Deliverable 9.3

First interim plan for the Communication, Exploitation and Dissemination of Results

Project acronym:

AquaVitae

Project title:

New species, processes and products contributing to increased production and improved sustainability in emerging low trophic, and existing low and high trophic aquaculture value chains in the Atlantic

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First interim plan for the Communication, Exploitation and Dissemination of Results

09/03/2021

Executive summary

AquaVitae's First interim plan for the Communication, Exploitation and Dissemination of results compiles Key Performance Indicators (KPIs) on the communication, dissemination and exploitation activities in order to propose enhanced strategies for the forthcoming 18 months. The reach and impact of the project is measured against its target audience, offering a snapshot on the performance of the project in these areas.

During its first 16 month of activity, the AquaVitae communication and dissemination activities have reached a global audience, helped by the impact of the partners' activities and work in their local communities. Brazil, Norway, South Africa and Spain stand out as the countries driving more audience to the project platforms (e.g., web, social media, workshops).

Communication activities have reached an average of 19,443 persons, with a total estimated audience of 2,201,883 for 113 activities. These elevated figures were achieved thanks to the coverage of the project press releases on the media and the considerable audience coming from partners' countries (e.g., Brazil, South Africa, and Spain). Meanwhile dissemination activities (e.g., workshops, scientific publications) reached a total of 3,651 persons with 56 activities celebrated in and outside the European Union.

COVID has impacted the ability to hold any physical meetings, which has slowed the development of case studies and research work to different degrees. A detailed summary of events (e.g., meetings and workshops) is included, together with the outcomes of this interaction.

Social network analysis has outline internal relations among WPs, CSs, and the multi-actor platform. The exercise has sketched two major clusters: one cluster reflects the trans-Atlantic connection, while the other cluster is weaved across horizontal WPs and specific CSs. This analysis allows pinpointing areas where further interaction can contribute to enrich research, as well as to detect key stakeholders influencing over several activities.

For the exploitation section, partners have been involved in the characterisation of the Key Exploitable Results (KER) of the project. These outputs will have a potential impact on an array of fields, from Research & Development, to policy areas, services and other knowledge-based activities (e.g., New species, processes, and products developed in aquaculture value chains across the Atlantic, MOOC on Sustainable Aquaculture for Low Trophic Species – SALTS). Possible target audiences related SDGs and a complete definition is outlined to pave the way for the use of these results beyond the project life. This analysis complements the detailed monitoring of innovation in the Case Studies (CSs) carried out by Work Packages on hatchery, post-hatchery processes, end products, and sensors and the Internet of Things (WP1, WP2, WP3 and WP4).

Among the proposed actions for the next period:

- Increase the resources invested on content creation (e.g., practice abstracts) for attracting external audience.
- Intensify the use of digital tools to bridge the Atlantic Ocean and compensate the cancellation of physical meetings.

- Organise internal activities (e.g., workshops on exploitation), so that partners can be empowered as ambassadors of the project and provide their feedback in the management of outreach activities.
- Continue collaborating with the Atlantic Research Community and the All-Atlantic Ocean Youth Ambassadors Initiative.
- Increase the information on the European Commission mechanisms for those partners participating in the Horizon 2020 programme for the first time.
- Calendars for future actions of networking and training activities.

This interim plan for the Exploitation, Communication and Dissemination of Results (PECDR) will be reviewed and updated through "D9.4. Second interim plan for the communication, exploitation and dissemination of results" and "D9.7. Final plan for the communication, exploitation and dissemination of results". AquaVitae has applied for a 6-month extension due to COVID that would contribute to curb the effects of COVID on research activities and contribute to the translation of results to the European and global audience.

Table of content

Abbreviations

AANChOR	All AtlaNtic Cooperation for Ocean Research and Innovation
BG	Blue Growth
CS	Case Study
CWA	CEN Workshop Agreement
D	Deliverable
DoA	Description of the Action
EATiP	European Aquaculture Technology and Innovation Platform
IMTA	Integrated Multi-trophic Aquaculture
IVL	IVL Swedish Environmental Research Institute
KER	Key Exploitable Result
KPI	Key Performance Indicator
LTS	Low-trophic Species
MOOC	Massive Open Online Courses
MS	Milestone
NGO	Non-governmental Organization
PECDR	Plan for the Exploitation, Communication and Dissemination of Results
RAS	Recirculating Aquaculture System
VC	Value chain
WP	Work Package

1.- Introduction

The First Interim Plan for the Exploitation, Communication and Dissemination of Results (PECDR) analyses the communication, dissemination and exploitation strategies and its impact. It offers a set of methodologies, indicators and next steps to maximise the impact of the resources (budget, staff, time) allocated to these tasks.

Knowledge production has been defined as a dynamic, multi-directional and interactive process, highly dependent on the stakeholders' capacity to take the research into practice[1]. Communication, dissemination and exploitation strategies can contribute to the creation of an engaged community, which will increase the likelihood of reaching interested players for the use of AquaVitae outcomes both during and beyond the project lifetime.

The indicators include the KPIs selected in the "D9.2. Initial plan for the Communication, Exploitation and Dissemination of Results", a selection of indicators across digital channels (website, Twitter, LinkedIn, Instagram) and are also established according to goals (audience, impressions, interaction, virality, activity). Quantitative indicators on the number of activities and the size of their estimated audience are also included. A set of actions are suggested to increase the impact of the project on its target audiences.

(i) The first interim plan includes:
(ii) methodology;
(iii) review and update of the communication plan;
(iv) review and update of the dissemination plan;
(v) review and update of the exploitation plan;
(vi) conclusions and next steps.

2.- Methodology

This review combines quantitative and qualitative methods to collect data on the performance of communication, dissemination and exploitation plans. Each of these sections makes use of a dedicated set of indicators and Key Performance Indicators (KPIs) to review and analyse the effectiveness of the strategies applied to each of these fields, and also adjusting to the stage of development of the AquaVitae outputs and results.

Qualitative feedback is represented by the feedback of partners and participants on diverse activities. On the other hand, quantitative feedback was already set at the proposal stage, with a series of targets for performance indicators. This document will expand that selection by including digital indicators, aiming at outlining the most relevant content on the website and social media.

The data collected in this interim report covers the first 16 months of activity of the project, from 1 June 2019 to 30 September 2020. Data sources are:

- AquaVitae partners self-reporting on the number of estimated participants and characteristics of communication and dissemination activities (see Annex I).

[1] Gronvad, J., Hvidtfeldt, R., Petersen, D. B "A report with analysis. Analysing co-creation in theory and in practice – A systemic review of the SSH impact literature". Available at https://cordis.europa.eu/project/id/693477/results Latest accessed: 18/11/2020

- Website and social media statistics (e.g., Google Analytics, Twitter Analytics).
- Key Exploitable Results (KERs)

Periodically, these figures are compiled, homogenised and weighted, in case of discrepancies.

Self-reporting data

Data related to the dissemination and communication activities were categorized according to the European Commission's template for periodical reporting of Horizon 2020 projects[2] and the grey literature available on the matter.

Each six months, partners are asked to report on their activities for external audiences. A user-friendly form located in the AquaVitae intranet allows to identify the involved partners, basic information on the activity (date, summary, location, link), estimated size of audience, thereby categorising it according to the European Commission standards.

Table 1. Categories of communication and dissemination activities according to the European Commission periodic reporting template for Horizon 2020 projects.

Communication activities	Dissemination activities
• Press releases • Exhibitions • Flyers • Social media • Websites • Communication campaign • Participation in an event other than a conference or a workshop • Video/film • Participation in activities organised jointly with other H2020 projects	• Organisation of a conference • Organisation of a workshop • Non-scientific and non-peer reviewed publications • Training • Participation in a conference • Participation in a workshop • Brokerage event • Pitch event • Trade fair • Other

The audience(s) reached are categorised as follows:

- Scientific community
- Industry
- Civil society
- General public
- Policy makers
- Media
- Investors
- Customers
- Others (e.g., university students, international organisations)

[2] Available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj-o6Kor4ztAhUOilwKHb9-D2EQFjAAegQIBxAC&url=https%3A%2F%2Fec.europa.eu%2Fresearch%2Fparticipants%2Fdata%2Fref%2Fh2020%2Fgm%2Freporting%2Fh2020-tmpl-periodic-rep_en.pdf&usg=AOvVaw21lp37bt9gbEJxZjECs2bl
Latest visited on: 18/11/2020

Digital Analysis Methodology

AquaVitae's presence online through its website (aquavitaeproject.eu) and dedicated social media channels offers multiple insights into the general public's interest in the project's activities. A selection of Key Performance Indicators (KPIs) offers insights on the visitors' interest, and reviews content creation and curation by the project (see Table 2).

Key Performance Indicators (KPIs) are the critical indicators of progress toward an intended result. KPIs provides a focus for strategic and operational improvement, create an analytical basis for decision making and help to focus attention on what matters most[3].

Table 2. Selected KPIs per digital channel.

KPIs per channel	
Website	Users Sessions Views Views from social media Newsletter subscription Web Publications
Twitter	Followers Impressions Engagement RTs Twitter Publications
LinkedIn	Group members Recommendations Shared Publications
Instagram	Followers Reach Likes Publications

Besides the reflection of the performance of each digital channel, the aggregation of KPIs according to a similar goal helps to understand, review and correct the effectiveness of social media channels. Being a research project, activity on its digital channels will aim at brand building, thereby creating awareness of the project activities and outcomes. Therefore, a selection of KPIs related to the size of the audience, reached public, interaction and eventual virality was outlined. Indicators on the website were excluded in this case to rate only social media performance.

[3]Available at https://kpi.org/KPI-Basics. Latest visited on 18/11/2020

Table 3. Selected KPIs on social media to achieve brand awareness on AquaVitae, its activities and outputs.

Social media KPIs per goal	
Audience	Followers Twitter Group members LinkedIn Followers Instagram
Impressions	Impressions Twitter Reach Instagram
Interaction	Twitter Engagement (No. of times a user interacted with a Tweet) RTs Twitter LinkedIn Recommendations LinkedIn Shared Instagram Likes
Virality	Twitter RTs LinkedIn Shared Instagram Likes
Activity	Twitter publications LinkedIn publications Instagram publications

Social Network Analysis Methodology

The social network analysis (SNA) studies the pattern of relationships and interaction. In the case of the AquaVitae project, the analysis reflects the relations among the stakeholders and the related WPs and CS. The application of graph analytic techniques and network analysis tools pinpoints these relations and its strenght (more in the "Social Network Analysis" section). Data comes from a survey circulated in the AquaVitae Kick-off meeting (June 2019) among CS and WP leaders. This has been updated constantly to respond to research demands.

Key Exploitable Results (KERs) identification Methodology

AquaVitae relies on dedicated activities to support exploitation or the use of the project results and outputs by its end-users. The initial plan "D9.2. Initial plan for the Communication, Exploitation and Dissemination of Results" includes main guidelines for intellectual property management and exploitation pathways. Furthermore, Work packages 1,2,3,4, and 7, are centred on anticipating the periodic monitoring of the prototypes and outputs development, data management and analysis of foreseeable business opportunities, including the development of business plans for a selection of AquaVitae case studies.

Key Exploitable Results (KERs) are defined as an identified main interesting result, which has been selected and prioritised due to its high potential to be "exploited" – meaning to make use and derive benefits- downstream in the value chain of a product, process or solution, or act as an important input to policy, further research or education[4]. The exploitation plan included in

[4] Available at https://webgate.ec.europa.eu/funding/display/ECResearchGMS/Managing+Project+Results+in+the+Horizon+Results+Platform . Latest visited on 18/11/2020

this document features a global table linking the main areas of impact of AquaVitae, spread along all work packages, with each KER. This table offers a global view on the most impactful areas of the project, which will be updated in the following editions, “D9.4. Second interim plan for the communication, exploitation and dissemination of results” and “D9.7. Final plan for the communication, exploitation and dissemination of results”. Each KER is compiled into the specific deliverables of each work package.

Using the support information provided by the European Commission, main contributors have been engaged in the description of each KER, related policy areas in the European Commission, related Sustainable Development Goals (SDGs), possible application and its target public.

3.- Review and update of the communication plan

Communication activities aim at taking the project messages to the public, as well as spreading the word on the project activities and outputs. The dynamic nature of communications activities, with a two-way channel between the project and its publics, also ask for a dynamic management. For instance, the global occurrence of the COVID pandemic has posed a challenge for every international project, making it necessary for the consortium to hold on-line the annual project meeting. This was combined with a stakeholder workshop (involving more than 100 participants) in April 2020.

Depending on the target audience, any communication activity can be categorised as internal or external. Internal communication refers to all actions that have as target the internal publics of the project, 35 partners in Europe, Africa, South and North America. Following the same pattern, external activities are aimed at external groups such as the project stakeholders’ groups (Industry Reference Group and Policy Advisory Group), representatives of the aquaculture sector, academia and institutions, alongside international organisations (e.g., FAO), specialised media or the aquaculture consumers situated in the four continents surrounding the Atlantic and, in Asia, where a numerous community of low-trophic aquaculture producers and consumers are found.

Internal communication

The AquaVitae Sharepoint, represented in Figure 1, is the main internal communication channel for the project. It has been embraced by all partners, who regularly use it to share documents and project activities with each other. Every person involved in the AquaVitae project, from all 35 project partners – in addition to the External Advisory Group (EAG), are members of the Sharepoint, , with a total of 92 people

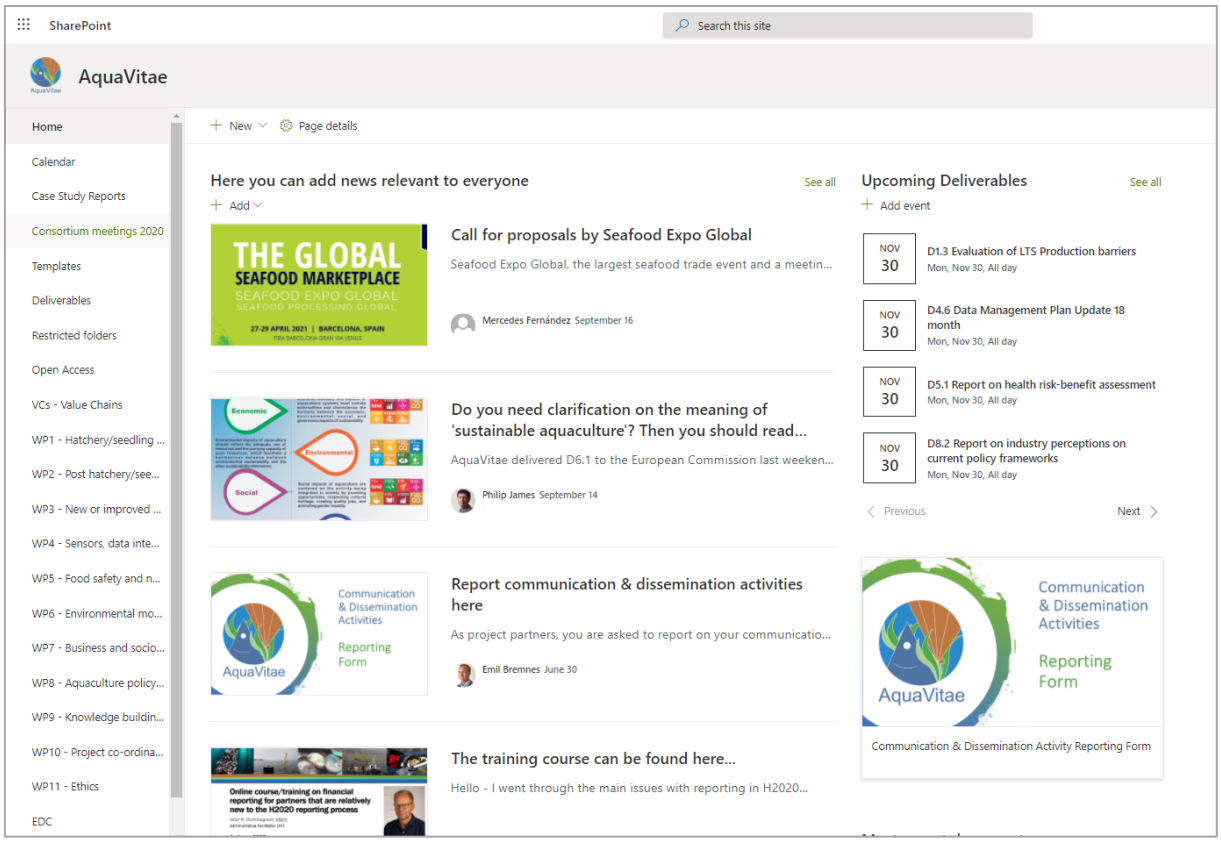


Figure 1. Screenshot of the AquaVitae Sharepoint homepage. Folders are listed on the left. The internal news section in the middle. A calendar for deliverables and a reporting form for communication and dissemination activities is on the right.

