Deliverable 9.2

Initial 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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Initial Plan for the Communication, Exploitation and Dissemination of Results

15/03/2021

Executive summary

The AquaVitae project's Communication, Dissemination and Exploitation Plan sets the main strategies, including goals, target groups and main messages for communicating project results and outputs. Furthermore, specific protocols and the main goals are outlined for the dissemination and exploitation strategies. This document includes Key performance indicators (KPIs) for monitoring the performance of communication and dissemination strategies. Target audiences and key messages are defined, as well as main stakeholders. The portfolio of actions will support cost-effective communication, developing synergies among the three strategies.

The mix of internal and external actions will contribute to spread a coherent image. On-line and off-line channels are included in this combination of actions. Open Access to results will be implemented through Green (Self-archiving) and Golden Access (article is immediately provided in open access mode as published). A review of these measures will be carried out periodically to adjust and correct possible deviations. The Exploitation and Dissemination Committee will follow up this Plan and will be in charge of its adjustments and corrections. A series of calendars foresee main events at case study and project level, training and networking activities, and possible aquaculture conferences in the first 18 months of the project life.

Protocols are detailed for guiding a multicultural partnership through communication tasks, social media activities, including compulsory disclaimers and logos, leading publications from the project, activating funding for Golden access to scientific papers and navigating Intellectual Property Rights (IPR) guidelines.

This Plan for the Exploitation, Communication and Dissemination of Results (PECDR) will be reviewed and updated on an annual basis throughout the project lifetime through D9.3 "First interim plan for the communication, exploitation and dissemination of results", 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". This revision will ensure that it remains fit-for-purpose to maximize the impact of the AquaVitae project.

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Abbreviations

AANChOR	All Atlantic Ocean Research Alliance
BP	Business Plans
CaNOE	Canadian Network for Ocean Education
CS	Case studies
DG MARE	Directorate General of Maritime Affairs
DoA	Deed of Agreement
EC	European Commission
EDC	Exploitation and Dissemination Committee
EMSEA	European Marine Science Educators Association
EU	European Union
EUSEA	European Science Events Association
FARNET	European Fisheries Area Network
GA	Grant Agreement
IPR	Intellectual Property Rights
IRG	Industry Reference Group
MOOC	Massive Open Online Courses
NGO	Non-Governmental Group
PAG	Policy Advisory Group
PECDR	Plan for the Exploitation, Communication and Dissemination of Results
PMG	Project Management Group
ToT	Training of Trainers
TRL	Technology Readiness Level

1.- Introduction

The Plan for the Exploitation, Communication and Dissemination of Results (PECDR) coordinates the efforts of partners and the communication, dissemination and exploitation strategies, to avoid overlap of activities, and to support the implementation of a cost-effective impact strategy. It will also specify communication, dissemination and exploitation measures, tools and channels, and the timing to reach the target users. Main target messages and audiences are identified. A set of protocols are proposed to coordinate partners' efforts.

Indicators of the activities managed by the PECDR will be measured throughout the project life, by using different key performance indicators, e.g. the size of the audience, their activity, interaction, reach rates. A revised version of the PECDR will be delivered at the end of each reporting period.

The PECDR will include the following: (i) tools/channels and respective performance indicator targets; (ii) key events to communicate and disseminate AquaVitae (AV) outcomes; (iii) ensuring the Open Access of project outcomes; (iv) Management of AV IPR; (v) Uptake of innovations (see table 2.3a).

2.- Aims

As stated in articles 38, 28 and 29 of the Horizon 2020 Grant Agreement model, all projects have the responsibility to:

- communicate on its activities[1]
- disseminate its outcomes and[2]
- facilitate the use of its results[3]

These actions will enable the impact of the research on the European and global society. This impact will be evaluated by the European Commission during and after the project's life.

