

D.5.4 EXPLOITATION PLAN



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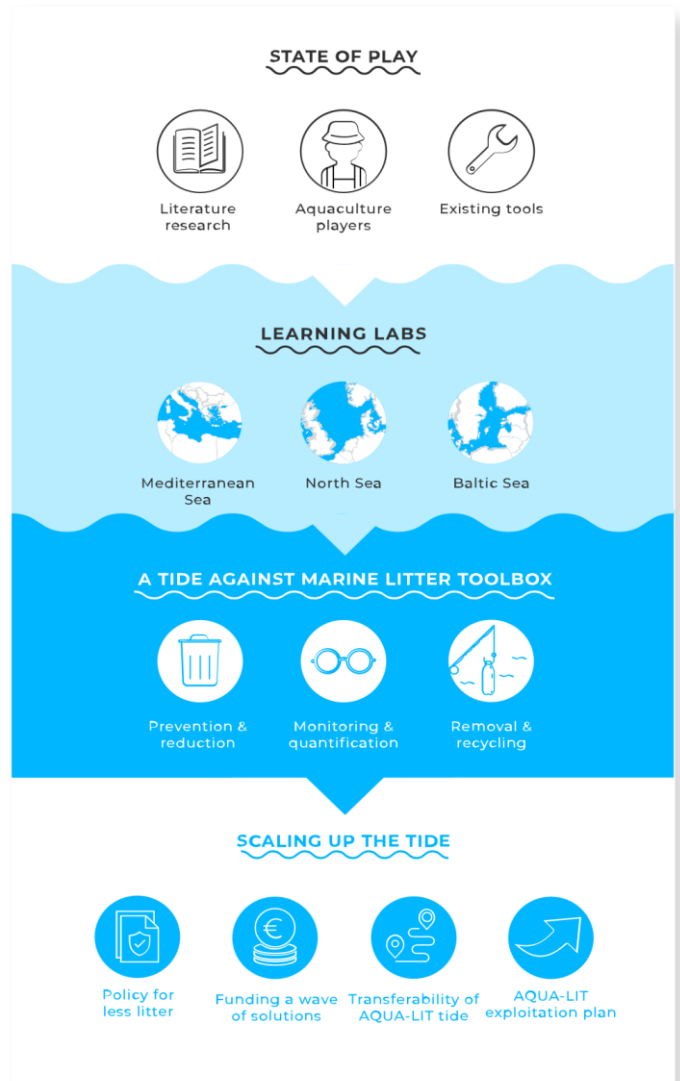
AQUA-LIT project

AQUA-LIT is an EASME-EMFF funded project that aims at providing the aquaculture sector with a sustainable toolbox of innovative ideas and methodologies to address the 3 main components of marine littering: prevention & reduction, monitoring & quantification, and removal & recycling.

To fulfil this mission, we have been working face-to-face with aquaculture farmers in three **regional Learning Labs**: at the Mediterranean basin, the North Sea and the Baltic Sea regions. In parallel, we identified and clustered existing, upcoming and already implemented tools on marine littering, and we have developed a platform and an app for providing the **'Tide against marine litter toolbox'**.

Lastly, we have **'scaled up the tide'** by developing the 'policy for less litter' set of recommendations, by showcasing the 'funding a wave of solutions' available for the sector and by coming up with a transferability plan for outermost regions.

Through this, we expect to help all stakeholders from the aquaculture chain to increase the understanding, awareness and availability of solutions, so a potential transformation of the aquaculture sector towards a less polluting sector can become possible.



Project Consortium



Geonardo Environmental Technologies (GEO)



European Centre for Information on Marine Science and Technology (EurOcean)



Vlaams Instituut voor de Zee - Flanders Marine Institute- (VLIZ)



Sustainable Projects GmbH (s.Pro)



Instituto Español de Oceanografía -Spanish Institute of Oceanography- (IEO)



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D.5.4 Exploitation Plan

Summary

The purpose of this document is to **propose a strategy that will show how to exploit the results generated during the AQUA-LIT project**, i.e. **how to put them to economic and social use** and improve public knowledge and action, and **how to make the AQUA-LIT scientific evidence available for policy making** in order to ensure that the outcomes of the project are used after its termination.

The document will describe five main exploitable results of the AQUA-LIT project which are:

- 1) the AQUA-LIT [Learning Lab methodology](#);
- 2) the AQUA-LIT toolbox *Tide against marine litter* both in the [online](#) and [app](#) version;
- 3) the AQUA-LIT review [Players at play](#);
- 4) the [Marine Litter Inventory](#) and,
- 5) the [Available tools and measures](#) compilation.

This document will also discuss the value and impact of the knowledge generated within the project for diverse stakeholder/end user target groups. It will further suggest concrete measures and explain how these results can meet real needs and can be taken up by potential users involving aquaculture farmers; equipment manufacturers; engineering, system design and construction companies; academic research groups; professional clusters, associations and platform representatives; NGOs; governance (including policy makers & implementers, and port staff); classification and certification bodies; companies processing waste; and communicators (media, press, science communicators).

The exploitable results of the AQUA-LIT project have been generated by the theoretical/ desk research, through interviews of stakeholders and contributions of the participants of four learning labs that were held in the Baltic, Mediterranean and North Sea basins and online in 2019 and 2020.

AQUA-LIT Exploitable Results – A review of the AQUA-LIT findings, new tools and methodology

This chapter contains a list of five main exploitable results of the AQUA-LIT project which are 1) the AQUA-LIT Learning Lab methodology; 2) the AQUA-LIT toolbox *Tide against marine litter* including an exhaustive marine litter inventory from aquaculture sources in 3 sea basins; 3) the AQUA-LIT review *Players at play*; 4) the inventory *Available tools and measures* and 5) the AQUA-LIT *Marine Litter Inventory*. For every exploitable result, stakeholder target groups have been identified, an adapted value proposition, application paths, and assets have been proposed, recommendations to maintain further development or promotion of the exploitable result have been put forward, and potential costs have been identified. Moreover, their potential exploitation has been highlighted for research, business, and policy.

1. AQUA-LIT Learning Lab methodology

Description

The **AQUA-LIT Learning Lab methodology** is a set of guidelines and tools produced as a result of two types of stakeholder engagement:

- i. Interviews with stakeholders (online and face-to-face) that helped to better understand the state of play concerning the management of aquaculture equipment mishandled, discharged or lost at sea, and to identify the needs, barriers, strengths, practices, opportunities and existing tools for its prevention, reduction, monitoring, quantification, removal and recycling.
- ii. Mutual learning interactive workshops that were facilitated using [participatory methods](#) (inspired by round tables, World Café and focus groups) in order to encourage knowledge sharing and co-creation and to develop a mutually valued and acceptable toolbox for tackling marine litter from the aquaculture sector.

This methodology contains a full array of organisation and promotion tools, before, during and after the learning labs: guidelines for learning lab planning and organisation, a scenario with an agenda, tips for facilitators, tips for organisers, Gantt timeline, reporting templates, promotional and communication tools (invites, press release template, attendance sheets and certificate). This common methodology takes into account the stakeholder variety and local specifications, allowing at the same time, for the comparison of results.

The methodology for the AQUA-LIT learning labs was designed for the engagement of stakeholders from the entire aquaculture sector and chain: from aquaculture farmers, gear manufacturers, engineering and construction companies, professional clusters, classification and certification bodies, academic research groups, waste processing companies to policy makers and implementers, NGOs and communicators. It was initially developed to define principles, protocols and leading lines for the implementation of learning labs in three sea

basins: the Baltic Sea, the North Sea and the Mediterranean in 2019-2020. However, it can be extrapolated and used for stakeholder engagement in other activity sectors, geographical regions and topics, and for on-line workshops, such as e.g. the AQUA-LIT [Virtual Learning Lab](#).

The learning labs 1) federated and engaged the multiple regional aquaculture stakeholders in preventing, reducing, monitoring, quantifying, removing and recycling aquaculture equipment mishandled, discharged or lost at sea, 2) helped to develop productive partnerships and solutions by forming inclusive problem-solving teams, 3) facilitated the adoption of successful existing solutions through knowledge sharing and capacity building, 4) explored the potential of innovative solutions for marine litter reduction, removal and recycling, and 5) improved the understanding of the specific needs of stakeholders to maximise the impacts of the project.

As a result, the stakeholders identified barriers to reducing the amount of the equipment, gear and plastics lost during aquaculture operations at sea, shared good practices, expertise and designed solutions for preventing, reducing, monitoring, quantifying, removing and recycling marine litter. These outputs have become the content of the AQUA-LIT [toolbox](#) *Tide against marine litter*.

Table 1.: AQUA-LIT Learning Lab methodology in a nutshell

EXPLOITABLE RESULT	AQUA-LIT Learning Lab methodology
Links	Deliverable 3.1 AQUA-LIT Learning Lab Leading Lines .
Stakeholder target groups	Aquaculture farmers; Equipment manufacturers; Engineering, system design and construction companies; Academic research groups; Professional clusters, associations and platform representatives; NGOs; Governance (including policy makers & implementers, and port staff); Classification and certification bodies; Companies processing waste; Communicators (especially science communicators).
Value Proposition	Gain in-depth understanding of citizens' perspectives and opinions about research questions, products, services and policies. Better align research, innovation, policy and their outcomes with the values, needs and expectations of society by involving a variety of actors in the process from the very early stages.
Costs	The methodology involves gathering many people together at a venue; the forecast costs can include rental of a conference room, snacks for participants, and the fee of a professional moderator if there is no one with such skills in-house. Like any gathering of multiple people, the methodology requires staff which will plan for and coordinate the Learning Labs, find participants, schedule a venue, provide assistance to facilitators and participants, etc.
Application	Research activity, Programme & project definition and development, Market study, Product & service development, Policy formulation, Political empowerment of people.
Geographical scope of application	International, EU, National, Regional, Local.
Assets	The AQUA-LIT methodology aims at collaborative learning and knowledge evolution. It stimulates conversation about questions that matter to participants. It allows for an interactive environment and a flow of ideas. Assembling a group of individuals, it can elicit interactions. As one participant makes a comment on questions asked by the moderator, other participants can jump in and add commentary to contribute to the overall conversation.

	<p>It can produce insights on the participants’ attitudes, ideas and preferences because it allows for direct observation of the participants’ immediate reactions and in-depth discussions on the topic.</p> <p>Ambiguities can be clarified and incomplete answers followed up.</p> <p>Learning Lab workshops deliver immediate information from the target groups. With the immediate information, businesses and governing bodies can react and make changes to their current strategies and plans sooner.</p> <p>Open discussions give insight into the language the target groups are using to talk about the research question, policy or to describe company’s products and services and their experience with them. This language can be weaved into communication about research and policy to improve their understanding by citizens and in marketing campaigns to better target potential customers.</p>
<p>Remaining lifespan</p>	<p>The methodology will be available on the AQUA-LIT website till 2025, i.e. for 5 years after the termination of the AQUA-LIT project.</p>
<p>Recommendations to maintain, further develop or promote the exploitable result</p>	<p>Make the methodology <u>accessible</u> to and easy to find by all (open access) on the AQUA-LIT website: optimise it for search engines and enable downloads.</p> <p>Experience has shown that the engagement of the stakeholders is effective and inspiring if the interviews, mobilisation and mutual learning workshops are carried out in their native language.</p>

Exploitation in research

The AQUA-LIT methodology combining individual interviews with participatory workshops can be used as a qualitative approach to gain an in-depth understanding of social and technical issues underlying marine challenges. It aims at obtaining data from a selected group of individuals rather than from a statistically representative sample of a broader population. It is based on a technique where a researcher assembles a group of individuals to discuss a specific topic, aiming to draw from the complex personal experiences, beliefs, perceptions and attitudes of the participants through a moderated interaction.

The methodology is a cost-effective tool in participatory research. It is a bridging strategy for scientific research and local knowledge offering a platform for divergent paradigms and worldviews and even conflicting interests.

The methodology is flexible and adaptable at any stage of the research. It offers an opportunity to explore issues that are not well understood, need prioritisation or where there has been little prior research on the topic.

Exploitation in business

The AQUA-LIT methodology may prove advantageous to companies and businesses searching for feedback about their brands from the very same people who use their products and services on a day-to-day basis. Companies can use it in their market research to assess a business idea or to gain insight from their target audience, key customer group or potential customers about

their perspectives and opinions about specific products or services, either being offered or in the product development stage.

The results can help to design new products and services or improve the existing ones.

Exploitation in policy

The AQUA-LIT methodology can be used in public consultations to gain insight into citizens' perspectives and opinions about policies implemented and/or to be implemented. The outputs can be further confirmed or refuted by a quantitative survey.

The methodology aims at helping to keep participants engaged and share their opinions. The results can help to design new policies or improve the existing ones.

2. AQUA-LIT Toolbox “Tide Against Marine Litter”

Description

The [AQUA-LIT Toolbox Tide against marine litter](#) (or *From Prevention to Recycling Marine Litter*), is an interactive online and app inventory of existing, upcoming and already implemented solutions, measures, good practices and databases regarding the management of marine litter by the aquaculture sector. It has been designed to assist the sector in addressing the current global environmental and social challenge of marine litter in three stages: prevention & reduction, monitoring & quantification, and removal & recycling in three sea basins: the Baltic Sea, the North Sea and the Mediterranean Sea. The toolbox is the most comprehensive repository of knowledge on the marine litter from aquaculture sources in Europe and can be a starting point for the development of new European Union's policies regarding the prevention of marine litter by the growing aquaculture sector.

