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Multi-Use in European Seas

Title:

MUSES Stakeholder Workshop Report:
'Multi-use for Sustainable Blue Growth'

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List of Acronyms

DABI – Drivers, Added Values, Barriers, Impacts

EU – European Union

IC(Z)M – Integrated Coastal (Zone) Management

MU – Multi-Use

MUSES – Multi-Use in European Seas

NGO – Non-Governmental Organisation

UCH – Underwater Cultural Heritage



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1. Introduction

The MUSES project held a Stakeholders Workshop in Poole, in order to discuss and verify findings on existing MU combinations identified from previous MU projects done, understanding of the definition of MU concept, as well as clarify the important roles for MU development. This Report presents the review of findings and outcomes of the Stakeholders Workshop and sets out factual information relating to the establishment of the workshop, reflects on achievements and concludes with recommendations arising from the work of the participants.

An overview and evaluation of the current status and future potential of MU development, as well as delivery of the Action Plan, requires active involvement of stakeholders including: industry representatives, NGOs, planning and licensing authorities, classification bodies, regional policy makers, and, financing bodies. In order to facilitate expert and practitioners input to the MUSES project, a stakeholder workshop was organised entitled '**Multi-Use for Sustainable Blue Growth**', and relevant stakeholders from across the EU sea basins were invited. The workshop was organised at an early stage in the project to obtain technical solutions for getting support and cooperation with stakeholders in developing knowledge and capabilities that bear on the MUSES project challenges. The overall aim of this workshop was to:

- i. Identify and discuss relevant MU combinations in terms of drivers, added-values, barriers and impacts of MU, from a stakeholders' point of view, and;
- ii. Discuss stakeholders' understanding of the MU definition and typologies, their attitude towards MU and perception of related drivers & barriers

The workshop took place on 17th May 2017 at the Thistle Hotel, Poole, England (UK), back to back with the European Maritime Day Conference on 18 & 19 May 2017, also in Poole. The outcomes were obtained through interactive group table sessions and games prepared for the workshop. The project team invited relevant stakeholders to engage with the project and contribute to the identification of the MU combinations existing in the EU Sea Basins, as well make suggestions of potential MU combinations. The outcomes will be used to guide the MUSES project team in clarifying Drivers, Barriers, Added Values and Impacts (DABI) of identified and examined MU combinations, as well continue to be involved with the project institutions which were recognized as important for MU development, overpassing barriers and enhance drivers for MU in European Seas.

The MUSES project team established the list of potential stakeholders to be invited for the workshop from its project database of relevant organisations working in the marine sectors and with previous experience/involvement in MU. Target institutions and individuals for attending the workshop comprised of representatives from a diverse range of areas, including: international organisations, national bodies, scientific institutions, NGO's, environmental associations, management bodies, industry and regional bodies, Maritime sectors (i.e. wind and wave energy, aquaculture, transportation, MSP, IC(Z)M, etc.), with different institutional roles (policy-making, environmental protection, industry, research/scientific, safety and/or control, planning) and covering all European Sea basins (Eastern Atlantic Ocean, North Sea, Baltic Sea, Mediterranean and Black Sea).



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Invitation letters, with an explanation of the workshop purpose, were sent to 83 stakeholders. The total number of participants for the workshop was 26. A breakdown of the participants is shown in Chapter 3.3, where analysis was done using the data from the online survey provided to all workshop participants.

Materials sent to stakeholders prior to the workshop included sheets with relevant findings on existing MU combinations. Those MU combinations were identified from previous projects done on MU, as well as from the findings of the MUSES team on the national level (national projects, MSP plans and other relevant literature).

2. Background to MUSES

2.1 What is MUSES?

MUSES (<https://muses-project.eu/>) is a two-year Horizon 2020 funded project, co-ordinated by Marine Scotland, involving 10 partners from across Europe. The project aims to provide an understanding of environmental, spatial, economic and societal benefits of MU, from the stakeholders' point of view, and identify the real opportunities for MU in 5 European sea basins: Baltic Sea, North Sea, Eastern Atlantic Ocean, Mediterranean Sea and Black Sea. This also includes the scope for innovation and Blue Growth potential.

The project will focus on a sea-basin overview of MUs in these five sea basins and include seven case studies across the EU. MUSES will deliver an Action Plan showing the MU potentiality of ocean space, and will suggest practical solutions on how to overcome regulatory and other non-technical barriers (including finance, licencing procedures, insurance, and standardisation) as well as minimise risks associated with MU development.

2.2. Multi-Use Definition

In the realm of marine resource utilisation MU should be understood as the joint use of resources in close geographic proximity. This can involve either a single user or multiple users performing multiple uses. It is an umbrella term that covers a multitude of use combinations and represents a radical change from the concept of exclusive resource rights to the inclusive sharing of resources by one or more users.

The base definitions for MU are:

- i. **A user** is understood as the individual, group or entity that intentionally benefits from a given resource. If a business creates a separate legal entity to exploit an additional resource, this entity is then considered another user.
- ii. **A use** is understood as a distinct and intentional activity through which a direct (e.g. profit) or indirect (e.g. nature conservation) benefit is drawn by one or more users. For the purpose of this definition, a clear distinction is made between different types of uses.
- iii. **A resource** is understood as a good or service that represents a value to one or more users. Such a resource can be biotic (e.g. fish stocks) or abiotic (e.g. ocean



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space) and can be exploited through either direct (e.g. fishing) or indirect (e.g. nature conservation) uses.

3. The Workshop

3.1. Aims of the workshop

The workshop was held in order to attain the MUSES project aims, as well as ensuring further collaboration with stakeholders during the lifetime of the project. The objectives of the workshop were as follows:

1. Identification of the MU combinations in the five EU Sea Basins:
 - Verification of MU combinations, identified from previous MU projects;
 - Identification of the most important MU combinations in the five EU Sea Basins;
 - According to the stakeholders' perception, investigate potential MU combinations relevant to occur in the Sea Basin, and identify potential MUs that could take place.
2. Examination of DABIs for identified MUs on the sea basin level;
3. Clarification with stakeholders on their roles and degree of influence in the decision-making process;
4. Identification of other potential stakeholders;
5. Ensuring good collaboration with attendees and their continued involvement in the MUSES project.

3.2. Structure of the workshop

The workshop began with a welcome note and introduction of the project by MUSES coordinator Bruce Buchanan (Marine Scotland). Brief presentation of the MUSES Project included project objectives and current status, definition of the term Multi-Use (see section 2.1), and structure of the workshop. Attendees were invited to ask questions and receive more details about the project, and MU definition. Stakeholders were introduced to the MUSES project in advance to the workshop with the findings on existing MU combinations. Those MU combinations were identified from previous projects done on MU, as well as from the findings of the MUSES team on the national level (national projects, MSP plans and personal findings of the project partners).

The workshop comprised of two exercises, named "Voting Game" (see section 4.1) - verification of MU combinations identified by MUSES and "Learning Agreement" (mutual learning, expectations and feedback from participants), and three interactive table discussions, in order to collect data on DABIs in MU development and for identification of key roles in development process.

Discussion sessions were conducted in three rounds in order to get a clear vision on different scenarios and the audience preferences on the same. Seating arrangements for the first session were free choice for participants (mixed group), and the next two sessions were prearranged according to the operational scale of participants. The Mixed group discussion enabled participants to share their ideas and experiences between different sea basins, while



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next two sea basin settlement discussions were aimed at a more in-depth elaboration of the MU within each sea basin.

First interactive table discussion - Eyes on European Seas

During the first interactive table discussion participants were able to choose working group according to preferable MU combination. Thus, participants had opportunity to elaborate chosen MU and provide their knowledge and vision on Drivers, Added Values, Barriers, and Impacts (DABI elements) of the MU. Focus of the first interactive discussion on MU combination was widely based on European Seas, and was independent on the regional sea perspective.

Second interactive table discussion – Eyes on Sea Basins

The second discussion session went into further detail on the DABI elements for the two most important MU combinations per sea basin, according to the results of the Voting Game. This group work was done as an interactive discussion with participants involved in each sea basin. Participants were then divided in 4 groups, per each sea basin (Eastern Atlantic, North Sea, Baltic Sea and Mediterranean and Black Sea)..

Third interactive table discussion – Eyes on Potentials

For this interactive session, participant remained divided by Sea Basin groups. The aim was to examine and better understand personal/institutional roles of participants present at the table in relation to MU development, as well as to identify other institutions and individuals who may play a key role for MU development. Identification of restraining and driving forces and key players behind both categories, considered different geographic scales, from local, national, to the sea basin and international level.

3.3. Participants

Selection of participants was done in balanced way, and focused on an equal presence of all maritime activities in the workshop. The final list of participants is presented in Annex 1. Analysis of the structure of participants was done according to responses to the online survey (Annex 2).

A total of 26 stakeholders from all five European Sea basins were present and represented a diverse range of institutions. Participants also represented different institutional roles in the planning process (policy-making, environmental protection, industry, research/scientific, safety and/or control, planning). The personal experience of most invitees included more than single role within the institution that was present and included a range of levels of involvement. In this sense, the aim of project team to invite as much diverse participants and hear experience from different perspectives, was achieved.

The following charts illustrate representatives from each sea basins and international institutions whose working scale overlap different sea basins (chart 3.3.1), where one stakeholder declared institutional interests on the national (UK) scale.