In the particular case of the AquaVitae project a series of characteristics could support or hinder the development of effective strategies in these fields:

[1] Article 38 in the Annotated Model Grant Agreement, stating the obligation to promote the action and its results to multiple audience in a strategic and effective manner. Link

[2] Dissemination is covered by article 29 in the Annotated Model Grant Agreement, focused on the obligation to disseminate the project results, unless it goes against the obligation to protect results or confidentiality obligations. Link

[3] Exploitation is covered by article 28 in the Annotated Model Grant Agreement, outlining the obligation to use the results in further research, creating products, processes or services, developing standardisation activities and related measures (e.g., transfer, licensing). Link

Table 1. SWOT Analysis of the AquaVitae project

Strengths	Weaknesses
• Excellent science. • Multidisciplinary consortium. • Practical outcomes (new products, species and processes). • Focus on low trophic species and zero-waste processes. • Intense participation of the business sector. • Several WPs including activities contributing to communication, dissemination and exploitation (3, 7, 9).	• Mismatch between project lifetime and media needs, as some outcomes (e.g., scientific papers) will arrive towards the end or after the project, when activities will no longer be funded. • Limited budget for covering activities spread over three continents. • Bad perception of aquaculture by the public in some countries (e.g., in Spain). • Limited coverage of research and sea affairs news by the media.
Opportunities	**Threats**
• Multicultural consortium able to develop new forms of collaboration. • Shared goals with EU future strategies for aquaculture and international research cooperation (e.g., Belem Statement). • Aquaculture having a momentum in the international community as a solution for a growing population. • Aquaculture as a priority in DG MARE and, specifically, in the Blue Growth strategy. • Collaboration with sister projects through the All Atlantic Ocean Research Alliance (AANChOR).	• Eventual bad reputation campaigns on aquaculture products and activities at local or regional level. • Difficulties to scale-up outcomes at global level. • Eventual mismatch between expected and actual research outcomes. • Researchers working in isolation rather than in a collaborative manner. • Stakeholders fatigue due to multiple research, policy and business initiatives.

Responsible Research and Innovation (RRI)

Being a cross-cutting issue in Horizon 2020, this plan outlines strategies, indicators and protocols to support the connection of the project with society, a key aspect of the Responsible Research and Innovation (RRI) principles. In particular:

- Contributes to public engagement paving the way to take the project messages to society.
- Contains strategies to enable Open Access to the project results.
- Anticipates the goals of the training programme of AquaVitae.

AquaVitae outreach activities will implement ethics and gender equality are also a key aspect of this plan. Gender-inclusiveness principles will guide content development, as well as ethics principles (outlined in deliverables 11.1 “Human ethics requirements”, 11.2 “Protection of Personal Data Ethics Requirements”, 11.3 “Animal ethics requirements” and 11.4 “Environmental Protection and Safety Ethics Requirements”).

Multi-actor approach

AquaVitae will apply a multi-actor approach, including stakeholders in the planning of work, execution, and the exploitation to ease the uptake of the project outputs. This approach will be applied to prototypes development (WP1-WP4), and horizontal WPs (WP5-WP8) with different levels of intensity (information, consultation, participatory uptake). This strategy will be adapted to the singularities of each case study and research activity.

With the involvement of 16 different countries in four different continents, AquaVitae outputs must be relevant at several levels: from the local/regional scope of the case studies to the national/transnational/international character of the expected indirect impacts. Stakeholder participation at all levels of activity with help to scale up the outcomes of the project, offering insights at EU and Atlantic level, helping to implement the Belém Statement and creating synergies with other projects in the call, in particular the AANChOR project.

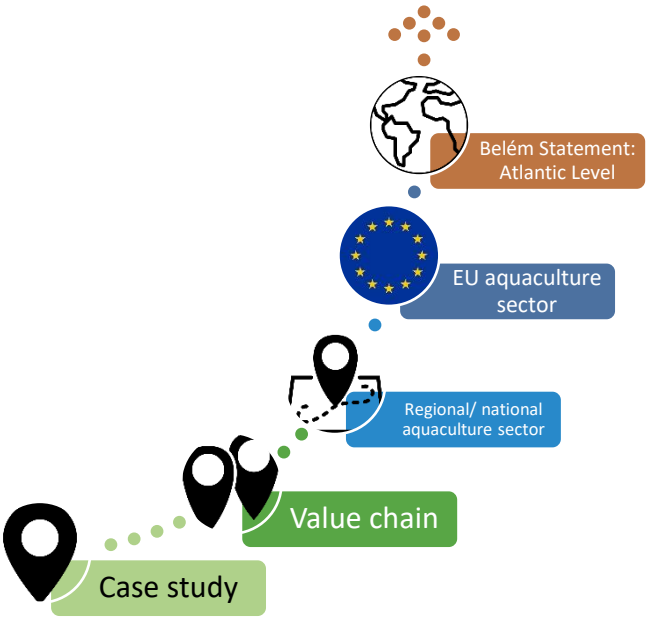

Figure 1. Scaling up AquaVitae outputs.