The toolbox consists of:

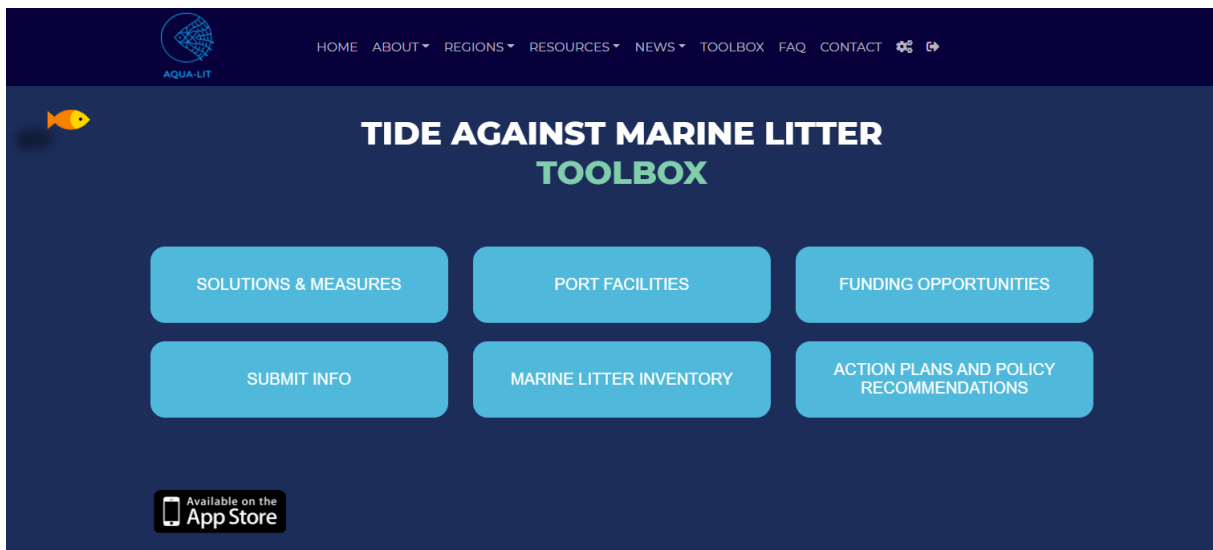


Fig. 01 AQUA-LIT toolbox categories

1. Solutions, measures and good practices that can be searched by:



Fig. 02 AQUA-LIT toolbox: Solutions & Measures categories

- Stage (Prevention & Reduction, Monitoring & Quantification, and Removal & Recycling),
- Sea Basin (the Baltic Sea, the North Sea and the Mediterranean Sea),
- Type of aquaculture (Finfish, Shellfish, Seaweed)
- Measure (Knowledge, Legislation, Responsibility and Support)

According to the entry and the path defined, the information is filtered to present the relevant measure types in the database. For example, if the user enters the toolbox through the Mediterranean Sea, the measures showed are only those relevant to this sea basin. The types of measures are divided in four categories presented below, having each different sub-categories as presented in figures 3 to 6:

1. Knowledge



Fig. 03 AQUA-LIT toolbox Knowledge Measures categories

2. Legislation



Fig. 04 AQUA-LIT toolbox Legislation Measures categories

3. Responsibility measures

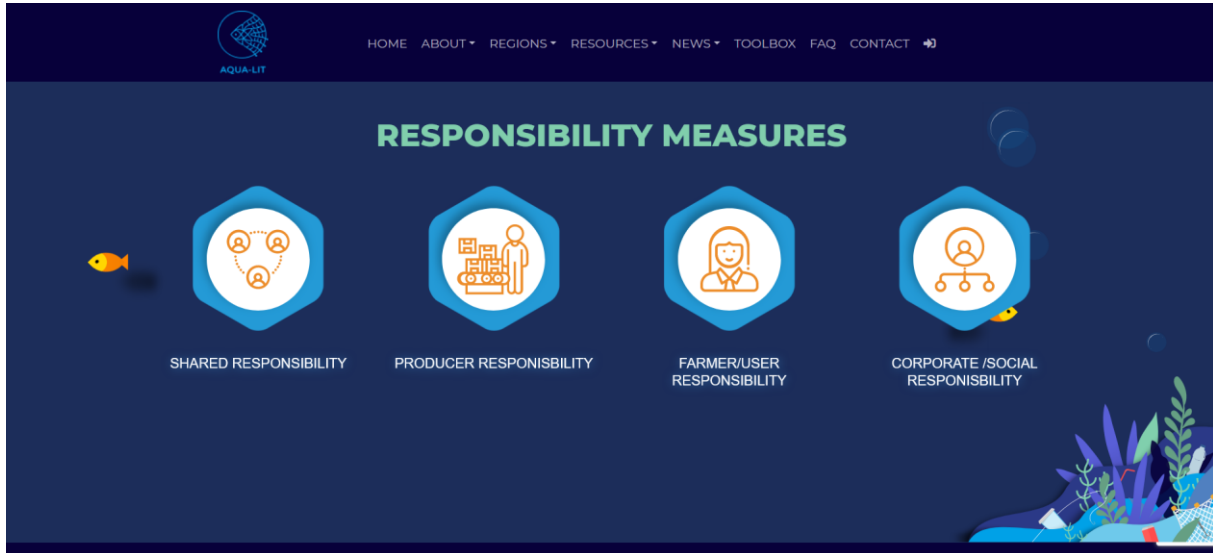


Fig. 05 AQUA-LIT toolbox Responsibility Measures categories

o Support measures .



Fig. 06 AQUA-LIT toolbox Support Measures categories

2. **Port Reception Facilities** is a data compilation that shows which ports in each country have facilities to receive different types of litter and how they act to collect it.
3. **Marine Litter Inventory** is available online as a downloadable visual file. In the online version, data can be searched by Types of Litter (Clothing, Collecting Material, Cover Material, Floats & Buoys, Nets Ropes, Strapping Material and Tags) Sea basins (showing

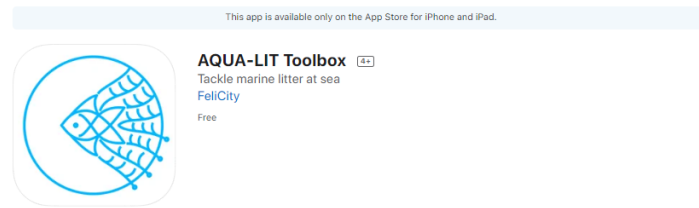
regional maps), [Geographically](#) by country and by viewing and selecting items in [Online Table with all data](#).

4. [Funding Opportunities](#) section is a database of European, National and Transitional funding schemes, as well as Grants and Investors, for funding marine litter related projects.
 5. [Action Plans and Policy Recommendations](#) that are divided into Support, Legislation, Responsibility, Knowledge and Others:
 - The AQUA-LIT Policy Recommendations contain a report that examines how the aquaculture sector can tackle marine litter at sea, and a set of recommendations to improve decision-making and to overcome the existing gaps,
 - Action Plans. These are two action plans directed to the outermost regions of the Azores and the Canary islands, where based on each regional context, we provide a targeted plan for using the AQUA-LIT tools and resources.
 6. [Submit Info](#) section provides the opportunity for AQUA-LIT website users to submit ideas and potential solutions that they have run across, and which are not part of our toolbox.
- 4.

The toolbox addresses the entire aquaculture value chain – its target users are aquaculture farmers; professional clusters, associations and platform representatives; policy makers; port authorities; aquaculture gear and equipment producers; engineering, system design and construction companies; plastic manufacturers; waste managers; researchers; environmental and social consultancies; NGOs; classification and certification bodies; communicators or any other person related or interested in the topic.

The *Tide against marine litter* toolbox is accessible on the AQUA-LIT website (<https://aqua-lit.eu/toolbox>) and a free mobile app for iOS 14.0 or beyond (<https://apps.apple.com/us/app/aqua-lit-toolbox/id1542596010>). It is an interactive inventory that can be enriched by any user interested in marine litter and aquaculture.

App Store Preview



Screenshots iPhone iPad

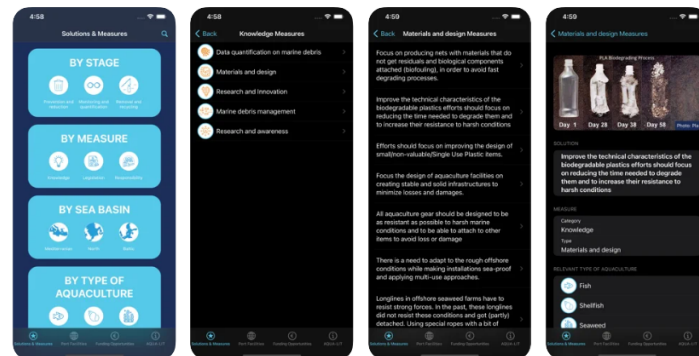


Fig. 07 AQUA-LIT toolbox App

The toolbox is the result of the compilation and analysis of the information and proposals provided by the aquaculture stakeholders in the framework of the AQUA-LIT Learning Labs, meetings and exchanges with other experts working closely with the AQUA-LIT team during 2019 and 2020, as well as a desk research carried out by the AQUA-LIT partner organisations.

Table 2.: AQUA-LIT TOOLBOX *Tide Against Marine Litter* in a nutshell

EXPLOITABLE RESULT	AQUA-LIT TOOLBOX <i>Tide Against Marine Litter</i>
Links	AQUA-LIT website , Application for iOS 14.0 , Deliverable 2.2 Knowledge wave on marine litter from aquaculture sources , Deliverable 3.5 Learning Lab outcome. portfolio of best practices , Best Practices Factsheets , Deliverable 4.1 From Prevention to Recycling Toolbox .
Stakeholder target groups	Aquaculture farmers; Equipment manufacturers; Engineering, system design and construction companies; Academic research groups; Professional clusters, associations and platform representatives; NGOs; Governance (including policy makers & implementers, and port staff); Classification and certification bodies; Companies processing waste; Communicators (media, press, science communicators), Environmental and social consultancies and any other person.
Value Proposition	Help to raise the profile of aquaculture in Europe and to make it a Blue Economic sector.
Costs	To enable the website and the app to be present on the Internet and keep them running and evolving, a web hosting service should be paid for. A shared hosting plan (i.e. sharing a server with other users) is the most elementary and popular form of web hosting. It is used by those who wish to create a small or medium scale business.
Application	Aquaculture product & service development, Aquaculture project definition and development, Capacity building, Research activity, Policy formulation.
Geographical scope of application	International, European Union, National, Regional, Local.
Assets	<p>The AQUA-LIT toolbox is a useful application that provides an online support than can:</p> <ul style="list-style-type: none"> • Increase the awareness of the impacts of marine litter on the marine environment and on the aquaculture sector • Empower aquaculture stakeholders to take SMART (Specific, Measurable, Achievable, Realistic and Time-bound) actions against marine litter • Improve gear identification skills and techniques • Share and replicate good practices and solutions • Identify technical and technological knowledge gaps and address them by responsible research, innovation and design • Improve the knowledge of sustainable gear and other equipment and alternative materials of the aquaculture farmers • Identify the policy and regulation gaps that need to be addressed to enforce the marine litter management practices across Europe • Facilitate the exchange of knowledge among all stakeholders <p>The toolbox includes good practices from the field that can be replicated. It allows any user (individuals and organisations) to access at any time and can be updated with the new information by stakeholders after a review on the input by AQUA-LIT team. It is user-friendly, easy to navigate through and free of charge.</p>
Remaining lifespan	The toolbox will be sustained on the AQUA-LIT website and iOS app by Geonardo Environmental Technologies Ltd. till 2025 (i.e. for 5 years after the termination of the AQUA-LIT project).

Recommendations to maintain, further develop or promote the exploitable result

Sustain the toolbox online so that interested stakeholders could complete it with new data and use it. The engagement of the stakeholders with the toolbox can be intensified if it is translated into several European languages.

The toolbox will be also accessible through the [Blue Cloud website](#), a H2020 project focusing on federating and piloting the marine-thematic European Open Science Cloud, a virtual environment with open and seamless services for storage, management, analysis and re-use of research data, serving the Blue Economy, Marine Environment and Marine Knowledge agendas.

Exploitation in research

The AQUA-LIT toolbox contains information that can help to understand the needs of the sector while researching on new products, services and reusable product alternatives for cages, gear or other equipment. It holds information from the field that can help to enhance scientific research on new materials and new designs for aquaculture equipment, including technical characteristics and the lifetime of aquaculture equipment as well as waste recycling processes. It can also contribute to the current research on marine debris quantification and monitoring. The toolbox can contribute to the promotion of interdisciplinary and international collaborations between companies and academia.

Exploitation in business

The AQUA-LIT toolbox may prove useful to aquaculture, gear equipment and engineering businesses and companies looking to improve their products and services, to implement Corporate Social Responsibility (CSR) practices, to shift towards circular economy, or simply looking for information about how to manage and dispose of worn-out gear and equipment and how to fund these activities.

It can also help to understand the needs of the sector while designing new products, services and reusable product alternatives for cages, gear or other equipment.