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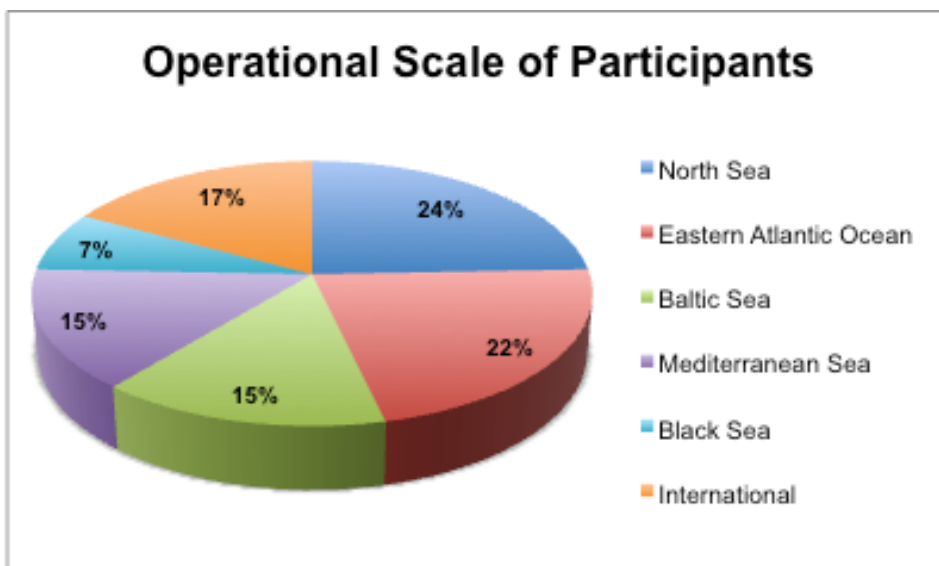
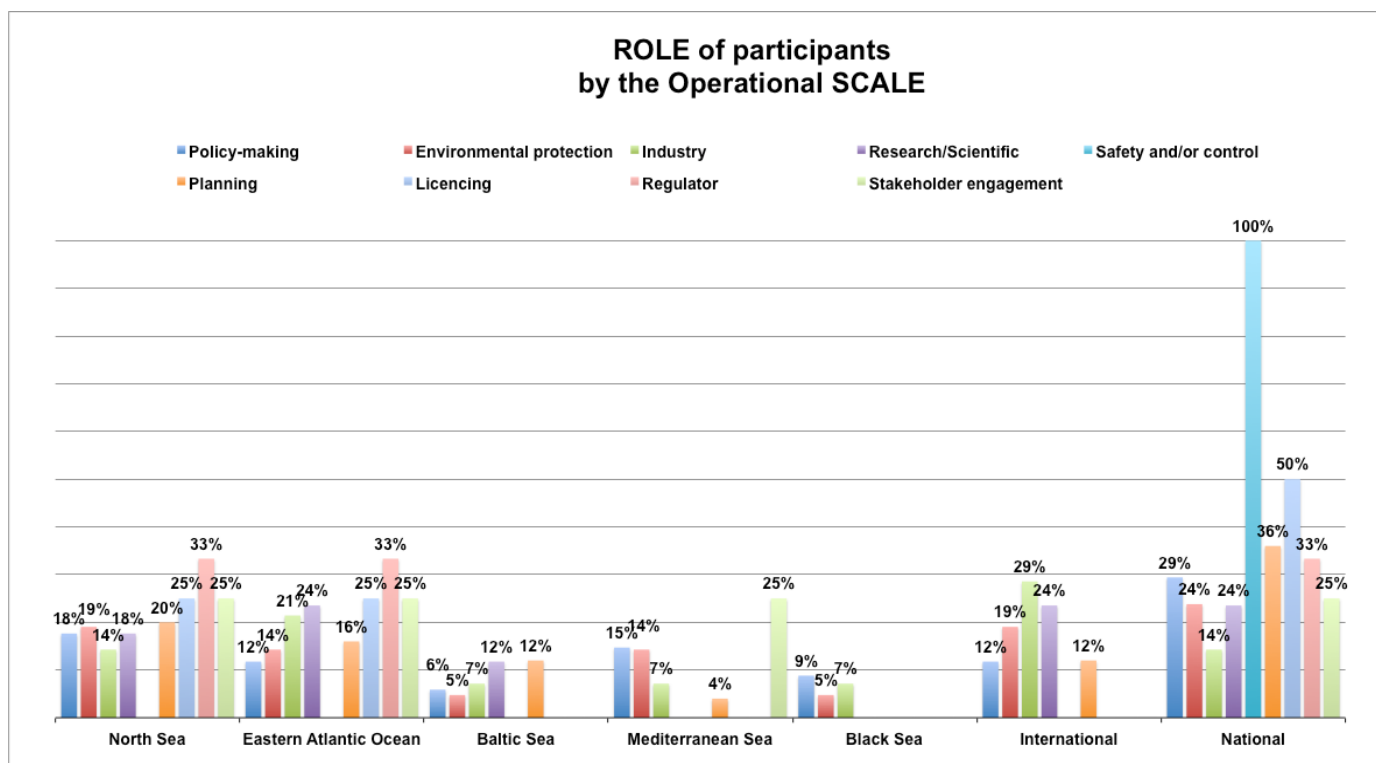


Chart 3.3.1. Working scale of stakeholders

An equal number of invitations for representatives from international institutions were sent for all sea basins. Nevertheless, disparity appeared due to the multi-scale involvement of some participants whose roles spanned across different sea basins, while also having a priority role at the national scale (illustrated in chart 3.3.2). Thus, the distribution of participants appeared to be more intense in the North Sea and Eastern Atlantic Ocean, and with less number of participants involved in the Baltic, Mediterranean and Black Sea (chart 3.3.2). The representative presence of stakeholders from different roles in planning/development process following the operational scale is presented in the chart 3.3.2.





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Chart 3.3.2. Role of the participants by the operational scale

Nonetheless, similar disparity in number of attendees and sector of involvement appeared due to the multi-sectoral involvement of some participants, whose sector of interest extend on more then one sector (chart 3.3.3). The chart 3.3.3 presents the distribution of activities represented at the workshop.

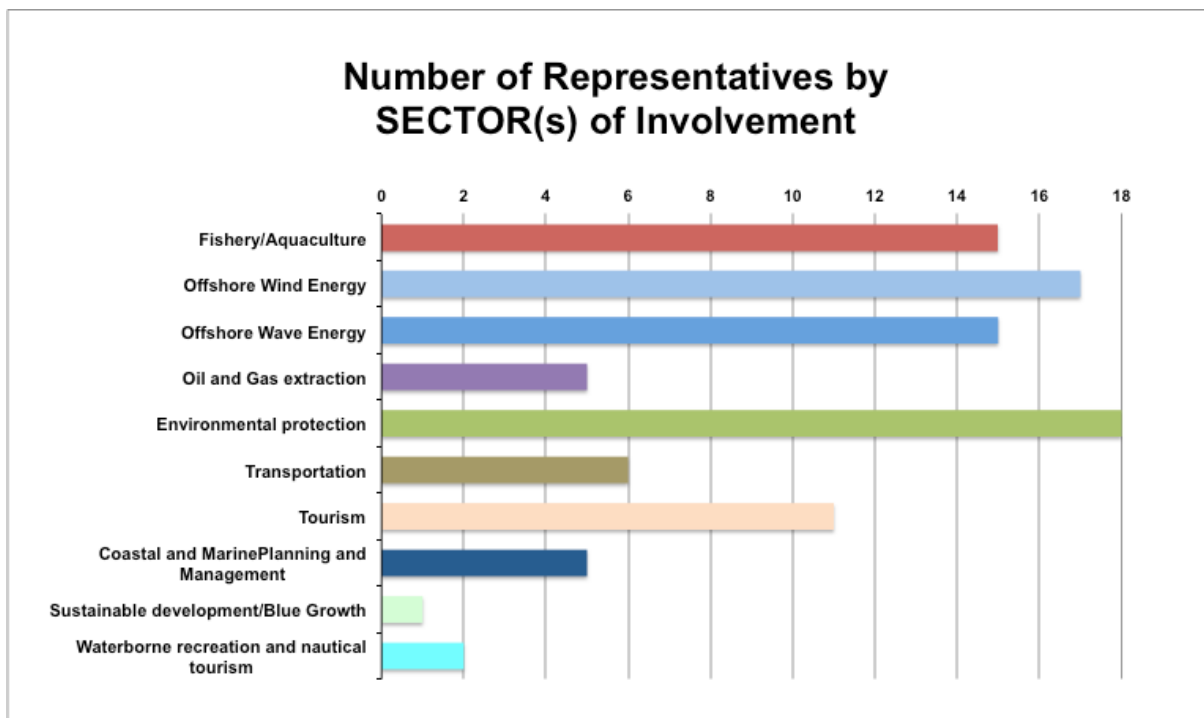


Chart 3.3.3. Sector of involvement of participants

Manifold types of institutions were present at the workshop. This has been broken down as shown in chart 3.3.4. In summary, this is as follows:

- international organisations (4),
- NGO (2),
- scientific institutions (3),
- industry representatives (3),
- non-profit association (1), and;
- representatives whose type cannot be declared on single one:
 - scientific, international organisation & national body (1),
 - national body & management (4),
 - international organisation & management (2),
 - international & industry (2),
 - national body, management and science (2),
 - international organisation, science & management(2).



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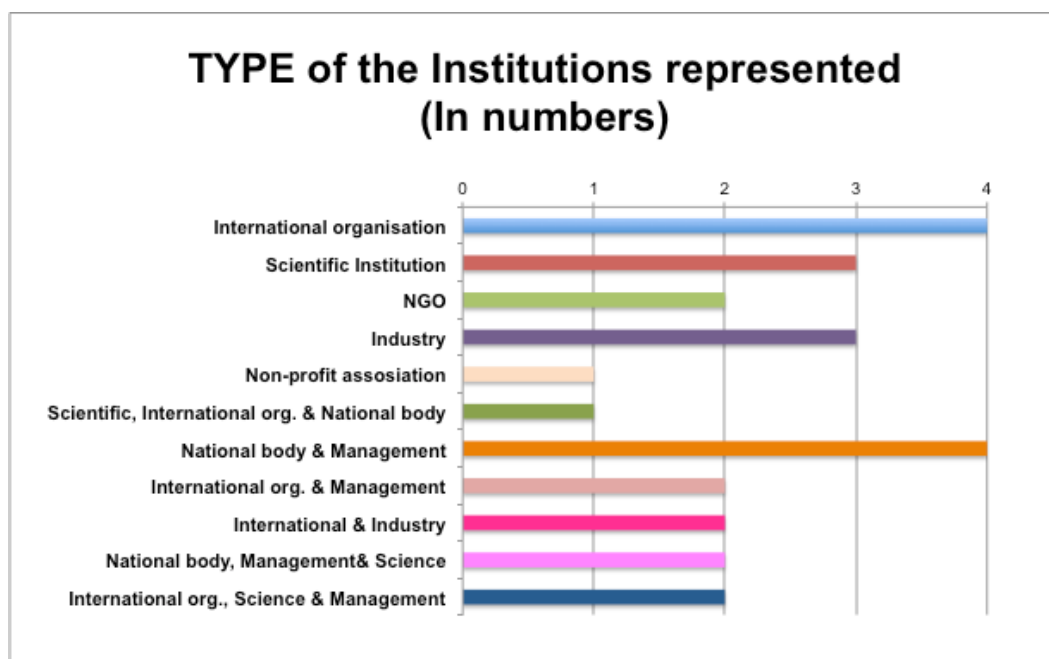


Chart 3.3.4: Type of the institution represented by participants



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4. Workshop Games

4.1. Voting game

The Voting Game (picture 4.1) was created in order to get verification of MUSES' preliminary findings on existing MU combinations the most relevant MU combinations and those with the least potential to occur in EU sea basins. Final voting results are presented in table 4.1. These results show the four most attractive MU combinations. Therefore, stakeholders were able to choose one of the most voted MU combinations for further discussion in terms of DABIs during the first table discussion session.