The AquaVitae Sharepoint is called the "Aquanet". It is a web-based platform for internal communication and document sharing that was established in the first project month. The platform is actively used, as well as continuously maintained. The main purpose of the Aquanet is to facilitate communication, document distribution and data storage. Examples of documents on the Sharepoint include templates, draft deliverables and research data.

The possibility to communicate easily with all partners, without sending or receiving mass emails or huge files, is seen as a great benefit. The Aquanet is also used to share information about relevant events, webinars and workshops.

The Aquanet contains documents and files that AquaVitae partners can easily browse and find from their computers or smart phones:

- Core project documents, such as the DoA, ethics requirements, and consortium mailing list.
- A folder dedicated to each WP and Value Chain (VC), as well as folders for Deliverables and Templates.
- A continuously updated Excel sheet that lists all the publications in which AquaVitae is mentioned (e.g. newspapers, academic papers, videos…).
- A folder called Outreach Material that includes promotional materials such as photos, fact sheets, project videos, a project one-pager, press releases, leaflet and banner.

- A relevant literature folder where interesting documents in connection with AquaVitae are shared.
- A calendar containing deadlines for deliverables and relevant events, workshops, CS meetings and conferences linked to the project or sustainable aquaculture. This is a useful tool to keep track of who is attending what.

During the first 18 months of the project a set of measures was implemented to ease reporting duties, internal communication and dedicated restricted folders to protect results and information potentially sensitive to intellectual property rights, such as:

- A reporting form for all the communication and dissemination activities (Figure 2). This has greatly facilitated C&D reporting, as partners now fill out a form rather than edit the same spreadsheet.
- A folder on Open Access guidelines. Not all project partners are familiar with this, especially those outside the EU, so the information inside has been of great help to many of them.
- A "Restricted folders" section. In here, folders containing research data with sensitive information (e.g. names, business information) can be stored securely and only shared among partners involved in that particular research. All other members are restricted from accessing the information.

Figure 2. C&D Activity Reporting Form

- A "Case study reports" folder with report forms for every single case study. Here, the WP-leaders are able to track the progress in a spreadsheet linked to each case study. This has been a vital addition to internal communication between CS leaders and WP leaders.
- A form for reporting delays related to COVID. Any partner was able to inform on expected delays, supporting flexible project management.

External communication

Data collection for this Deliverable ended on the 30 September 2020, when the project had reached a third of its expected duration. At this point, production of most communication activities had started (e.g., website, social media, newsletters), with the exception of those material more results-dependent (e.g., practice abstracts, tailored communication material). Video production already exceeds initial expectations, with a total of 8 videos joining a general video on the project and specific pieces on cases studies and tasks.

Table 4. Main KPIs for communication activities.

Tool	KPIs at M16	Target at M46
AquaVitae official website Aquavitaeproject.eu	5,567 sessions	50,000 sessions
Social Media @aquavitaeEU	1,025 followers	2,000 followers on Twitter, Instagram and ResearchGate
Press releases	5 press releases distributed at international and local media among a database of around 100 media	20 press releases distributed through a database of at least 50 media
Digital Newsletters	2 newsletters	8 newsletters
Tailored communication material	0 tailored products	14 tailored products [11 products (1 per CS) + 3 per cross-cutting topics]
Practice abstracts	0 practice abstracts	20 practice abstracts
Videos	8 videos	5 videos

Audience of communication activities

During the first 18 months of the project duration, the main communication activities have been focused on "Communication campaigns", "Press releases" and "Social media" activities (see Table 5). The average audience size per activity is 19,440 participants, which is boosted by the reach of activities organized in Brazil, Norway, South Africa and Spain; and the wide reach of communication activities (see Table 6). These tables summarise all the activities developed by partners and detailed in the Annex I.

As examples, the initial press release on the kick-off meeting was translated and printed in about 41 media outlets in 9 different countries, achieving a potential audience of 180 000. Regarding videos, both the English version and the one in Brazilian Portuguese have been watched around 200 times on YouTube.

Table 5. Number of communication activities.

Communication activities	Number
Communication campaign (e.g. radio, TV)	81
Flyers	2
Participation in activities organised jointly with other H2020 project(s)	2
Participation in an event other than a conference or workshop	1
Press release	16
Social media	7
Video/film	2
Website	2
TOTAL	**113**

Table 6. Average and total audience in AquaVitae communication activities.

All communication activities	Average	Size of audience
Communication campaign (e.g. radio, TV)	25,564	2,050,107
Flyers	150	850
Participation in activities organised jointly with other H2020 project(s)	425	707
Participation in an event other than a conference or workshop	354	100
Press release	100	146,494
Social media	9,156	2,135
Video/film	305	490
Website	245	1,000
Communication campaign (e.g. radio, TV)	500	2,050,107
TOTAL	**19,443**	**2,201,883**

Digital channels audience

AquaVitae's presence on digital channels has been consistent since September 2019, when AquaVitae launched its website complementing its Twitter and Instagram profiles, which have been active since June 2019. Social media offer instant connection with interested parties, along with a flexible platform to support interaction and branding activities with the European research and policy communities. Instagram represents a peculiar case, as it has established itself as a window for young Brazilian users.

A temporal analysis of the website statistics, provided by Google Analytics and shown in Figure 3, marks the period between March and July 2020 as the most successful in terms of views and sessions on the website. This fact matches the project calendar, which hosted its annual meeting (28-30 April 2020) and launched several activities in that period (e.g., a survey on sustainability, scuba dive session with the Norwegian Minister of Fisheries and Coastal Affairs).

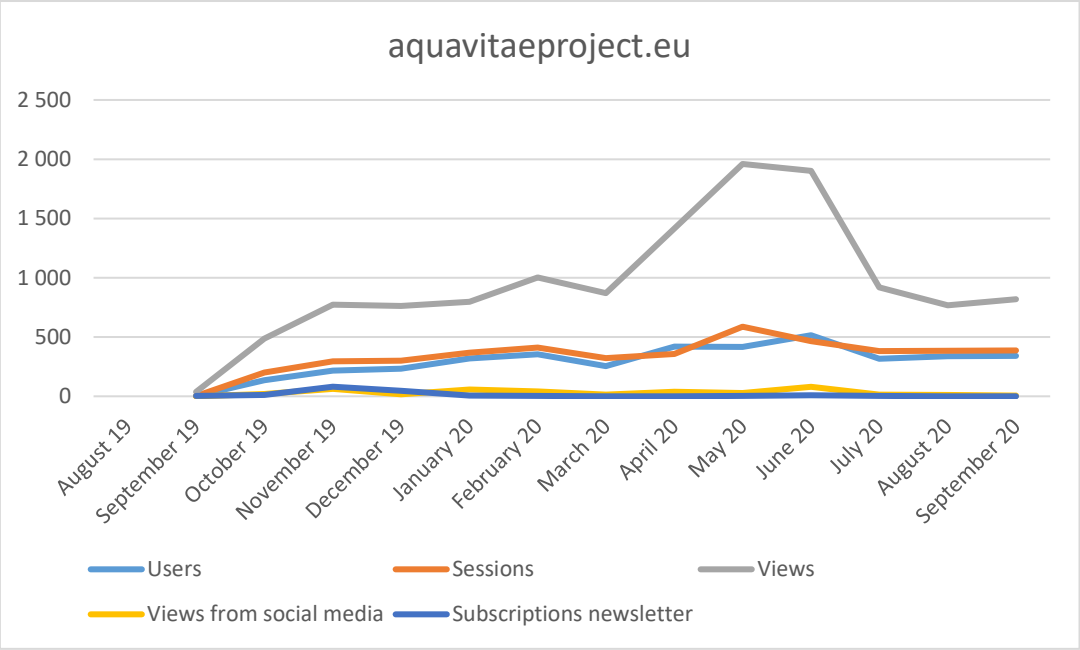


Figure 3. Main indicators of the AquaVitae website.

The audience size through the different social media channels (Twitter, LinkedIn Group and Instagram) follows uneven patterns (see Figure 4). While Aquavitae LinkedIn group steadily increases its membership, Twitter and Instagram reflect peaks of activity whenever the project organises outreach activities, such as the participation in the All-Atlantic Ocean Research Forum (February 2020) or the AquaVitae First Annual Meeting. Interaction rates on social media reflect the same pattern as the audience size, but in geometric proportion (see Figure 5). As in other projects, the celebration of networking events (e.g., Atlantic Forum, annual meeting) causes higher interaction with the project and its social media profiles.

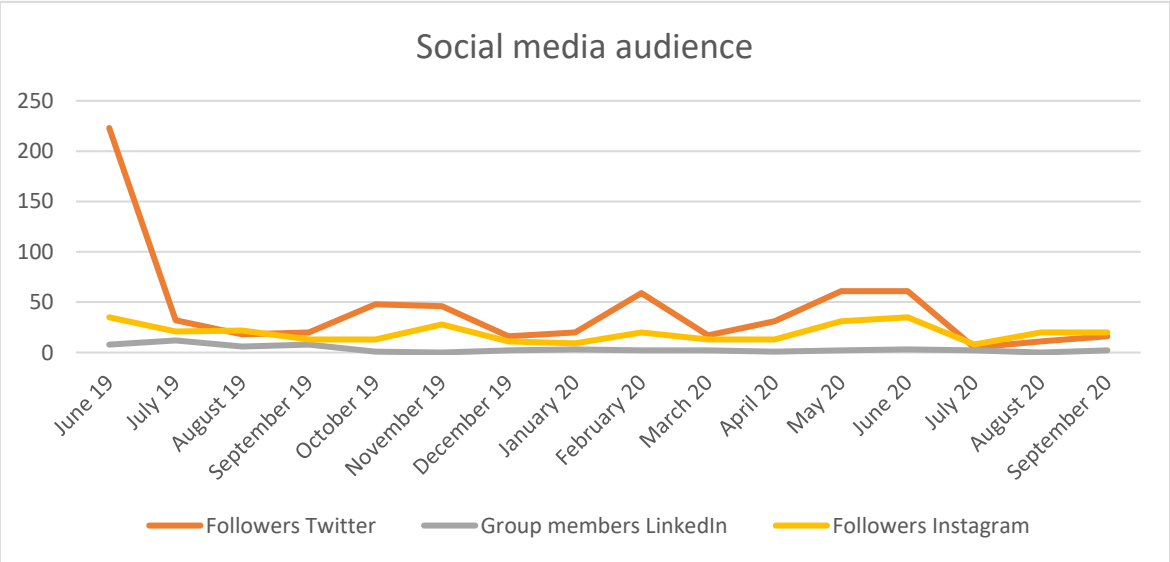


Figure 4. Size of audience through social media channels.

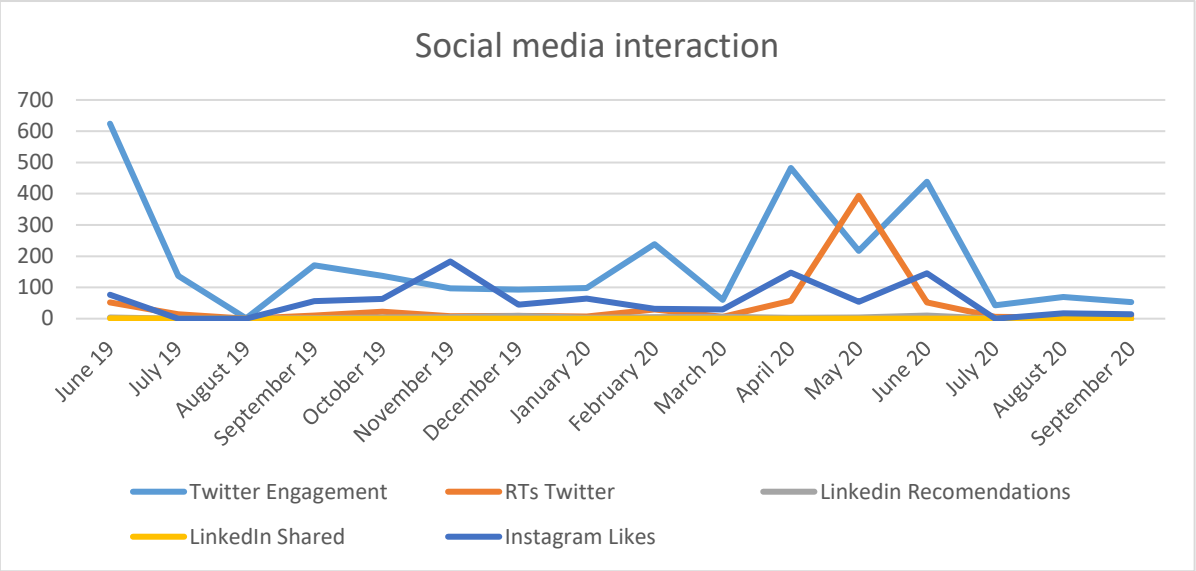


Figure 5. Interaction through social media.

Networking activities and synergies

Collaboration with the Atlantic Research Community, led by the H2020 project AANChOR, has been constant. This group also involves the H2020 initiatives iAtlantic, Triatlas, ASTRAL and AtlantECO, grouped in the H2020 BG08 call. Collaboration with the All Atlantic sisterhood is established through a set of working groups under the topics of Coordination, Capacity building, Knowledge Transfer and Communication, Data sharing and standards, Ocean literacy and awareness and alignment of R&I infrastructures. In addition to the coordinator and the WP9 leader several AquaVitae partners have actively attended and contributed to the activities in each thematic areas. AquaVitae has also participated in the ASTRAL and AtlantECO consortium meetings, two of the projects funded in the second round of the BG-08 call.

