit its results to the benefit of the industry, creating a training that is respondent to the new trends at EU level, fostering the creation of job opportunities, increasing the competitiveness of the industry.

What tools can be used in support of such Recommendation?

Establish regular and structured dialogue channels

- Create an online **platform** or **forum** at EU level where stakeholders of the maritime sector can engage in an open dialogue exchanging ideas, perspectives and best practices; or

Create models or use existing models for sharing Best Practices

- Use existing models created at EU level such as, for example, the Up-sailing PR3 Green Label Registry (1); or
- Avail of models created under other EU Projects such as Skillsea¹ where the introduction of European Maritime Skills Forum (E-MSF) was proposed with the aim to assist in sharing best practices, fostering cooperation among VET/MET providers and maritime stakeholders, and increasing knowledge transfer on skills in the maritime sector.

Example of existing model (1) for best practices sharing among shipowners

The Up-Sailing project developed a “*Green Label Registry*” for vessels responding to green navigation. The Green Label Registry is an online database where shipping companies that adopt green best practices can voluntarily register after having successfully passed an online questionnaire. A scoring system has been developed alongside the questionnaire in order to enable the shipowners to assess their level of green practices within the scope of the Green Label Registry.

¹ More information available at [[SkillSea "Futureproof Skills for the Maritime Transport Sector" - SkillSea](#)].



The benefits of the Register are to support shipping companies in adopting greener practices, sharing them with other participating shipping companies and thus promoting positive growth and ongoing development of new environmentally-friendly models and practices on board.

Policy Recommendation no. 2

EU fundings and programmes that invest in upskilling and reskilling in the maritime sector.



Awareness on EU grants suitable for upskilling and reskilling programmes and training within the sector is functional to take strategic decisions for enhancing environmental sustainability in the sector, while maintaining high levels of competitiveness in the maritime and shipping industry.

The European Union has a central role in the advancements of the sector and management of EU maritime regulations. However, it recognizes the invaluable importance of the maritime human resources as pivotal elements to the success of the industry. To this end, EU funds dedicated to the human capital skills and capabilities are crucial to leverage the resources and contribute to the sustainable development of the industry in the future.

For the aforementioned reasons, a breakdown of the main EU funds in the shipping and maritime sector is provided below:

On upskilling and reskilling of the workforce:

ERASMUS+

Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. It focuses on social inclusion, the green and digital transitions, and promoting young people's participation in democratic life. Erasmus+ supports vocational education and training (VET), including those focused on



maritime skills. It supports digital and green skills in higher education sector as well as in capacity building projects.

Other programmes on innovation of the maritime sector:

HORIZON EUROPE & EUROPEAN MARITIME FISHERIES AND AQUACULTURE FUND (EMFAF)²

These EU funding programmes, on research and innovation and on common fishery, maritime policies and international ocean governance, respectively, concur to the sustainable blue economy. Among other things, they focus on preserving and restoring marine life and commit to the sustainable use of marine vital resources.

INTERREG EUROPE³

Interregional cooperation programme for the reduction of disparities development, growth and quality of life in the EU MS. Among its main priorities related to the maritime and shipping sector, a “Greener Europe” supports energy efficiency, renewable energy, smart energy systems, climate change, water management, circular economy, nature & biodiversity and zero-carbon urban mobility. As for a “Smarter Europe”, it aims to research & innovation capacities, digitization, SME competitiveness, and S3 strategies, industry and entrepreneurship digital connectivity.

NEXT GENERATION EU (NGEU)⁴

NextGeneration EU funding is a recovery plan for the period 2021-2026. It was born to sustain Member States’ recovery from the Covid-19 pandemic. Among other things, it intends to achieve the “*make it green*” goal aiming to the

² More info available at https://oceans-and-fisheries.ec.europa.eu/ocean/blue-economy/other-sectors/research-and-innovation_en ; https://oceans-and-fisheries.ec.europa.eu/funding/emfaf_en

³ More info available at <https://www.interregeurope.eu/what-is-interreg-europe>

⁴ More info available at https://next-generation-eu.europa.eu/make-it-green_en



reduction of the carbon footprint, transitioning to clean energy, making transports, including maritime vessels, more environmentally-friendly, protecting environment, nature and biodiversity and much more.

COST ACTIONS⁵

It is an interdisciplinary research network that brings researchers and innovators together to investigate a topic of their choice for 4 years. This network is usually composed of researchers from academia, SMEs, public institutions and other relevant organizations. It is open to all science and technology fields, including new and emerging fields.