The first list for table discussion 1 – “Eyes on European Sea” consisted of:

- Combination 1: Offshore Wind & Wave Energy
- Combination 2: Underground Cultural Heritage (UCH) & Tourism
- Combination 3: Aquaculture + Environmental protection
- Combination 4: Fishery + Tourism + Environmental Protection



Picture 4.1. Voting game



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MU Combination/Sea Basin	Eastern Atlantic	North Sea	Baltic Sea	Mediterranean Sea	Black Sea	Total scores (Table session 1)
Offshore Wind Energy ¹ & Aquaculture ^{2,5}	3 – Yes		2 – Yes	2 – No		3
Offshore Wind Energy ¹ & Commercial Fisheries	1 – Yes	2 – Yes 1 – No				2
Offshore Wind Energy ¹ & Environmental Protection ³	1 – Yes		1 – Yes			2
Offshore Wind Energy ¹ & Tourism			1 – Yes 1 – No	1 – No		-1
Offshore Wind Energy ¹ & Shipping Terminal			2 – No			-2
Offshore Wind Energy ¹ & Offshore Wave Energy	5 – Yes	2 – Yes			1 – No	5+2-1 = 6
Aquaculture ^{2,5} & Environmental Protection	3 – Yes			2 – Yes	1 – Yes	3+2+1=6
Aquaculture ² & Offshore Wave Energy	1 – Yes					1
Aquaculture ² & Tourism	1 – Yes			1 – Yes	1 – Yes	3
Oil and Gas & Tourism & Aquaculture ²	4 – No 1 – Yes	1 – No		2 – Yes 1 – No		-3
Oil and Gas & Renewable Energy ⁴		2 – Yes		1 – Yes		1
Desalination & Tourism & Renewable Energy ⁴	4 – No	3 – No				-7
Fisheries & Tourism & Env. Protection ³	1 – Yes	1 – Yes		3 – Yes		1+1+3=5
Tidal Energy & Environmental Protection ³				2 – No		-2
Under Water Cultural Heritage & Tourism & Env. Protection ³	2 – Yes	1 – Yes	2 – Yes	1 – Yes		2+1+2+1=6
Offshore Wind Energy ¹ & Aquaculture ² & Tourism						0

Table 4.1. Ranking of MU combinations according to the votes of participants, where: Violet = The most voted MU combinations; Green = Most voted MU combinations per Sea Basins; Red = Least relevant MU per Sea Basin

Notes

- 1 Wind Energy can be fixed and floating
- 2 Aquaculture can be fish, mussel, seaweed, shellfish, Integrated Multi Tropic Aquaculture
- 3 Environmental Protection can be MPA, Natura 2000 sites
- 4 Renewable Energy is Wind, Wave, and Tidal
- 5 Possible combinations of two types of Aquaculture



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According to the votes of participants, the following MU combinations were founded as most relevant for the sea basins, and later on elaborated in the second table discussion – “Eyes on the Sea Basin”:

Sea Basin	MU Combination
Eastern atlantic	1. Aquaculture + environmental protection 2. Wind energy + aquaculture
North sea	1. Offshore wind + wave energy 2. Oil and gas + renewable energy
Baltic sea	1. Underwater cultural heritage + tourism + environmental protection 2. Offshore wind + aquaculture
Mediterranean and black sea	1. Oil & gas + tourism + aquaculture 2. Environmental protection + aquaculture

Table 4.2: Sea basins with top 2 MU combinations

4.2. Learning Agreement game

Learning agreement game was seen as an agreement between the MUSES project and workshop participants of the mutual learning. Rule of the game was that MUSES team promises on sharing the findings with the participants, and invited participants promise on sharing their knowledge and experience during the workshop discussion sessions. On another side, participants were able to leave written comment on their expectation from the MUSES projects. Likewise, to guide following steps of the MUSES work according to their experience what are the needs in MU development process. A more in-depth explanation of the exercise is given in the chapter 6.

4.3 Multi-Use Definition Comments

The definition of MU (section 2.2) was presented during the workshop as well as provided in a poster format. This gave stakeholders the opportunity to compare the definition of MU to their personal understanding of MU and add comments and engage in discussions with other stakeholders as well as the MUSES project team about it.

The collected comments and discussion points can be broken down into two main topics:

- i. The multi-dimensional nature of MU can offer difficulties in grasping the connection between uses. Uses can conceivably be connected in a temporal dimension (re-use of offshore platforms) as well as in the direct spatial dimension (managed co-existence of uses in the same ocean space), making understanding the degree of connection between uses difficult.
- ii. MU can take place between a wide variety of users and uses. But it was added that it always requires multiple uses being performed by a single or by multiple uses.



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5. Workshop Discussions

5.1. Table discussion 1 – Eyes on European Seas



Pictures 5.1 & 5.2 – Discussion 1

In discussion 1, participants were able to choose preferable MU combination to work on, during this session. Thus, the distribution of participants was following, presented in the table 5.1.

Table selection	MUSES Team	Participants
Combination 1 Offshore Wind & Wave Energy	Moderator: Andronikos Kafas Reporter: Mario Caña	• Representative from Windstrand • Chris McConville (Floating Power Plant) • Russell Gadbury (Marine Management Organisation) • Lodewijk Abspoel (Ministry for infrastructure and the environment) • Hans Chr Soerensen (Møllebesøg, Middelgrundens (Vindmøllelaug)) • Joaquín Hernández Brito (PLOCAN) • Teresa Simas (WavEC – Offshore Renewables)
Combination 2 Underground Cultural Heritage (UCH) & Tourism	Moderator: Vincent Onyango Reporter: Martina Bocci	• Rhona Fairgrieve (Scottish Coastal Forum) • Marko Prem (PAP/RAC) • Teresa Simas (WavEC – Offshore Renewables)
Combination 3 Aquaculture & Environmental Protection	Moderator: Angela Schultz-Zehden Reporter: Ivana Lukic	• Damien Perisse (CRPM-CPMR) • Adrian Judd (OSPAR) • Alex Adrian (Crown Estate Scotland) • Riku Varjopuro (Finish Environment Institute) • Representative from General Fishery Commission for the Mediterranean
Combination 4 Fishery & Tourism & Environmental Protection	Moderator: Daniel Depellegrin Reporter: Emiliano Ramieri	• Representative from UK National Federation of Fishermen's Organisations • Elina Veidemane (VASAB) • Representative from Marine Scotland • Paul Holthus (World Ocean Council) • Representative from Black Sea Regional Agency for Energy Management • Mauro Randone (WWF Med) • Representative from Italian Ministry of Economic Development • Representative from Italian Ministry of Economic Development

Table 5.1. Distribution of participants for discussion 1



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5.1.1. Combination 1 – Offshore Wind & Wave Energy

Offshore Wind & Wave Energy	
DRIVERS	ADDED VALUES
• <u>Grid balance</u> / system stability. • <u>Integrated solution</u> / joint use of infrastructure. • <u>Spatial efficiency</u>. • Higher costs of competing energy sources (e.g. island communities). • Incentive to <u>drop the energy cost</u> from combined use. • Electricity price going up offers a chance to alternative sources. • <u>Companies keen to adopt new technology</u> combination as part of their industrial strategy to prepare for the future and demonstrate competence. • Possible <u>requirement of the licencing authority to make use of the best-available technology</u> and most efficient usage of energy available. • Possibility to develop projects beyond national EEZ can allow optimisation of the hybrid platforms.	• Joint use of infrastructure offer <u>protection from wave and tides extreme events</u>. • Unique <u>operational benefits</u>. • <u>Power quality</u> / smooth output. • <u>Rank areas on potential values</u> in terms of combination potential (e.g. TROPOS project MU site selection).
BARRIERS	IMPACTS
• Main discussion point: <u>financial barriers</u>. <u>Stand-alone applications are currently cheaper</u>. • <u>Different maturity levels</u> can absence combination. Solution: focus on floating wind (similar maturity level). • Bankers and other financial backers. Underwriting principles, when <u>including floating and wave components</u>, often result to <u>higher interest rates</u>. • <u>Lack of demonstration projects</u>. • Technology combination can take place in <u>limited locations</u> with ideal conditions that makes it affordable. • <u>Main competitor is a single-use floating wind farm</u>. • UK <u>energy policy</u> can be a barrier. E.g. nuclear presence despite high cost. • <u>Different natural resource requirements</u> for wind and wave development. • <u>Wave energy is not yet commercially viable</u>.	• Under developing in area's potential.