Exploitation in policy

The toolbox provides information that can help to develop policies, regulations and standards to encourage responsible use of aquaculture gear and other equipment and enforce Extended Producer Responsibility (EPR). It can also support the development and harmonisation of specific certification schemes that will ensure sustainability, quality and social responsibility including waste management plans, the establishment of common standardised licensing procedures for various types of aquaculture in a clear and cohesive format to especially support small scale farmers in Europe.

3. AQUA-LIT Review “Players at Play”

Description

The AQUA-LIT Review *Players at play* is an analysis and a comprehensive list of aquaculture stakeholders organised by country profiles in the three sea-basins, and categorised by stages in the aquaculture life cycle which refer to the period of time an aquaculture farm is present on the economic market until is it dismantled and removed. Thus, the review offers a description of stakeholders involved in four phases of the aquaculture farm operations: 1) Initiation, 2) Development; 3) Operations and 4) End of life.

A country profile was compiled for the two most extensively studied countries in each of the three AQUA-LIT focal sea basins: Italy and Spain in the Mediterranean Sea basin, Belgium and France in the North Sea basin, and Denmark and Germany in the Baltic Sea basin.

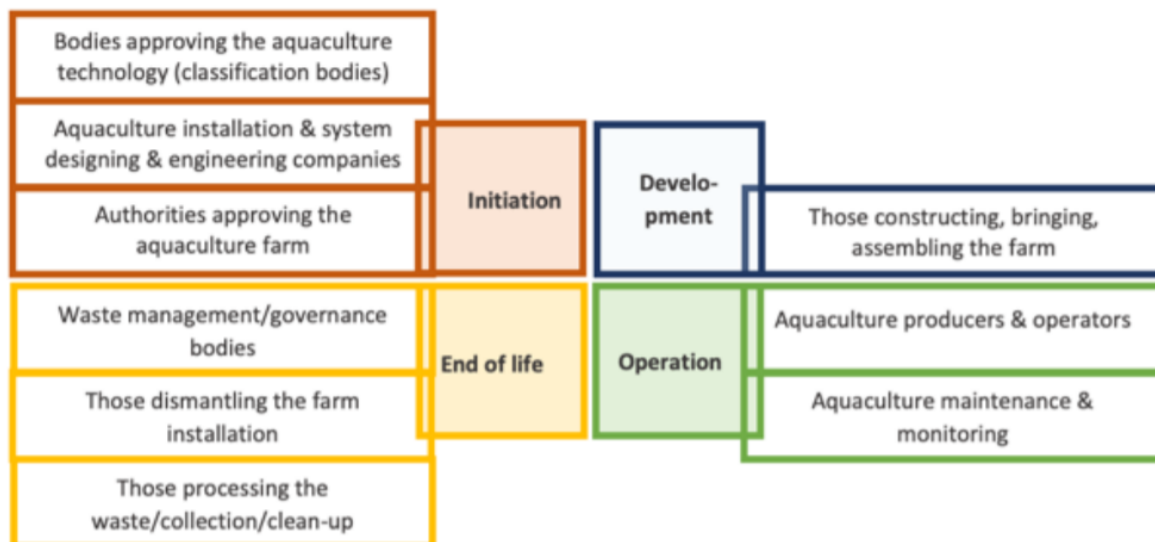


Fig. 08 Stakeholder categories in regard to 4 stages in the life cycle of an aquaculture farm (D.2.2)

The Review *Players at play* is attached in the Annex 5 of the AQUA-LIT report deliverable [D.2.2 Knowledge wave on marine litter from aquaculture sources](#) and published on [the AQUA-LIT website](#) where each country profile can be accessed separately.

A stakeholder analysis is the first step in stakeholder management procedures. It helps to gain a better understanding of how various actors operate and what their constraints and interests are. It enables to work out their power, influence and interest, enabling to know who one should focus on and develop a good understanding of the most important stakeholders, so that one knows how they are likely to respond and how you one can win their support, starting early on in the project. Therefore, the review can advise on effective stakeholder engagement strategies for fighting marine litter and debris and feed the development of recommendations

addressing specific target groups by taking into account national, region and sea basin specificities.

The review has resulted from desk research, AQUA-LIT Learning Labs and other surveys carried out by the AQUA-LIT partner organisations in 2019-2020.

Table 3.: AQUA-LIT Review of Players at play in a nutshell

EXPLOITABLE RESULT		AQUA-LIT Review of Players at play
Links		<u>Deliverable 2.2 Knowledge wave on marine litter from aquaculture sources.</u>
Stakeholder target groups		Aquaculture farmers; Equipment manufacturers; Engineering, system design and construction companies; Academic research groups; Professional clusters, associations and platform representatives; NGOs; Governance (including policy makers & implementers, and port staff); Classification and certification bodies; Companies processing waste; Communicators (media, press, science communicators).
Value Proposition		Identify stakeholders in the entire life cycle of an aquaculture farm and gain a better understanding of how they operate.
Costs		Further stakeholder analysis will involve staff costs.
Application		Aquaculture product & service development, Aquaculture project definition and development, Capacity building and empowerment, Research activity, Policy consultation and formulation, Market study.
Geographical scope of application		Italy, Spain, Belgium, France, Denmark, Germany, European Union.
Assets		<p>The Review of players at play is the first step in stakeholder management and can help to:</p> <ul style="list-style-type: none"> • Develop tailored stakeholder engagement strategies by providing knowledge of stakeholders • Identify stakeholders to build partnerships and collaborative projects • Identify stakeholders to carry our public consultations on policies and regulations • Identify stakeholders to carry out market research on products and services • Identify stakeholders target groups of awareness raising campaigns • Mobilise stakeholders to exchange knowledge and best practices <p>Accessible online, the review allows any user (individuals and organisations) to access it at any time.</p>
Recommendations to maintain, further develop or promote the exploitable result		<p>Carry our research to complete the review with stakeholder information in other countries in the Baltic, Mediterranean and North Sea basins and beyond.</p> <p>Maximise stakeholder management by prioritising them on a Power/Interest Grid:</p> <ul style="list-style-type: none"> • High power and highly interested stakeholders to be managed closely • High power and less interested stakeholders to be kept satisfied • Low power and highly interested stakeholders to be kept informed, • Low power and less interested stakeholders to be monitored

Exploitation in research

Stakeholder perspectives can guide the development of a research question or project, study implementation, data analysis and dissemination of research findings.

The AQUA-LIT Review *Players at play* contains a stakeholder list which is useful data for identifying persons or groups who have an interest in the research topic, and/or who might be influenced by the research findings directly or indirectly and/or who might support the research impact.

The choice on how to use the AQUA-LIT review may depend on whether a researcher conducts applied research or basic/theoretical research. If they carry out applied research, they are more likely to be in closer contact with stakeholders, whereas if they do basic research, they are more likely to have indirect linkages to stakeholders.

There are two ways of stakeholder engagement in research:

- Transfer of knowledge and research findings - stakeholder engagement is happening after the research has been done, when researchers communicate or handover their results to the stakeholders. This model builds on an understanding of science as a neutral activity that needs to be sheltered from political and economic interests.
- Interaction – stakeholders are included in the research process in different ways to help researchers gain broader access to data, obtain contextual information, communicate research findings and finally improve their research. This model builds on an understanding that scientific research cannot be separated from society, and as the interaction between researchers and stakeholders can improve the quality of knowledge, continuous stakeholder interactions are not seen as detrimental to good scientific quality.

Therefore, the stakeholders listed in the AQUA-LIT review might help researchers to: build and expand networks with stakeholders; access to data and research materials, bring about new research ideas, present their findings at policy and stakeholder workshops and seminars, gain invitations to advisory boards and government commissions, gain membership in research funding and/or research-policy committees, enquire for independent research advice and ‘second opinions’ and gain invitations to media events, debates and public hearings.

Exploitation in business

The AQUA-LIT Review *Players at play* can be used for stakeholder management of the aquaculture or marine litter related business, product or service. This stakeholder-based approach gives the following benefits:

1. Getting an aquaculture related business project into shape. Using the opinions and input of the most powerful stakeholders to define the project at an early stage will improve its quality and make them more likely to support it.
2. Winning resources. Gaining support from powerful stakeholders can help to win financial and human resources and improve the chances for the project to succeed.
3. Building understanding. Communicating with stakeholders from the early stage and regularly can help them fully understand the benefits of the project and better relate to it, which can make them support the project when necessary more actively.

4. Getting ahead of the game. Good understanding of the business project stakeholders will enable to anticipate and predict their reactions to the project as it develops, which will allow planning actions that will more likely win further support.

The AQUA-LIT toolbox may prove useful to aquaculture, gear equipment and engineering businesses and companies looking to improve their products and services, to implement Corporate Social Responsibility practices, to shift towards circular economy, or simply looking for information about how to manage and dispose of worn-out gear and equipment and how to fund these activities.

It can help to understand the needs of the sector while designing new products, services and reusable product alternatives for cages, gear or other equipment.

Exploitation in policy

Stakeholder engagement is one of the strategies for reducing the gap between research, practices and policy and ensuring that research evidence and aquaculture stakeholders barriers needs and good practices from the field are used to inform decision-making.

The involvement of the stakeholder groups that have been identified in the review in the early stages of policy decision-making might help to develop the policies, regulations and standards as well as improve the social acceptance of responsible use of aquaculture gear and other equipment and of Extended Producer Responsibility. This may support the development and harmonisation of specific certification schemes that will ensure sustainability, quality and social responsibility including waste management plans and the establishment of common standardised licensing procedures for various types of aquaculture.

4. AQUA-LIT Inventory “Available tools and measures”

Description

The AQUA-LIT Inventory *Available tools and measures* gives an overview of the global, European, regional, and national action plans, strategies and other official documents that contain measures to reduce or avoid marine litter that can be applied by the aquaculture sector. These measures are discussed in relation to specific target groups. In particular, this inventory lists the regulatory measures and briefly explains the marine litter strategies and action plans proposed by the United Nations Organisation, the European Union, the Regional Seas Programmes for the Baltic, Mediterranean and North Sea regions, and by national governments in Belgium, Cyprus, Denmark France, Germany, Italy, Norway, Portugal, Spain, Sweden, the Netherlands and the United Kingdom. Hyperlinks are provided to all relevant documents and action plans. The strategies and measures are subdivided into global, regional, European and national action plans and are classified by six target groups (Aquaculture, Science, Waste, Public, Producers and Policy) and by seven categories:

- A. Monitoring - actions or measures related to scientific research and to mapping the impact, presence or trends of (micro)litter and debris related to the aquaculture sector
- B. Planning - actions or measures related to marine spatial planning
- C. Solutions - actions related to the identification of possible solutions to specific problems of marine litter
- D. Economic - actions or measures related to production or production losses, distribution, and consumption of aquaculture products
- E. Social - actions or measures related to voluntary agreements, promotion, education, responsibility, etc., and involving specific sectors or groups
- F. Recovery - actions or measures that can ensure that lost material or gear is recovered, or that can prevent from unintentional material or gear loss
- G. Policy - documents indicating or proposing specific policy actions related to aquaculture-litter

The inventory provides an insight into the implementation stage, the needs, knowledge and research gaps and the current policy challenges related to the aquaculture sector.

The inventory of available tools and measures results from a desk research carried out by the AQUA-LIT partner organisations.

Table 4.: AQUA-LIT Inventory of available tools and measures in a nutshell

EXPLOITABLE RESULT	AQUA-LIT Inventory of available tools and measures
Links	Deliverable 2.3 Available tools and measures.
Stakeholder target groups	Aquaculture farmers; Equipment manufacturers; Engineering, system design and construction companies; Academic research groups; Professional clusters, associations and platform representatives; NGOs, Governance (including policy makers & implementers, and port staff); Classification and certification bodies; Companies processing waste Communicators (media, press, science communicators).
Value Proposition	Gives an overview of current global, European, region and national strategies and action plans to reduce and prevent marine littering and relates them to the aquaculture sector.
Costs	Further analysis of measures and tools will involve staff costs.
Application	Capacity building and empowerment, Research activity, Policy making.
Geographical scope of application	International, European Union, National (Belgium, Cyprus, Denmark France, Germany, Italy, Norway, Portugal, Spain, Sweden, the Netherlands, the United Kingdom), Regional, Local.
Assets	<p>As the tools to reduce marine litter have to be as diverse as the challenge of marine litter itself and there is no ‘one size fits all,’ the inventory can help its target groups to:</p> <ul style="list-style-type: none"> • Build capacity to monitor and enforce national and local legislation and compliance with policy requirements and other relevant international instruments and agreements • Enable work with all stakeholders along the value chain to find appropriate solutions • Create possible synergetic benefits from addressing sectors with similar litter issues • Develop and strengthen the implementation of best management practices in the industry designed to minimize the abandonment or accidental loss of equipment, solid waste and gear at sea • Conduct responsible ocean-user education and outreach on marine debris impacts, prevention, and management • Develop and strengthen the implementation of national and international legislation, policies and other relevant instruments and agreements to prevent and manage marine debris from sources at-sea
Recommendations to maintain, further develop or promote the exploitable result	The global and European framework for the prevention and management of marine debris exists, but needs to be further translated into implemented tailor-made actions and measures depending on the source of marine debris. The results of this research indicate that further research is necessary in order to upgrade the knowledge base as evidence for decision-making and the implementation of clear policy actions and effective measures to prevent the leakage of debris during aquaculture activities.