The high-level event "Aquaculture meeting in connection to the All-Atlantic Forum Event" (Brussels, February 2020) allowed the partners to review the collaborative links between projects, and to discuss new opportunities in the AANCHoR workshops. AquaVitae partners from Europe and South Africa were present. AquaVitae was also represented at the European Aquaculture Technology and Innovation Platform (EATiP) meeting to support the trans-Atlantic cooperation. The summary report "Towards an All-Atlantic Ocean Research Alliance"[5] highlights AquaVitae, German-Brazilian research network BluEcoNet and AANChOR Coordination and support action participation as an opportunity to gain insights into the projects.

This high-level event pinpointed the synergies among the endeavours, facilitating the participation of EATiP and AANChOR in the first stakeholder workshop, which was focused on the possibility to develop an EATiP mirror platform in Brazil (further explained in the section "Brazilian Aquaculture Stakeholder Workshop").

AquaVitae activities were held at several sectoral events. For instance, the project participated at Aquaculture Europe, where it had a stand and was selected to participate in the EATiP day "Low impact – High output", coordinated by the EATiP with the collaboration of the European Commission. Main collaboration with other projects materialised as workshops co-organised for

[5] Link

shared goals (e.g., workshop on seaweed cultivation with H2020 project Genialg) or as introductory presentations on AquaVitae activities.

In the first 18 months period, a handful of networking activities are highlighted because of their relevance at regional, international and trans-Atlantic level: the BluEco Net Industry Forum (Florianápolis, Brazil, June 2019), a workshop on policy aspects organised with the Portuguese association Proalga (October, 2019), a dedicated workshop on policy aspects of aquaculture in Brazil at the Brazilian national shrimp conference FENACAM (Rio Grande do Norte, Brazil, November 2019), a presentation at Arctic Frontiers (Tromsø, January 2020), participation at the fair Fish International (Bremerhaven, February 2020), a workshop in conjunction with Genialg "Seaweed aquaculture in Norway: Socio-environmental benefits and policy frameworks" (Oslo, February 2020), and the participation at the EU4Ocean Coalition for Ocean Literacy (On-line, October 2020).

Table 7. Calendar of future networking activities M18 – M45.

Activity	Nov 20	Nov 22	Nov 23
AANcHOR – All Atlantic Research Alliance	Collaboration to support project for a new EATiP mirror platform in Brazil: BrAtip Common meetings and activities in the framework of All Atlantic Forums. Synergies on social media: mutual content sharing.	Common meetings and activities in the framework of All Atlantic Forums. Synergies on social media: mutual content sharing.	AANcHOR ends. Initiative taking over trans-atlantic collaboration. Synergies on social media: mutual content sharing.
European Commission (e.g., DG Research and Innovation, DG MARE)	Communication and eventual meeting with DG Mare regarding guidelines for sustainability. Planned for 2021.	Collaboration though common topics (e.g., sustainability, LTS cultivation…).	Collaboration though common topics (e.g., sustainability, LTS cultivation…). Participation in final conference.
EATiP	Collaboration to support project for a new EATiP mirror platform in Brazil: BrAtip.	Trans-Atlantic collaboration.	Trans-Atlantic collaboration. Participation in final conference.
H2020 project Astral	Inter-project communication. Eventual collaboration on IMTA activities (e.g., synergies on IMTA work in Ireland	Inter-project communication. Eventual collaboration through IMTA CSs.	Inter-project communication. Eventual collaboration through IMTA CSs.

Activity	Nov 20	Nov 22	Nov 23
	between ASTRAL and AquaVitae WP1).		
BlueEcoNet	Possible collaboration to support project for a new EATiP mirror platform in Brazil: BrAtip mirror platform in Brazil: BrAtip.	Possible collaboration on trans-Atlantic cooperation.	Possible collaboration on trans-Atlantic cooperation.
JPI Oceans	Stakeholder interaction in collaboration with inEval (BlueBioCofund – JPI) through the sea urchins CS. New Strategy Framework 2021-25	Possible collaboration through new framework.	Possible collaboration through new framework.
FAO	Participation of WP6 - representatives in regional workshop.	Knowledge transfer of outputs related to sustainable aquaculture and LTS species.	Knowledge transfer. Participation in final conference.
European Fisheries Area Network – FARNET	Active monitoring of activity. Scope initiatives in LTS aquaculture. Contact through WP9 representatives.	Knowledge transfer of outputs related to sustainable aquaculture and LTS species.	Knowledge transfer. Participation in final conference.

Next steps

Based on this analysis, a set of measures are suggested:

- Encourage partners to share photos, videos and activities of field work, instead of contributing to a "death by Zoom screenshots".
- Increase the resources invested on content creation for "de-seasonalized" audience peaks and attract external audience out of leading events.
- Reach out to "silent" case studies, work packages and partners to encourage them to share updates on their activity.
- Continue collaborating with the Atlantic Research Community and the All-Atlantic Ocean Youth Ambassadors Initiative.
- Re-evaluate maintaining Facebook, as Instagram has established itself as a consistent window to young fans, especially among Brazilian audiences.
- Start the development of practice abstracts and dissemination material on deliverables, in case the COVID situation continues to keep partners separated.
- Scope the interest on translating contents into Brazilian Portuguese.

- If there is no new material, recycling updating and creating clipping material.
- Include cross-cutting case studies in promotional material.

4.- Review and update of the dissemination plan

Dissemination aims to support the access to the project results, represented by presentations at conferences, scientific publications, training activities or workshops with stakeholders. Although the project started to participate at different events and to prepare scientific publications early on, COVID had a major impact on dissemination activities as lockdowns cancelled most of the conferences, trade fairs, and transoceanic meetings, while partners in remote areas struggled to substitute physical meetings for virtual calls due to either problems with internet connection, lack of digital literacy, and/or companies prioritising economic issues over research collaboration.

Main KPIs

A complete overview of the KPIs elated to dissemination activities is available at table 7. In particular, AquaVitae partners participated in three events of international relevance:

- A project booth at the Aquaculture Europe conference (Berlin, October 2019).
- Fish Fair International (Bremerhaven, Germany, January 2020).
- All Atlantic Conference (Brussels, February 2020).

Furthermore, two open access peer-review publications have been issued:

- "Assessing the impact of bivalve aquaculture on the carbon circular economy". A.A. Alonso, X. A. Álvarez-Salgado, L. T. Antelo. Journal of Cleaner Production. https://doi.org/10.1016/j.jclepro.2020.123873
- "Evidence of total suspended solids control by Mugil liza reared in an integrated system with pacific white shrimp Litopenaeus vannamei using biofloc technology". Mariana Holanda, Gabriel Santana, Plinio Furtado, Ricardo Vieira Rodriguez, Vinícius Ronzami cerqueira, Luís André Sampaio, Wilson Wasielesky Jr., Luis Henrique Poersch. Aquaculture Reports. https://doi.org/10.1016/j.aqrep.2020.100479

During this period, training was aimed at internal partners starting with an internal workshop to develop partners' skills as trainers. This training for trainers' workshop was held in the First AquaVitae Annual Meeting. Topics were chosen to back partners doing scientific presentations, mentoring students or apprenticeships and creating and dynamizing Massive Open Online Courses (MOOC), the main activities covered in task 9.6. The student exchange programme was initiated with a student from the University of New England (US) coming to IVL (Sweden).

This progressive introduction of partners into training needs, skills and duties will allow them, on the one hand, to be better prepared to host training activities in their local communities and to facilitate the transfer of the project outputs to external participants. On the other hand, the celebration of the final conference at the end of the project will benefit from the precedent efforts in engaging audiences and involving external stakeholders.

Table 8. Main KPIs for dissemination activities.

Tool	KPIs at M16	Target at M46
Open access peer-review publications	2	12 publications in peer-reviewed journals
AquaVitae Workshops and meetings	7 events with around 80 participants	45 events with > 400 participants
Training activities	MOOC under development One student exchange approved	50 certificates in AquaVitae training actions. 5 student exchanges. 5 apprenticeships.
Conferences, trade fairs and events	3 events of international relevance	10 events of international relevance
Final conference	n/a	250 participants

Training activities

Within the training plan for the upcoming period, AquaVitae will offer student exchanges for at least five students, with the first exchange between US and Sweden already in place. Student exchange is a capacity building opportunity, both for the students and their home and host institutions. Students have the possibility to expand their international network, while simultaneously participating in institutional knowledge exchange. Mobility among the PhD and Masters students is encouraged, as it creates additional channels for the dissemination of knowledge, enhances the development of transferable skills and provides access to a greater scientific community.

Apprenticeships are structured learning programs in which an inexperienced person works with a skilled professional, gaining practical on-the-job experience. Training for professionals through AquaVitae in the aquaculture field will be implemented with an international industrial apprenticeship program. These apprenticeships can be conducted at industry organizations in the consortium and/or other industry organizations, and they should have a trans-Atlantic approach. The project foresees a maximum of five apprenticeships with up to a 6-month duration.

AquaVitae's MOOC on Sustainable Aquaculture for Low Trophic Species (SALTS) will serve as a tool towards building capacity concerning sustainable food production in the world. This massive open online course (MOOC) is an alternative to traditional schooling. The programme will contain approximately 10 modules that will cover topics such as production systems (IMTA, RAS), various low-trophic species (molluscs, echinoderms, novel species, etc.), governance and value chains. Each module will consist of several lectures where each lecture has an opening video (film or animation), texts to read and other material, and obligatory participation in a discussion forum. To pass a module, the student needs to respond adequately to a quiz or, in every second module, do an assignment.

Complementary, AquaVitae will continue to organise monthly webinar meetings (webinar title being 'Low Trophic Life') with 20-minute presentations on a topic that a young researcher in AquaVitae has worked on.

Train the Trainers activities are conducted at least twice a year in connection to the AquaVitae meetings in spring and fall. Topics are chosen according to teacher's wishes and needs.

Due to Covid 19 there is an increased need for online educational material and capacity building among teachers. AquaVitae accommodates this by enhancing the activity on Training the Trainers and the MOOC including material for use in e.g. flipped classrooms (see Table 8 below). The student and apprenticeship exchanges have been delayed, but they are still planned to take place during the remaining project period.

Table 9. List of upcoming AquaVitae training activities.

Training format	Activity	Date	Participants (profile and number)
Industry apprenticeships	Capacity building and networking	2021-2022	5 Apprentices
Student exchange	Capacity building, transversal skills and networking	2021-2022	5 University students
Online event at annual meeting	Review list of students, apprentices, and host institutions	May 2021	AquaVitae consortium and industry partners
Webinars	Workshop to promote and prepare for apprenticeships and student exchange despite Covid	September 2021	All consortium partners, apprentices and students identified for exchange
Train the Trainers Video package followed by online Q&A session	Training trainers on how to produce short informative videos for online courses and flipped classrooms	March 2021	All consortium
Online workshop	Train the trainers on how to create online assessments	April 2021	All consortium
Train the Trainers at the virtual AquaVitae annual meeting	How to ensure a successful PhD/Master project	May 2021	All consortium and graduate students
Train the Trainers at the virtual AquaVitae CS and WP leader meeting	Flipped classroom and other approaches to increase student active learning	November 2021	All consortium
MOOC. All steps in chart below	SALTS launched	March 2022	All consortium and the world

The SALTS MOOC requires a lot of work and UiT has applied for and received additional funding to ensure a complete and technically advanced course and associated material. The course development process is indicated in the chart below (Table 9).

Table 10. Chart describing the timeline of the steps towards the final massive open online course on Sustainable Aquaculture for Low Trophic Species (SALTS).

	Who?	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
Intended Learning Outcomes (ILO) Developed	UiT															
Modules content outline developed	UiT															
Module structure outlined	UiT															
Assessment methods outlined	UiT															
ILO, modules content outlines and structure sent of for feedback	UiT															
Contributors confirmed	All															
Instructional videos developed & distributed	UiT															
Workshop on assessment	All															
Pilot modules ready	Selected															
Feedback on pilot modules collected (meeting)	All															
All modules ready for testing	All															
Feedback on modules (meeting with referance group)	All															
All modules ready and online	All															

Audience of dissemination activities

Most of dissemination activities in the first 16 months of the project belong to the categories "Participation in conferences" (Aquaculture Europe, Arctic Frontiers 2020, Portuguese Association of Applied Phycology), and "Participation and organisation of workshops" (Sustainability in Nomad Foods, BlueEconet Industry Forum) along with a high number of meetings with stakeholders, grouped under the category "Other".

In contrast with communication activities, in which bigger audiences are managed due to the mass character of some media, dissemination activities (see Table 11) involved a reduced number of participants, but usually higher impact (see Table 11). Popularised publications, as the project newsletter, and either the participation or organisation of conferences and workshops allowed the project to reach representatives of the industry, policy-makers, NGOs, and academia. Brazil, Norway, Germany, Portugal, Peru and Spain stand out as the countries in which AquaVitae has had more impact.

Table 11. Number of dissemination activities.

Dissemination activities	Number
Organisation of a conference	1
Non-scientific and non-peer reviewed publications (popularised publications)	2
Participation in a workshop	9
Organisation of a workshop	12
Other	14
Participation in a conference	16
TOTAL	56

Table 12. Average and total audience in AquaVitae dissemination activities.

Dissemination activities	Average	Size of audience
Non-scientific and non-peer reviewed publications (popularised publications)	150	300
Organisation of a conference	50	50
Organisation of a workshop	27	332
Other	4	54
Participation in a conference	146	2,340
Participation in a workshop	63	575
TOTAL		3,651

Implementing the Aquavitae Multi-actor Approach

AquaVitae multi-actor platform is formed by several groups (Industry Reference Group – IRG, Policy Advisory Group – PAG) that collaborate with the AquaVitae project by providing insights and complementing research with their experience. These groups complement the research-industry partnership at the core of all the case studies in the project, where a minimum of a research partner and an industry partner collaborate hand in hand.

During these first 18 months the project has been mainly involved in:

- The identification of stakeholders relevant for the implementation of a multi-actor platform.
- Organisation and kick-off of the collaboration at case study level with the organisation of online and off-line meetings for the definition of the case study shared goals.

The following table summarizes the interactions with stakeholders that will be fully detailed in D9.11 AquaVitae multi-actor platform.

Table 13. Interactions with stakeholder from M1 until M18.

Method	Date	Topics	Participants
10 Case Study Kick-off meetings with stakeholders. A CS had 2 meetings in different locations, 3 case studies held a common kick-off meeting.	September 2019 – February 2020	Common CS plan for research, industrial partner and other involved stakeholders. Project presentation. Common guidelines and rules for project implementation (e.g., consent form, etc).	From one industrial partner to 31 participants, depending on the CS needs and industrial partners and stakeholders' availability.
1 Workshop at project level - Brazilian Aquaculture Stakeholder Workshop	29 April 2020	Project to develop an EATiP mirror platform in Brazil. Research needs of the Brazilian aquaculture sector.	Around 100 participants from the industry, policy and research sectors in the EU, Brazil and South Africa.
3 CS Barriers & Opportunities Meetings	From October 2020.	Feedback on the first prototype related to: -Prototypes and outputs development (e.g., CS1 focus on light intensity, water motion as relevant indicators). -Development of protocols (e.g., holding systems and tank design in CS6). -Potential bottlenecks (e.g., training needs in CS5). -Addressing sectoral challenges (e.g., new abalone feed potentially valid for more markets by CS3, 4, 7). -Cross-fertilization of knowledge (e.g., CS1 synergies with report CEN/TC 454 on algae and algae products).	From a pair of industry representatives to more than 20 representatives of the industry, policy and research sectors, depending on the breadth of CS activities.