Comments on Combination 1

- Review literature: TROPOS, MARINA and ORECCA projects. Also, Windfloat (floating wind turbine), Windspeed, and study on wind-wave combination



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5.1.2. Combination 2 – Underground Cultural Heritage (UCH) & Tourism

Underground Cultural Heritage (UCH) & Tourism	
DRIVERS	ADDED VALUES
• The UCH already exists, therefore easy / convenient to exploit. • Valorisation of <u>winning existing experiences</u>. • <u>Legally supported</u> (e.g. Blue Growth Strategy, DG Mare Staff Working document on Nautical Tourism). • <u>Education and awareness raising</u> program on the possibility to make touristic use of UCH. • Need for <u>diversification of tourism offer</u> in a given area/country/sea-basin. • Opportunity to develop a <u>new economic sector</u>.	• <u>Excelling knowledge</u> about national UCH. • <u>Jobs creation and diversification</u> (new types of jobs are created in the tourism sector). • <u>Tourism offer diversification</u> – possible pressures relieved from overcrowded touristic sites. • Increased variety of tourism offer at regional or national level.
BARRIERS	IMPACTS
• <u>Lack of communication</u> / coordination <u>between the authorities</u> dealing with UCH and Tourism. • <u>Inadequate regulatory framework</u>. • <u>Immaturity of MSP planning process</u> for MUs. • Lack of adequate <u>financial incentives</u>. • Unavailability of <u>adequate specialised divers</u> for UCH.	• Risk of <u>damage</u> to UCH. • <u>Disturbance of marine ecosystem</u> due to the presence of tourists. • <u>Conflicts with other uses</u> (planned, in project or in place) (e.g. fishing or renewable energy generation). • <u>Health and safety risks to tourists</u>.

Comments on Combination 2

- Adding environmental protection as a third component to the combination could be a driver.
- Creating UCH to divert from attention and reduce pressures from real UCH (this element was discussed but its classification as a driver is quite controversial).



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5.1.3. Combination 3 – Aquaculture + Environmental protection

Aquaculture + Environmental protection	
DRIVERS	ADDED VALUES
• The <u>need to reduce the pressure from industrial fisheries.</u> • <u>Food security</u> - there is a stronger driver for aquaculture for human consumption versus aquaculture as a source fuel. • These two <u>uses are highly synergetic</u> (e.g. need the same environment such as good water quality). • Fish aquaculture is considered as large-scale economic contributor, which requires certainty, thus <u>financial incentives are important drivers.</u> • <u>Economic driver to move from land to the sea</u> – fish aquaculture is more economically viable when in the sea versus on land. • <u>Interpretation and implementation of adaptive management and EIA</u> in certain county can be ether a driver or a barrier.	• Aquaculture provides the <u>relief effect of extensive industrial fisheries.</u> • <u>Environmental benefits.</u> • <u>Better control</u> of nutrient input and confidence and transparency in reporting. • <u>Green/eco labeling</u> (sells as a premium product). • Where feasible Integrated Multi-Trophic Aquaculture (IMTA) could potentially provide <u>environmental benefits.</u>
BARRIERS	IMPACTS
• <u>Media has a strong influence</u> and can create negative perception. However, media can also serve as an effective medium for raising awareness of local communities. • Common <u>perception nowadays that aquaculture provides unhealthy food</u> and increases pollution. • Visual impact – <u>negative perception derived from the visual impact and lack of information</u> and knowledge about aquaculture. • <u>Knowledge.</u> Carbon sequestration narrative should be used to inform communities and instead of word aquaculture rather using local shellfish business, local fish farm (e.g. Rhode Island Shellfish Management Plan). • <u>Lack of investment</u> needed to support local outreach. • <u>Responsibility between actors is unclear</u> – is it industry or the government? • <u>Lack of collaboration</u> between different actors (e.g. unclear responsibility when it comes to how monitoring system is being implemented). As well, in industry side exists need for raising the collaboration. • Industry is lacking <u>legal incentives and certainty</u> • Uncertainty of <u>interaction between these two uses.</u> • <u>Lack of carefully planned monitoring and 'clever regulation'</u>, as well as credit carbon for mussel aquaculture. • Separate regulations apply on different type of aquaculture	• Potential negative impacts on the environment due to uncertainty in interaction between these two uses • Visual pollution

Comments on Combination 3

- MSP should assign the specific place suitable for this MU, and ensure that portion of sea space is strategically assigned to certain type of aquaculture (have space for each mussel, fish, and seaweed) taking into consideration their correlations and cumulative effects.
- Mussel were considered to be more local activity while fish aquaculture is a large-scale economic contributor.



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For the case of the Baltic Sea:

- Seaweed is not profitable business in the Baltic.
- In Finland fish farm is not allowed in MPA.
- In Baltic Sea environmental impacts are very relevant because of the eutrophication. Implications from MSFD-WFD i.e. in Sweden some licenses were withdrawn. Interpretation of MSFD in Sweden is that finfish is seen as point source, and shellfish is not (aquaculture is left out as on land legislation applies to it). One of the major questions is: how do you remove precaution?
- Separate regulations apply to seaweed in Sweden as it is considered to be a land activity. All this is relevant for territorial waters while regulations for beyond 12 nm, in the EEZ are still very unclear.



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5.1.4. Combination 4 – Fishery + Tourism + Environmental Protection

Fishery + Tourism + Environmental Protection	
DRIVERS	ADDED VALUES
• <u>Maintenance of access to fishing grounds.</u> • Make <u>fisheries more competitive</u> through sustainable, environmental friendly practices. • <u>Linking/harmonizing policies/directives</u> (e.g. MSFD, Blue Growth, NATURA 2000). • <u>Financial incentives for extension of MPA.</u> • <u>EU level funding schemes</u> support this MU (e.g. fishing funds from FARNET or EFF) • Presence of <u>regulations and strategies</u> that can stimulate this MU combination. • Fishery and Tourism are <u>soft uses, compatible with environmental protection.</u> • Combination is <u>“easily” manageable.</u> • <u>Stakeholder involvement</u> is an enabling factor for the MU. • <u>Diversification of tourism products</u> towards environmentally less impacting practices. • <u>AICHI targets</u> can further stimulate <u>synergetic combination of environmental protection</u> with tourism and fishery (reaching Aichi targets may imply the need to find solutions for the coexistence of biodiversity conservation with such uses).	• The <u>presence of emblematic species</u> (e.g. turtles, marine mammals, sea birds) in protected areas can be further asset, and support environmental conservation practices. • <u>Integrated development</u> of a production system combining fishery resources with tourism, agro-food, crafts and natural areas. • <u>Support environmental education/</u> responsible tourism and sustainable fishery. • Revenue from tourism can provide <u>economic support</u> to MPA and fishery. • <u>Empowerment of the fisherman.</u> Fishermen can have direct involvement in the co-management of MPA, in terms of environmental monitoring and surveillance. • <u>Technical adaptation</u> of fishing boats for tourism activities. • <u>Adaptation/recovery/upgrading of facilities</u> and or traditional fishery homes <u>for new tourism concepts.</u> • Opportunity to have <u>all year around tourism</u> activities. • Development of <u>new specialized job profiles</u> in the fishery sector. • <u>Safeguarding of cultural heritage</u> of fishery sector. • Development of a production system including <u>sustainable tourism</u> and market for the production of <u>sustainable fish food products.</u> • <u>Synergetic co-management</u> of natural capital among sectors. • <u>Transfer of knowledge:</u> Fishermen can support environmental monitoring of MPAs and therefore gain knowledge and specialization in the field of environmental protection. • Generation of <u>new specialized job profiles.</u>
BARRIERS	IMPACTS
• <u>Lack of guidelines/regulatory aspects.</u> <u>Regulation should not only prohibit</u>, but also facilitate. • High specificity of <u>ecological conditions of MPA</u>, make generalization of criteria for MU difficult. • <u>Lack of knowledge and experience</u> in entrepreneurship by fishermen. • <u>Lack of financial resources</u> and subsidies to start a business. • Opposition from <u>tourism sector traditional practices.</u> • Lack of <u>knowledge on real impacts of tourism and fishery activities</u> on environmental components of an MPA, leads to default application of	• Unregulated tourism flows in MPAs can lead to <u>high environmental impacts in sensible areas.</u> • Environmental impacts strongly depend on <u>number of tourists and fishermen</u>, as well as on the way these activities are carried on. • <u>Development of the 3 activities in a balanced level</u> shall be ensured. • <u>Distributional impacts on the other sectors</u> or sub-sectors of fishery not fitting with MU. • Different <u>typologies of tourism</u> can lead to different impacts. • <u>Perception that fishery impacts</u> “pristine” environment, can lower the attractiveness (also for tourism).



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precautionary principle. • Lack of <u>knowledge</u> for decision makers on the socio-economic value and importance <u>of MPA for society</u>. • <u>Safety</u> issues related to specific tourism practices (e.g. diving).	
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Comments on Combination 4

Some of the participants stated they voted this specific MU combination since both tourism and fishery highly depend on healthy seas. Therefore there is a strong interdependency between the environmental protection goals and objective of sustainable development and fishery. Moreover, tourism and fishery can be perceived as “soft” uses of the sea that can match well (if sustainably managed) with environmental protection target. Indeed, environmental sustainability really depends on number of actors (tourism and fishermen) and modalities.



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5.2. Table discussion 2 – Eyes on Sea Basins

During the table session 2 and 3, participants were divided in four groups, according to the Sea Basin of involvement. According to the voting game, list of most voted MUs per sea basin were elaborated, thus DABI elements for each combination was examined.