Exploitation in research

The AQUA-LIT Inventory *Available tools and measures* contains information that can help to understand the strategy and regulatory gaps in the assessment and prevention of marine litter and debris coming from the aquaculture operations. It can suggest paths for further research

to fill these gaps and upgrade the knowledge base as evidence for decision-making and the implementation of clear policy actions and effective measures to prevent the leakage of debris during aquaculture activities

Exploitation in business

The AQUA-LIT inventory may prove useful to aquaculture farmers, equipment manufacturers, engineering, system design and construction companies, professional clusters, associations and platform representatives, classification and certification bodies and companies processing waste looking to improve their operations and implement Corporate Social Responsibility, or simply looking for information about how to manage and dispose of worn-out gear and other equipment.

Exploitation in policy

The information provided in the inventory can help to develop missing specific policies, regulations and standards to encourage responsible use of aquaculture gear and other equipment. It can help to translate high-level policy requirements into concrete actions in the field and vice versa – to standardise proven good practices, allow for a more targeted and integrated approach, indicate paths showing how policy-makers can work with all stakeholders along the value chain to find together appropriate solutions, and create cross-sectoral synergies by jointly addressing sectors with similar litter issues.

5. AQUA-LIT Marine Litter Inventory

Description

The [AQUA-LIT Marine Litter Inventory](#) is an interactive online database of marine litter originating from the aquaculture sector and reported in the North Sea, the Mediterranean and the Baltic sea regions. This litter inventory was generated by a thorough screening of the available literature and litter databases (e.g., OSPAR, HELCOM, Marine Litter Watch), cooperation with 8 organizations that shared their data with us, and with information collected from discussions with stakeholders and aquaculture farmers during the course of the AQUA-LIT project.

The AQUA-LIT *Marine Litter Inventory* is the most comprehensive repository of knowledge on the marine litter from aquaculture sources that exists currently in Europe and can be a starting point for the development of new European Union's policies regarding the prevention of marine litter by the growing aquaculture sector.

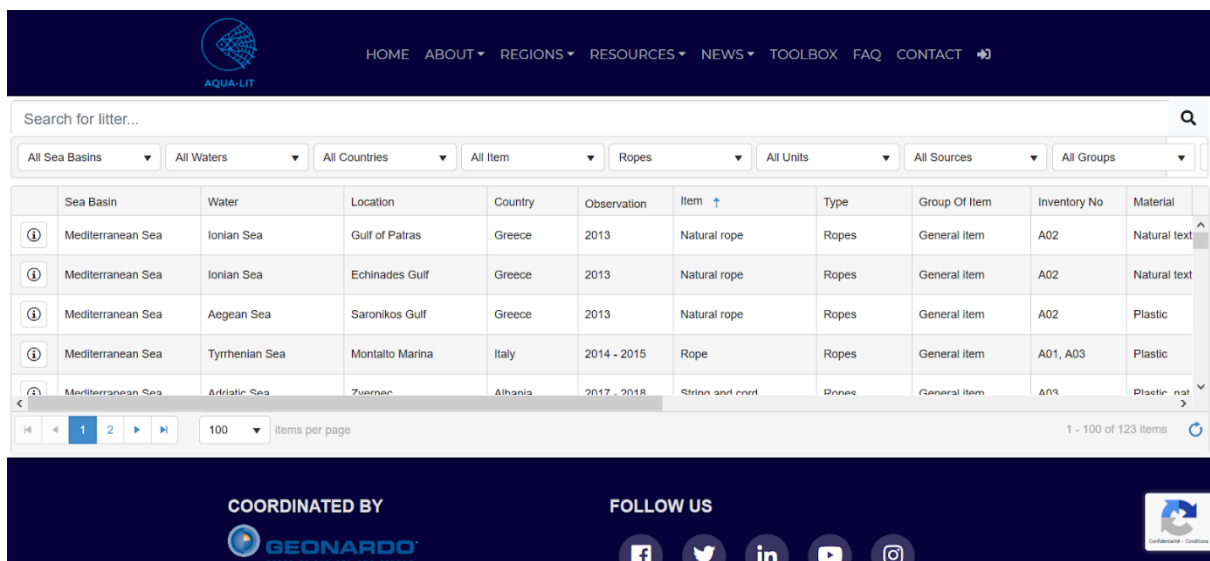


Fig. 09 Marine Litter Inventory database on the AQUA-LIT website

The *Marine Litter Inventory* can be searched by

- Types of Litter (Clothing, Collecting Material, Cover Material, Floats & Buoys, Nets, Ropes, Strapping Material, Tags),
- Sea basins (showing regional maps),
- Geographically by country, and by viewing and selecting items in an Online Table.

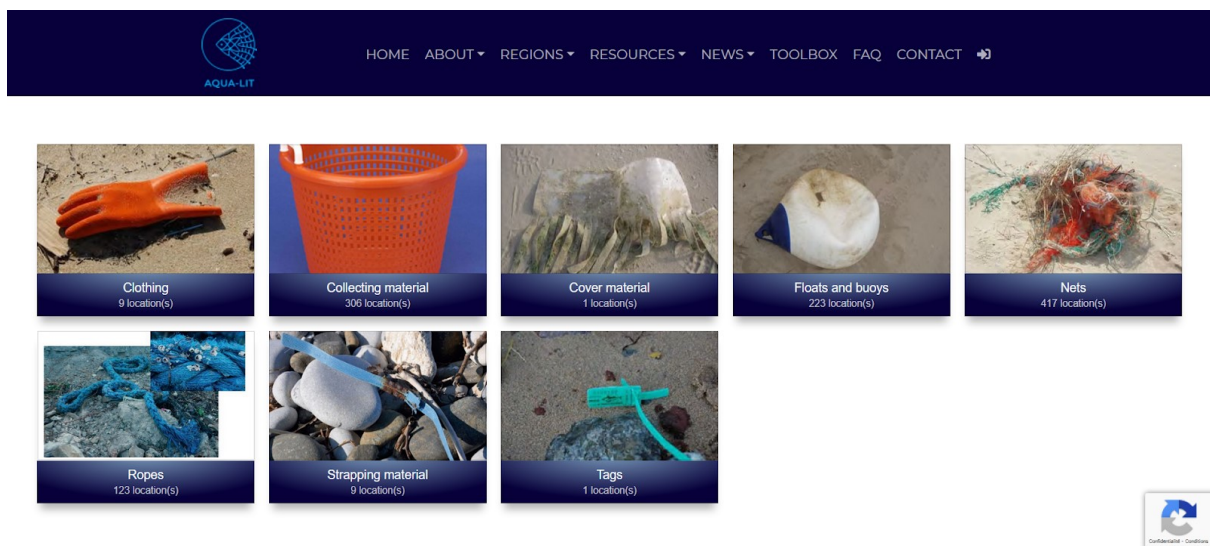


Fig. 10 Types of Litter categories of the Marine Litter Inventory on the AQUA-LIT website

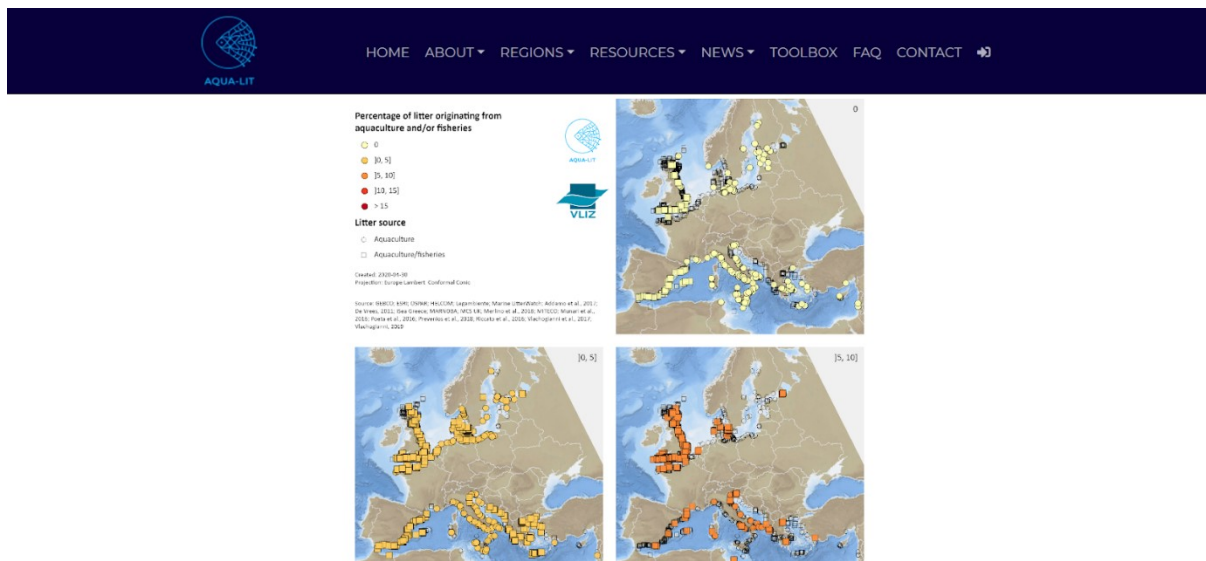


Fig. 11 Maps of sea basins in the *Marine Litter Inventory* on the AQUA-LIT website. These [regional maps](#) show the origin of aquaculture related litter (e.g. from finfish aquaculture activities, shellfish or seaweed), and their fate (sea bottom, beach or floating litter).

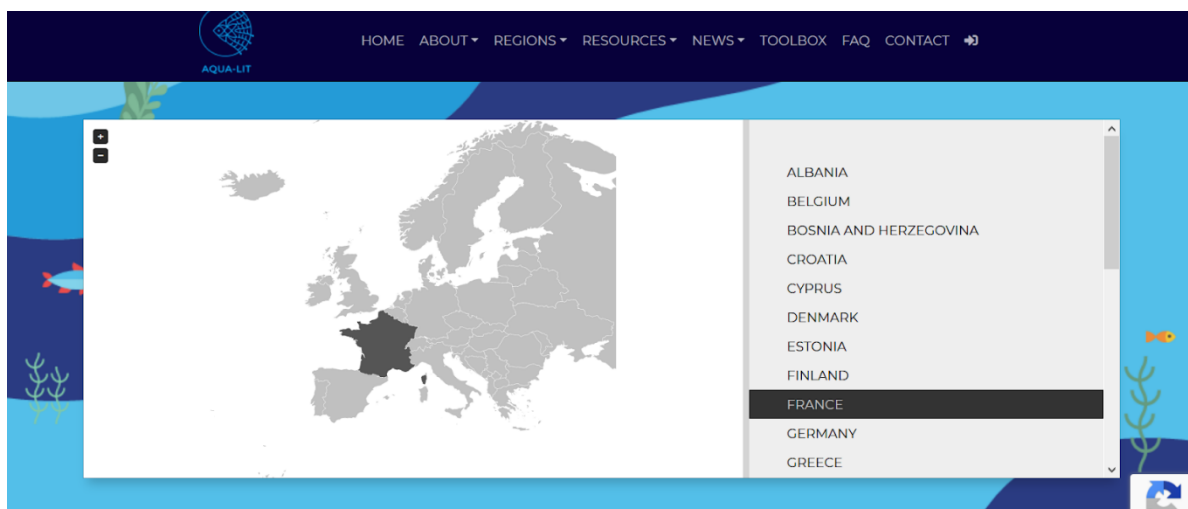


Fig. 12 Country selection in the *Marine Litter Inventory* on the AQUA-LIT website

The *Marine Litter Inventory* addresses the entire aquaculture value chain – its target users are aquaculture farmers; professional clusters, associations and platform representatives; policy makers; port authorities; aquaculture gear and equipment producers; engineering, system design and construction companies; plastic manufacturers; waste managers; researchers; environmental and social consultancies; NGOs; classification and certification bodies; communicators or any other person.

The *Marine Litter Inventory* is accessible on the AQUA-LIT website (<https://aqua-lit.eu/marine-litter-inventory/menu>), through a downloadable printable highly-visual version (<https://aqua-lit.eu/assets/content/MARINE%20LITTER%20INVENTORY.pdf>) and on the AQUA-LIT Toolbox a free mobile app for iOS 14.0 or beyond (<https://apps.apple.com/us/app/aqua-lit-toolbox/id1542596010>).



Fig. 13 Marine Litter Inventory downloadable version

It is the result of the compilation and analysis of the information and proposals provided by the aquaculture stakeholders in the framework of the AQUA-LIT learning labs, meetings and exchanges with other experts working closely with the AQUA-LIT team from 2019 to 2020, as well as a desk research carried out by the AQUA-LIT partner organisations.

