Co-funded by the Erasmus+ Programme of the European Union

MOBILISATION WORKSHOPS

WORKSHOP TITLE: How can ocean literacy promote blue growth in the maritime industry?

DATE: 26 April 2018

PLACE: Athens Digital Lab, Athens, Greece

GENERAL DESCRIPTION: The mobilisation workshop in Athens focused on ocean literacy as a cross-cutting issue, in the shipbuilding and offshore renewable energy sectors of the maritime industry. The goal of the workshop was to establish current skill and information gaps in the maritime industry, review past and existing education and training activities and initiatives and establish a network of experts in the fields of offshore renewable energy and shipbuilding. Furthermore, connections and synergies with other similar EU projects were made. The methodology included a brief presentation of the MATES project, proposed ways of engagement in the project as well as past and current training schemes and education initiatives from secondary education to university courses on offshore energy and shipbuilding in Greece.

TARGET PUBLIC: Shipbuilding and offshore renewable energy sectors, including local administration, public authorities, private companies and associations, research centres and academia.

PROGRAMME:

09:30 – 10:00	**Registration / Coffee**
10:00 – 10:15	**Welcome, Brief Presentation of the Workshop, *Tour de table*** ***Martha Papathanassiou (Indigo-Med)***
10:15– 10:30	**Welcome by the Piraeus Chamber of Commerce** ***Theodoros Pitsirikos***
10:30 – 10:45	**Presentation of the MATES Project: Overview** ***Maria Boile (CERTH-HIT)***
10:45 – 11:00	**What do we mean by Ocean Literacy: Examples & Initiatives** ***Martha Papathanassiou (Indigo-Med)***
11:00 – 11:15	Coffee break
11:15 – 11:45	**The present and future of Offshore Renewable Energy in Greece from the perspective of research and technology & education:** ***Takvor Soukissian, HCMR*** ***Varvara Petridou, 2e Education, Environmental Education Officer***
11:45 – 12:30	**The present and future of Shipbuilding in Greece from the**

	perspective of research and technology & education: *George Vozikis, Hellenic Institute of Marine Technology* *Nicholas Ventikos, Naval Architecture & Marine Engineering, NTUA*
12:30 – 13:15	**Round Table/Open Discussion**
13:15 – 13:45	**Light Lunch**
13:45 – 14:00	Next steps and Thematic Working Groups & ToR Presentation *Lefteris Sdoukopoulos (CERTH-HIT)*
14:00	**End of Workshop**

DESCRIPTION OF RESULTS:

1 **Attendance:** 15 participants
Type of Organization of participants: Enterprise, Industry Association, Research organization, Administration
Gender information: 3 women, 12 men
Age information: Between 35-60

2 **Main results for each section:** description of main contents
Main contents extracted from experts presentations:

a. **Description of the current situation:**

The blue economy is a key lever of both the European and the Greek economy, with high employment rates and a broad turnover. There is, however, significant potential for further development by making good use of the human capital and exploring innovative sustainable development solutions.

The development of specific areas of the blue economy, such as the maritime and port sector, can be supported by a specific policy characterized by the following three components:

- Defining specific integrated maritime policy measures
- Developing sea basin strategies in order to ensure an appropriate mix of sustainable development measures that take into account local, climatic, oceanographic, economic, cultural and social factors
- Targeted approach for specific activities such as coastal tourism and marine biotechnology.

The further strengthening and networking of the 1st Maritime Hellenic Maritime Cluster "Maritime Hellas" can significantly support the development of the aforementioned sectors, taking advantage of its evolution into a self-supporting organization that incorporates a wide range of shipping-related business sectors and provides (a) unique opportunities for growth, partnerships and investment, (b) increased productivity, (c) enhanced mobility, and (d) access to innovation and new technologies.

Greek shipowners as well as other relevant stakeholders involved in the shipbuilding industry have identified significant shortcomings, mainly due to the economic crisis, in relation to the implementation of new market requirements which do not make it possible to attract ships to Greek shipyards. Such a deficiency is the inability to convert conventional ships into "dual-fuel" ships or on ships using LNG (Liquefied Natural Gas) or other alternative fuels due to the non-operation of yards and partly due to the lack of necessary know-how.

Education is a key factor in addressing these deficiencies (as well as the requirements of new technologies such as autonomous vessels, Internet of Things, etc.) and the gap between existing training programs and market needs is an important issue to consider. Previous successful initatives (e.g. training of technicians through a VET program, NAUSOL actions, etc.) should be taken into account in the future planning of activities.