Sea Basin	MU Combinations	Participants
Eastern Atlantic	AQUACULTURE & ENVIRONMENTAL PROTECTION  	Moderator: Andronikos Kafas Reporter: Mario Caña • Adrian Judd (OSPAR) • Chris McConville (Floating Power Plant) • Maria Ferreira (EUCC Coastal and Marine Union) • Damien Perisse (CRPM-CPMR) • Representative from Marine Scotland • Joaquín Hernández Brito (PLOCAN) • Teresa Simas (WavEC – Offshore Renewables)
	WIND ENERGY & AQUACULTURE  	
North Sea	OFFSHORE WIND & WAVE ENERGY  	Moderator: Vincent Onyango Reporter: Martina Bocci • Rhona Fairgrieve (Scottish Coastal Forum) • Representative from National Federation of Fishermen's Organisations • Lodewijk Abspoel • Russell Gadbury (Marine Management Organisation) • Alex Adrian (The Crown Estate Scotland) • Chris McConville (Floating Power Plant)
	OIL AND GAS & RENEWABLE ENERGY  	



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Baltic Sea	UCH & TOURISM & ENVIRONMENTAL PROTECTION   	Moderator: Angela Schultz-Zehden Reporter and Moderator: Ivana Lukic Reporter 2: Marija Lazic • Elina Veidemane (VASAB), • Riku Varjopuro (Finish Environmental Institut), • Jacek Zaucha (Maritime Institute in Gdansk), • Representative from Windstrad, • Hans Chr Soerensen (Vindmøllelaug), • Paul Holthus (World Ocean Council)
	OFFSHORE WIND & AQUACULTURE  	
Mediterranean and Black Sea	OIL & GAS & TOURISM & AQUACULTURE   	Moderator: Daniel Depellegrin Reporter: Emiliano Ramieri Reporter 2: Anita Kovacheva • Mauro Randone (WWF Med) • Representative from Italian Ministry of Economic Development • Representative from Italian Ministry of Economic Development • Marko Prem (UNEP-MAP, Priority Actions Programme/Regional Activity Centre) • Representative from Black Sea Regional Agency for Energy Management
	ENVIRONMENTAL PROTECTION & AQUACULTURE  	



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5.2.1. Eastern Atlantic Sea

1. AQUACULTURE + ENVIRONMENTAL PROTECTION	
DRIVERS	ADDED VALUES
• Spatial efficiency. • Local scales provide better conditions for this combination, especially in the case of seaweed and shellfish aquaculture. • Technologies closer to the market are more likely to be combined. • Logistics: using common services /resources. • Increase of security: avoid some fish escapes or vandalism. • Food security as compensation to losses from fisheries. • Social acceptance in terms of local employment. • Social encouragement. E.g. spatial efficiency. • Marketing products labelled as green.	• Opportunity to jointly assess cumulative impacts without affecting the outcome. • Possible further combinations with tourism • Increase local employment • Protection of underwater cultural heritage • Responsible farming and quality food • “De facto” MPAs • Regions can have an interest when local employment is affected. Regions can influence perceptions and educate/influence citizens.
BARRIERS	IMPACTS
• Aquaculture cannot take place in Natura 2000 sites. • Technology limitations (e.g. current cages need protection). • Regular maintenance and feeding patterns. • Public perception against changes • Lack of knowledge about possibilities and benefits of MU • Vessel regulation favours single use. Different licences for fishing, tourism or aquaculture. • MU might make eco-labelling harder. • Not enough maturity of offshore aquaculture. • Perception against environmental impacts of aquaculture	• Compensation of fisheries losses. • Visual impacts. • Loss of aquaculture production in case of bad weather and lack of access.



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2. WIND ENERGY + AQUACULTURE	
DRIVERS	ADDED VALUES
• Spatial efficiency. • Technologies closer to the market are more likely to be combined. • Logistics: using common services /infrastructures. • Energy provision to the fish farm. • Food security as compensation to losses from fisheries. • High wave energy sites may have more advantage comparing with the fixed wind energy in the Atlantic. • Social acceptance in terms of local employment. • Social encouragement (e.g. spatial efficiency). • Marketing products labelled as green.	• Opportunity to jointly assess cumulative impacts without affecting the outcome. • Possible further combinations with tourism • Increase local employment • Responsible farming and quality food • Regions can have an interest when local employment is affected. Regions can influence perceptions and educate/influence citizens.
BARRIERS	IMPACTS
• Technology requirements are different. • Regular maintenance and feeding patterns. • Regulation and insurance favour single use. • Public perception against changes • Lack of knowledge about possibilities and benefits of MU • Vessel regulation favours single use. Different licences for fishing, tourism or aquaculture. • MU might make eco-labelling harder. • Perception against environmental impacts of aquaculture. • Perception of impacts on underwater cultural heritage.	• Compensation of fisheries losses • Visual impacts • Multiplication of cumulative impacts • Loss of aquaculture production in case of bad weather and lack of access

COMMENTS

- Survey, deploy and monitoring policy from Scotland can be a good reference to progress with demonstration areas.
- Need to learn on processes, not just in terms of technology (e.g. prove of not ignoring the precautionary principle).



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5.2.2. North Sea

1. OFFSHORE WIND + WAVE ENERGY

DRIVERS	ADDED VALUES
• Planning policy of efficient use of marine space / promotion of co-location • Political agreements e.g. Paris Agreement and need to meet Renewable Energy targets • Blue Growth agenda e.g. job creation • Underwriting investments aimed at demonstrating the practical feasibility and economic convenience of the combination • Combination of different incentives	• Reduction of costs for the wind farm • Ready-made location (and EIA) for wave energy MU • Cluster effect – the two industries can share solutions and costs (and even move out of more congested areas) • Reduced costs of management and infrastructure • Reduced impacts on sea bed; • Diversification of professional skills • Possibility to store energy and more consistency of energy supply arising from MU of more energy generators • Potential to provide energy for charging vessels at sea
BARRIERS	IMPACTS
• Lack of long term consistency of integrated energy policies promoting effectively energy production by different renewable sources e.g. addressing the various incentives across different MUs • Lack of political convincement about • Restrictive regulatory framework • Lack of financial incentives, political support, political convincement on the advantages of MU in energy production insufficient confidence by governments on the available MU technologies • Compatibility issues among MU impacts and MU technologies • Lack of energy price parity with alternative / competing fossil fuels • Lack of common policy for energy pricing at EU level • Lack of successful / demonstrative first time movers (at commercial scale) • Other areas e.g. Eastern Atlantic is more preferable for wave energy than the North sea • Lack of full understanding of this MU – e.g. how to address risks connected with legalities, responsibilities, liabilities and management of combined uses • Combination with other uses might result easier or more convenient • Possible objections by local communities or environmental conservation actors (NGOs)	• Risk of more complex EIAs • Impact on tourism • Opportunity cost of more productive MU combinations • Risks connected with legalities, liabilities and management of combined uses



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2. OIL AND GAS + RENEWABLE ENERGY	
DRIVERS	ADDED VALUES
• Already existing Oil and Gas infrastructure offers opportunity to add Renewable Energy • Political agreements e.g. Paris Agreement and need to meet Renewable Energy targets • Need to act quickly and exploit fossil fuel options • To prolong life span of oil and gas platforms • To reduce carbon footprint? • Circular economy agenda	
BARRIERS	IMPACTS
• Restrictive regulatory framework for the MU • Lack of successful prototypes demonstrating the long-term feasibility of the MU • Technical difficulties e.g. design of the structures which are ideal for the MU • Regulatory frameworks for apportioning risk and responsibility for the MU • Location of existing Oil and Gas infrastructure often not suitable for Renewables	• Distract attention and efforts from other more promising MU combinations



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5.2.3. Baltic Sea

1. UNDERWATER CULTURAL HERITAGE (UCH) + TOURISM + ENVIRONMENTAL PROTECTION	
DRIVERS	ADDED VALUES
• Common interest from legislative perspective • Better control and protection - better protection of UCH and environment is ensured when it is intentionally combined with tourism. • Need to diversify the tourism and relief the pressure on the coastal areas • Multiple synergies between UCH and environmental protection – virtually no barrier, it almost 'comes naturally' • 'pristine' nature in the protected area, educational benefits of combining tourism and UCH. • Diving businesses are those who have started combining UCH and tourism, hence, they act as strong driving actors.	• Improve tourism sector (e.g. diving business) • Combining with tourism can provide additional finance to UCH and environmental protection • Better control in place • Educational benefits • New jobs provision due to new museums, information stands, • Creation of specialized professions – diving guides specialized in UCH
BARRIERS	IMPACTS
• Lack of awareness about benefits	Not identified!

COMMENTS

The stakeholders chose the combination of these three uses as this combination “almost comes naturally” – these uses are highly synergetic with number of shared interests, added values and virtually no barriers. This combination is most likely to quickly gain the momentum in the Baltic Sea.

2. OFFSHORE WIND + AQUACULTURE	
DRIVERS	ADDED VALUES
• Competition for space is the key driver • Visual pollution of aquaculture is not an issue anymore when combined with existing offshore wind • Licensing for OW is easier if proven that it could be combined with another use • Good examples - Wave Dragon has put the floating barges ropes all the way to the sea bottom and harvested mussels from them • Denmark has a lot of experience already with this MU. Water is shallow and combination of OW and aquaculture is feasible. • MSP to introduce the concept of MU would contribute to easier permitting • Planning should be approached the other way around-identify areas where NOT to put the OW and then let government chose from areas left available. • Permitting requirements - in order to receive permit OW must prove other benefits apart from renewable energy. This includes environmental benefits and benefits to other users	• Specialized jobs creation • There are innovative technologies and techniques to combine lobster or shellfish farming and OW cable protection. • OW and Tourism - Improved Corporate Social Responsibility (CSR) for OW – e.g. to promote its company and improve its CSR, DONG publishes in local newspapers that people can sign up to go on a tour to see the turbines for free. Apart from that tour organized by DONG, everyone can normally go with their own boat around the turbines. However, this set back regulation differs by country. • Wave devices can provide



e.g. lobster fisherman - environmental court in Sweden is arguing for the combination of OW structure artificial reefs and lobster farming. • OW and Tourism combination - Tourists are willing to pay to go see the turbines but the barrier is that going that far off shore by tour boat might not be so profitable and efficient (time wise) • Tourist attraction - tourists are coming to Copenhagen specifically to go on the offshore wind farm tour • Improved Corporate Social Responsibility (CSR) for OW – e.g. to promote its company and improve its CSR, DONG publishes in local newspapers that people can sign up to go on a tour to see the turbines for free. Apart from that tour organized by DONG, everyone can normally go with their own boat around the turbines. However, this set back regulation differs by country. • Combination of OW and Wave energy – wave energy harvesting is feasible in the Baltic but more mature technology is needed that would be adapted to Baltic conditions • Wave devices can provide protection for the seaweed – electricity from the wave can be used to sink seaweed cages deeper during the extreme weather events/rough seas	protection for the seaweed – electricity from the wave can be used to sink seaweed cages deeper during the extreme weather events/rough sea.
BARRIERS	IMPACTS
• Administrative and institutional barriers i.e. authorities in Sweden have very narrow environmental views • No clear driver in the Baltic from OW developers perspective • In Sweden Bothnia Bay there is plenty of space and therefore there is no drive for space efficiency and MU • Finland is just starting discussion about MU and researcher and aquaculture authorities are driving actors. • In Finland coastal licensing is not possible anymore for aquaculture and they would like to go further offshore. • Complicated regulations and insurance issues for OW contributing to complicated permitting procedure for aquaculture to be added as additional use (this might be more relevant to OW already in place) • Lack of scientific research and its transferability to other countries • Policy making in not consistent within countries (local vs. federal level)	• Due to changed environment and high productivity, other species not meant to be there might show up and overrule the mussels

COMMENTS

This combination was often examined in MU projects and was the one stakeholders were perhaps most familiar with. Past projects mainly dealt with this combination from the technical point of view, while stakeholders were interested to also better understand the non-technical aspects discussed at the table. Given that In some Baltic countries space for the aquaculture is not easy to find any more combination of these two uses was deemed as relevant from the spatial efficiency perspective.