Table 5.: AQUA-LIT *Marine Litter Inventory* in a nutshell

EXPLOITABLE RESULT	AQUA-LIT Marine Litter Inventory
Links	AQUA-LIT Marine Litter Inventory AQUA-LIT Marine Litter Inventory – Downloadable version Application for iOS 14.0 Deliverable 2.2 Knowledge wave on marine litter from aquaculture sources
Stakeholder target groups	Aquaculture farmers; Equipment manufacturers; Engineering, system design and construction companies; Academic research groups; Professional clusters, associations and platform representatives; NGOs; Governance (including policy makers & implementers, and port staff); Classification and certification bodies; Companies processing waste; Communicators (media, press, science communicators), Environmental and social consultancies and any other person.
Value Proposition	Contribute to raising awareness on the type of aquaculture gear and equipment that could eventually constitute marine litter.
Costs	To enable the website and the app to be present on the Internet and keep them running and evolving, a web hosting service should be paid for. A shared hosting plan (i.e. sharing a server with other users) is the most elementary and popular form of web hosting. It is used by those who wish to create a small or medium scale business.
Application	Aquaculture product & service development, Aquaculture project definition and development, Capacity building, Research activity, Policy formulation
Geographical scope of application	International, European Union, National, Regional, Local.
Assets	<p>The AQUA-LIT Marine Litter Inventory is a useful database that provides an online support than can:</p> <ul style="list-style-type: none"> • Increase the awareness of the impacts of marine litter on the marine environment and on the aquaculture sector • Empower aquaculture stakeholders to take SMART (Specific, Measurable, Achievable, Realistic and Time-bound) action against marine litter • Improve identification of marine litter linked to aquaculture activities • Improve the knowledge of sustainable gear and other equipment and alternative materials of the aquaculture farmers <p>It allows any user (individuals and organisations) to access at any time. It is user-friendly, easy to navigate through and free of charge.</p>
Remaining lifespan	As part of the toolbox, it will be sustained on the AQUA-LIT website and iOS app by Geonardo Environmental Technologies Ltd. till 2025 (i.e. for 5 years after the termination of the AQUA-LIT project).
Recommendations to maintain, further develop or promote the exploitable result	<p>Sustain the Marine Litter Inventory on line so that interested stakeholders could use it. The engagement of the stakeholders with this database will be intensified when it is translated into several European languages.</p> <p>Implement new data coming from other Sea Basins e.g Black Sea or Arctic Sea</p> <p>Develop the content of the database with marine litter specifically originating from finfish aquaculture activities</p>

Exploitation in research

The Marine Litter Inventory contains information that can help to understand the needs of the sector while researching on new products, services and reusable product alternatives for cages, gear or other equipment. It holds information from the field that can help to enhance scientific research on new materials and new designs for aquaculture equipment, including technical characteristics and the lifetime of aquaculture gear and other equipment. It can also contribute to the current research on marine debris quantification and monitoring. The toolbox can contribute to the promotion of interdisciplinary and international collaborations between companies and academia.

Exploitation in business

The *Marine Litter Inventory* may prove useful to aquaculture, gear equipment and engineering businesses and companies looking to improve their products and services, to implement Corporate Social Responsibility (CSR) practices, to shift towards circular economy, or simply looking for information about which gear and equipment is most likely to end up at sea.

It can also help to understand the market needs of the sector while designing new products, services and reusable product alternatives for cages, gear or other equipment.

Exploitation in policy

The *Marine Litter Inventory* provides information that can help to develop policies, regulations and standards to encourage responsible use of aquaculture gear and other equipment and enforce Extended Producer Responsibility (EPR). It can also support the development and harmonisation of specific certification schemes that will ensure sustainability, quality and social responsibility.

Potential stakeholder groups (end-users) and influencers for possible uptake of results and ways to reach them

The identification of stakeholder groups who could be end-users and influencers of the AQUA-LIT findings, new tools and methodology, and ways to reach them are critical success factors for the possible uptake of these project results. This involves analysing their needs and expectations, proposing various ways of engagement so that they have access to the AQUA-LIT results, relate to them as well as understand their potential for their own activities, schemes and projects. This is also a challenging task due to stakeholder multidisciplinary, including power, interests and attitudes.

This chapter is divided into 10 sections which correspond to the AQUA-LIT stakeholder target groups: 1) Aquaculture producers; 2) Equipment manufacturers; 3) Engineering, system design and construction companies; 4) Academic research groups; 5) Professional clusters, associations and platform representatives; 6) NGOs; 7) Governance (including policy makers & implementers, and port staff); 8) Classification and certification bodies; 9) Companies processing waste; and 10) Communicators (media, press, science communicators). Each section describes a specific action plan and tools to help reaching each target group: the role of the stakeholder group in AQUA-LIT strategy, what is expected from them, their economic and personal motivation, the meeting point between their motivation and AQUA-LIT strategy, tools and actions, and priorities for implementation.

1. Aquaculture farmers

The role of aquaculture farmers in AQUA-LIT strategy

The aquaculture farmers are the end users of the toolbox developed in the framework of the AQUA-LIT project. They are the main actors involved in the reduction of the aquaculture marine litter as they are the ones to implement the identified measures and best practices allowing to reduce marine litter.

What do we want from aquaculture farmers as a target group?

- To pursue and intensify their efforts towards reducing marine litter and debris linked to their activities in order to accelerate the adoption of AQUA-LIT tools and measures by the industry and to improve the image of the industry among the Europeans.
- That those who are yet to be involved in such an approach identify best practices to reduce marine litter linked to their activities.
- That through their commitment, they validate and promote the industry's entire approach.

- To add more good practices into the AQUA-LIT toolbox.
- To become advocates of the AQUA-LIT methodology, toolbox and databases among their peers.

The motivation of the aquaculture farmers

Economic: In the medium and long term, the economic advantage of a good management of marine debris in their facilities is obvious and this is what should be put forward to convince them: European citizens are increasingly sensitive to ecology and sustainable consumption and production patterns and the long-term development of sales will only be compatible with an improvement in the image of the aquaculture industry.

Personal: Aquaculture farmers can suffer from the negative public image they have, which portrays the lack of trust in their products. Reducing marine litter is one of the keys that could contribute to changing this perception that citizens have of them.

The development of aquaculture is one of the solutions identified to feed an ever-increasing number of people and to reduce the pressure on fish stocks. In order to create these conditions for this industry developing and responding to the needs of our society, it is necessary to maintain/develop the attractiveness of aquaculture related jobs improving the image of aquaculture at large.

The meeting point between aquaculture farmers and AQUA-LIT strategy

Economic motivation cannot be used as the sole key towards motivating a massive commitment to sustainability and participating in the reduction of marine litter. Nor can the medium- or long-term economic gain be a decisive factor, as it is difficult to assess precisely how much farmers will save in the long term by implementing better techniques or by investing in better aquaculture equipment.

Transforming their image into actors of sustainable development and growth taking future generations into account would be a real boon and could be very motivating for the industry.

Tools and actions

Volunteering AQUA-LIT partners could:

- Send the AQUA-LIT toolbox *Tide Against Marine Litter* to the aquaculture farmers that participated in the Learning Labs or that have been identified in the country profiles of the [D2.2 Knowledge wave on marine litter from aquaculture sources](#) and specify the tools that they can use. The message should be in the language of the aquaculture farmers to maximise the adoption of the tools;
- Translate or find organisations interested in translating the AQUA-LIT tools by the end of 2021 to maximise their impact especially among artisanal aquaculture farms;

- Participate in aquaculture professional events to share the AQUA-LIT tools directly (e.g. European Aquaculture Society);
- Encourage aquaculture farmers to seek certifications that include the reduction of marine litter in their criteria.

Priorities of implementation

- Promotion of aquaculture farmers who are already implementing actions to reduce aquaculture pollution (web articles, interview videos, posts on social networks, etc.)
- Participation in aquaculture professional events to share the AQUA-LIT tools directly
- Promotion of the AQUA-LIT toolbox through the communication channels of identified partners and relays

2. Equipment manufacturers

The role of the equipment manufacturers in our strategy

The equipment manufacturers and assembling companies have to be targeted for several purposes. Based on the project results, they can improve existing equipment; create new equipment that will be more sustainable and weather-proof and thus enhance marine litter reduction and find new promotional arguments for increasing sales of their new equipment or services that have been identified as avoiding marine litter. As the closest actors to the aquaculture producer farmers can also act as technical advisors helping to implement better methodologies.

What do we want from equipment manufacturers as a target group?

- To pursue and intensify their efforts towards increasing the lifespan of their equipment;
- To create equipment easier to recycle (e.g. gear made of a unique type of material);
- To add more good practices in the AQUA-LIT toolbox;
- To become advocates of the equipment and methodologies that contribute to reducing marine litter among their clients (e.g. suggest to improve maintenance of aquaculture gear by relying on the results and tools of the AQUA-LIT project).

The motivation of the equipment manufacturers

Economic: In the medium and long term, the economic advantage is obvious and this is what should be put forward to convince them: improving the durability of their equipment through a new design or by promoting better maintenance methodologies will have a huge impact on their sales as their products will be identified as being of higher quality. Furthermore, if policy

makers and certification bodies improve their rules by requiring more sustainable equipment, they will have a strategic advantage compared to other manufacturers.

Personal: Equipment manufacturers will be able to feel valued by developing the advisory aspect of their profession.

The meeting point between equipment manufacturers and our strategy

Economic motivation can be used as the key towards motivating equipment manufacturers to become massively committed with the reduction of marine litter. Increasing the durability of their equipment will greatly improve their image among the aquaculture farmers and thus potentially increase their market share. Furthermore, by anticipating future evolutions of the regulations, they will appear as leaders of their industry.

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox *Tide Against Marine Litter* on website and app to the equipment manufacturers that participated in the Learning Labs or that have been identified in the country profiles of the [D2.2 Knowledge wave on marine litter from aquaculture sources](#) and point out tools relating to them specifically. The message should be in the language of the equipment manufacturers to maximise the adoption of the tools;
- Translate or find organisations interested in translating the AQUA-LIT tools by the end of 2021 to maximise their impact;
- Participate in aquaculture professional events to share the AQUA-LIT tools directly (e.g. European Aquaculture Society);
- Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn);
- Encourage equipment manufacturers to develop more sustainable equipment and anticipate the future evolution of regulations.

Priorities of implementation

- Promotion of equipment manufacturers who already propose sustainable gear and other aquaculture equipment;
- Participation in aquaculture professional events to share the AQUA-LIT tools, findings and methodology directly with them;
- Promotion of the AQUA-LIT tools through the communication channels of identified partners and relays.

3. Engineering, system design and construction companies

The role of the engineering, system design and construction companies in our strategy

The engineering, system design and construction companies have to be targeted for several purposes. Based on the project results, they can help to reduce marine litter by designing and engineering aquaculture systems and by implementing techniques that have been identified to help reducing marine litter. As close partners of the aquaculture farmers they can act as technical advisors to help them to implement these techniques.

What do we want from construction companies as a target group?

- To pursue and intensify their efforts to design and engineer aquaculture systems and constructions that are marine environment friendly and with a greater lifespan;
- To choose construction materials which are easier to recycle;
- To add more good practices in the AQUA-LIT toolbox;
- To become advocates of the equipment and methodologies reducing marine litter among their clients (e.g. suggesting to aquaculture farmers to improve maintenance of their aquaculture gear by relying on the results and tools of the AQUA-LIT toolbox).

The motivation of the engineering, system design and construction companies

Economic: In the medium and long term, the economic advantage is obvious and this is what should be put forward to convince them: implementing equipment with a greater durability, by promoting techniques that improve the lifespan of equipment or by offering better maintenance methodologies and services will help them to attract new clients as their clients will replace their equipment less frequently but make use of the equipment maintenance services more often instead.

Personal: The employees of the engineering, system design and construction companies will be able to feel valued by developing the advisory aspect of their profession.

The meeting point between the engineering, system design and construction companies and our strategy Economic motivation can be used as the key towards motivating the engineering, system design and construction companies to become massively committed to the reduction of marine litter. Improving the durability of the aquaculture equipment they implement, will greatly improve the image of the whole industry among the citizens. With greater acceptability of the establishment of aquaculture farms among citizens and increased market demand for seafood, more farms will be able to set up, which will open up new opportunities for them.

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox *Tide Against Marine Litter* on website and app to the construction companies that participated in the Learning Labs or that have been identified in the country profiles of the [D2.2 Knowledge wave on marine litter from aquaculture sources](#) and point out tools relating to them specifically. The message should be in the language of the construction companies to maximise the adoption of the tools;
- Translate or find organisations interested in translating the AQUA-LIT tools by the end of 2021 to maximise their impact;
- Participate in aquaculture professional events to share the AQUA-LIT tools directly;
- Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn);
- Encourage the engineering, system design and construction companies to implement more sustainable technologies and promote methodologies that help to reduce marine litter linked to the aquaculture.

Priorities of implementation

- Promote the engineering, system design and construction companies that are already implementing the identified tools and good practices;
- Participate in aquaculture professional events to share the AQUA-LIT tools directly;
- Promote the AQUA-LIT tools through the communication channels of identified partners and relays.

4. Academic research groups

The role of the academic research groups in our strategy

The academic research groups have to be targeted for several purposes. They are the organisations that are in the capacity to disseminate the AQUA-LIT results and tools and to develop further research programmes to address the gaps identified. For all the actors, they are a trusted source of information and furthermore they have long established communication channels (newsletters, workshops, seminars, publications, toolboxes, websites, etc.).

What do we want from the academic research groups as a target group?

- To disseminate the AQUA-LIT findings and tools among all their publics (from aquaculture producers to policy makers), through their communication channels or by including them in their existing toolboxes;
- To add more findings and good practices in the AQUA-LIT toolbox;

- To develop more research programmes to tackle knowledge gaps identified during the AQUA-LIT project.

The motivation of the academic research groups

Economic: The academic research groups are organisations with missions frequently set by the governing bodies and the objective of which is to help the industry to grow in a sustainable way.