3.- Communication plan

This plan aims to strategically outline those activities focused on the communication of the project activities and outcomes to the society. Communication activities are aimed at different areas of the public and are focused on the action and its results. This section gives an overview of methodologies to implement this goal.

Training on communication

AquaVitae started drafting its communication goals with a dedicated session in the kick-off meeting (Tromso, Norway, 4-6 June 2019). Researchers and business representatives participating as partners in the consortium shared their proposals on possible slogans for the project and main areas of work. WP9 leader, Fundacion CETMAR, facilitated weaving of ideas to produce succinct messages that are easy-to-understand by lay people. The session illustrated the need for digesting contents and collaboration among the consortium. Partners outline the key role of AquaVitae as a project aimed at sustainable products, species and processes.

Figure 2. Most commonly used words in AquaVitae DoA.

Story-telling

The application of a story-telling approach will guide the creation of contents, including a narrative structure when possible (e.g., blog posts or videos). Narratives support a better understanding of messages, so that non-expert audiences can be interested in, extract information from and, finally, take up the results. Stakeholder participating as partners or member of the Industry Reference Group (IRG) and Policy Advisory Group (PAG) involvement in AquaVitae will facilitate the creation of material collecting stories of industry-research collaboration.

Communication Office

CETMAR, with the support of NOFIMA, set up the AquaVitae communication office. The office works as a one-stop service to offer tailored knowledge products (e.g. press releases, brochure, fact-sheets social media), covering a local, national, European and international scope. It designs, implements, monitors and redesigns the communication strategies, but also the

activities related to dissemination and exploitation. This Communication Office supports all partners in their events, meetings, conferences where AV will be present. Any queries related to communication activities can be sent to this Communication Office.

A series of general principles will guide communication activities of the project:

- Get to know target audiences
- Focus on their needs to build trust
- Co-create engaging and attention-grabbing messages
- Maximise the impact of the budget
- Select the best dissemination channels and content
- Balance frequency and reach
- Applying SEO techniques[4] (e.g, backlinks, Yoast module for web).

Communication Protocol

- Partners must inform the Communication Office 1 month before any activity related to Aquavitae (e.g., participation on behalf of the project in a scientific event, business congress). Send the activity, goal, place, date and background information to: philip.james@nofima.no; rchapela@cetmar.org; emil.bremnes@nofima.no; info@aquavitaeproject.eu

- *Internal communication*

All 36 partners will work together using the same communication channel – Sharepoint – to ensure the development of the project, inform all partners about project activities and to facilitate communication among the partners.

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 will be actively used, as well as continuously maintained, by all partners throughout the project. The main purpose of the Aquanet is to facilitate communication, document distribution and data storage (e.g. templates, draft deliverables, reports for internal deadlines). The possibility to communicate easily with all partners, without sending or receiving mass emails or huge files, is seen as a benefit. Moreover, the Aquanet will be used to share information about relevant events, conferences and workshops.

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

- All the project documents (DoA, Consortium, mailing list) but also the core documents of the AquaVitae project proposal.
- A folder dedicated to each WP and Value Chain (VC), as well as folders for Deliverables and Templates.

[4] SEO (Search Engine Optimization) is the process of increasing the quality and quantity of website traffic by increasing the visibility of a website to users of a web search engine (e.g. Google). SEO techniques are those oriented to generate qualified traffic to your website, making it friendly to search engines and improving the user experience.

