

POLICY BRIEF

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The ResponSEAbLe project

ResponSEAbLe is a Horizon 2020 project on Ocean Literacy, which aims at supporting the emergence of an effective and dynamic European ocean knowledge system that contributes to raising awareness on everybody's (individual and collective, direct and indirect) responsibility and interest in a healthy and sustainable ocean. It has a regional focus in all European regional seas: the Baltic, Black, Mediterranean, North seas and the Atlantic ocean.

On board are experts from fifteen countries, representing various organizations, including researchers with expertise in marine sciences, environmental policy and communication, social-economic tools, artists, and multi-media.

Trim your sails to the wind!

Who are the actors?

In the previous policy brief we discussed which key stories ResponSEAbLe project will focus on and how the existing knowledge on these key stories (on Drivers, Actors, Pressures, Impacts and Responses) is structured in the Knowledge Base. This policy brief will further explore and open the box of 'Actors' and explain how with the help of value chain approach we identify which actors are important players in each key story and how we analyse which of them have opportunity to change behavior and need to be targeted for ocean literacy campaigns and tools.

The identification of the activities and actors of the ocean economy connected to particular challenges has been implemented by using a "value chain approach".

Value Chain Approach

The purpose of this assessment is to make explicit the embedment of activities in a vertical/linear socio-economic structure and cross it with pressures so the different socio-ecological components of the system attached to a specific challenge of issue are well accounted for.

For the main economic activity associated to each key story, a value chain has been developed.

It allows for a qualitative assessment of the most important components of the value chain in terms of their potential market power. Links between economic activities, and their connections to marine ecosystems, are identified and characterized based on available knowledge.

Actors related to components of the value chains are identified. Special interest is in identifying actors who could drive changes along the value chain so more sustainable practices are put in place.

Finally, drivers and constraints faced by the most important economic activities/actors are characterized in order to better understand margins for changes in behavior or practice that would reduce pressures on marine ecosystems, or seize development opportunities and contribute to Blue Growth.

The assessments carried out for the socio-economic values chains relevant to key marine challenges have stressed: (a) the large number of economic activities directly or indirectly connected to the pressures imposed on, and the benefits that can be drawn from, marine ecosystems; (b) the large number of actors that are connected to the value chains, and (c) the diversity of drivers (economic & financial drivers, regulation, Social demand and Technology, innovation & knowledge) that influence the strategies and practice of activities/actors.

Any change in practice or behavior from activities that directly impact on marine ecosystems is likely to impact indirectly other activities and actors of the value chain. In some cases, activities of the value chain might be the main drivers for changes in the value chain that lead to the protection of marine ecosystems and their use as key factors of sustainable socio-economic development.

Windows of opportunities: who has room for maneuvering

The knowledge collected and analysed using value chain approach will be the basis for identifying activities and actors for which enhanced knowledge on marine ecosystems and on the human-ocean relationship is a pre-condition for change of behavior that can benefit marine ecosystems and society as a whole. More specifically:

- » For each main issue/challenge, knowledge on the structuring and main components of the value chain will be combined with information on pressures-state-impact-welfare that has been investigated in parallel. This will contribute to the development of a wider picture on the human-ocean relationship, ensuring the main dimensions of the human-ocean equation (that could form the basis of content of literacy initiatives) are well captured;
- » The knowledge produced will now be used to identify the priority areas for “behavior change”, i.e. the activities and actors which “change of behavior” are essential for the activities of the value chain to shift to more “marine-friendly” practices and behavior (or to capture potential benefits offered by marine ecosystems and thus contribute to Blue Growth).

Depending on the issues investigated, different approaches will be applied for identifying priority areas for “behavior change”:

- » The organization of so-called PESTLE Workshops mobilizing (5-10) stakeholder representing different activities of the value chain. These workshops will help consolidating the knowledge on the links between environment and human activities, and to identifying changes (in strategies and practices) that would help better accounting for marine ecosystems (protection and/or development opportunities). Part of the workshops will be also devoted to the i) co-construction of scenario as a way to structure expression of interests regarding potential

The description of the value chains connected to the marine challenges investigated stressed the diversity of the activities that directly or indirectly are connected to these challenges.

changes and ii) hierarchy of these scenarios¹¹. Depending on the issues and challenges, such workshops might involve local (e.g. for coastal tourism) or European (e.g. for cosmetics and microplastics) stakeholders. Scenarios building and classification of scenarios will be part of the PESTLE workshop that will deliver a story telling as a result;

- » A series of interviews based on an interview guidance combining structured and semi-structured questions addressing the same issues as the ones discussed during the PESTLE workshop. The results of the interviews will help developing a SWOT analysis of different alternatives of “behavioural changes” within the value chain, or influence/interest grids that help capturing stakeholders and activities that are priority in influencing the functioning of the overall value chain, including decisions and practices of sectors that impose direct pressures on marine ecosystems.