The meeting point between academic research groups and our strategy

By relying on the AQUA-LIT tools and results and on the [D2.4 Potential Future Impacts](#), the academic research groups will be able to suggest new tools and best practices related to strategic targets and suggest science-based improvements, as well as they'll be able to further develop research programmes on promising solutions or to tackle identified knowledge gaps.

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT tools, findings and methodologies on website and app to the academic research groups that participated in the Learning Labs or that have been identified in the country profiles of the [D2.2 Knowledge wave on marine litter from aquaculture sources](#) and point out tools and findings relating to them specifically;
- Participate in marine scientific events gathering researchers to share the AQUA-LIT findings directly with them;
- Promote the AQUA-LIT toolbox and share findings on professional social networks (e.g. LinkedIn, Researchgate);
- Encourage the academic research groups to share the AQUA-LIT tools and results;
- Encourage the academic research groups to develop research programmes to tackle knowledge gaps identified during the AQUA-LIT project.

Priorities of implementation

- Promote research and findings that contribute to the reduction of marine litter from aquaculture operations;
- Participate in scientific conferences and other events to promote the AQUA-LIT findings, tools and methodologies;
- Encourage further research and innovation to address the knowledge gaps and improve aquaculture materials.

5. Professional clusters, associations and platform representatives

The role of the professional clusters, associations and platform representatives in our strategy

The professional clusters associations and platform representatives, have to be addressed by the exploitation strategy because they are the organisations that can be the interface with all the other actors related to aquaculture. They can disseminate the AQUA-LIT results and promote the AQUA-LIT tools to their members, mobilize the equipment manufacturers and their research departments to develop innovative technologies and influence policy makers and certification bodies to adapt the regulations. Furthermore, they have long established communication channels (newsletters, workshops, toolboxes, websites, etc.) to reach all the actors.

What do we want from the professional clusters, associations and platform representatives as a target group?

- To disseminate the AQUA-LIT results and tools among their members;
- To lobby political and research institutions and equipment manufacturers to develop innovative technologies and methodologies to tackle the gaps identified during the AQUA-LIT project;
- To continue the dialogue with policy makers and certification bodies to implement new regulations;
- To add more good practices in the AQUA-LIT toolbox;
- To promote the AQUA-LIT good practices and encourage the sector to share and replicate more good practices in order to accelerate their adoption by the industry and to improve the image of the industry among the general public.

The motivation of the professional clusters, associations and platform representatives

Economic: In the short term, proposing new solutions to enhance the durability of the equipment of their members can attract new aquaculture producers to become members of their network. In the long term, even if it might be counter-intuitive at first, developing the ecological sustainability of the industry even by strengthening the regulation will increase the public acceptability of the installation and consequently the products of aquaculture farms which are potential new members for these organisations. With an industry offering a more environmentally friendly image, they will be able to focus on other services to offer to their members.

Personal: One of the roles of these types of organisations is to convince the public and the institutions of the ecological sustainability of the aquaculture farms. In the long term, with the

reduction of marine litter produced by aquaculture farms and with the improvement of the image of the industry, the representatives of these organisations will be happier to work for an industry considered as more sustainable.

The meeting point between the professional clusters, associations and platform representatives and the AQUA-LIT strategy

Economic motivation can be used as the key for the professional clusters, associations and platform representatives. The long-term development of the industry will only be possible if the general public is convinced of the environmental sustainability and growth of the industry (as clients or as citizens).

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox Tide Against Marine Litter on website and app to the professional clusters, associations and platform representatives that participated in the Learning Labs or that have been identified in the country profiles of the [D2.2 Knowledge wave on marine litter from aquaculture sources](#) and point out which ones are useful to them most before the end of 2021;
- Encourage the professional clusters, associations and platform representatives to translate the AQUA-LIT toolbox Tide Against Marine Litter;
- Participate in the events they hold on blue economy or organise with them workshops during marine events (e.g. the annual European Maritime Day Stakeholder conference, the European Aquaculture Society annual conferences, Seafood Summits) to directly share the AQUA-LIT tools;
- Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn).

Priorities of implementation

- Share the AQUA-LIT toolbox and results on website and app with professional clusters;
- Participate in professional events to share directly the AQUA-LIT tools (e.g. European Maritime Day conference, European Aquaculture Society);
- Organise workshops during marine-related events to share the AQUA-LIT tools directly.

6. NGOs

The role of NGOs in our strategy

The Non-Governmental Organisations (NGOs) have to be addressed by the exploitation strategy because they are the most committed organisations to the reduction of the impacts

of human activities on the natural environmental, including the impacts of the aquaculture industry on the marine ecosystems. They can be an essential actor to promote good practices, new technologies or methodologies that reduce marine litter linked to the aquaculture activities. They can also encourage the policy makers and certification bodies to strengthen the regulations to accelerate the adoption of the best practices identified during the AQUA-LIT and other projects. Furthermore, they have long established communication channels (participation in the policy making and lobbying processes, newsletters, workshops, toolboxes, websites, etc.) to reach public opinion.

What do we want from NGOs as a target group?

- To disseminate the AQUA-LIT tools, best practices, findings and methodology among the general public, media, professional clusters, policy makers and certification bodies;
- To lobby political and research institutions and equipment manufacturers to develop innovative technologies and methodologies to tackle the gaps identified during the AQUA-LIT project;
- To add more good practices in the AQUA-LIT toolbox;
- To carry out a positive and constructive dialogue with policy makers and certification bodies to implement new regulations;
- To share positive and constructive communications and disseminate the good practices widely to accelerate their adoption by the industry and improve the image of the industry among the general public.

The motivation of the NGOs

Economic: The NGOs are by nature one of the major actors of the battle against pollution. By relying on the AQUA-LIT results, they will be able to bring solutions to the issues they identify. They will be able to accelerate the adoption of these news solutions through their actions with policy makers, certification bodies or professional clusters. Appearing as solution providers might also facilitate their dialogue with aquaculture producers and accelerate the adoption of best practices.

Personal: Helping the NGOs to appear as solution providers and encouraging them to carry out positive and constructive communication messages will facilitate their dialogue with the aquaculture producers thus reducing the possible tensions between the actors and making their missions more enjoyable.

The meeting point between NGOs and our strategy

The ecological motivation can be used as the key towards mobilising the NGOs. The swift adoption of the best practices reducing marine litter will be a great motivation as their objective is to reduce the pollutions as fast as possible.

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox Tide Against Marine Litter on website and app to the NGOs representatives that participated in the Learning Labs or that have been identified in the country profiles of the [D2.2 Knowledge wave on marine litter from aquaculture sources](#) and point out which ones are useful to them most before the end of 2021 emphasising the existing good practices, Participate in the events gathering the NGOs to directly share and present the AQUA-LIT tools and results;
- Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn).

Priorities of implementation

- Share the AQUA-LIT tools on website and app with the NGOs emphasising the existing good practices;
- Participate in the events gathering the NGOs to directly present the AQUA-LIT tools and results.

7. Governance (including policy makers, implementers, and port staff)

The role of the governance bodies in our strategy

Through their influence at local, national or international level, the governance bodies can act across the entire aquaculture industry and their providers, from the aquaculture farmers, equipment manufacturers, engineering and system design companies, professional clusters and associations to the certification bodies and waste processing companies. They enforce the laws, define, supervise and control aquaculture operations, and regulate standards and the rules for installation and exploitation of the aquaculture facilities. They also impose sanctions whenever applicable.

At the local level, according to the countries and local authorities (town councils, departments or regions, etc.) governance bodies decide on the practices and orientations of services under their authority.

What do we want from the governance bodies as a target group?

- To continue clarifying the regulatory framework leading to reducing marine litter linked to the aquaculture activities (installation, equipment, maintenance, removal, certification, etc.);
- To supervise and control the aquaculture operations and encourage good practices;
- To fund research and development to further develop identified solutions or to find new solutions to the gaps identified in the methodologies, knowledge and technologies;

- To encourage good practices and enable their replication across countries and regions;
- To include modules on the subject of the reduction of marine litter linked to aquaculture activities into national educational programmes and professional training schemes (universities, agronomy engineering schools, etc.) and encourage lifelong learning in the sector.

The motivation of the governance bodies

Political: Sustainable development and growth has become essential and a fundamental movement. Moreover, Blue Growth and Blue Economy have become the long-term strategy of the European Union to support sustainable growth in the marine and maritime sectors as a whole and promote the sustainable use of the ocean resources for improved livelihoods and preserving jobs, while preserving the health of the marine ecosystems. Those not taking them into account have started to be penalized by the public opinion, civil society movements, companies and public authorities or the politicians they are dependent on (e.g. non-observance of European directives).

Economic: Sustainable development is a medium or long-term approach. Often its effects are not immediate. However, at the end of the day, it's the taxpayers' money that needs to be managed efficiently. This is particularly obvious in towns that have embarked on huge energy saving plans. General image improvement is also an economic argument that weighs on an authority's resources, whatever it is.

Personal: Politicians aim to satisfy their electors and consequently be re-elected. Anything that will enable them to improve their image will be used with that objective in mind. And in this field, a real sustainable development policy for the aquaculture can clearly contribute to that, all the more so if this choice helps improve the citizens' quality of life and face the global societal challenge of food security.

The meeting point between the governance bodies and our strategy

The ecological motivation can be used as the key towards mobilising the governance bodies. The swift adoption of the best practices reducing marine litter will be a great motivation as their objective is to reduce pollution as fast as possible.

At national and international levels, there are bodies specialized in lobbying politicians. This does not mean that other actors should not be involved, but that their priority and true added value begins with their respective ability to mobilize people around themselves, at local level:

- By inviting and associating politicians and governance representatives to debates and conferences organized on the subject of the reduction of marine litter and aquaculture (or sustainable development related to marine resources for instance);

- By working directly with politicians and government representatives as deciders and administrators of a number of collective services: port facilities, waste management services, etc.

As far as policy makers and governance bodies are concerned, the idea is to be involved in this fundamental movement without opposing one population against another, or heap opprobrium on a profession. Politicians will be important actors in an action plan in favour of the reduction of the marine litter linked to aquaculture activities, if they have the means to positively administer several elements that are important to them:

- A. To speak of aquaculture producers and the other actors involved in the industry in a positive and gratifying way, so as not to show them in a bad light;
- B. To create the conditions for the economic development of their territory (e.g. reconciling aquaculture and tourism development);
- C. To make sure their involvement in this course of action carries a positive message regarding their policy with regard to the general public (thus improving their image).

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox Tide Against Marine Litter on website and app and the project methodologies to the governance bodies representatives that participated in the Learning Labs or that have been identified in the country profiles of the D2.2 Knowledge wave on marine litter from aquaculture sources and point out which ones are useful to them most before the end of 2021;
- Participate in the events gathering governance bodies (e.g. annual European Maritime Day Stakeholder conferences, United Nations Biodiversity Conference of Parties (COPs), etc.) to present the AQUA-LIT tools and results directly;
- Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn);
- Organize public debates on the subject of sustainable development, aquaculture and reduction of marine litter;
- Suggest that those in charge at political level become leaders of sustainable development themselves within the framework of their mandates, locally in particular by:
 - ✓ Making sure that farm installation permits include obligations to implement measures to reduce marine litter;
 - ✓ By financing the Research & Development of new solutions.

Priorities of implementation

- Share AQUA-LIT tools and results on website and app with governance bodies (or with their associations);

- Participate in the events gathering the governance bodies, (e.g. mayors' fairs, European Maritime Day Stakeholder conferences, United Nations Biodiversity Conferences of Parties...) to directly share the AQUA-LIT tools and results;
- Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn).

8. Classification and certification bodies

The role of the classification and certification bodies in our strategy

Driven by the governance bodies, or by creating themselves more environmentally friendly certifications including criteria linked to the reduction of marine litter, the actions of the classification and certification bodies will have a direct impact in the entire aquaculture industry, from the aquaculture producer to the equipment manufacturers. During the certification process, they can also act as technical advisors of the aquaculture producers and promote good practices.

What do we want from certification bodies as a target group?

- To improve their certification requirements to include the management of the aquaculture gear and equipment and good practices identified during the AQUA-LIT project in the certification criteria;
- To add more good practices in the AQUA-LIT toolbox;
- To disseminate the AQUA-LIT tools among the aquaculture entire industry.

The motivation of the classification and certification bodies

Economic: By offering more demanding certification service from an environmental point of view, the classification and certification bodies will be able to develop new markets. For instance, the aquaculture producers and gear manufacturers might be interested to have a certification proving their environmental efforts, or a local government body might require a specific certification to authorise the installation of a new aquaculture farm.

Personal: By enhancing the environmental aspects of their services, the staff of the certification bodies will feel valued as they act for the general good.

The meeting point between certification bodies and our strategy

The economic motivation can be used as the key towards mobilising the certification bodies. As the citizens have a growing interest in the environmental impacts of the products they consume, thus aquaculture producers will look for certifications proving their efforts to reduce marine litter.

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox Tide Against Marine Litter on website and app to the NGOs representatives that participated in the Learning Labs or that have been identified in the country profiles of the D2.2 Knowledge wave on marine litter from aquaculture sources and point out which ones are useful to them most before the end of 2021;
- Participate in the events gathering certification bodies to present the AQUA-LIT tools and results (e.g. European Aquaculture Society conferences, Seafood Summits, etc.) directly;
- Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn).