The proposed interaction strategy is adapted to the reality of each CS, ranging from inter-Atlantic to local coverage, from mono-species to multi-species scope. Cases studies 1 Macroalgae new species, 3 Land-Based Integrated Multi-Trophic Aquaculture (IMTA), 4 Sea-based IMTA, and 5 Biofloc and pond-based IMTA had organised the first Barriers & Opportunity

meeting at month 18, while CS 6 Sea urchin roe enhancement had resorted to phone-interviews to get feedback from their stakeholders. Other CSs have planned to hold their interactions in the forthcoming months to complete their first loop.

The COVID will delay the loops cadence by six months. The reviewed calendar is available in the following table.

Table 14. Reviewed milestones for the loop-development.

Prototype Development Stages	CS KO Meeting	CS End of First Loop (MS7)	CS End of Second Loop (MS11)	Final prototypes and meeting (MS11)
Estimated time	Nov 19	Nov 20	Nov 22	Nov 23

Analysing the Multi-Actor Approach

The social network analysis (SNA) studies the behaviour of the individual at the micro level, the network structure is traced by the pattern of relationships at the macro level, and the interactions between the two[6][7]. In this case, the analysis was applied to the AquaVitae project, where the micro level was composed by the stakeholders related to the case studies (CSs) and work packages (WPs) of the project. The relations were stablished by CS and WP leaders according to the stakeholders' interest and participation in these CSs and WPs.

The identification of stakeholders started at the kick-off meeting, where the partners provided the contact details of a series of organisations (companies, NGOs, policy-makers, research centres...) with a potential relation to the work to be developed in AquaVitae.

They are all described as networks with the nodes (the green bubbles) being the stakeholders (for instance, industry organizations, management authorities, companies, research institutions, etc.) and the relationships being described as lines between the nodes. The type of relationships is described by the frequency of the interaction.

The resulting graph can reveal patterns of connection among stakeholders and the project as a whole. Small networks are represented visually, and these linkages are easily visualized and may make apparent patterns of connections, and reveal nodes that are highly connected or which play a critical role in connecting groups together. As the network representation of the project, it becomes necessary to apply graph analytic techniques to compute the characteristics of nodes and the graph as a whole[8]. In this sense, the data collected are analyzed by means of several

[6] Stokman, F.N., 2001. Networks: Social, in: International Encyclopedia of the Social & Behavioral Sciences. https://doi.org/10.1016/b0-08-043076-7/01934-3

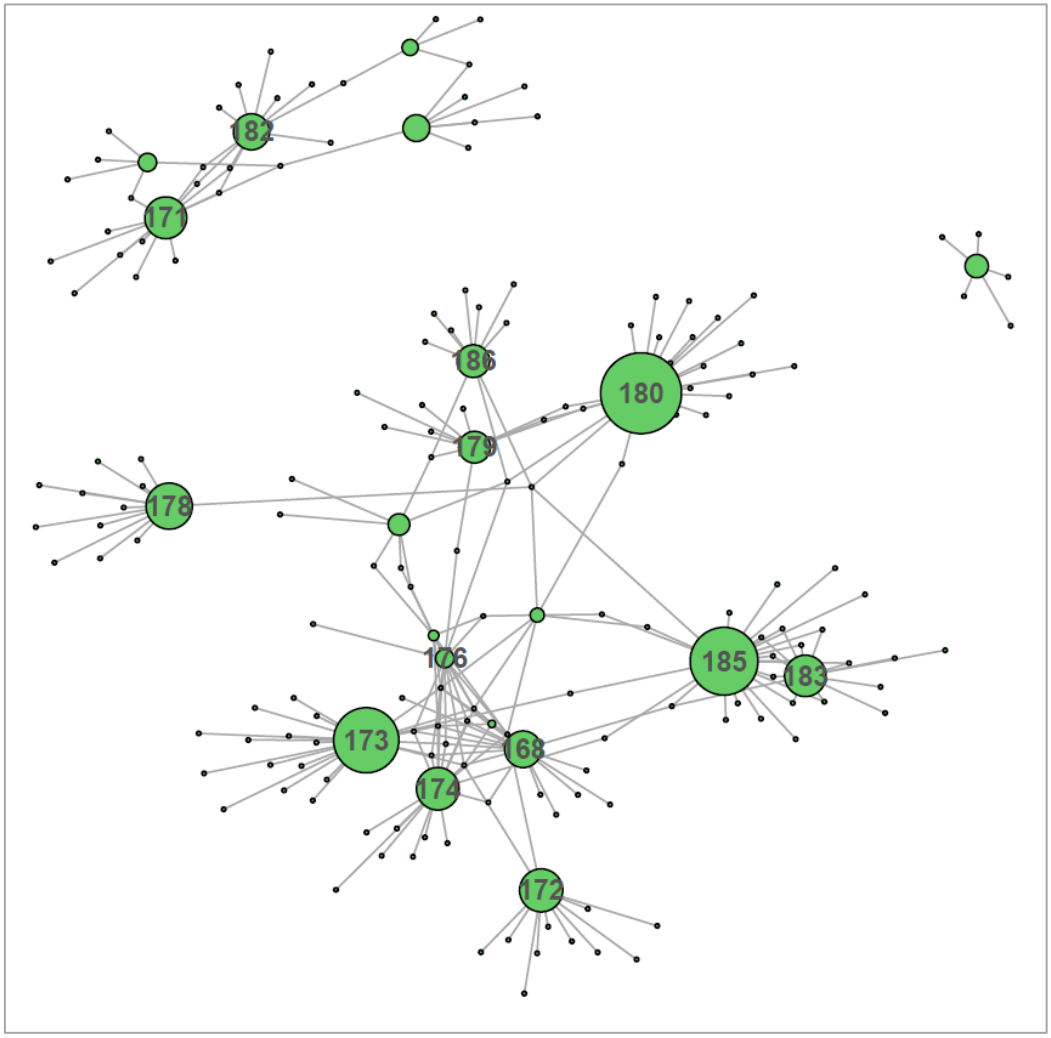
[7] Brender, J., 2006. Handbook of Evaluation Methods for Health Informatics, Handbook of Evaluation Methods for Health Informatics. https://doi.org/10.1016/B978-0-12-370464-1.X5000-X

[8] Powell, J., Hopkins, M., 2015. Graphs and the Semantic Web, in: A Librarian's Guide to Graphs, Data and the Semantic Web. https://doi.org/10.1016/b978-1-84334-753-8.00003-8

techniques that illustrate the relationships, in particular the igraph[9]. The igraph is a collection of network analysis tools with the emphasis on efficiency, portability and ease to use. Igraph is open source and it was programmed in R to illustrate the social network in the initial moment of the project AquaVitae.

In addition to the igraph, the method called Pagerank[10] was applied. PageRank is a method developed by Larry Page and Sergey Brin (Google founders) at Stanford University that uses the link structure of the web to rank the importance of web pages, and assigns numeric values to represent their importance. This can be applied in SNA highlighting those stakeholders, WPs or CSs more popular and representing this relevance by expanding their nodes volume. The AquaVitae network is represented in the Figure 6, limited to the most connected nodes, and Figure 7, reflecting the whole network.

Figure 6. Nodes (Aquaculture WP and CS) with more than eight connections. The nodes are referred as follow: 171:WP9; 182:CS13; 178:WP5; 180:CS9; 183:WP6; 185:CS6; 186:WP4; 179:CS9; 176:WP1; 168:WP2; 173:CS2; 174:CS3; 172:WP8]



[9] Csardi G, Nepusz T. 2006. The igraph software package for complex network research. InterJournal, Complex Systems, 1695. https://igraph.org.

[10] Brin S. and Larry Page, L. 1998. The Anatomy of a Large-Scale Hypertextual Web Search Engine. Proceedings of the 7th World-Wide Web Conference, Brisbane, Australia, April 1998.

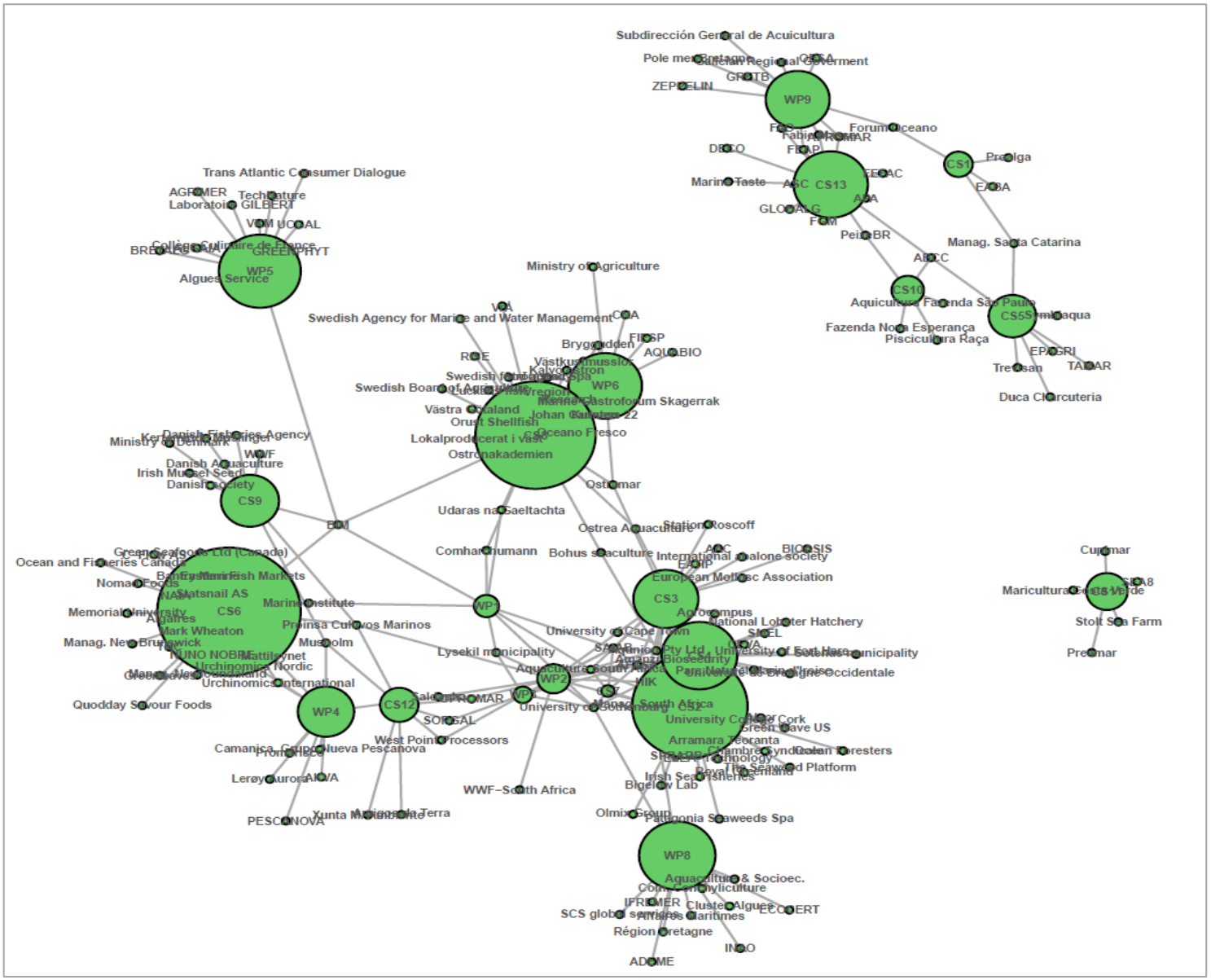


Figure 6. Social network analysis of AquaVitae multi-actor platform and related WPs and CS.

The analysis highlights the following aspects regarding the identified stakeholders:

- Two main clusters are sketched. One across the Atlantic (Brazil-Portugal-Spain), the other links several WPs and CS.
- Most connected nodes reflect CS2 (macroalgae offshore production), CS6 (sea urchin), and CS8 (oysters) activity. The latter having many shared connections with WP6 (environmental monitoring and risk assessment).
- CS3 and CS4 (IMTA land-based and sea-based, respectively) form a cluster with CS2 (macroalgae offshore production). They are also linked to the sub-cluster formed by CS8 (oysters) and WP6 (environmental monitoring and risk assessment). This structure is coherent with the task division of these CSs, as certain activities are shared between the group. Whereas CS8 and WP6 are led by the same institution, therefore being prone to share some connections.
- WP4 (data and monitoring devices), CS12 (by-products) and CS9 (mussels) are connected to CS6 (Sea urchin).
- WP5 (working mainly on food security and nutrition) and WP8 (policy) form self-sustained clusters. This situation is likely to change, as they will require more information and feedback from stakeholders.
- WP9 (training and outreach), CS1 (algae new species), CS5 (biofloc and pond-based IMTA), CS13 (LTS feeds), and CS10 (finfish species) are connected thanks to shared stakeholders working across the Atlantic in common tasks, mainly in Portugal and Brazil.

This exercise will be iterated in the forthcoming deliverables on the dissemination activities to reflect adaptations and evolution of the multi-actor stakeholder platform. For instance, CSs and WPs are expected to diversify their scope at the same pace as the project evolves.

The double-loop processes

A feedback session on stakeholder interaction was organised during the first Annual Meeting, gathering feedback from WPs and CSs leaders on stakeholders' interests and lessons-learnt, factors to be improved and general feedback on the double-loop process.

Table 15. Internal evaluation of the kick-off meetings round.

Stakeholders interests & lessons-learnt	Factors to improve
- Develop, test protocols and evaluate future applicability of the results. - Need to intensify the exchange between CSs and WPs. - Need to adapt to different challenges in different countries. - Need to allocate time for debates and discussion. - Differentiate between internal issues and topics that need to be discussed with stakeholders.	- Diminish administrative tasks required from stakeholders (i.e., consent form). - Gather enough geographical representation in meetings. - Have stakeholders testing the prototypes and outputs at commercial scale.

As a result of this session, an online version of the stakeholder form was implemented. Furthermore, an adapted version of the prototype framework[11] was suggested for CSs to receive the stakeholders' feedback on the first prototype, featuring the main goal and indicators compiled on the testing session of the prototype, and including feedback from stakeholders as well as possible future pathways to continue the research.

Table 16. Modified prototype framework to structure the stakeholders' feedback on the first prototype.

What? Development goal	Summary of testing session (location, when, tools, staff, users, measuring tools, observations, comments, indicators/measurements)	Stakeholders feedback for evaluation (data, bottlenecks, possible modifications, other feedback)	Future research lines
…	…	…	…

The arrival of the COVID pandemic has impacted CSs development, with physical meetings being cancelled in all the countries covered by the project. Some industry participants are re-evaluating the priorities in their businesses as they struggle to stay afloat throughout the pandemic. Digital meetings were crucial already for the first loop, with 5 out of 10 meetings taking place online to bridge the physical distance in international case studies. Currently, CSs are receiving stakeholders' feedback on the first prototype ("Milestone 7. Stakeholders feedback on the first prototype"). Taking into account factors as stakeholders' availability, digital literacy, technical developments, and task interdependencies, each CS is readapting its development to effectively achieve the planned outputs. This will result in an extended first loop for some case studies.