Key Story	Key Actors
Eutrophication and agriculture	Agricultural Producers Wholesalers Decision-makers
Sustainable Fisheries	The Public Wholesalers
Ballast water/invasive species	Shipowners European and National Legislators Marine Equipment Suppliers and Manufacturers of paints and coatings
Marine Renewable Energy	The Public Investors (public & private)
Microplastics and cosmetics	Cosmetic Producers NGOs Decision Makers
Coastal development/tourism	Hoteliers Tourists Policy makers Construction Marina managers Beach managers

There is often a wide knowledge on the changes in practices and behavior that are necessary for the sector putting the direct pressure on marine ecosystems to reduce its pressure. However, ensuring the change effectively takes place might result from actions and changes taken elsewhere in the value chain, or for stakeholders connected to components of this value chain. For example: ensuring eutrophication in the Baltic Sea is reduced might come from the decision of the EU regulator, or of the State administration of one Baltic country, to establish food labeling that make explicit the nitrate footprint of food – that in turn will influence consumers and eventually agro-food industry and farmers themselves. In some cases, some of these stakeholders might then become priority target group for communication, information and literacy activities – if their current knowledge on the human-marine system needs to be strengthened to make opportunities for change more explicit.

In the six key stories a wide range of stakeholders are connected to the value chains were investigated. Some of these are similar (e.g. EU consumers, or some of the EU regulators) while others are very specific to one value chain or marine challenge (e.g. ship owners in relation to the issue of invasive species).

Blue Growth

Blue growth dimensions are taking a special place in the ResponSEable project, as in addition to using DAPSIR approach (which is environmental pressure driven) we also take a particular focus on the 'opportunity' side. In particular out of the six main challenges – the key stories ResponSEable is working on three stories are – Blue Growth stories, namely: coastal development and tourism, renewable energy and sustainable seafood.

For example, to contribute to the blue growth of the tourism sector, ocean literacy would need to intervene in the vicious circle which is currently affecting coastal and marine environments on the one hand, and tourism activities on the other.

In the development of ocean literacy materials it is important to raise the question *Is there a specific Blue growth dimension in ocean literacy? Does literacy needs to be mobilized for Blue growth?*

To do this, one key goal of ocean literacy will be to improve coordination among the different actors and overcome current sector fragmentation. At the same time, ocean literacy campaigns will also need to target tourists, with a dual objective: on the one hand, ocean literacy can raise tourists' awareness on the impact of mass tourism and on how they can mitigate their own impact; on the other hand,

it can inform local actors on tourists' feedback on the environmental quality of a destination, and learn about their expectations and wishes for a healthier environment –thus creating a virtuous cycle.

In Marine Renewable Energy, there is a need to support the knowledge exchange between the natural science community and MRE developers using new formats, particularly with regard to the development of MRE design and construction that reduces impacts on biodiversity; Also, to develop ocean literacy products that increase the confidence of investors in the MSP process. For ocean energy in particular, to find synergies with more advanced sectors such as off-shore wind, oil and gas, and ship-building; Another important aspect for ocean literacy aspect is to address the gap between perceived and actual knowledge with regard to MRE development in communities.

In the aquaculture side of the Sustainable Fisheries story, the challenge is linked to the ability of the aquaculture industry to manage production and demand sustainably throughout the whole production chain and as a result informing consumers that not all aquaculture products can be considered as a sustainable seafood choice. Ocean literacy could support the knowledge exchange between the natural science community and the aquaculture industry particularly with regard to the need to reduce impacts on wild stocks; developing new communications products that increase the knowledge of "buyers" (including transformers, wholesalers, retailers, consumers) in order to allow for sustainable seafood choices, whether from aquaculture or other sources. For example, a communications product that encourages consumers to prefer herbivorous to carnivorous aquaculture finfish.

For each of the 'Blue growth' stories we are developing SWOT analysis of what conditions needed for fulfilling Blue Growth objectives.

Special focus on consumers

Consumer's role is transversal to all key stories of ResponSEable. The analysis of the different value chains has stressed the role final consumers have in different value chains. An initial review of the literature on consumer behavior and the role of knowledge in supporting consumers' behavioral changes, combined with semi-structured interviews of citizens/consumers, have helped identifying the main issues at stake with factors influencing consumer's behavior, and their purchasing choices. It is proposed now to launch an internet-based survey for capturing the consumer choices in relation to food, seafood and cosmetics. The results of the survey will provide interesting results that will help targeting ocean literacy regional strategies and ocean literacy products. Stay tuned with these developments in the next policy brief!

Follow our journey with the next policy briefs

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