Mainly LNG, large and medium-sized companies recognize the lack of appropriately trained engineers, superintendents and technicians (e.g. electricians).

There is also a lack of professional training of educators/trainers as well as inadequate certification of trainees and, consequently, this also affects the renewal of the various available certifications.

b. Description of the expected future situation:

The needs of the shipbuilding industry have now shifted from manual to intellectual work and specialization in new technologies and equipment. It is clear that the necessary renewal of the existing old equipment of the Greek companies operating in this sector should be accompanied by the staffing of properly trained manpower. Businesses should deeply understand the need to invest in manpower and the importance of effective and time-consuming interconnection of entrepreneurship with education and training / specialization.

New investments in the port of Piraeus are expected to revitalize the shipyard repair zone while there is a plan for the creation of craft training schools with specific knowledge profiles in this sector, replacing the older selective transmission of technical knowledge (e.g. passed on from one generation to the next).

There are important initiatives that need to be carefully considered and potential synergies that should be explored. Such an initiative is the research project "MENTOR", in which the Department of Naval Mechanics of the National Technical University of Athens (NTUA) participates. The project responds to the need for skilled personnel in different sectors of the blue economy (i.e. maritime transport, cruise, offshore oil and gas extraction platforms and fish farms) and expects to achieve this through the creation of employment support centers for these sectors (Blue Career centers).

Main contents extracted from debates:

The technological evolution of shipbuilding and offshore renewable energy creates new needs for training and skills as well as new market data.

From the industry perspective, the Greek Marine Cluster Maritime Hellas creates the basis for supporting an autonomous self-supporting organization that incorporates a wide range of shipping-related business sectors.

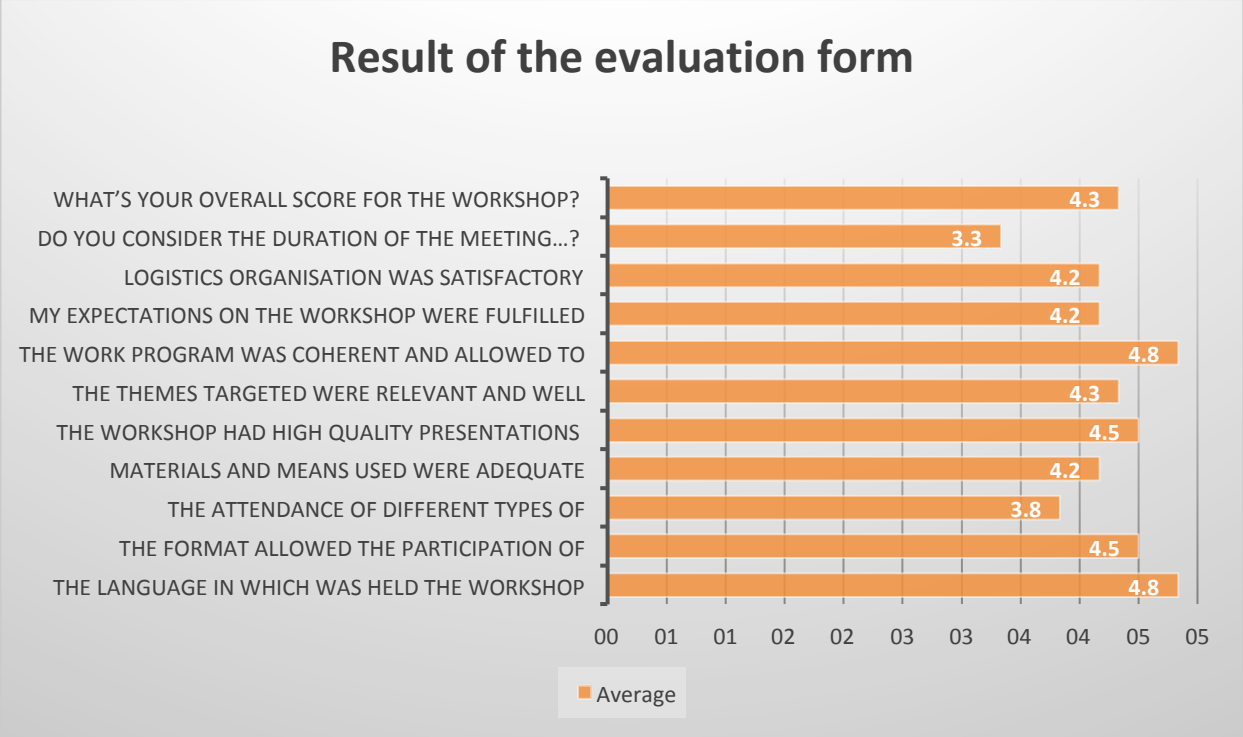
From an academic perspective, there are important initiatives such as the aforementioned project "MENTOR" (http://mentor.cubiclemon.net), which responds to the need for skilled personnel in different sectors of the blue economy through the creation of 4 employment support centers in across the Mediterranean and the Black Sea. The career centres will help young people who would like to be employed in these sectors, while also supporting businesses in finding the appropriate staff presenting the necessary skills and knowledge.