Brazilian Aquaculture Stakeholder Workshop

Following the dialogue started in the meeting organised by the EATiP in connection to the Al-Atlantic Forum event (Brussels, February 2020), the first online annual AquaVitae meeting hosted a workshop with Brazilian stakeholders in order to spot further collaboration pathways between the European, Brazilian and South African aquaculture sectors, among them the possibility of creating an EATiP mirror platform in Brazil. The session had the participation of more than 90 stakeholders from Europe, Brazil and South Africa, including the companies participating as partners in the project as well as partners not directly participating.

Among the attendants, there were representatives of the following organisations:

[11] Extracted from the document "Social Impact Tools" by the Transition project, H2020 project under Gran Agreement 604849.

Table 17. Attendants at the Brazilian Aquaculture Stakeholder Workshop.

Organisation	Profile	Activity	Geographical Scope
Guabi Nutrição e Saúde Animal	Aquaculture sector	Feed producer	Brazil
ABCC - Brazilian Shrimp Farming Association	Aquaculture sector	Assoc. Of shrimp producers	Brazil
Brazilian Fishfarming Association - Peixe BR	Aquaculture sector	Assoc. Of aquaculture producers	Brazil
Aquabio - Brazilian Society to Aquaculture and Aquatic Biology	Aquaculture sector	Society for the research on aquaculture and aquatic biology	Brazil
FIESP - Sao Paulo State Industries Federation	Aquaculture sector	Assoc. Of companies	Brazil
Ministério de Ciência, Tecnologia, Comunicações e Inovações - Brasil	Policy and administration	Ministry of Research and Innovation	Brazil
PEIXESP - Sao Paulo State Fish Farming Association	Aquaculture sector	Assoc. Aquaculture producers of Sao Paulo state	Brazil
Symbiaqua	Aquaculture sector	Aquaculture producer	Brazil
Escama Forte	Aquaculture sector	Aquaculture producer	Brazil
Aquaculture and Fisheries Secretary of the Ministry of Agriculture and Livestock - SAP-MAPA	Policy and administration	Governmental department managing aquaculture activities	Brazil
Aquaculture Commission of the National Confederation of Agriculture - CNA	Policy and administration	Department in charge of implementing aquaculture measures	Brazil
EATiP	Aquaculture sector	Technology platform	EU
AANChOR	Research	H2020 research project	EU
DG Research	Policy and administration	EU Directorate General for Research and Innovation	EU

Organisation	Profile	Activity	Geographical Scope
REA	Policy and administration	EU management of Research and Innovation Funds.	EU
ASTRAL	Research	H2020 research project	EU
Innovation Norway	Policy and administration	Research department	Norway
FAO	Policy and administration	UN agency aiming to tackle hunger worldwide	World

The workshop covered the topics listed below:

- Multi-stakeholder collaboration in aquaculture,
- Brazilian R&D status and needs
- AquaVitae, as a stepping stone to foster trans-Atlantic cooperation
- BlueEcoNet, Innovation Norway and AANChOR contributions for an aquaculture platform in Brazil.

Discussion covered the following topics:

- The need for scientific evidence in the policy-making process in Brazil. Currently, several different departments cover aquaculture production, from environmental assessment to labour hiring. Coordination between different governmental agencies and the licencing process could be improved.
- Dialogue between the research and production sector can be improved, as companies have also a role play to in technology development.
- Diversity of environments in Brazil poses difficulties to any global endeavour, as the country has a continental biodiversity, and also produces species with very different needs and with a fragmented industry, in some cases
- EATiP previous experience (e.g., Bangladesh) shows that platforms are an opportunity to have a shared voice and participate in the public dialogue.
- In the case of South Africa, the funding options for an innovation platform are critical, as the country has a small number of producers and limited funding form the government.

The discussion raised important topics to base the next steps for developing closer links between the Brazilian and European aquaculture industries.

Next steps

Some actions are suggested in view of this indicators:

- Encourage visibility of AquaVitae work with the partners' participation in scientific activities, such as conferences and scientific publications.
- Look for training needs at case study level and, if possible, encourage the organisation of activities to meet these needs.

- Involve partners in the review of the stakeholder strategy, to curb COVID related fatigue and support their activity.
- Offer dedicated digital services for online meetings (e.g., Zoom, Webex) and digital interactive workshops (e.g., Miro, Mural) to face the banning on travelling.
- Allocate more personnel and time resources for event planning, since digital meetings require more preparation (e.g., testing connections, rehearsals, content adaptation).
- Review the multi-actor platform with CSs and WPs to ensure suitability and geographical and topical stakeholders' representability.
- Circulate the results of social network analysis, the multi-actor platform and related protocols so that WP and CS leaders are aware of the potential of AquaVitae connections to connect the project work with further regions or different disciplines, when needed.

5.- Review and update of the exploitation plan

Monitoring of exploitable outputs of the AquaVitae project occurs at several levels. The structure of WPs 1, 2, 3 and 4 foresees the periodic monitoring and characterisations of the technical advances in aquaculture processes and technologies. WP9 contributes to this task by complementing summaries of the technical developments with the description of man outputs from the so-called "evaluation" WPs, focused on horizontal tasks such as nutrition analysis and food safety, environmental monitoring and risk assessment, socio-economic and policy analysis, and training and outreach.

The methodology applied simplifies the table used by the European Commission to categorise Key Exploitable Results (KERs), as "any tangible or intangible output of the action, such as data, knowledge and information whatever their form or nature, whether or not they can be protected, which are generated in the action as well as any attached rights, including intellectual property rights"[12].

Along several meetings, work package leaders and selected task leaders agreed upon applying a simplified version of the form used by the European Commission, as the early stage of the upcoming outputs would not allow for a detailed description yet. The complete version of the table, based on the form by the European Commission, contained the following fields:

- Title,
- Message to potential user,
- Video,
- Logo,
- Main Project,
- Policy related result,
- Result type,
- Related EC Policy Area,
- Result description,
- Result Contributors,
- Keywords,
- Radical Innovation Breakthroughs (RIBs),

[12] Available at https://webgate.ec.europa.eu/funding/pages/viewpage.action?pageId=9962377. Latest visited on 12/11/2020.

- Target audience,
- Needs,
- SDGs,
- Influence on Policy,
- RTD aspects,
- Investor readiness,
- Testimonial,
- Other info/ data

The following simplified version was applied:

- KER title
- Result type
- Business sector(s)
- Description
- Keywords
- Audience
- Related Sustainable Development Goals (SDGs)
- Other

With the goal of prioritising results with the highest probability of being used by external audiences, partners looked at innovation and exploitability or possible impact. However, disparity in the development stages has showed the interest of continuing to enrich this task throughout the project. Moreover, when planned, activities in the framework of AquaVitae WP9 could promote them among its target users (e.g., tailored products for CSs, videos).

Most results produced by the project belong to the "Scientific or technological R&D": around 100 outputs from the 13 case studies (products and new species, processes and reports), together with the technological prototypes (UTOFIA biomass estimates, sensor for sulphite monitoring and the IoT platform) and the new methods for hatchery activities. Policy-related results are the analysis of the policy framework for low-trophic species, information on consumer concerns and preferences for LTS products and environmental analysis supporting the transition to sustainable practices. AquaVitae will also deliver intangible results such as the Good Practice International Standard on hatchery practices (CWA), results of socio-economic analysis, nutritional and food safety information on new aquaculture products and the trans-Atlantic network of stakeholders. So far, the major service is represented by the Massive Open Online Course (MOOC) GreenAquaEdu that will be organised with project partners.

A detailed description of these results can be found in the following table:

Table 18. Key Exploitable Results of the AquaVitae project at month 16 (October 2020).

KER title	Result Description
Scientific or Technological R&D Result	
New species, processes, and products developed in aquaculture value chains across the Atlantic	There is a total of 109 exploitable outputs (i.e. 48 products/species; 37 processes; and 24 reports) that will be developed across the Atlantic with a prime role played by low-trophic species. As an example, AV will develop a process to produce a new product (sea cucumber) that removes solid waste from abalone culture tanks in a land-based IMTA. Descriptions are periodically updated in deliverables from WP1, WP2 and WP3.
New or improved sustainable processes contributing to the circular economy by the utilisation of waste and by-products	Of the 109 exploitable outputs produced in AV, 22 report to CS12 and 13 where aquaculture products are cycled back into aquaculture production, to support more sustainable aquaculture processes across the Atlantic. Among the innovations are new diet formulations for shellfish (abalone), crustacean (whiteleg shrimp) and finfish (Senegalese sole, Brazilian flounder, pirarucu, tambaqui), that include valorisation of algae grown in and valorisation of aquaculture by-products, as shellfish $CaCO_3$. A detailed description is available in deliverables D2.1 and D2.2.
New hatchery standard for low-trophic species cultivation	Standardised commercial hatchery production methods for low-trophic species (e.g., oysters, mussels, macroalgae). These methods are being developed in collaboration with aquaculture producers in Europe, South Africa and Brazil.
Prototype of new online sensor for sulphite monitoring in aquaculture production	Food safety testing device: fast, portable, connected, rapid and cost-effective tool for sulphite monitoring in shrimp aquaculture. The result will facilitate sulphite analyses at various points in the aquaculture process, achieving better control of sulphite addition and avoiding contamination of the final product.
UTOFIA biomass estimates	A range-gating video camera with a customized software to measure lengths and volumes of observed objects.
IoT platform for integration of real and virtual sensor data	IoT platform for integration and analysis of sensor data.
Policy Related Result	
The information on consumer concerns and preferences in relation to new LTS products	The results will facilitate an application of consumer preferences in the LTS product development to design market-driven strategies.
Transitioning marine food production systems into a sustainable future	The results will facilitate an expansion of LTS mariculture around the Atlantic in a way that helps achieve Agenda 2030 in terms of resilient food production with an emphasis on sustainable production. Recommendations on how to optimize the sustainability of low-trophic species will be developed on a geographical, temporal and activity scale. The analysis will include ecosystem services quantification, risk assessment and management, and current environmental monitoring frameworks.
Analysis of the policy framework for low-trophic species and new processes in the Atlantic Area	An analysis of policy frameworks related to aquaculture of low-trophic species in the Atlantic Area with special focus on algae and IMTA in EU countries, Norway, South Africa and Brazil. This will be complemented with a report on producer perceptions to identify regulation and policy role in the development of the sector. Resulting recommendations will be summarized as a policy-brief to provide recommendations, good practices, obstacles and opportunities when developing an institutional framework for low-trophic aquaculture, perfectly applicable in other regions to the Atlantic Area.

KER title	Result Description
Other Intangible Results (Ex. citizens engagement platform, know-how, best practices, methodologies etc.)	
The Good Practice international standard (CWA) for hatchery practices of low-trophic species aquaculture	A voluntary industry standard will be published as a CEN Workshop Agreement (CWA) compiling robust hatchery protocols for new species (e.g., algae, echinoderms, shellfish) and processes (Integrated Multi-trophic Aquaculture). The standard will contribute to disseminate tested procedures to meet aquaculture companies' demands while supporting their innovation processes.
The nutritional and food safety information on the new aquaculture products	Guidelines on performing health risk benefit assessment.
Socioeconomic analysis and business plans for new aquaculture products and processes	The socioeconomic analysis will investigate the possible impacts of new aquaculture product and processes on local economies. The results will be applied in business plans for selected CSs for achieving full commercialization of the aquaculture products. These results can be used for business development, public policy and governance studies. Business Plans will be important tools in developing business partnership among stakeholders and partners along the Atlantic Ocean.
A trans-Atlantic network of aquaculture stakeholders, supporting industry-driven innovation.	More than 150 stakeholders collaborate with the AquaVitae multi-actor platform, either as partners, or collaborating through the Industry Reference Group (IRG) and the Policy Advisory Group (PAG). They represent industries, policy-makers, NGOs, academia and other aquaculture organisations in Europe, Africa, North and South America. This platform will remain open throughout the project life. The cooperation with the All Atlantic Ocean Community (the AANChOR project) contributes to the enlargement of this community. The network will highlight the emerging role of low-trophic species in the blue bioeconomy
Services (Ex. research infrastructures, educational sources, citizen helplines, etc.)	
MOOC - GreenAquaEdu	Massive open online course (MOOC) and resources for teachers applying flipped classroom on low trophic aquaculture to support sustainable food production. GreenAquaEdu will improve the professional skills and competences of teachers and those working and being trained to work within the blue economy and will help to create a well-trained workforce. The course development will also help harmonize knowledge and practices in industry and academia throughout the Atlantic Ocean.

The process of analysis proved to be crucial, as it facilitated intra-disciplinary communication and unveiled results that were not identified in the initial assessment, as the new hatchery practices for LTS species. The full version of the table is available in Annex II. with detailed description of each KER. AquaVitae already shows a large catalogue of innovations, each one linked to different policy and business areas (e.g., Research and Innovation, Maritime affairs and Fisheries, Environment, Climate action, Food safety, Consumers...), therefore, having potential impact on an array of areas. Each of these outputs have internal links to several activities within the project, outlining the need of iterating this analysis in a periodic and multidisciplinary manner. As lessons-learnt for the future exercises, the predefined audiences were too precise for this level of project development, and the analysis also introduced partners from third-countries to the policy areas structure of the European Commission.

The level of detail will be enriched in the reviews of the exploitation analysis planned for the following deliverables “D9.4. Second interim plan for the Communication, Exploitation and Dissemination of Results” (M36) and “D9.7. Final plan for the Communication, Exploitation and Dissemination of Results” (M46).

Next steps

Based on this analysis, a set of measures are suggested:

- Reassemble WP leaders and relevant partners for an exploitation workshop, where participants can provide their disciplinary and geographic expertise to provide input for the most relevant exploitation pathways for each result. This could provide a sense of co-ownership of the results, as well as pointing out potential international implementation actions, out of the EU scope. For more impact, the date could be coordinated with development milestones in the project, as development loops, annual meetings or Scientific Committee meetings.
- Increase the information on the European Commission structure and policy development processes, as well as on potential exploitation partners (e.g, investment companies, BlueInvest platform) to empower partners as exploitation ambassadors.
- Assess the participation in the support service Impact Booster to obtain an external support for dissemination and exploitation tasks in the project.

6.- Conclusions

The usual dynamics of project implementation have been irrupted by the advent of the COVID pandemic. All activities have undergone a digital transformation, with long term impacts still to be measured. For a project as AquaVitae, this poses some disadvantages as well as advantages. The latter includes supporting a wider participation using online platforms. However, the project will need to explore whether digital environments can support effective stakeholder feedback on prototypes and outputs development. This will be included in future Deliverables.

The following map reflects the size of the audience of activities of communication, dissemination and exploitation organised by AquaVitae partners. The impact on the geographical areas of project partners stands out.