Priorities of implementation

- Promote the AQUA-LIT tools toward the identified certification bodies (directly and through relevant relay such as the aquaculture professional clusters);
- Participate in aquaculture professional events to share the AQUA-LIT tools, findings and methodology.

9. Companies processing waste (including waste recycling and incineration)

The role of the waste processing companies in our strategy

The waste processing companies are one of the key actors to mobilise for successfully reducing marine litter caused by the aquaculture activities. They are in charge of collecting, sorting, recycling and incinerating the waste of the aquaculture producers.

What do we want from the waste processing companies as a target group?

- To improve collecting methods to facilitate the sorting process for the aquaculture producers;
- To develop new recycling methods to reuse materials that are currently incinerated;
- To add more good practice in the AQUA-LIT toolbox.

The motivation of the waste processing companies

Economic: By developing new methods to recycle materials that are currently incinerated, the waste processing companies will be able to develop new business opportunities and attract more clients.

Personal: By helping to reduce marine litter, the waste processing companies will increase the acceptability of the creation of aquaculture farms among the citizens and thus help to develop job opportunities for the community.

The meeting point between processing waste companies and our strategy

Both economic and personal motivations can be used as keys towards mobilising the waste processing companies as it is interesting for these companies to appear as actors of the sustainable development and of the local economic development to help aquaculture farmers to develop their activities.

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox Tide Against Marine Litter on website and app to the waste processing companies and their representative association that participated in the Learning Labs or that have been identified in the country profiles of the D2.2 Knowledge wave on marine litter from aquaculture sources and point out which ones are useful to them most before the end of 2021;
- Organise workshops or present the AQUA-LIT tools at events assembling waste processing companies and aquaculture producers, if the opportunity arises;
- Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn).

Priorities of implementation

- Promote the AQUA-LIT tools to the waste processing companies and their representative associations;
- Organise workshops and info days for the waste processing companies and aquaculture farmers and professional clusters;
- Raise awareness among the governance bodies on the necessary evolutions of the regulations to ensure a better collection and management of the waste.

10. Communicators (media, press, science communicators)

The role of the communicators in our strategy

The communicators are a key actor to mobilise for successfully reducing marine litter caused by the aquaculture activities. They are in charge of informing all actors about the existing and possible actions to reduce the marine litter linked to the aquaculture operations. At a local scale, they can share stories that will increase the acceptability of the aquaculture industry. At a national and international scale, they can inform on the good and best practices that help to

reduce marine litter and on new possibilities for recycling or reusing materials used in the aquaculture processes.

What do we want from communicators as a target group?

- To disseminate the AQUA-LIT tools, results and methodology;
- To add more good practices in helping to reduce marine litter in the AQUA-LIT toolbox;
- To use the AQUA-LIT learning lab methodology to organise workshops, info days, etc.;
- To inform on new recycling methods facilitating the reuse of materials used in the aquaculture processes.

The motivation of the communicators

The ecological impacts of the aquaculture industry are a source of concern for part of the population. Proposing a positive and solution-oriented angle might interest their audience.

The meeting point between communicators and our strategy

The economic motivation can be used as a key towards mobilising the communicators as it is interesting for them to rely on the AQUA-LIT tools, methodology and results to share positive information on solutions to reduce marine litter.

Tools and actions

Volunteering AQUA-LIT partners could:

- Share the AQUA-LIT toolbox Tide Against Marine Litter on website and app and the project methodologies to the Communicators and their representative associations that participated in the Learning Labs or that have been identified in the country profiles of the D2.2 Knowledge wave on marine litter from aquaculture sources before the end of 2021;
- Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn);
- Participate in science communication events to share the AQUA-LIT tools and results.

Priorities of implementation

- Promote the AQUA-LIT tools toward the communicators and their professional networks (an article will be published on the March issue of the European Aquaculture Society);
- Participate in science and aquaculture professional events to share the AQUA-LIT toolbox (e.g. European Marine Educators Association - EMSEA, CommOcean conferences, etc.);

- Maximise the impacts of the AQUA-LIT tools and results by relying on international events (e.g. United Nations Decade of Ocean Science for Sustainable Development, Food and Agriculture Organisation - FAO campaigns, etc.).

The role of AQUA-LIT partners in the exploitation plan

Geonardo Environmental Technologies Ltd.

Geonardo will maintain the website alive with all outcomes, databases, toolbox, and resources for 5 years after the termination of the project. The organisation will update the toolbox whenever the public submits information to feed it and update the version of the app as we see fit. Geonardo has also created a project proposal called HARMO-LIT, which aims at being the continuation of AQUA-LIT and will actively continue to look for funding opportunities that could give us the opportunity to continue building on these two years of hard and great teamwork. Moreover, Geonardo plans to discuss with the EMFF the possibility of transforming the AQUA-LIT toolbox into the EU-wide repository of solutions and ideas to tackle marine litter at sea more broadly. Geonardo will continue to promote AQUA-LIT outcomes at events, meetings and to people that they find relevant and potentially interested in the topic. Lastly, Geonardo will remain as the contact point for future synergies with other initiatives and projects. For example, a new synergy has been set with the [Blue Cloud](#), a H2020 project focusing on federating and piloting innovative services for Marine Research & the Blue Economy, and also with the aim of having a data discovery and access service coming from multi-disciplinary datasets and synergies with other projects and organizations. AQUA-LIT's logo and a link to our toolbox and website will be available at their portal so their stakeholders can explore our results. Furthermore, we will potentially contribute with our outcomes to the Roadmap to 2030 they will develop.

EurOcean

EurOcean will keep promoting the AQUA-LIT Toolbox via communication channels and among network members (e.g. January Newsletter), and make use of the AQUA-LIT dissemination and branding material in conferences and international events. The AQUA-LIT results will be potentially included into the upcoming EurOcean "MyOceanGate", a repository of information on marine science and technology open to the ocean community and society. The AQUA-LIT project description and link to the online Toolbox will be kept on the EurOcean's website. The successful stakeholder engagement strategy, such as the organisation of the AQUA-LIT Learning Labs, will be applied, if possible, in other projects or activities that need efficient engagement of external stakeholders. Moreover, EurOcean will actively look for new funding opportunities for the continuation and implementation of the work developed in the framework of the AQUA-LIT project.

Flanders Marine Institute (VLIZ)



VLIZ will use the outcomes of the AQUA-LIT project in the context of the marine litter action plan in Flanders. The institution will actively promote the outcomes in the broader context of the aquaculture sector. VLIZ has presented the potential and shortcomings of marine litter data at the ICES level and will present the outcomes at national (e.g. VLIZ marine science day) and international events and conferences. VLIZ joined forces to establish the HARMO-LIT proposal, and will actively prospect new funding opportunities for the continuation of this work or the application of the derived methods in other marine or maritime sectors. The 'Players at Play' review will be used to build extended partnerships and collaborative projects. The Learning Lab methodologies will be optimized for co-creation and collaborative innovation initiatives.

Sustainable Projects (s.Pro)

s.Pro will continue to spread the AQUA-LIT project results in the Baltic Sea region (BSR) and on national levels, especially related to the on-going developments of national marine strategies in the BSR. In addition, HELCOM will be informed to take into consideration the project results in their Recommendation 25/4 on limiting the pollution from fish farms to the Baltic Sea. s.Pro has been involved in a range of activities on national level related to the implementation of the EU Directive on Single-Use-Plastic (SUPD) into national law in Germany and will further integrate the results derived of AQUA-LIT. Some of these national activities may be transferable to other Baltic Sea initiatives related to the SUPD.

s.Pro will also coordinate with WWF Baltic, especially with regards to their work on Marelitt, to use synergies and optimise lessons-learned for the practice. Linked to the SUBMARINER Network in the Baltic Sea, all topic-related existing and upcoming projects considering aquaculture will be informed about the results of AQUA-LIT, especially about the toolbox and the reports on knowledge wave, players at play, impact assessment, and Learning Labs. SUBMARINER projects, which will benefit from the results are, for example, InnoAquaTech, AquaCross, AquaFIMA, AquaBEST, AquaSPACE and CleanAQ. s.Pro will promote the project's toolbox during future project meetings. Tools and methodologies obtained during the Learning Labs will be adopted and applied in other aquaculture and fisheries stakeholder events. s.Pro will also continue to actively search for new funding opportunities to assure the up-take of the results obtained during the project and to continue collaboration within the experienced project team.

Instituto Español de Oceanografía (IEO)

IEO will keep disseminating the AQUA-LIT toolbox not only amongst the Spanish aquaculture stakeholders who have been involved in building the aquaculture network initiated in the framework of the AQUA-LIT project, but also amongst other scientific institutions integrating large European consortiums. Additionally, IEO will transfer results and the toolbox to national and transboundary scientific networks (Europe, South America and Asia). Moreover, the toolbox will be presented to regional and national authorities as an example of a multidisciplinary and integrative approach to the reduction of marine litter and also as an innovative initiative with the potential to be extrapolated and adapted by other initiatives concerning marine ecosystems and biodiversity and its conservation and sustainable management. The AQUA-LIT results and toolbox will also be promoted via IEOs' social media

and network. IEO will also use and adapt the AQUA-LIT Learning Lab methodologies and guidelines for future workshops and network building regarding marine litter and derived impacts in coastal environments.

Fundo Regional para a Ciência e a Tecnologia (FRCT)

FRCT will publicize the AQUA-LIT results through the FRCT webpage and promote the project outcomes at our social networks. FRCT will make the AQUA-LIT results available to the Azorean end-users (such as competent authorities, aquaculture organizations, scientists, etc.).

Nausicaá, Centre National de la Mer plans:

- to use and adapt the AQUA-LIT Learning Lab methodology (1) for future stakeholder engagement workshops on other topics on local, national and international levels,
- to promote the AQUA-LIT toolbox *Tide against marine litter* (2) at professional meetings such as e.g. the Aquaculture Europe 2021 conference and on other occasions,
- to inform professional networks in France and Europe about the AQUA-LIT toolbox (2), methodology (1) and findings (1,2,3,4),
- to make use of the AQUA-LIT toolbox (2) and results (3,4) while updating the criteria of the Mr.Goodfish programme in relation to the positioning taken by the Aquaculture Stewardship Council's (ASC) in the white paper of 2019 about introducing a set of criteria for non-organic waste reduction and recycling in the requirements for certified farms;
- to include the AQUA-LIT toolbox and findings in the catalogue of resources of our Learning Centre.

Recommendations and conclusions - Matching exploitable results with target stakeholder groups

This document has focused on the development of the strategy for ensuring the exploitation of the AQUA-LIT project findings, new tools and methodology after the project finalization. To this end, we have reviewed the materials developed during the project, identified results that can be exploited and transferred, and analysed how the diverse stakeholder groups mobilised during the AQUA-LIT learning labs can take up these results and make use of them in their ongoing and future activities, schemes and projects. As a result, we have defined specific action plans for each stakeholder group to sustain the promotion and endorsement of the results of the project, which are summarised in the tables here below.

Tools/stakeholder groups

	Learning Lab methodology	AQUA-LIT Toolbox	Review of Players at play	Inventory of Available tools & measures	Marine Litter Inventory
Aquaculture farmers (fish, shellfish, seaweed)	✓	✓	✓	✓	✓
Equipment manufacturers (e.g. of aquaculture material & gear)	✓	✓	✓	✓	✓
Engineering, system design and construction companies	✓	✓	✓	✓	✓
Academic research groups	✓	✓	✓	✓	✓
Professional clusters, associations and platform representatives	✓	✓	✓	✓	✓
NGOs	✓	✓	✓		✓
Governance (including policy makers & implementers, and port staff)	✓	✓	✓	✓	✓
Classification and certification bodies	✓	✓	✓	✓	✓
Companies processing waste (including waste recycling and incineration)	✓	✓	✓	✓	✓
Communicators (media, press, science communicators)	✓	✓	✓	✓	✓

Summary action plan for each stakeholder target group

	Role of the target	What is expected of the target	Motivation of the target	Interface between concept and target	Tools and action	Initial priorities
Aquaculture farmers (fish, shellfish, seaweed)	End users of the toolbox developed in the framework of AQUA-LIT, they are the main actors in the reduction of aquaculture marine litter.	<ul style="list-style-type: none"> • Intensify their efforts towards reducing marine litter linked to their activities • Add more good practices in the AQUA-LIT toolbox • Become advocates of practices and methodologies to be used to reduce marine litter among their peers 	<ul style="list-style-type: none"> • Economic: long-term development of sales will only be compatible with an improvement of the image of the aquaculture industry • Personal: be part of an industry with a better image 	Transforming the image of the industry to actors of the sustainable development and Blue Economy could be an efficient leverage	<ul style="list-style-type: none"> • Show them the AQUA-LIT toolbox Tide Against Marine Litter on website and app and specify the tools that they can use • Translate or find interested organisations in translating the AQUA-LIT tools to maximise their impact especially among artisanal aquaculture farms • Participate in aquaculture professional events to share the AQUA-LIT tools directly • Encourage aquaculture farmers to seek certifications that include the reduction of marine litter in their criteria 	<ul style="list-style-type: none"> • Promote fish farmers who are already implementing actions to reduce aquaculture litter (web articles, interview videos, posts on social networks, etc.) • Participate in aquaculture professional events to share directly the AQUA-LIT tools, • Promote the AQUA-LIT toolbox through the communication channels of identified partners and relays