All things considered, the EU commitment towards the upskilling and reskilling of maritime workforce ensures innovation and efficiency as well as a skilled pool of professionals at any level, namely in terms of green skills and digital transformation. In fact, awareness on knowledge and competences over these themes would guarantee a sustainable maritime sector now and in the future. At the same time, only consciousness is not enough without maximizing the use of EU grants. For this reason, it is crucial to implement efficient frameworks to achieve the set objectives. Moreover, partnerships are invaluable means of cross-collaboration in the sector, whether they are companies in the industry, academia, training centres or any other stakeholder involved and interested in the maritime sector and environmental sustainability.

In conclusion, the EU commitment in prioritizing upskilling and reskilling the workforce in the sector may be considered as a twofold success. On the one hand, the sector is constantly evolving to meet the current needs; on the other hand, as a result of its primary interest in the maritime sphere, the EU may be considered as the engine for creating new medium and long-term competences in the industry, ensuring its funding initiatives' success and value.

⁵ More info available at <https://www.cost.eu/cost-actions/what-are-cost-actions/>

Policy Recommendation no. 3

Enhance and support collaboration initiatives with National and EU Maritime Clusters.



A Cluster has been defined as “*geographically proximate group of interconnected companies, associated institutions and research bodies, in turns linked by commonalities and complementarities*” (Porter, 1998⁶). Applying the definition to the maritime sector, it has been observed that Maritime Clusters are “*irreplaceable tools for boosting cooperation between practitioners towards common (shared) goals in the Blue Economy*”⁷.

Hence, why not considering the role of EU Maritime Clusters in identifying and adopting concrete strategies to anticipate skills needs?

Maritime clusters are indeed emerging as crucial players in bolstering regional alliances, playing a crucial role in promoting collaboration across the entire industry as observed by the project “CallmeBLUE” (EMFAF-2023-PIA-FLAGSHIP)⁸. Therefore, availing of the strong networks created through Maritime Clusters, it would be possible to overcome common challenges also in terms of new skills and competences, identifying common needs, proceeding with a wide sector analysis and providing transversal solutions to the training needs of the blue economy sector. As observed in Erasmus+ MARMED project’s⁹ final report on the skills gap analysis “*clusters are in fact active facilitators of matchmaking*

⁶ M. E. Porter, Clusters and the New Economics of Competition, Harvard Business Review, 1998.

⁷ Union for the Mediterranean, Maritime Clusters in the Mediterranean Region, December 2019, p. 41. [Available at [Maritime-Clusters-in-the-Mediterranean-Region_Dec-2019.pdf](#) (ufmsecretariat.org)]

⁸ More info available at [The importance of maritime clusters in strengthening regional alliances \(callme-blue.eu\)](#)

⁹ Maritime Cluster Management Education Development (MARMED), Grant Agreement Number: 2022-1-IT01-KA220-VET-000089010, Final Report, Skill gaps analysis, p. 14 [available at https://www.projectmarmed.eu/wp-content/uploads/2023/10/R.5-Final-Report_FINAL.pdf].



and synergies supporters among large companies, SMEs, start-ups, associations, universities, research centres and so on - at both national and international levels¹⁰ also emphasizing that “*a huge benefit of Cluster’s work is evident also in increasing best practice exchanges, technology transfer, sharing of innovative ideas carried out at various levels*”.

The benefits of networking and clustering activities are well known as they can facilitate the exchange of knowledge and experiences among the members and towards their wide networks.

Furthermore, clusters are undoubtedly involved in **advocacy activities**: they can represent the sector needs to the Institutions promoting policies in support of upskilling, reskilling and lifelong learning. Clusters can indeed act as public awareness raisers in the sector also through the adoption of targeted campaigns promoting the importance of continuous training and skills upgrading for the competitiveness of the sector.

In conclusion, maritime industry clusters can play a key role acting as catalysts for the development of a qualified and flexible workforce, capable of meeting the challenges of the changing labour market. Cooperation with and within such Clusters should be prioritized in order to anticipate and respond to the skills demand in the Blue Economy sector. A great example of Maritime Cluster Alliances is given by the WestMED Maritime Clusters Alliance¹¹, an initiative of dialogue between ten countries in the West-Mediterranean region involved in the ‘5+5 Dialogue’: five EU Member States (France, Italy, Portugal, Spain and Malta), and five Southern partner countries (Algeria, Libya, Mauritania, Morocco and Tunisia). The Countries involved in the Alliance cooperate on their shared interests for the region with the aim to increase maritime safety and security,

¹⁰ (European Cluster Collaboration Platform (ECCP), 2023).