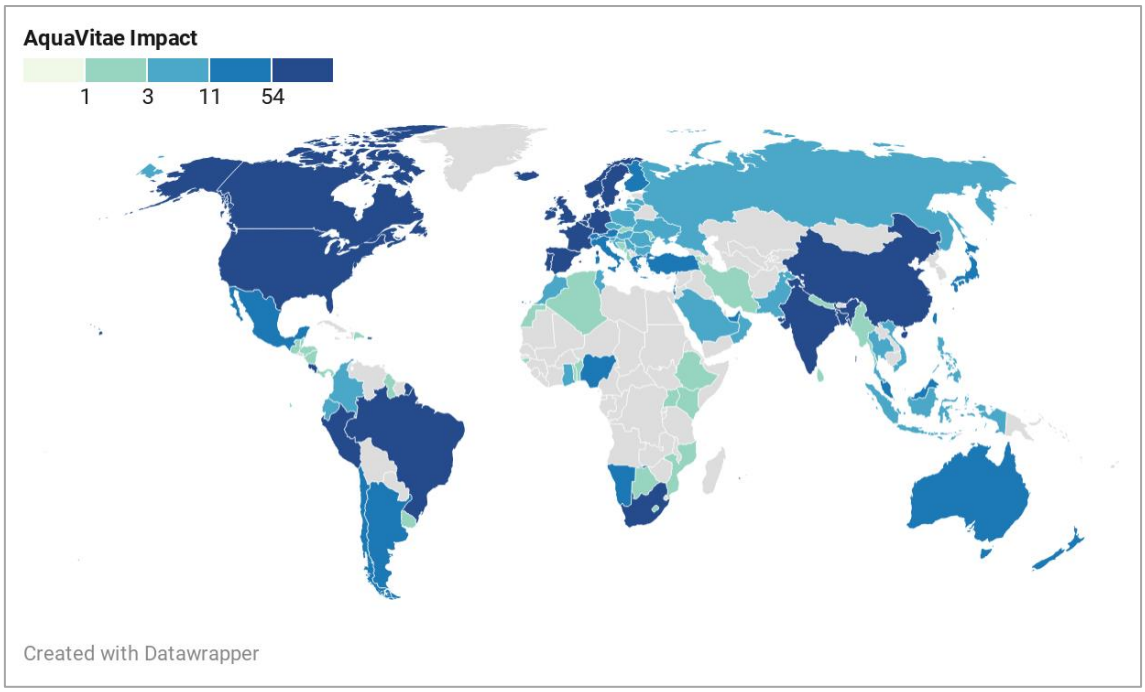


Figure 7. Audiences of communication, dissemination and exploitation activities organised in AquaVitae at global level.

In an uncertain environment, the management of communication, dissemination and exploitation will need to be more flexible than ever to respond to ever-changing circumstances and maintain the interest raised so far. The expected 6-month extension of the project period (June 2019 – November 2023) will offer an extended window to tackle any COVID related impact and continue the work to support the use of the project outputs. This document proposes a set of measures to encourage partners as active communicators of the AquaVitae message (e.g., boost to content creation, collaboration with other initiatives as the All-Atlantic Ocean Youth Ambassadors). Dissemination performance can be further strengthened with digital tools tailored to AquaVitae needs and the involvement of the consortium in the implementation of the multi-actor platform. Social network analysis contributes to visualize the internal structure of interactions with stakeholders. Intensifying the internal communication on the protocols for contacting stakeholders and the members of the multi-actor platform will contribute to interconnect stakeholders with several project CSs or WPs. This will contribute to a more efficient interaction with stakeholders. Finally, exploitation activities will benefit from periodic monitoring of the multidisciplinary and geographical diverse background of the project partners.

Annex I. Dissemination and communication activities M1-M16

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
NOFIMA, CETMAR	3-Jun-19	The fish site - Aquaculture community - Low trophic aquaculture on the spotlight in new EU funded project	Communication campaign (e.g. radio, TV)	General public	World	3000	Link
NOFIMA	3-Jun-19	Forskning.no - Forsiden - Skal forske på oppdrett av alger og kråkeboller	Communication campaign (e.g. radio, TV)	General public	Norway	2500	Link
NOFIMA	3-Jun-19	High North News - Nofima leder EU-prosjekt til 80 millioner kroner	Communication campaign (e.g. radio, TV)	General public	Norway	500	Link
NOFIMA, CETMAR	3-Jun-19	All About Feed - Animal feed news - Focus on low trophic aquaculture in new EU project	Communication campaign (e.g. radio, TV)	Industry	World	1000	Link
NOFIMA	3-Jun-19	Kyst.no - Pressemeldinger - Nofima leder EU-prosjekt til 80 millioner kroner	Communication campaign (e.g. radio, TV)	Industry	Norway	1000	Link
NOFIMA	3-Jun-19	Ilaks - Nyheter - Nofima leder EU-prosjekt til 80 millioner kroner	Communication campaign (e.g. radio, TV)	Industry	Norway	2000	Link
NOFIMA	3-Jun-19	Fiskeribladet - HAVBRUK - Har fått 80 millioner til å teste produksjon av kråkeboller, sjøpølser og østers	Communication campaign (e.g. radio, TV)	General public	Norway	8000	Link
NOFIMA	3-Jun-19	- Tare, sjøpølser og kråkeboller kan fôre verden	Communication campaign (e.g. radio, TV)	General public	Norway	250	Link
NOFIMA	3-Jun-19	NTB Pressemeldinger - RSS - Nofima leder EU-prosjekt til 80 millioner kroner	Communication campaign (e.g. radio, TV)	General public	Norway	1500	Link
CETMAR	3-Jun-19	Ipac Acuicultura: Esta semana se lanza AquaVitae, un ambicioso proyecto europeo para incrementar la producción de especies de bajo nivel trófico	Communication campaign (e.g. radio, TV)	General public	Spain	1000	Link
NOFIMA, CETMAR	4-Jun-19	Seafood.com News - Scientists, Industry Professionals Gather in Norway to Launch AquaVitae Project	Communication campaign (e.g. radio, TV)	General public	World	1000	Link
NOFIMA, CETMAR	4-Jun-19	Undercurrent News - Europe - EU-funded project investigates Atlantic's low trophic aquaculture sector	Communication campaign (e.g. radio, TV)	General public	World	1000	Link
NOFIMA	4-Jun-19	Nofima PR: Low trophic aquaculture on the spotlight in new EU funded project	Press release	General public	Norway	384	Link
NOFIMA, CETMAR	4-Jun-19	AquaVitae PR: Low trophic aquaculture on the spotlight in new EU funded project	Press release	Medias	Europe	40	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
CETMAR	5-Jun-19	Noticieirogalego - Local - O Cetmar participa na realización de once estudos de caso para obter melloras no eido da acuicultura en augas do Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	500	Link
CETMAR	5-Jun-19	Xunta.gal - O Cetmar participa na realización de once estudos de caso para obter melloras no eido da acuicultura en augas do Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	3500	Link
CETMAR	5-Jun-19	Noticiasvigo - O Cetmar participa na realización de once estudos de caso para obter melloras no eido da acuicultura en augas do Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	500	Link
CETMAR	5-Jun-19	Noticiasde.es - O Cetmar participa na realización de once estudos de caso para obter melloras no eido da acuicultura en augas do Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	500	Link
NOFIMA, CETMAR	5-Jun-19	Aquafeed - Headline News - Low trophic aquaculture in the spotlight in new EU funded project	Communication campaign (e.g. radio, TV)	General public	World	300	Link
NOFIMA	5-Jun-19	Bladet Vesterålen, side 27 - Nofima leder 80 mill-prosjekt	Communication campaign (e.g. radio, TV)	General public	Norway	2000	Link
CETMAR	5-Jun-19	CETMAR PR: El Centro Tecnológico del Mar se alía a 36 centros de investigación y empresas de 16 países en un nuevo proyecto europeo H2020 para mejorar la acuicultura en el Océano Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	300	Link
AWI	6-Jun-19	AWI PR - Start des Projekts „AquaVitae“	Press release	Medias	Germany	200	Link
AWI	6-Jun-19	AWI PR- Start of the project "AquaVitae"	Press release	Medias	Germany	200	Link
CETMAR	6-Jun-19	Mispeces.com - Nofima lidera el macro-proyecto AquaVitae para la acuicultura de organismos marinos de la base de la cadena alimentaria	Communication campaign (e.g. radio, TV)	General public	Spain	8500	Link
CETMAR	6-Jun-19	Ipac AcuiCultura - En Portada - Cetmar trabajará junto a 36 centros de investigación y empresas de 16 países para mejorar la acuicultura en aguas del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	1000	Link
NOFIMA	6-Jun-19	iTromsø (behind paywall) - Nofima valgt til å lede EU-prosjekt til 80 millioner kroner	Communication campaign (e.g. radio, TV)	General public	Norway	3000	Link
NOFIMA, CETMAR	6-Jun-19	Aquaculture Magazine: Low trophic aquaculture on the spotlight in new EU funded project	Communication campaign (e.g. radio, TV)	General public	World	3000	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
NOFIMA, CETMAR	12-Jun-19	Intrafish - Nofima kicks off $9 million low-trophic aquaculture research project	Communication campaign (e.g. radio, TV)	General public	Norway	3039	Link
NOFIMA	13-Jun-19	Bondebladet - Skal forske på algeoppdrett	Communication campaign (e.g. radio, TV)	General public	Norway	300	Link
DTU	13-Jun-19	Dansk Skaldyrcenter, DTU Aqua's Facebook site	Social media	General public	Denmark	400	Link
NOFIMA, CETMAR	15-Jun-19	Cordis - Low trophic aquaculture on the spotlight in new EU-funded project	Communication campaign (e.g. radio, TV)	General public	Europe	11000	Link
TTZ	17-Jun-19	TTZ introduced AquaVitae in BluEco Net Industry Forum	Participation to a workshop	Industry	Brazil	50	Link
UFSC	17-Jun-19	Distribution of AquaVitae one page at the BluEco Net Industry Forum	Flyers	Industry	Brazil	50	
UNE	17-Jun-19	UNE PR: UNE chosen as US partner for EU-funded aquaculture project	Communication campaign (e.g. radio, TV)	Medias	USA	500	Link
RhU	17-Jun-19	Science Show: Interview with Prof. Cliff Jones (Rhodes University) on his AquaVitae Project	Communication campaign (e.g. radio, TV)	General public	South Africa	350000	Link
UNE	18-Jun-19	Press herald: UNE named partner for EU-funded aquaculture project	Communication campaign (e.g. radio, TV)	General public	USA	37776	Link
IVL, PrAq	26-Jun-19	IVL meeting with Primar Aquacultura	Other	Industry	Brazil	2	
Biolan	28-Jun-19	Biolan PR: AquaVitae, an ambitious cooperation EU funded project about aquaculture in which BIOLAN collaborates	Communication campaign (e.g. radio, TV)	Industry	Spain	100	Link
IVL	2-Jul-19	IVL website: Stor forskningssatsning på vattenbruk runt Atlanten	Communication campaign (e.g. radio, TV)	General public	Sweden	500	Link
IVL	2-Jul-19	Press release on AV in national press in Sweden	Press release	Medias	Sweden	50	
IVL	5-Jul-19	Meeting with Orust Shellfish and Lysekils mussels and oysters for initiation of the low-tech nursery system study	Other	Industry	Sweden	3	
EmBraPa	16-Jul-19	EmBraPa PR: Consórcio intercontinental vai pesquisar aquicultura ao redor do Atlântico	Press release	Medias	Brazil	78400	Link
EmBraPa	18-Jul-19	Jornal Preliminar: Consórcio intercontinental vai pesquisar aquicultura ao redor do Atlântico	Communication campaign (e.g. radio, TV)	General public	Brazil	500	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
UNESP	26-Jul-19	Presentation of AquaVitae Project inside Brazilian Workshop: Regulamentação da Ranicultura Brasileira e a Conservação de Anuros Nativos.	Participation to a Workshop	Scientific community (higher education, research)	Brazil	100	Link
Biolan	30-Jul-19	ASEBIO: AquaVitae un proyecto de cooperación sobre acuicultura en el que participa Biolan	Communication campaign (e.g. radio, TV)	Industry	Spain	500	Link
PrAq	1-Aug-19	Aquaculture Brazil: report on Primar work with oysters in Brazil	Communication campaign (e.g. radio, TV)	Industry	Brazil	500	-
DTU	3-Aug-19	Bedre udnyttelse af havets ressourcer - Article in the Danish fisherys magazine.	Website	General public	Denmark	500	Link
DTU	7-Aug-19	DTU website: Forskning i bedre produktion af muslinger og søpølser	Website	General public	Europe	500	Link
CETMAR, NOFIMA, UFSC, EmBraPa, DTU, ORF, AWI, Matis, GMIT, CCMAR, RhU, ULPGC, IVL	10-Aug-19	AquaVitae flyers distributed in Aquaculture Europe to partners	Flyers	General public	Europe	800	
UNESP	18-Aug-19	AquaVitae H2020_UNESP_Integrated Aquaculture - European Union and Brazil Raising Food in the Water. União Europeia e Brasil Produzindo Alimentos na Água (Instagram Profile).	Communication campaign (e.g. radio, TV)	General public	Brazil	188	Link
IVL	26-Aug-19	Meeting with Orust Shellfish about the nursery system study	Other	Industry	Sweden	2	
StellU	26-Aug-19	Faculty of AgriScience Newsletter	Communication campaign (e.g. radio, TV)	Other	South Africa	3000	Link
NOFIMA, CETMAR, ORF, RhU, EmBraPa	1-Sep-19	EAS magazine: Aqua Vitae – Low-trophic species, the solution for more sustainable aquaculture in the Atlantic Ocean?	Communication campaign (e.g. radio, TV)	Scientific community (higher education, research)	Europe	500	Link
EmBraPa	1-Sep-19	Norte Agropecuario: Com participação de pesquisador da Embrapa, Tocantins integra projeto de aquicultura orçado em de 8 milhões de euros	Communication campaign (e.g. radio, TV)	General public	Brazil	500	Link
CETMAR	1-Sep-19	AquaHoy: Científicos brasileños se unen a proyecto Aquavitae para investigar el incrementó de la producción acuícola de forma sostenible	Communication campaign (e.g. radio, TV)	General public	Brazil	100	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
EmBraPa	1-Sep-19	Saense: Consórcio intercontinental vai pesquisar aquicultura ao redor do Atlântico	Communication campaign (e.g. radio, TV)	General public	Brazil	100	Link
NOFIMA	17-Sep-19	Presentation at International Food Fraud Conference. Petter Olsen: Why use blockchain technology in the food industry?	Participation to a conference	Industry	Denmark	100	Link
NOFIMA	19-Sep-19	Case Study on sea urchin kick-off meeting with IRG members in Norway	Organisation of a workshop	Industry	Norway	8	
IVL	24-Sep-19	Visit to Kalvö Ostron	Other	Industry	Sweden	2	
CETMAR	26-Sep-19	Presentation on AquaVitae in workshop "Macro and microalgae as a source for bioproducts and nutritional ingredients in aquaculture"	Participation to a workshop	Industry	Spain	40	Link
NOFIMA	26-Sep-19	Case Study on sea urchin kick-off meeting with IRG members in Spain	Organisation of a workshop	Industry	Spain	6	
IVL, BoHu	30-Sep-19	Meeting with Bohus Havsbruk	Other	Industry	Sweden	2	
NOFIMA	1-Oct-19	Videos on AquaVitae participants in the kick-off meeting in Tromso (Norway)	Video/film	General public	Europe	40	Link
NOFIMA, CETMAR	7-Oct-19	Press release on AquaVitae participation at Aquaculture Europe	Press release	Medias	Germany	20	Link
CETMAR, NOFIMA, UFSC, EmBraPa, DTU, ORF, AWI, Matis, GMIT, CCMAR, RhU, ULPGC, IVL	8-Oct-19	AquaVitae participates in Aquaculture Europe with a stand	Trade fair	Industry	Germany	2700	Link
NOFIMA, CETMAR	8-Oct-19	The Fish Site: High hopes for low trophic aquaculture	Communication campaign (e.g. radio, TV)	General public	UK	3000	Link
NOFIMA	9-Oct-19	Presentation at Aquaculture Europe. Petter Olsen: Should the Aquaculture Industry Use Blockchain Technology for Data Recording?	Participation to a conference	Scientific community (higher education, research)	Germany	100	Link
NOFIMA	9-Oct-19	Presentation on AquaVitae in EU EATiP day in Aquaculture Europe	Participation to a conference	Policy makers	Germany	30	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
CSIC	10-Oct-19	Presentation in the Forum of Marine Resources and Aquaculture of the Rias Baixas	Participation to a conference	Scientific community (higher education, research)	Spain	150	
CETMAR	14-Oct-19	IPAC AcuiCultura Cetmar y AquaVitae llevan a Aquaculture Europe la búsqueda de soluciones innovadoras para la actividad acuícola marina	Communication campaign (e.g. radio, TV)	General public	Spain	1000	Link
IVL	14-Oct-19	Kick-off meeting of CS8 Oysters	Other	Industry	Sweden	6	
FISK	15-Oct-19	Presentation on AquaVitae in West European Fish Technologists' Association (WEFTA)	Participation to a conference	Scientific community (higher education, research)	Europe	50	Link
NOFIMA	15-Oct-19	Presentation at West European Fish Technologists' Association (49thWEFTA conference)	Participation to a conference	Scientific community (higher education, research)	Faroe Islands	150	Link
IVL, DTU, UiT	16-Oct-19	Presentation and group work on AquaVitae in workshop "Offshore Aquaculture workshop "	Participation to a workshop	Scientific community (higher education, research)	Sweden	30	Link
CETMAR	19-Oct-19	Atlantico: A acuicultura viguesa chegou a Berlin	Communication campaign (e.g. radio, TV)	General public	Spain	10000	
CETMAR	19-Oct-19	Faro de Vigo: El CETMAR presenta un proyecto de mejora de la acuicultura en un congreso en Berlín	Communication campaign (e.g. radio, TV)	General public	Spain	48313	
FCUP/Ciimar	21-Oct-19	Presentation of Aquavitae project at the Portuguese Association of Applied Phycology (APAA 2019 Conference)	Participation to a conference	Industry	Portugal	120	
CIIMAR	21-Oct-19	Presentation of Aquavitae project at the Portuguese Association of Applied Phycology (APAA 2019 Conference)	Participation to a conference	Industry	Portugal	120	
Matís	22-Oct-19	Matís introduced AquaVitae in the AORA Marine Microbiome Workshop	Participation to a workshop	Scientific community (higher education, research)	Iceland	35	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
FCUP/Ciimar	22-Oct-19	Workshop on Examining producer perceptions of policy frameworks (WP8 task 8.2)	Organisation of a workshop	Industry	Portugal	20	
CIIMAR	22-Oct-19	Workshop on Examining producer perceptions of policy frameworks (WP8 task 8.2)	Organisation of a workshop	Industry	Portugal	20	
NOFIMA	24-Oct-19	Presentation at Food Authenticity and Food Fraud Prevention conference. Petter Olsen: Supply chain tools with special focus on blockchain technology	Participation to a conference	Scientific community (higher education, research)	Germany	100	Link
CSIC	1-Nov-19	TV interview - Galician mussels under climate change	Communication campaign (e.g. radio, TV)	General public	Spain	5000	
ULPGC, RhU, AWI, FrHa, Mfeed, WiCoAb	4-Nov-19	Case Studies on land-based, sea-based IMTA and sea cucumber kick-off meeting with IRG members	Organisation of a workshop	Industry	South Africa	10	
Biolan	6-Nov-19	Ruta Pesquera Magazine: AquaVitae is an ambitious aquaculture cooperation project funded by the EU with Biolan participation	Communication campaign (e.g. radio, TV)	Industry	Spain	1000	Link
EmBraPa	11-Nov-19	EmBraPa-AquaVitae workshop on IMTA in the FENACAM congress (Feira Nacional do Camarao Brazil)	Organisation of a workshop	Industry	Brazil	25	Link
RhU	11-Nov-19	Radio 786 Interview	Communication campaign (e.g. radio, TV)	General public	South Africa	500	
RhU	12-Nov-19	Rhodes University: Rhodes University academics kick-off international project for sustainable aquaculture	Press release	General public	South Africa	2000	Link
AWI	12-Nov-19	Symposium "Marine resources and offshore wind farms"	Participation to a conference	Scientific community (higher education, research)	Germany	80	Link
RhU	13-Nov-19	Aquaculture Directory: Rhodes University academics kick-off international project for sustainable aquaculture	Communication campaign (e.g. radio, TV)	General public	UK	200	Link
RhU	13-Nov-19	Cape Times: Hi-tech farming project	Communication campaign (e.g. radio, TV)	General public	South Africa	34523	Link
ULPGC	14-Nov-19	IPAC Acuicultura: Investigadores de ECOAQUA se reunieron con otros socios de AquaVitae para avanzar en el desarrollo de sistemas multitróficos	Communication campaign (e.g. radio, TV)	General public	Spain	4600	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
UiT, NOFIMA, CETMAR, IVL, Matís, GMIT	14-Nov-19	AANChOR subMultistakeholder platform meetings	Participation in activities organised jointly with other H2020 project(s)	Scientific community (higher education, research)	Belgium	700	
UFSC	18-Nov-19	Globo Tv: report on UFSC work in aquaculture and role in AquaVitae	Communication campaign (e.g. radio, TV)	General public	Brazil	1000000	Link
CSIC	19-Nov-19	Talk - Galician mussels under climate change	Participation to an event other than a conference or workshop	General public	Spain	100	
UNESP	22-Nov-19	Presentation at LACQUA - WAS 2019 - AQUAVITAE CONSORTIUM HORIZON 2020 - H2020 BRAZILIAN PARTICIPATION	Organisation of a conference	Scientific community (higher education, research)	Costa Rica	50	
IVL, UiT	25-Nov-19	Article on "Offshore Aquaculture workshop"	Non-scientific and non-peer reviewed publications (popularised publications)	General public	Europe	50	Link
NOFIMA	26-Nov-19	Low trophic aquaculture project participates in Aquaculture Europe	Communication campaign (e.g. radio, TV)	General public	Europe	420	Link
GMIT	27-Nov-19	Thea: AquaVitae Project: Developing Atlantic Ocean aquaculture production in a sustainable way	Communication campaign (e.g. radio, TV)	Scientific community (higher education, research)	Ireland	300	Link
NOFIMA	27-Nov-19	Key note speak at the SIG conference in Trondheim, mentioning AquaVitae and the transatlantic collaboration	Participation to a conference	Scientific community (higher education, research)	Norway	140	Link
UFSC	28-Nov-19	Aquaculture Brazil: report on UFSC work in aquaculture and AquaVitae involvement	Communication campaign (e.g. radio, TV)	Industry	Brazil	500	
UNESP	28-Nov-19	Workshop Integrated Multitrophic Aquaculture - Workshop to PRIMAR's workforce		General public	Brazil	10	Link
NOFIMA, CETMAR, ORF, CIIMAR, IVL, UiT, RhU, AWI, ULPGC, AlgaP	2-Dec-19	AquaVitae 1st Newsletter	Communication campaign (e.g. radio, TV)	General public	World	98	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
IVL	5-Dec-19	University lecture on AquaVitae work	Other	Scientific community (higher education, research)	Sweden	20	
IVL	5-Dec-19	IVL meeting with Orust shellfish	Other	Industry	Sweden	2	
EmBraPa	5-Dec-19	Case Study on freshwater finfish kick-off meeting with IRG members in Brazil	Organisation of a workshop	Industry	Brazil	10	
CETMAR	6-Dec-19	Revista Alimentaria: Nuevo proyecto en acuicultura: economía circular y residuo cero	Communication campaign (e.g. radio, TV)	General public	Spain	5000	Link
UNESP	19-Jan-20	Workshop on Indicators of Sustainability in Aquaculture - Ph.D. Students of CAUNESP have discussed the Indicators of Sustainability in Aquaculture that will be used in WP 6 of Aquavitae H2020. During the CAUNESP's Workshop.	Organisation of a workshop	Civil society	Latin American	30	Link
IVL, GMIT	20-Jan-20	Stakeholder meeting with IRG partner	Other	Industry	Sweden, Ireland	3	
IVL	28-Jan-20	Stakeholder meeting with IRG partner	Organisation of a workshop	Industry	Sweden	23	Link
NOFIMA	29-Jan-20	Presented AquaVitae at Arctic Frontiers 2020, the biggest annual conference on Arctic issues. Title of presentation: "AquaVitae, an EU H2020 project to develop low trophic aquaculture value chains in the Atlantic, possible impacts on the north Atlantic and Arctic areas."	Participation to a conference	Scientific community (higher education, research)	Norway	100	Link
AWI	2-Feb-20	Article on Research Projects featuring AquaVitae in Germany's most relevant sector magazine FischMagazin	Press release	Industry	Germany	4200	
FCUP/Ciimar, NOFIMA, CETMAR, AWI, GMIT, RhU, AWI, TTZ	5-Feb-20	Presentation of Aquavitae at the All Atlantic Research Forum and at the different working groups	Participation to a conference	Policy makers	Europe	500	Link
AWI	9-Feb-20	Booth at Germany's only fish and seafood trade fair "fish international 2020" in Bremen.	Trade fair	Industry	Europe	150	