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5.2.4. Mediterranean and Black Sea

1. OIL & GAS + TOURISM + AQUACULTURE

DRIVERS	ADDED VALUES
• Transposition of the EU Offshore Directive on mining activities • The platform lifetime is 20/30 years requires decision on what to do with not productive wells. Reuse of the platform for energy installations (renewable, energy carrier, LNG); scientific infrastructure (monitoring, radio-broadcasting, artificial reef); commercial activities (aquaculture, tourism) or as MUP (energy, aquaculture, desalination, monitoring) is seen as an interesting possibility and technically feasible opportunity. • Elevated number of platforms, 136 are the Italian Offshore O & G platforms (93 within the 12 nautical miles). In early 2020, 16 are ready for decommissioning (10 within 12 nautical miles). • One key challenge of the BLUEMED Strategy R & I Agenda under enabling technology and capacity creation for the Mediterranean foresees multi-purpose offshore platforms in the Mediterranean. • O&G companies are looking for cost effective solutions to reuse decommissioned platforms. • The high number of platforms at the end of their production cycle triggers the need to develop a case study of best practice.	• Diversification of tourism offer on regional, national and international level. • Shallow seas like Northern Adriatic (about 50 m depth) are a good target for aquaculture installation and recreational diving. • Decommissioned platform can be used as logistic facility and installation for aquaculture • Re-use of platforms avoids environmental impacts of removal of the infrastructure and avoids environmental impacts of new infrastructure installations. • Hard infrastructure has positive effect on biodiversity establishment. • Transpose good practice example to other Mediterranean areas and other EU Sea Basins. • In sea areas characterized by several decommissioning O & G platforms concepts of multiple platform/hub can be considered.
BARRIERS	IMPACTS
• Physical/Liability issue. Need for risk assessment before hand over to new purpose. Who has the responsibility in case of infrastructure failure after the hand over from O&G to other uses? • Lack of strong legal framework and guidelines concerning the decommissioning process. The lack of guidelines causes unclear definition of criteria (environmental, security, social and economic). • Unclear responsibilities in the reuse of the platform. • Potential installation of aquaculture requires a classification of waters around the O & G platform. • Potential presence of pollutants after decommissioning, requires monitoring. • Difficulties to understand what are real or perceived social acceptance. • Decommissioned O&G in combination with other use will require new Environmental Impact Assessment.	• Difficulties to identify impacts due to lack of prior experiences • Continuous visual impacts vs. decommissioning that may reduce visual impacts. • Potential presence of other chronic impacts, such as release of heavy metals from the infrastructure.



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COMMENTS

This specific MU combination was selected by some of the participants since it deals with a real problem in some areas of the Mediterranean (e.g. Adriatic Sea, Ionian Sea), i.e. re-use of old oil and gas offshore platform as an alternative to just infrastructure removal is considered as technically feasible. Indeed, the problem can also affect other European marine regions, as the North Sea. Re-use of offshore platform for tourism and aquaculture was also considered potentially feasible by some of the participants to the discussion.

2. ENVIRONMENTAL PROTECTION + AQUACULTURE	
DRIVERS	ADDED VALUES
- Increasing demand for quality seafood - Requirement of specific/good environmental conditions suitable for aquaculture - Lack of space induces the development of aquaculture also in protected areas. - AICHI Targets, potentially competing with aquaculture expansion	- Development of eco-labelling practices for aquaculture products. - Higher quality of fish food products - Provide additional income opportunities for local communities - Contribute to carbon credit (shellfish farming) "WIN-WIN Situation" – strong interest of aquaculture sector of maintaining good environmental condition. - Aquaculture sector can provide economic input to MPA management - Aquaculture activities can support monitoring of protected areas. - Development of new specialized job profiles combining aquaculture and environmental monitoring activities. - Support environmental education and increase scientific knowledge of local communities
BARRIERS	IMPACTS
- Absence of clear/smart regulation in terms of implementation and monitoring - Social acceptability has to be improved - Lack of transparency/communication on what is aquaculture (and the different typologies of aquaculture) and what is the interaction of different aquaculture practices with the environment. - Absence of transparent stakeholder engagement. - Space conflicts can arise. - Planning barriers: environmental protection and aquaculture compete for the same space. This needs to be transformed into a driver for sustainable combination of the two uses.	- Visual impacts of cages or large farming sites. - Impacts need to be assessed according to different aquaculture typologies. - Other possible negative impacts induced by aquaculture such as nutrients excess or improper use of fragile natural areas. - Conflicts with other activities rely on environmental quality aspects, e.g. tourism and yachting.

COMMENTS

Participants to this discussion highlighted a number of reasons that led to the selection of this combination for the Mediterranean Sea:



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- Aquaculture is quickly expanding in various coastal areas and the increasing trend is assumed to continue. Aquaculture expansion has a lot of relevant socio-economic implication (including food production).
- Aquaculture and environmental protection somehow compete for same/similar areas; i.e. areas with good environmental quality. There is a competition between the increasing development of aquaculture and the 10% target of environmental protection.
- Aquaculture expansion is a “hot topic”, especially for coastal development trends and therefore synergies/combinations need to be addressed at an early stage of development, rather than solving conflicts in a later implementation phase.
- This will hopefully stimulate sustainable aquaculture practices to be adopted both within and beyond protected areas.
- It was also stressed, that these reasons identified for the Mediterranean are also relevant for the Black Sea, too.

5.3. Table discussion 3 – Eyes on Potentials

During table discussion 3 the potentials of MU development were analysed through the identification of the key roles who may act as drivers, or restraining forces for particular MU combinations relevant on the Sea Basin level. Data for this session were collected as Force Field and Actor Chart commonly used in the stakeholder analysis for identification of influential actors in stakeholder network.



Pictures 5.3 & 5.4: Discussion on MU Potentials



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5.3.1. Eastern Atlantic Sea

FORCE CHART

Acting as a driver	Restraining forces
- Existing EU network of pre-commercial areas (from single devices to arrays). E.g. Canaries, Peniche. - Test sites (e.g. EMEL) and primarily help Technology Readiness Level (TRL), not Commercial Readiness Level (CRL). - Identify areas in a similar process to Scottish Regional Location Guidance to deep water offshore wind. - Guarantee grid connections and areas for commercial expansion to the areas to be pre-consented. Do it along with funders, so they can co-learn from pilot phases to pre-commercial phases, and finally to commercial phases. - Rank areas according to their resources. - Offer processes to bring industries together. - Implement co-existence/MU policies - Demonstrate business value (e.g. B2B mechanism for matchmaking for combinations that are feasible).	- Need for EU coordination around innovation. E.g. Maritime Affairs / Environmental protection is at EU level but industrial innovation is a national competence. - Rochdale envelope: you can't consider every possible combination. - Need for a EU wide licence approach, otherwise companies will move between countries for MU.

IDENTIFIED ACTORS:

- MSP Authorities: mapping of conflict areas and areas with opportunities (e.g. overlapping of resources) which can serve to promote MU.
- Seabed lease authority (e.g. The Crown Estate): be proactive to explore MU when there is an application for a seabed lease. E.g. approaching trade bodies or encouraging users to work together instead of competing for single uses.
- Marine licencing authorities: requesting a "burden of proof" to favour MU. Applicants would need to justify why they have not applied for a MU case.
- Special promotion offices for business or joint industry processes to promote MU.