<p>Equipment manufacturers (e.g. of aquaculture material & gear)</p>	<p>They produce the equipment that is used in the aquaculture farm</p>	<ul style="list-style-type: none"> • Increase the lifespan of their equipment • Create easier to recycle equipment • Become advocates of equipment and methodologies • Add more good practices in the AQUA-LIT toolbox 	<p>Economic: thanks to their more sustainable equipment they will be able to develop their market share and ensure the acceptability of the industry in the long term</p> <p>Personal: becoming actors of the sustainable development and Blue Economy and developing the advisory aspect of their profession</p>	<p>Increasing the lifespan of the equipment they produce will greatly improve their image among the industry thus increasing their sales in the long term</p>	<ul style="list-style-type: none"> • Share with them the AQUA-LIT toolbox on website and app and point out tools relating to them specifically, • Translate or find organisations interested in translating AQUA-LIT tools to maximise their impact • Participate in aquaculture professional events to share the AQUA-LIT tools directly, • Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) • Encourage equipment manufacturers to develop more sustainable equipment and anticipate the future evolution of regulations 	<ul style="list-style-type: none"> • Promote equipment manufacturers who already propose sustainable gear and other aquaculture equipment; • Participate in aquaculture professional events to share the AQUA-LIT tools, findings and methodology directly with them, • Promote the AQUA-LIT tools through the communication channels of identified partners and relays
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<p>Engineering, system design and construction companies</p>	<p>They design and/or build the aquaculture farms</p>	<ul style="list-style-type: none"> • Design and engineer aquaculture systems and constructions that are marine environment friendly and with a greater lifespan; • Choose construction materials easier to recycle; • Add more good practices in the AQUA-LIT toolbox; • Become advocates of the equipment and methodologies to be used to reduce marine litter among their clients 	<p>Economic: designing and building equipment and constructions with a greater sustainability using technologies that improve the lifespan of constructions and offering better maintenance methodologies and services will help them attract new clients</p> <p>Personal: employees will be able to feel valued by developing the advisory aspect of their profession</p>	<p>Increasing the lifespan of the farm they implement and consequently reducing the litter will greatly improve their image among the aquaculture farmers thus increasing their sales in the long term</p>	<ul style="list-style-type: none"> • Share with them the AQUA-LIT toolbox on website and app, and specify which tools relate to them • Translate or find organisations interested in translating AQUA-LIT tools to maximise their impact, • Share AQUA-LIT tools during aquaculture professional events, • Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) • Encourage them to implement more sustainable technologies and promote methodologies that reduce marine litter linked to the aquaculture. 	<ul style="list-style-type: none"> • Promote the engineering, system design and construction companies that are already implementing the identified tools and good practices, • Participate in aquaculture professional events to share the AQUA-LIT tools directly, • Promote the AQUA-LIT tools through the communication channels of identified partners and relays.
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<p>Academic research groups</p>	<p>They carry out research linked to the aquaculture industry</p>	<ul style="list-style-type: none"> Disseminate the AQUA-LIT findings and tools among all their publics through their communication channels or by including them in their existing toolboxes Add more findings and good practices in the AQUA-LIT toolbox Develop more research programmes to tackle knowledge gaps identified during the AQUA-LIT project 	<p>Economic: The academic research groups are the organisations the missions of which are frequently set by the governing bodies and the objective of which is to help the industry to grow in a sustainable way</p> <p>Personal: the researchers will be able to feel valued by developing the advisory aspect of their profession</p>	<p>Relying on the AQUA-LIT tools and results, the academic research groups will be able to suggest new tools and best practices to their targets and suggest science-based improvements, as well as they'll be able to further develop research programmes on promising solutions or to tackle identified knowledge gaps</p>	<ul style="list-style-type: none"> Share with relevant academic research groups the AQUA-LIT tools, findings and methodologies; Participate in marine scientific events gathering researchers to share the AQUA-LIT findings directly with them Promote the AQUA-LIT toolbox and share findings on professional social networks (e.g. LinkedIn) Encourage the academic research groups to share the AQUA-LIT tools and results Encourage the academic research groups to develop research programmes to tackle knowledge gaps identified during the AQUA-LIT project 	<ul style="list-style-type: none"> Promote the research and findings that contribute to the reduction of marine litter from aquaculture operations Participate in scientific conferences and other events to promote the AQUA-LIT findings, tools and methodologies Encourage further research and innovation to address the knowledge gaps and improve aquaculture materials
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<p>Professional clusters, associations and platform representatives</p>	<p>They represent the industry, assemble all the actors and defend their interests</p>	<ul style="list-style-type: none"> Disseminate the AQUA-LIT results and tools among their members Lobby with policy makers, research institutions and equipment manufacturers to develop innovative technologies and methodologies to tackle the gaps identified during the AQUA-LIT project Continue the dialogue with policy makers and certification bodies to implement new regulations Add more good practices in the AQUA-LIT toolbox Promote the AQUA-LIT good practices and encourage the sector to share and replicate more good practices to accelerate their adoption by the entire industry and to improve the image of the industry among the general public 	<p>Economic: attract new members and ensure the development of the industry in the long term</p> <p>Personal: personnel will be happier to work for an industry considered as more sustainable</p>	<p>Economic motivation can be used as the key for the professional clusters, associations and platform representatives. The long-term development of the industry will only be possible if the general public is convinced of the environmental sustainability of the industry (as clients or as citizens)</p>	<ul style="list-style-type: none"> Share with the professional clusters, associations and platform representatives, the AQUA-LIT tools and results on website and app and point out which ones are useful to them most Participate in the events they hold on blue economy or organise with them workshops during marine events (e.g. the annual European Maritime Day Stakeholder conference, the European Aquaculture Society annual conferences, Seafood Summits) to share the AQUA-LIT tools directly Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) 	<ul style="list-style-type: none"> Share the AQUA-LIT toolbox and results on website and app with professional clusters Participate in the professional events to share directly the AQUA-LIT tools (e.g. European Maritime Day Stakeholder conference, European Aquaculture Society) Co-organise workshops during marine-related events to share the AQUA-LIT tools directly
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<p>NGOs</p>	<p>They are the most committed organisations to the reduction of the impacts of human activities on the natural environmental</p>	<ul style="list-style-type: none"> Disseminate the AQUA-LIT tools, best practices, findings and methodology Lobby governments, policy-makers, research institutions and equipment manufacturers to develop innovative technologies and methodologies Add more good practices in the AQUA-LIT toolbox; Carry out a positive and constructive dialogue with policy makers and certification bodies to implement new regulations, Share positive and constructive communications and disseminate the good practices widely to accelerate their adoption 	<p>Ecologic: accelerate the adoption of good practices to reduce marine litter</p> <p>Personal: helping the NGOs to appear as solution provider</p>	<p>The ecological motivation is the key to involve the NGOs</p>	<ul style="list-style-type: none"> Share the AQUA-LIT tools and results on website and app with the NGOs emphasising the existing good practices, Participate in the events gathering the NGOs to directly share and present the AQUA-LIT tools and results Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) 	<ul style="list-style-type: none"> Share the AQUA-LIT tools on website and app with the NGOs emphasising the existing good practices, Participate in the events gathering the NGOs to directly present the AQUA-LIT tools and results.
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<p>Governance (including policy makers & implementers, and port staff)</p>	<p>They make and apply policy at local, national, European and international levels.</p>	<ul style="list-style-type: none"> • Continue to clarify the regulatory framework leading to reducing marine litter linked to the aquaculture activities. • Supervise and control the aquaculture operations and encourage good practices; • Fund research and development to find new solutions or further develop the existing ones; • Encourage good practices and enable their replication across countries and regions; • Include modules on the subject of the reduction of marine litter linked to aquaculture activities into national educational programmes and professional training schemes and encourage lifelong learning in the sector. 	<ul style="list-style-type: none"> - Political – sustainable development and Blue Economy are fundamental guidelines. - Economic in the medium and long term. - Personal, in terms of image as a member of a governance body 	<p>Ecological motivation can be used as the key towards mobilising the governance bodies. The swift adoption of the best practices reducing marine litter will be a great motivation as their objective is to reduce pollution as fast as possible.</p>	<ul style="list-style-type: none"> • Share with governance bodies the AQUA-LIT tools, findings and methodologies, • Participate in the events gathering governance bodies (e.g. annual European Maritime Day Stakeholder conferences, United Nations Biodiversity Conference of Parties (COPs), etc.) to present the AQUA-LIT tools and results directly, • Promote the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) • Organize public debates on the subject of sustainable development, aquaculture and reduction of marine litter • Suggest that those in charge at political level become leaders of sustainable development themselves within the framework of their mandates, locally, in particular by: • Making sure that farm 	<ol style="list-style-type: none"> 1. Share AQUA-LIT tools and results on website and app with governance bodies (or with their associations) 2. Participate in the events gathering the governance bodies, (e.g. mayors' fairs, European Maritime Day Stakeholder conferences, United Nations Biodiversity Conferences of Parties...) to share the AQUA-LIT tools and results directly 3. Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn)
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					<p>installation permits include obligations to implement measures to reduce marine litter</p> <ul style="list-style-type: none">• By financing the Research & Development of new solutions	
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<p>Classification and certification bodies</p>	<p>They grant certifications to aquaculture facilities and their operating processes</p>	<ul style="list-style-type: none"> • Improve their certification requirements to include the management of the aquaculture gear and equipment and good practices identified during the AQUA-LIT project in the certification criteria, • Add more good practices in the AQUA-LIT toolbox • Disseminate the AQUA-LIT tools among the aquaculture entire industry 	<p>Economic: By offering more demanding certification service from an environmental point of view, the classification and certification bodies will be able to develop new markets</p> <p>Personal: By enhancing the environmental aspects of their services, the staff of the certification bodies will feel valued as they act for the general good</p>	<p>Economic motivation can be used as the key towards mobilising the certification bodies. As the citizens have a growing interest in the environmental impacts of the products they consume, thus aquaculture producers will look for certifications proving their efforts to reduce marine litter</p>	<ul style="list-style-type: none"> • Share the AQUA-LIT tools and results on website and app with certification bodies, • Participate in the events gathering certification bodies to present the AQUA-LIT tools and results (e.g. European Aquaculture Society conferences, Seafood Summits, etc.) directly • Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) 	<ul style="list-style-type: none"> • Promote the AQUA-LIT tools toward the identified certification bodies (directly and through relevant relay such as the aquaculture professional clusters) • Participate in aquaculture professional events to share the AQUA-LIT tools, findings and methodology.
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<p>Companies processing waste (including waste recycling and incineration)</p>	<p>They are in charge of collecting, sorting, recycling and incinerating the waste of the aquaculture producers.</p>	<ul style="list-style-type: none"> • Improve collecting methods to facilitate the sorting process for the aquaculture producers • Develop new recycling methods to reuse materials that are currently incinerated, • Add more good practices in the AQUA-LIT toolbox 	<p>Economic: By developing new methods to recycle materials that are currently incinerated, they will be able to develop new business opportunities and attract more clients.</p> <p>Personal: helping to reduce marine litter, the waste processing companies will increase the acceptability of the creation of aquaculture farms among the citizens and thus help to develop job opportunities for the community</p>	<p>Both economical and personal motivation can be used as keys towards mobilising the waste processing companies as it is interesting for these companies to appear as actors of the sustainable development, Blue Economy and of the local economic development to help aquaculture farmers to develop their activities</p>	<ul style="list-style-type: none"> • Share the AQUA-LIT toolbox, findings and methodology on website and app with the waste processing companies and their representative association • Organise workshops for waste processing companies and aquaculture producers, • Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) 	<ul style="list-style-type: none"> • Promote the AQUA-LIT tools to the waste processing companies and their representative associations • Organise workshops and info days for the waste processing companies, aquaculture farmers and professional clusters • Raise awareness among the governance bodies on the necessary evolutions of the regulations to ensure a better collection and management of the waste
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<p>Communicators (media, press, science communicators)</p>	<p>They communicate with and reach all sectors of the society</p>	<ul style="list-style-type: none"> Disseminate the AQUA-LIT tools, results and methodology, Add more good practices in helping to reduce marine litter in the AQUA-LIT toolbox Use the AQUA-LIT learning lab methodology to organise workshops, info days, etc Inform on new recycling methods to reuse materials used in the aquaculture processes 	<p>Economic: The ecological impacts of the aquaculture industry are a source of concern for part of the population. Proposing a positive and solution-oriented angle might interest their audience</p>	<p>The economic motivation can be used as a key towards mobilising the communicators as it is interesting for them to rely on the AQUA-LIT tools, methodology and results to share positive stories and information on solutions to reduce marine litter.</p>	<ul style="list-style-type: none"> Share the AQUA-LIT toolbox and results on website and app with the communicators and their representative associations Share the AQUA-LIT toolbox on professional social networks (e.g. LinkedIn) Participate in science communication events to share the AQUA-LIT tools and results 	<ul style="list-style-type: none"> Promote the AQUA-LIT tools toward the communicators and their professional networks Participate in science and aquaculture professional events to share the AQUA-LIT toolbox (e.g. European Marine Educators Association - EMSEA, CommOcean conferences, etc.), Maximise the impacts of the AQUA-LIT tools and results by relying on international events (e.g. United Nations Decade of Ocean Science for Sustainable Development, Food and Agriculture Organisation - FAO campaigns, etc.)
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