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
NOFIMA	10-Feb-20	News article - Nå vil forskerne ha bifangst i havbruksnæringen. Det kan redde verden.	Communication campaign (e.g. radio, TV)	Industry	Norway	4000	Link
CIIMAR, Bellona, UiT, Nofima	25-Feb-20	Co-organisation of the workshop "SEAWEED AQUACULTURE IN NORWAY: SOCIO-ENVIRONMENTAL BENEFITS AND POLICY FRAMEWORKS" on the scope of WP8 task 8.2: Examine producers perceptions on policy frameworks.	Organisation of a workshop	Industry	Norway	50	
UNESP	28-Feb-20	Training carried out on operation and maintenance and care of the equipment acquired by the Aquavitae project. Training given by PhD student Stephany Pereira	Training	General public	Brazil	5	
IVL	03-Mar-20	Stakeholder meeting with IRG partner	Other	Industry	Sweden	2	
AWI	6-Mar-20	9 posts on Linkedin	Social media	Scientific community (higher education, research)	World	272	
IVL, Bohus	17-Mar-20	Stakeholder meeting	Other	Scientific community (higher education, research)	Sweden, Germany	3	
IVL, Bohu, Stakeholder	16-Apr-20	Stakeholder meeting	Other	Scientific community (higher education, research)	Sweden, Germany	3	
IVL, Cetmar	21-Apr-20	Call for industry collaborators - oyster seed production	Social media	General public	Europe	50	Link
NOFIMA	22-Apr-20	Captain Purpose Workshop - Sustainability in NOMAD foods company (Birdseye / Iglo / Findus...)	Participation to a workshop	Industry	Norway	60	Link
NOFIMA, MATIS, Embrapa, UFSC, FURG, UNESP, CETMAR	28-Apr-20	AV annual meeting: Brazilian Aquaculture Stakeholder Workshop	Organisation of a workshop	Industry	Brazil	100	Link
IVL, UNE	29-Apr-20	Student exchange	Training	Other	USA, Sweden	3	