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5.3.2. North Sea FORCE CHART

Acting as driver	Restraining Forces
• Planning and licensing authorities could provide facilitative procedures for MU application, simplify EIA and reduce the costs for the procedure related to this combination • Governments and policy makers could politically and economically support the development of this MU combination • North Sea county governments should underwrite some of the financial risks for this MU combination roll out • North Sea country governments should develop the North Sea grid that this MU combination could piggyback onto • Once persuaded about the economic and environmental benefits of this combination Environmental NGOs and local communities could play an important role to request this MU implementation in their area • Scientific and research community could help in establishing the quantitative knowledge about energy potential and viabilities for this MU combination.	• None

IDENTIFIED ACTORS:

- Planning and licensing authorities
- Scientific institutions
- NGOs
- Local communities



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5.3.3. Baltic Sea FORCE CHART

Acting as driver	Restraining Forces
• Political will and sectorial authorities (responsible ministries) have enabling role – (e.g. sectorial ministries for enabling changes in getting permits; authorities in terms of offering more transparent procedure for MU) • Small scale/local authorities have significance in lobbying - it is easier to lobby on the local level, then in the main governance (i.e. for aquaculture and tourism) • Strong driver for single use • In case of Sweden, aquaculture authorities are open for co-existence • Sweden is lead with licencing procedure • In case of Denmark drivers are in wind energy • Desire of both engaging uses on their combining • Clear vertical governance settings of uses (Denmark) • Offer processes to bring industries together - Good investment environment • Implement co-existence/MU policies • Designation of the uses on the sea • Site importance • UNESCO sites acknowledge - encouragement of the UCH by the UNESCO	• EIA has indirect interests for preparation by local users, on the smaller scale • Different understanding of the MUs and information by the stakeholders from the private sector and administration • UCH projects do not harness with the blue growth • Side effect – licencing • Tourism is very local •

IDENTIFIED ACTORS:

- Sectorial authorities are key actors (sectorial ministries)
- MSP Authorities often does not have influence in this term
- VASAB although intergovernmental organisation has low influence/doesn't have active role
- UNESCO
- Local businesses



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5.3.4. Mediterranean and Black Sea

MU combination 1: O&G + Tourism + Aquaculture

Sea Basin: Mediterranean

FORCE CHART

Acting as driver	Restraining Forces
- Identify and promote case studies/good practice or “success story” along the entire process - Success stories can help triggering the strategic process at various levels (from Local to Regional Sea Level) - Enable the development of an action plan (National/Regional/Local authorities + sectors) - Provide technical and regulatory frameworks that enable the passage from theory to practice. - Increase awareness/produce guidelines and disseminate knowledge documents (NGO + National Authorities + International Organization) - Multi-stakeholder platforms are essential to engage all needed actors in the process (Public, private, technical, legal and social actors) - National authorities involved in the decommissioning process have the capacity to initialize a case study (National and Regional authorities) - Involvement of O & G sector is essential - MSP process can be a driver for MU and stimulate involvement of different actors	- Legislation put in place: primary and secondary laws including liability (National level) - Regional guidelines on Mediterranean Sea Basin level (REMPEC, International Organizations + NGOs) - Research need on O & G impacts on future activities and support monitoring (Research institutions + Environmental Agencies) - Communication to improve social acceptance and responsibilities on governance level (National + Sub-National Authorities) - O & G sector need to ensure environmental and security standards when handling over platform for reuse - Coherent implementation of all relevant directives (Regulators)

IDENTIFIED ACTORS:

- National/Regional/Local authorities and sectors
- Public, private, technical, legal and social actors
- NGOs
- National Authorities and International Organization
- Research institutions and Environmental Agencies



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MU combination 2: Environmental Protection + Aquaculture

Sea basin: Mediterranean + Black Sea

FORCE CHART

Acting as driver	Restraining Forces
- Guidelines and position papers on sustainable aquaculture (NGOs + International Organizations) - Pilot Action showing real benefits on national (International Organizations) - Identify procedures to assess the environmental, social and economic carrying capacity of the MU combination. - Multi-stakeholder Platforms based on national/local authorities (National/local authorities + Aquaculture farmers + NGOs) - Improve dissemination of existing knowledge - Barcelona Convention through SPA/RAC, to promote the MU at Mediterranean scale - MSP process can be a driver for MU and stimulate involvement of different actors	- Awareness raising to improve understanding of real aquaculture implications on environment and mutual benefits - Research triggering innovation towards more sustainable aquaculture - Improve understanding of ecosystem services (Research institutions +NGOs) - Improved governance/collaboration between decision makers (Ministerial level) - Facilitate Science – Policy Dialogue (Research Institutions + Decision Makers)

IDENTIFIED ACTORS:

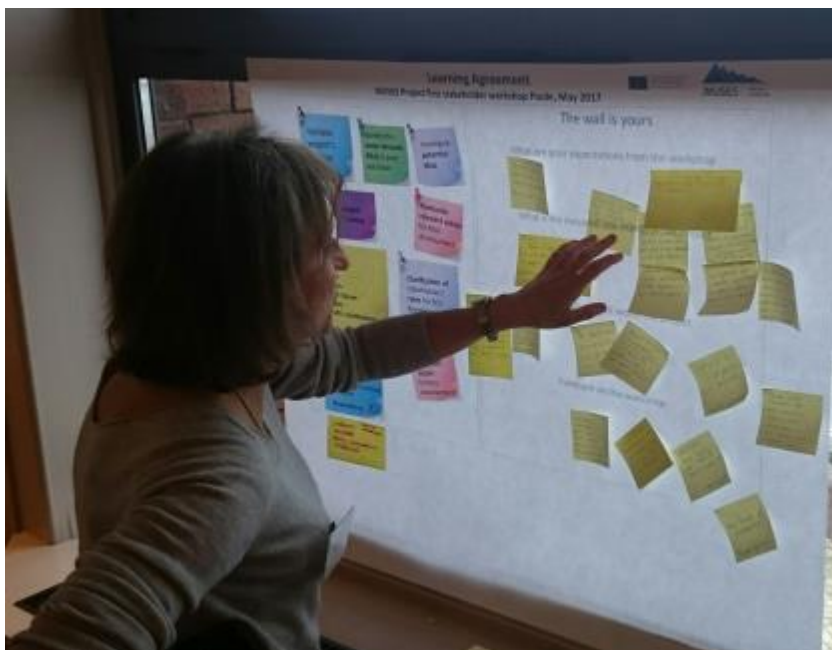
- Ministries
- International Organizations
- National/local authorities
- Aquaculture farmers
- NGOs
- Ministries
- Research Institutions and Decision Makers



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6. Follow-up action plan



Picture 6.1. Learning Agreement game (illustration)

The Learning Agreement game was conducted in order to introduce project needs as well as get the feedback from participants about their expectations from the project and attended workshop. Thus, all participants were kindly asked to leave their comments/suggestions on possible future collaboration with the MUSES project and their feedback about the 1st stakeholder workshop of the MUSES project. While on the left side of the paper poster were stated aims of the workshop and knowledge that the MUSES project aims to provide.

The expected outcome of the “Learning agreement” game was successfully achieved, through the comments placed on the wall by participants (picture 6.1), as well as through the interactive communication of project partners with participants on the workshop.

In terms of knowledge sharing and mutual learning, stakeholders’ expectations from the MUSES project are:

- Learning about the MU in all European sea basins;
- Promote and emphasize more MU development in realm of the Blue growth and within the Blue growth projects;
- Sharing of knowledge with the trans-boundary MSP projects;
- Continuous verification of previous findings from the projects done, on the sea basin level;
- Sharing of the specific examples of Wind farms & Aquaculture for English waters. Interests in receiving from the MUSES project examples of co-location wind & aquaculture (where this has occurred).
- Interests on particular MU combinations, thus personal involvement and participation for following MU combinations - Wave energy & Aquaculture and Wave & Wind energy;
- Clarification of the specific project outcomes and exchange of knowledge;



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- Identification of the key actors for getting the permit for coexistence.

Important suggestions from participants, in terms of the future steps of the MUSES project to be taken, are:

- To establish collaboration on the decommissioning of offshore platforms in order to define best solutions for their reuse;
- To promote involvement of administration (decision making at project level), and policy agencies at national and EU level;
- To get involved industries and business, by using international organizations (e.g. World Ocean Council);
- To continue with the stakeholder engagement method;
- To invite developers of the Wave devices to the project and discuss MU potential (like MARIBE Project);
- To be aware of learning by doing procedure on the project;
- To continue developing difficult idea of creating collaboration from competing users;
- To tailor results on particular governance levels – Policy makers, national, regional and local authorities
- To create information sheets to maximize impacts and stakeholders' awareness about their potentials or not

Throughout the informal discussions with participants the following important aspects should be highlighted:

- Regarding the MU combination Wind & Aquaculture and its potentials, participants from the UK stated that there are many different activities, thus it should be recognised that the combination of two energy types are more likely to occur in terms of development. In addition, there are no incentives for specific combination that have been proposed until now, and the existence of only one pilot experience of Wind & Aquaculture MU developed in UK waters, which was not successful, according to the knowledge of the responder.
- the EC should be fully updated regarding the findings on MU;
- Emphasize more MU development in realm of the Blue growth and within the Blue growth projects;
- Give more concrete guides of what need to be done in terms of promoting and understanding MU. What is expected from each role in the development process to do, in particular EC and other national and international authorities;
- Identify regulatory and funding system for the MU development;
- Provide successful case studies in order to convince governance and encourage stakeholders perception for MU, by knowing what happened in previous attempts and experiences from others.

Suggested future engagement in the MUSES project was very welcome from all workshop participants. According to the responses to the online survey and learning agreement game notes, the following engagement processes from MUSES were accepted:

- Newsletter
- LinkedIn discussion group
- Twitter



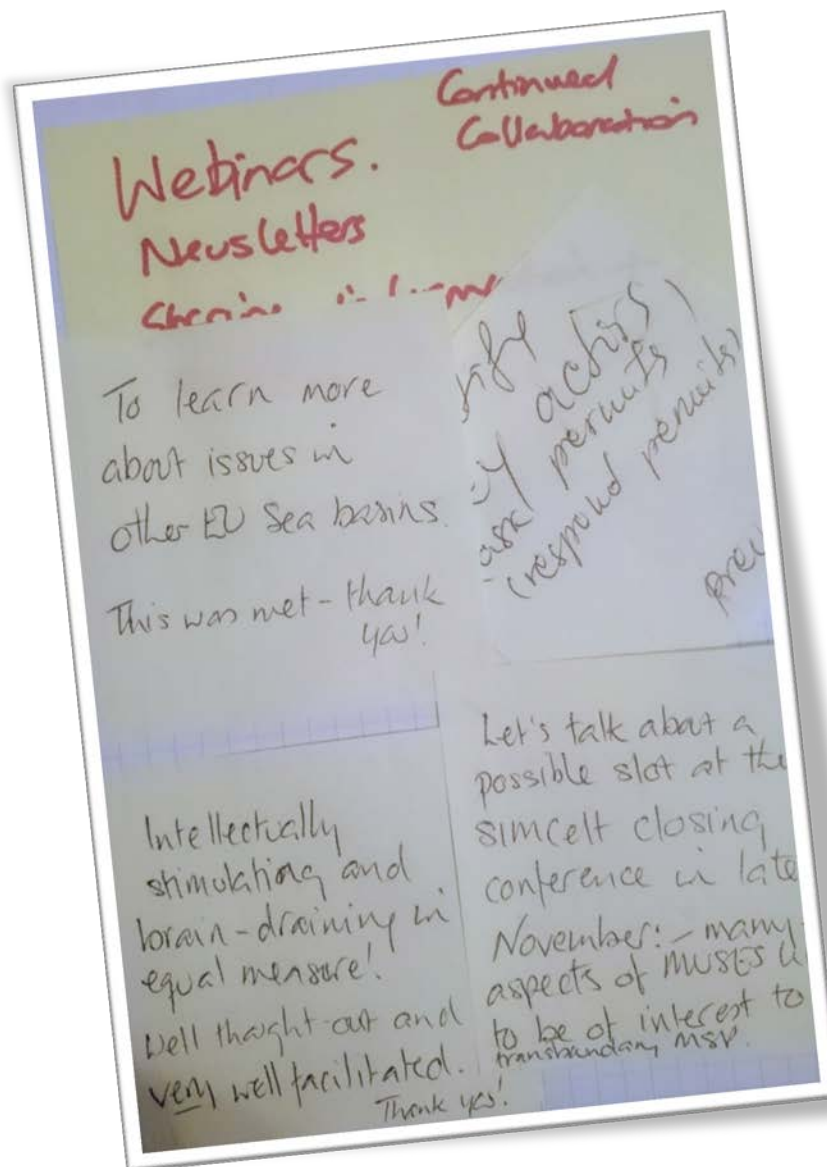
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- Working group that would be commenting on our draft documents
- Webinars in certain stages of the MUSES project (follow up and verifying of project's findings)
- Occasionally allowing MUSES project representative an observer status in their meetings