In higher education, there is only one postgraduate program fully harmonized on renewable energy, with offshore technologies being approached only through a single course, although it is planned to soon integrate more relevant courses into a postgraduate of the National Technical University of Athens - NTUA. The remaining postgraduate studies on renewable energy mainly address energy management issues.

Regarding offshore renewable energy sources that can be best exploited in the Mediterranean region (i.e. wind and wave), the wind is characterized by fully mature technologies (technological readiness level 9) and presents the greatest exploitation potential. Although relevant infrastructure has been implemented in the North Sea for quite some years, there is still no relevant investment in the Mediterranean Sea as well as in Greece in particular.

All workshop participants agreed that one of the key elements for the future sustainable evolution of the targeted two sectors is the environmental education provided to students from an early age which acts as the foundation for developing appropriate environmental consciousness and raising awareness on ocean stewardship and literacy. Combining formal with non-formal learning practices, the trainee reaches the level of knowledge that will lead him / her more easily towards the use of new technologies and the acquisition of new skills and competences.

3 Results of satisfaction survey



CONCLUSIONS: This was the first mobilization workshop for the MATES project, and the main aim was to start the discussion at the national level on the skills needed by the industry to train the new workforce supporting, in this manner, their competitiveness and sustainability as well as on new education and training schemes to be provided for successfully addressing the future challenges of the maritime technology sector. A good mix of representatives from the shipbuilding industry were present, while the offshore renewable energy sector in Greece was under-represented given the lack of relevant investments in the country and the Mediterranean region in general. Existing barriers and relevant actions that can be undertaken for overcoming them were discussed in more detail in Dr. Soukissian's presentation from the HCMR, who provided a detailed overview of the past and present of the offshore renewable energy sector, which assisted the workshop participants in better understanding where Greece currently stands but also the great potential that this sector offers. CERTH-HIT invited key contacts related mainly to the shipbuilding and shiprepairing industry, who also presented their views on industry needs and gaps and some initial discussions took place in view of recent investments that have taken place in the port of Piraeus that are expected to revitalize the sector and generate important benefits for the local community. Ocean Literacy and its role in the MATES project were presented at the start of the workshop, in order to establish a common understanding of the concept as well as introduce it as a cross-cutting issue within MATES. Additionally, some ocean literacy examples and initiatives that MATES could link to in the future were also presented.

In addition, a presentation by the Secondary Education Environmental Education Officer for the wider region of Athens was given, where she presented what is currently taught in schools and what

is missing from the existing curriculum in order to better educate children about maritime professions related to the above-mentioned sectors.

Finally, the Terms of Reference for External experts were presented to all participants and their interest in participating as experts in the MATES Thematic Groups was briefly gauged. There was some interest in joining the Thematic Groups, although participants were informed that they would receive the translated ToR in order to ensure that all stakeholders are aware of the responsibilities, should they decide to join these Groups.

IMPACT ON MEDIA

Three tweets were published on the day of the Workshop. All of them contained photos from the speakers and the participants. Below is a screenshot from the tweeter activity of the day, indicating the impressions, engagements and profile views (clicks). The usual ERASMUS-MATES hastags were used, with an average of 3 re-tweets and 5 likes by other accounts.

Tweet Activity

ErasmusMATES @ErasmusMATES
How can Ocean Literacy help **#bluegrowth** in the **#maritime** industry? **#BlueprintMATES** **#MATES_Project** pic.twitter.com/EnqqyuZKF8

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Impressions	1,290
Total engagements	38
Media engagements	11
Link clicks	11
Likes	6
Retweets	5
Hashtag clicks	2
Detail expands	2
Profile clicks	1