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
UNESP	29-Apr-20	News on: Research on freshwater finfish species kicks off in Brazil	Press release	Civil society	Brazil	30000	Link
AWI	30-Apr-20	Live Stream (in German) on YouTube on the advantage of aquaculture products compared to other protein sources in relation to climate change featuring AV and the LTS thereof	Social media	General public	Germany	439	Link
UNESP	4-May-20	Weekly Instagram Post with a photo and information about AquaVitae	Social media	General public	Brazil	301	Link
IVL, GMIT, DTU, FrHa	05-May-20	Stakeholder meeting	Other	Industry	Sweden, Denmark, France, Ireland	4	
CETMAR	15-May-20	News on: El proyecto AquaVitae presenta la primera versión de varios prototipos para aumentar la sostenibilidad acuícola	Communication campaign (e.g. radio, TV)	General public	Spain	500	Link
EMBRAPA	15-May-20	News on: Projecto internacional de aquicultura apresenta seus primeiros resultados	Communication campaign (e.g. radio, TV)	General public	Brazil	500	Link
ULPGC	19-May-20	ULPGC: El proyecto AquaVitae genera en su primer año más de 100 avances para la acuicultura del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	100	Link
ULPGC	19-May-20	La Vanguardia: El Proyecto AquaVitae genera más de 100 avances en acuicultura en un año	Communication campaign (e.g. radio, TV)	General public	Spain	600	Link
ULPGC	19-May-20	Canary Ports: El proyecto AquaVitae genera en su primer año más de 100 avances para la acuicultura del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	100	
ULPGC	19-May-20	Puerto Canarias: Notables avances científicos en acuicultura en el seno de la ULPGC	Communication campaign (e.g. radio, TV)	General public	Spain	200	Link
ULPGC	19-May-20	Spanish Ports: El proyecto AquaVitae genera en su primer año más de 100 avances para la acuicultura del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	200	Link
ULPGC	19-May-20	Cluster Marítimo Español: El proyecto AquaVitae genera en su primer año más de 100 avances para la acuicultura del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	300	Link
ULPGC	19-May-20	El Periódico de Canarias: El proyecto AquaVitae genera en su primer año más de 100 avances para la acuicultura del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	200	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
ULPGC	20-May-20	MisPeces: AquaVitae finaliza el primer año presentando 100 prototipos de acuicultura de bajo nivel trófico	Communication campaign (e.g. radio, TV)	General public	Spain	8500	Link
ULPGC	20-May-20	Aquahoy: El proyecto AquaVitae genera en su primer año más de 100 avances para la acuicultura del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	100	Link
ULPGC	20-May-20	Elblogferoz: GRAN CANARIA | El proyecto AquaVitae genera en su primer año más de 100 avances para la acuicultura del Atlántico	Communication campaign (e.g. radio, TV)	General public	Spain	100	Link
ULPGC	20-May-20	Ondayzas: AquaVitae genera en su primer año más de 100 avances para la acuicultura	Communication campaign (e.g. radio, TV)	General public	Spain	100	Link
ULPGC	20-May-20	Vivelecanarie: Canarie. Il progetto AquaVitae nel suo primo anno di vita 100 progressi per l'acquacoltura dell'Atlantico	Communication campaign (e.g. radio, TV)	General public	Spain	100	Link
ULPGC	20-May-20	News on: Proyecto internacional genera más de 100 avances en acuicultura en un año	Communication campaign (e.g. radio, TV)	General public	Spain	100	Link
CETMAR, NOFIMA	22-May-20	News on The AquaVitae project generates in its first year more than 100 advances for aquaculture	Communication campaign (e.g. radio, TV)	General public	World	200	Link
NOFIMA	22-May-20	News on: bright future for sea urchin aquaculture	Communication campaign (e.g. radio, TV)	General public	World	200	Link
NOFIMA	25-May-20	High hopes for low trophic aquaculture	Communication campaign (e.g. radio, TV)	Industry	UK	10000	Link
NOFIMA	26-May-20	PR - Phil får millioner fra EU for å utvikle miljøvennlig kråkebolleoppdrett i Norge	Press release	General public	Norway	100	Link
NOFIMA	26-May-20	News article - Får millioner fra EU for å utvikle miljøvennlig kråkebolleoppdrett i Norge	Communication campaign (e.g. radio, TV)	General public	Norway	2000	Link
NOFIMA	26-May-20	News article - EU pløyer inn millioner i kråkeboller	Communication campaign (e.g. radio, TV)	General public	Norway	2000	Link
NOFIMA	26-May-20	News article - High hopes for low trophic aquaculture	Communication campaign (e.g. radio, TV)	General public	Norway	500	Link
IVL	27-May-20	Dissemination about co-culture of lobsters and oysters	Press release	General public	Sweden, Norway, Denmark	100	Link
UFSC	27-May-20	Cultivo de Organismos Aquáticos em sistema de bioflocos	Participation to a conference	Scientific community	Brazil	100	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
				(higher education, research)			
NOFIMA	27-May-20	Press release - Får millioner fra EU for å utvikle miljøvennlig kråkebolleoppdrett	Press release	General public	Norway	700	Link
IVL, DTU, Cetmar, GMIT, PrAq	1-Jun-20	AV newsletter	Non-scientific and non-peer reviewed publications (popularised publications)	General public	World	250	Link
IVL, Cetmar	3-Jun-20	SDG flash mapping	Social media	General public	Europe	100	Link
UNESP	9-Jun-20	News article: Unesp desenvolve inovações para aquicultura no Oceano Atlântico. Protótipos foram apresentados virtualmente durante reunião anual do projeto AquaVitae	Press release	General public	Brazil	30000	Link
UNESP	9-Jun-20	Stakeholders Meeting of The Federation of Industries of the State of São Paulo (FIESP)	Organisation of a workshop	Industry	Brazil	30	Link
UFSC	10-Jun-20	Avances del cultivo marino integrado en biofloc	Participation to a conference	Scientific community (higher education, research)	Peru	200	Link
NOFIMA	15-Jun-20	Presentation of AquaVitae to the A*Star Singapore-Norway bilateral project	Participation to a workshop	Industry	Singapore, Norway	10	
NOFIMA	15-Jun-20	News article - Kråkebolleminister på milliardtokt	Communication campaign (e.g. radio, TV)	General public	Norway	50000	Link
NOFIMA	15-Jun-20	TV News Report - Kråkebolleminister på milliardtokt	Communication campaign (e.g. radio, TV)	General public	Norway	400000	
NOFIMA	17-Jun-20	PR - DIVING FOR SEA URCHINS WITH A NORWEGIAN MINISTER	Press release	General public	World	50	Link
NOFIMA, CETMAR	17-Jun-20	Diving for Sea Urchins with a Norwegian minister	Press release	General public	Norway	50	Link
UFSC	19-Jun-20	Acuicultura multitrófica integrada con uso de la tecnologia biofloc	Participation to a conference	Scientific community (higher education, research)	Latin America	300	Link
Nofima, CETMAR, Embrapa, DTU, Biolan, GMIT	22-Jun-20	AquaVitae project video with a focus on sustainability, short and long versions in English and Brazilian Portuguese	Video/film	General public	World	450	Link

Partner involved	Date	Title	Type of Dissemination or Publication Activity	Type of Audience	Countries Adressed	Size of audience	Link
UFSC	24-Jun-20	Post on Aquavitae video	Social media	General public	Brazil	573	Link
NOFIMA	10-Jul-20	Participation in Networking Friday with Sigi Gruber	Participation to a workshop	Policy makers	Belgium	50	Link
UNESP	13-Aug-20	News on: UNESP develops innovations for aquaculture in the Atlantic Ocean	Communication campaign (e.g. radio, TV)	General public	Brazil	100	Link
UiT, NOFIMA, CETMAR, IVL, Matís, GMIT, UFSC	9-Sep-20	Meetings with the sisterhood of BG-08 projects: AANChOR, iAtlantic, AquaVitae, TRIATLAS, ASTRAL, AtlantECO, Mission Atlantic, SO-CHIC	Participation in activities organised jointly with other H2020 project(s)	Scientific community (higher education, research)	Belgium	7	
Nofima	23-Sep-20	Sustainable low-trophic aquaculture: supplying food from the ocean	Participation to a workshop	Industry	World	200	Link

Annex II. Main Key Exploitable Results (KER) at month 17 (October 20).

Key Exploitable Result (KER) title	Result type	Business Sector(s)/Related EC Policy Area	Result Description	Keywords	Audience	Related SDGs:
New species, processes, and products developed in aquaculture value chains across the Atlantic	· Scientific or Technological R&D Result including ICT Hardware	- Maritime affairs and fisheries, - Business and industry - Environment	There is a total of 109 exploitable outputs (i.e. 48 products/species; 37 processes; and 24 reports) that will be developed across the Atlantic with a prime role played by low-trophic species. As an example, AV will develop a process to produce a new product (sea cucumber) that removes solid waste from abalone culture tanks in a land-based IMTA. Descriptions are periodically updated in deliverables from WP1, WP2 and WP3.	aquaculture, innovation, Technology readiness level, industry, emergent species, new processes, new products	· Public or private funding institutions · Research and Technology Organisations · Other Actors who can help us fulfil our market potential	8 Economic growth 12 Sustainable consumption 14 Life below water
New or improved sustainable processes contributing to the circular economy by the utilisation of waste and by-products	· Scientific or Technological R&D Result including ICT Hardware	- Maritime affairs and fisheries, - Climate action - Environment	Of the 109 exploitable outputs produced in AV, 22 report to CS12 and 13 where aquaculture products are cycled back into aquaculture production, to support more sustainable aquaculture processes across the Atlantic. Among the innovations are new diet formulations for shellfish (abalone), crustacean (whiteleg shrimp) and finfish (Senegalese sole, Brazilian flounder, pirarucu, tambaqui), that include valorisation of algae grown in and valorisation of aquaculture by-products, as shellfish $CaCO_3$. A	circular economy, aquaculture, innovation, Technology readiness level, industry, emergent species, new processes, new products	· Public or private funding institutions · Research and Technology Organisations	12 Sustainable consumption 13 Climate action 14 Life below water

Key Exploitable Result (KER) title	Result type	Business Sector(s)/Related EC Policy Area	Result Description	Keywords	Audience	Related SDGs:
			detailed description is available in deliverables D2.1 and D2.2.			
The Good Practice international standard (CWA) for hatchery practices of low-trophic species aquaculture	· Other Intangible Results (Ex. citizens engagement platform, know-how, best practices, methodologies etc.);	- Maritime affairs and fisheries - Environment - Consumers	A voluntary industry standard will be published as a CEN Workshop Agreement (CWA) compiling robust hatchery protocols for new species (e.g., algae, echinoderms, shellfish) and processes (Integrated Multi-trophic Aquaculture). The standard will contribute to disseminate tested procedures to meet aquaculture companies' demands while supporting their innovation processes.	low-trophic, aquaculture, environment, companies, hatchery, new species, new processes	· Research and Technology Organisations · EU and Member State Policy-makers. · International Organisations (ex. OECD, FAO, UN, etc.) · Academia/Universities · Private Investors	2 End hunger 8 Economic growth 12 Sustainable consumption 14 Life below water
New hatchery practices for low-trophic species cultivation	· Scientific or Technological R&D Result including ICT Hardware	- Maritime affairs and fisheries - Environment - Consumers	Standardised commercial hatchery production methods for low-trophic species (e.g., oysters, mussels, macroalgae). These methods are being developed in collaboration with	low-trophic, aquaculture, companies, hatchery, new species, new	· Public or private funding institutions	2 End hunger 8 Economic growth 12 Sustainable consumption 14 Life below water

Key Exploitable Result (KER) title	Result type	Business Sector(s)/Related EC Policy Area	Result Description	Keywords	Audience	Related SDGs:
			aquaculture producers in Europe, South Africa and Brazil.	processes, oysters, mussels, macroalgae	· EU and Member State Policy-makers. · International Organisations (ex. OECD, FAO, UN, etc.)	
Prototype of a new online sensor for sulphite monitoring in aquaculture production	· Scientific or Technological R&D Result including ICT Hardware	- Food safety	Food safety testing device: fast, portable, connected, rapid and cost-effective tool for sulphite monitoring in shrimp aquaculture. The result will facilitate sulphite analyses at various points in the aquaculture process, achieving better control of sulphite addition and avoiding contamination of the final product.	food safety, food safety testing	Other Actors who can help us fulfil our market potential	8 Economic growth 12 Sustainable consumption
UTOFIA biomass estimates	· Scientific or Technological R&D Result including ICT Hardware	- Food safety - Consumers	A range-gating video camera with a customized software to measure lengths and volumes of observed objects.	laser camera, machine learning, biomass, fish, mussels	· Other Actors who can help us fulfil our market potential	8 Economic growth 14 Life below water
IoT platform for integration of real and virtual sensor data	· Scientific or Technological R&D Result including ICT Hardware	- Food safety	IoT platform for integration and analysis of sensor data.	IoT sensors, data communication, data analysis, visualization	· Other Actors who can help us fulfil our market potential	8 Economic growth 12 Sustainable consumption 14 Life below water
The nutritional and food safety	· Other Intangible	- Food safety	Guidelines on performing health risk benefit assessment.	food safety, nutrition	· EU and Member State Policy-makers.	2 End hunger

Key Exploitable Result (KER) title	Result type	Business Sector(s)/Related EC Policy Area	Result Description	Keywords	Audience	Related SDGs:
information on the new aquaculture products	Results (Ex. citizens engagement platform, know-how, best practices, methodologies etc.);				· International Organisations (ex. OECD, FAO, UN, etc.) · Academia/Universities	12 Sustainable consumption 14 Life below water
The information on consumer concerns and preferences in relation to new LTS products	· Policy Related Result	- Food safety - Consumers	The results will facilitate an application of consumer preferences in the LTS product development to design market-driven strategies.	consumer preferences, consumer acceptance, sustainable consumption	· EU and Member State Policy-makers. · International Organisations (ex. OECD, FAO, UN, etc.) · Academia/Universities	2 End hunger 12 Sustainable consumption 14 Life below water
Transitioning marine food production systems into a sustainable future	· Policy Related Result	-Business and industry - Consumers - Climate action - Environment	The results will facilitate an expansion of LTS mariculture around the Atlantic in a way that helps achieve Agenda 2030 in terms of resilient food production with an emphasis on sustainable production. Recommendations on how to optimize the sustainability of low-trophic species will be developed on a geographical, temporal and activity scale. The analysis will include ecosystem services quantification, risk assessment and management, and current environmental monitoring frameworks.	Agenda 2030, SDGs, LTS aquaculture, sustainability, climate change, risk identification, risk analysis, monitoring, risk mitigation, ecosystem cervices	· Does not apply yet.	2 End hunger 8 Economic growth 12 Sustainable consumption 13 Climate action 14 Life below water

Key Exploitable Result (KER) title	Result type	Business Sector(s)/Related EC Policy Area	Result Description	Keywords	Audience	Related SDGs:
Socioeconomic analysis and business plans for new aquaculture products and processes	· Other Intangible Results (Ex. citizens engagement platform, know-how, best practices, methodologies etc.);	- Business and industry - The EU Blue Growth Strategy - Green Growth & Circular Economy - SDGs	The socioeconomic analysis will investigate the possible impacts of new aquaculture product and processes on local economies. The results will be applied in business plans for selected CSs for achieving full commercialization of the aquaculture products. These results can be used for business development, public policy and governance studies. Business Plans will be important tools in developing business partnership among stakeholders and partners along the Atlantic Ocean.	Business plans, socioeconomics, commercialization, investors, business partnership, low-trophic aquaculture industry, sustainable food production	· Private Investors	8 Economic growth 12 Sustainable consumption
Analysis of the policy framework for low-trophic species and new processes in the Atlantic Area	· Policy Related Result	- Maritime affairs and fisheries - Animal health - Food security - Environment - Climate action	An analysis of policy frameworks related to aquaculture of low-trophic species in the Atlantic Area with special focus on algae and IMTA in EU countries, Norway, South Africa and Brazil. This will be complemented with a report on producer perceptions to identify regulation and policy role in the development of the sector. Resulting recommendations will be summarized as a policy-brief to provide recommendations, good practices, obstacles and opportunities when developing an institutional framework for low-trophic	policy, institutions, IMTA, seaweed, shellfish, EU, Brazil, South Africa, Norway, social license, aquaculture legislation	· EU and Member State Policy-makers. · International Organisations (ex. OECD, FAO, UN, etc.)	8 Economic growth 12 Sustainable consumption 14 Life below water

Key Exploitable Result (KER) title	Result type	Business Sector(s)/Related EC Policy Area	Result Description	Keywords	Audience	Related SDGs:
			aquaculture, perfectly applicable in other regions to the Atlantic Area.			
MOOC - GreenAquaEdu	· Services (Ex. research infrastructures, educational sources, citizen helplines, etc.)	- Education and training - Climate action - Food Safety	Massive open online course (MOOC) and resources for teachers applying flipped classroom on low trophic aquaculture to support sustainable food production. GreenAquaEdu will improve the professional skills and competences of teachers and those working and being trained to work within the blue economy and will help to create a well-trained workforce. The course development will also help harmonize knowledge and practices in industry and academia throughout the Atlantic Ocean.	low-trophic aquaculture, sustainable food production, circular economy, governance, open science, flipped classroom	Academia/Universities	2 Zero Hunger 3 Good health and well-being 4 Quality Education 8 Decent work and economic growth 9 Industry, Innovation and Infrastructure 12 Sustainable consumption and production patterns 13 Climate Action 14 Life below water
A trans-Atlantic network of aquaculture stakeholders, supporting industry-driven innovation.	· Other Intangible Results (Ex. citizens engagement platform, know-how, best practices, methodologies etc.);	- Maritime affairs and fisheries, - Research and innovation - Environment	More than 150 stakeholders collaborate with the AquaVitae multi-actor platform, either as partners, or collaborating through the Industry Reference Group (IRG) and the Policy Advisory Group (PAG). They represent industries, policy-makers, NGOs, academia and other aquaculture organisations in Europe, Africa, North and South America. This platform will remain open throughout the project life. The cooperation with the All	multi-actor approach, Atlantic community, research, collaboration, interaction, industry, NGOs, policy-makers, producers, innovation	· EU and Member State Policy-makers.	8 Decent work and economic growth 9 Industry, Innovation and Infrastructure 14 Life below water

Key Exploitable Result (KER) title	Result type	Business Sector(s)/Related EC Policy Area	Result Description	Keywords	Audience	Related SDGs:
			Atlantic Ocean Community (the AANChOR project) contributes to the enlargement of this community. The network will highlight the emerging role of low-trophic species in the blue bioeconomy			