Other stakeholders' suggestions for other ways of collaboration were:

- Potential project partner to ensure outreach and engaging of the industry - via associations and companies;
- Possible time slot for MUSES project within the SIMCELT closing conference in November.



Picture 6.2 – Example of Learning Agreement Game note

7. Conclusion

The Stakeholder Workshop was an important step in meeting the MUSES project objectives, set out in the introduction of the workshop to the participants. It also allowed interested parties an opportunity



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engage with the MUSES project team, to verify identified MU combinations and introduce their personal and institutional statements on DABIs of identified combinations.

What will be key for the project will be the involvement of more industrial representatives, which was highlighted by the participants, as well as shown through the participant analysis, where the need for representations from industrial stakeholders is clearly demanded.

Outcomes of the workshop will contribute in building of the report for final selection of the MU combinations for the five EU sea basins. The main results achieved on the MUSES workshop being:

- Strongly stated need and will of participants for collaboration and enhancement of the MU potentials, where MU potentials are seen in providing clear instructions on how best to deliberate environmental, social, economic and political concerns, and identify actors to be involved as driving forces
- Many participants saw the benefit for further collaboration and mutual knowledge sharing through
 - o working groups that could comment on the project's draft documents;
 - o webinars at certain stages of the project;
 - o allowing stakeholders to observe future MUSES meetings, and;
 - o follow up with project's findings through newsletters and social networks (Twitter and LinkedIn)
- The identification of preliminary DABI elements for a number of combinations (four at the EU level and eight others at the sea basin level) to be used in the country level analysis MUSES are conducting under Work Package 2
- Precondition for success in implementation of the MU concept in practice, in terms of the parties involved, are always comprised of 2 sectors and 1 regulator. This should include
 - o strong interests of both sectors;
 - o strong drive for at least 1 use, and;
 - o strong drive from the regulator;
- With regards to the MU definition, there exists a shared meaning of the concept of MU. This also highlights the different understandings of certain aspects within MU. More work is required to achieve a full understanding of the views of different stakeholder communities on MU, in order to effectively engage and communicate across disciplinary boundaries.

While the lessons learned from the workshop and actions needed, include:

- Extension of the list of stakeholders involved in the project
- To be organised second seminar in order to fine-tune communications with stakeholders, and meet their needs
- Identification of the MU combination (case study), which proves aforesaid preconditions for successful MU practice
- Continuous work on the MU definition



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8. Annexes

Annex A-1: Agenda of the workshop

*Time frame and sessions, 17th of May, 2017

Time	Sitting Arrangements	Activity
10:00 – 11:30		Brief internal meeting to align all partners on the workshop methodology and steps
11:30 – 12:00		Registration
12:00 – 12:30		Lunch
12:30 – 13:00	Mixed	Introduction (introduction to MUSES Project) - MUSES goals and concepts, actual position of multi-use in European seas - MU definition - Role of the workshop within the project
13:00 – 13.45	Mixed	Workshop introduction - Overview on concept of the workshop and what are the expectations from stakeholders (tasks to be done) - Voting – Multi-use combinations - Introduction of the game – Learning agreement
13:45 – 14:30	Mixed	Table discussion 1 – Eyes on the EU Seas Mixed group work on chosen combination 1 st interactive group discussion with stakeholders
14:30 – 15:00		Coffee break
15:00 – 16:10	Sea Basin	Table discussion 2 – Eyes on Sea Basins Discussion on voting choice and DABIs per Sea Basins & Potentials in Multi-use - 2 nd interactive group discussion with stakeholders
16:10 – 16:20		Short break
16:20 – 17:20	Sea Basin	Table discussion 3 – Eyes on Potentials Sea Basins group work – Clarification of roles - 3 rd interactive group discussion with stakeholders
17:20 – 17:30		Short break
17:30 – 18:00	Remain in Sea Basin	Reflections, summary and next steps - Description of the way forward - Learning agreement game (How would stakeholders like to receive follow up information? What is the best way of communicating?)
19:00 – 21:00		Dinner



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Annex A-2: List of workshop participants

Poole Stakeholder workshop – 17 May 2017

Number	Print Name	Organisation
1	Joaquín Hernández Brito	TROPOS project (Wave Energy)
2	Representative	Black Sea Regional Agency for Energy
3	Damien Perisse	CRPM-CPMR
4	Teresa Simas	WavEC – Offshore Renewables
5	Adrian Judd	OSPAR
6	Maria Ferreira	EUCC Coastal and Marine Union
7	Representative	National Federation of Fishermen's Organisations
8	Lodewijk Abspoel	Ministry for infrastructure and the environment
9	Alex Adrian	The Crown Estate Scotland
10	Chris McConville	Floating Power Plant
11	Rhona Fairgrieve	Scottish Coastal Forum
12	Russell Gadbury	Marine Management Organisation (MMO)
13	Representative	Wistrand



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Poole Stakeholder workshop – 17 May 2017 (cont.)

Number	Print Name	Organisation
14	Riku Varjopuro	Finnish Environment Institute, Environmental Policy Centre, Interactive Governance Unit
15	Hans Chr Soerensen	Møllebesøg, Middelgrundens (Vindmøllelaug)
16	Elina Veidemane	VASAB
17	Paul Holthus	World Ocean Council
18	Mauro Randone	WWF Mediterranean
19	Marko Prem	Priority Actions Programme/Regional
20	Representative	MISE
21	Representative	MISE
22	Representative	General Fishery Commission for the Mediterranean and Black Sea
23	Representative	Marine Scotland
24	Jacek Zaucha	Maritime Institute in Gdansk
25	Representative	EUCC Coastal and Marine Union
26	Representative	Marine Scotland



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Annex A-3: Online survey

MUSES Project - 1st Workshop, Poole (UK)
Questionnaire

Question 1	Name of the institution •
Question 2	Your name and personal role in the institution you are answering about? •
Question 3	On what spatial scale does your institution function? (Please choose opinion in the following list. Check all that apply.) •
You can enter some information about this question here. ☐ North Sea ☐ Eastern Atlantic Ocean ☐ Baltic Sea ☐ Mediterranean Sea ☐ Black Sea ☐ International ☐ National ☐ Other:	



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Question

4

What is the type of your institution? (Please choose opinion in the following list. Check all that apply.) •

You can enter some information about this question here.

- ☐ International organisation
- ☐ International organization
- ☐ Regional body
- ☐ National body
- ☐ Scientific Institution
- ☐ NGO
- ☐ Environmental association
- ☐ Management body
- ☐ Industry
- ☐ Other:

Question

5

What are the roles and/or functions of your institution, related with Multi uses in the regional sea? (Please choose opinion in the following list. Check all

You can enter some information about this question here.

- ☐ Policy-making
- ☐ Environmental protection
- ☐ Industry
- ☐ Research/Scientific
- ☐ Safety and/or control
- ☐ Planning
- ☐ Other:

Question

6

Which sector(s) fits your institution's focus? (Check all that apply) •

You can enter some information about this question here.

- ☐ Fishery/Aquaculture
- ☐ Offshore Wind Energy
- ☐ Offshore Wave Energy
- ☐ Oil and Gas extraction



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- ☐ Environmental protection
- ☐ Transportation
- ☐ Tourism
- ☐ Other:

Question

7

How many years, you have been dealing with maritime activities? •

Involvement to the Multi-Use(s)

Question

8

Have you been involved previously in Multi-Use(s)? •

Question

9

What are the MU combination(s) you were previously involved in? (Either personally or institution on whose behalf you answering) •

Question

10

What are the Multi-Use combination(s) you are aware/heard of before in Europe? (Please indicate location)

Question

11

How would you rate your role in the development of the Multi-Use? (Else please specify. Please use textbook bellow) •

- ☐ Not able to influence
- ☐ Somewhat influential
- ☐ Active control in decision making



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Please help us understand why you selected this answer:

A large, empty rectangular box with a thin grey border, intended for a user to provide a detailed explanation for their selection.



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Closing questions

Question

12

What is the method you would like to continue your engagement with the MUSES project? (Please, check all that apply) •

You can enter some information about this question here.

- ☐ Newsletter
- ☐ LinkedIn discussion group
- ☐ Tweeter
- ☐ Working group that would be commenting on our draft documents
- ☐ Webinars in certain stages of the MUSES project (follow up and verifying of project's findings)
- ☐ Allowing us observer status in your meetings
- ☐ Other:

Question

13

Do you have any comments regarding the survey? (Please leave a comment if any)