¹¹ For more info visit the official website at: [WestMED Initiative at a glance - WestMED \(europa.eu\)](https://www.westmed.europa.eu/)



promote sustainable **blue growth and jobs**, and preserve ecosystems and biodiversity.



Policy Recommendation no. 4

Enhance cooperation of Member States with CEDEFOP in order to address skills gaps and foster employment opportunities.



The European Centre for the Development of Vocational training (CEDEFOP) is the EU organisation that “brings together policy-makers, employers’ organisations and trade unions, training institutions, teachers and trainers, and learners of all ages – everyone with a stake in vocational education and training”¹².

CEDEFOP plays an important role in analysing skills policies and practices in EU Member States in order to understand how information on labour market trends and skill needs can be used to support the development of appropriate upskilling and reskilling policies at EU and national level, conducting at the same time to the integration of VET Curriculum in the maritime sector. Therefore, this fourth Recommendation aims to strengthen sector cooperation with CEDEFOP for an effective approach to anticipate skills needs, encouraging the adoption of specific initiatives for collaboration, both by Governments and other stakeholders, including social partners and VETs.

The strategy to identify skills needs and integrate Curriculum with the new trends and skills demand in the sector has proven to be a successful methodology for

¹² European Centre for the Development of Vocational Training (Cedefop) https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/search-all-eu-institutions-and-bodies/european-centre-development-vocational-training-edefop_en



the Up-sailing project. But it needs wider application, becoming part of a national and European governance strategy on skills. Therefore, Recommendation no. 4.

Indeed, the benefits of EU initiatives such as CEDEFOP also emerge from the support given to Member States in improving their **governance** on skills anticipation and matching, providing technical expertise, methods and tools to promote stakeholders' cooperation and consensus, to help build a path for developing skills anticipation and matching in their country. Therefore, this Recommendation is directly interlinked with Recommendation no. 1.

Tools for skills anticipation are the starting point for having reliable and up-to-date information on skills and for preparing effective skills matching policies.



Policy Recommendation no. 5

Creating Alliances at sectoral level, organizing seminars, workshops, conferences to promote models and methodologies on upskilling and reskilling developed under EU projects.



One of the most effective ways to promote the practices, models and methodologies developed in European projects dedicated to skills, in this case in the maritime sector, is to create **cross-sectoral Alliances** where stakeholders can network in sector-specific partnerships, developing and implementing strategies to address skills gaps in the reference sectors. Such Alliances offer also the opportunity to showcase and spread knowledge about the results of similar projects developed in the sector.

As already mentioned, it is indeed essential to create opportunities for meeting and mutual consultation, so what better way than to organize dedicated events that allow sectoral alliances to regularly meet? The adoption of such a Recommendation would make it possible not to lose the valuable results obtained in the work carried out by European partners and indeed to optimise and maximise the results obtained in the framework of similar projects. Meeting under such events can create also the occasion to foster new partnerships, further exploring new joint opportunities for anticipating skills needs.

Similar Alliances already exist at EU level such as the “*Blueprint for sectoral cooperation on skills*” introduced by the Skills Agenda for Europe 2016 and confirmed by the European Skills Agenda 2020. This is indeed a best practice and a valuable experience to take into proper consideration and to be further enhanced since the participation in Blueprint Alliances and events can also



support **smart specialisation strategies at regional level in order to fight sector skills mismatches**, contributing to the definition of national and EU policies specifically targeted to bridge the skills gap, improving sectoral cooperation on skills and identifying concrete actions for the implementation of a sectoral skills strategy.



3. CONCLUSIONS

The Up-sailing project demonstrated the importance of cooperation and networking to anticipate skills needs.

It is essential to understand and shed light on the importance of common objectives and actions to increase the competitiveness of the sector and its employees and above all on promoting high-level and up-to date Curricula to facilitate the employability in the sector.

If we want to keep pace with the ever-changing and constantly evolving maritime sector, then we urgently need to put in place effective dialogue mechanisms and governance strategies on skills at national and European level.

The Policy Recommendations have this precise objective, raising awareness on the importance and the results of initiatives such as the Up-Sailing project for the benefit of the sector and above all on the importance of continuing to invest in upskilling and reskilling in the maritime sector, making use of existing and effective methodologies.

European cooperation can have significant added value for upskilling and reskilling in the maritime sector.



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