- A continuously updated Excel sheet that lists all publications in which AquaVitae is mentioned (e.g. newspapers, academic papers, videos…)
- A Dissemination folder that contains templates, images, and all promotional materials such as poster, pamphlet, factsheet, available and printable by every partner in the project. Press releases and project videos can also be found in this folder.
- A relevant literature folder where interesting documents in connection with AquaVitae are shared.
- A "Calendar" with the common agenda for AquaVitae partners. It contains all deadlines for deliverables and is continuously updated with 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. Increased feedback will thus be provided, and dissemination activities are reinforced.

The Exploitation and Dissemination Committee (EDC)

This internal committee will oversee outreach activities. Its activity began on June 2019 drafting first internal protocols, ranking most interesting events, and drafting the strategies for the website and the communication plan.

- *External communication*

External communication is aimed at the main communities outside the project. Main target groups of AquaVitae are described in the following table.

Table 2. AquaVitae main target audiences.

Target audience	Expected outcomes
Project partners	Scientists involvement in communication activities
IRG, PAG	Participatory research in relevant areas
Representatives of the aquaculture industry (e.g., companies, associations)	Involvement with the project and results uptake, especially in WP1-3 (CSs 1-11) & WP7.
Aquaculture scientists, students and young professionals	Disseminate AquaVitae results and method. Participation in training activities
Policy-makers (EU, South Africa, Brazil, USA, Canada)	Involvement with the project and results uptake, especially through WP8
Aquaculture value chain actors (e.g., retailers, certification initiatives, consumer associations, NGOs)	Disseminate AquaVitae results and method. Involvement in participatory research, if relevant.
International aquaculture organisations (e.g., DG Mare, FAO)	Involvement with the project and results uptake.
European media	Introduce AquaVitae activities, results and the H2020 programme
Consumers, digital and general audience	Search engine optimization to engage digital community for the MOOC and digital knowledge products. Accurate knowledge about increasing aquaculture production and its challenges

A series of messages have been developed to sustain the contents developed for them.

Table 3. Target groups and key messages.

Target group	Key Message
Representatives of the aquaculture industry (e.g., companies, associations)	AquaVitae works to develop new solutions for sustainable aquaculture in collaboration with representatives of the industry and policy sectors.
Aquaculture scientists, students and young professionals	AquaVitae develops new products, processes and works with new species in the Atlantic basin. Eleven case studies, mainly focused on low-trophic species, are complemented by research on horizontal aspects as food safety, environmental monitoring, socio-economic and policy analysis.
Policy-makers (EU, South Africa, Brazil, USA, Canada)	Thirty-six partners, joining research centres and industry, work to find new solutions for more sustainable aquaculture activities. AquaVitae outcomes will contribute to the implementation of the Belém Statement and the strengthening of the European aquaculture sector.
Aquaculture value chain actors (e.g., retailers, certification initiatives, NGOs)	AquaVitae works on more sustainable solutions at all stages of the aquaculture value chain. We look at solutions for zero-waste and circular processes.
Consumers, digital and general audience	Cultivated low-trophic species are a more sustainable choice for those consumers worrying about the environment.
International aquaculture organisations (e.g., DG Mare, FAO)	Cultivated low-trophic species stand as a sustainable solution to feed a growing population. AquaVitae will contribute to strengthen the social, environmental and economic welfare of aquaculture communities at EU and global scale.
European media	Research in aquaculture contributes to enhance its performance, providing consumers with safe food from monitored environments with a low carbon footprint.

Stakeholders involvement

Some key representatives of these audiences (industry project partners, IRG, PAG, other eventual key industry and policy representatives) are considered as key stakeholders of AquaVitae. WP9 has already distributed a separate roadmap to manage among CS leaders to support their participation in AquaVitae at Case Study and Work Package level. This document offers initial guidelines that will be adapted to the project evolution and each CS particularities. Main covered topics are:

- General guidelines for the AquaVitae multi-actor platform
- Description and protocols for involving IRG and PAG members (GDPR requirements)
- Main events at CS and project level (see Table 4)
- How the platform works
- Budget management guidelines

AquaVitae aims to ensure stakeholder participation and to not only guarantee the exploitation and use of project results by end-users, but also to guarantee the communication and

dissemination of those results. We will use the AV multi-stakeholder platform to disseminate AquaVitae results. Thanks to the social network analysis we will outline the networks of influence among stakeholders as well as to integrate stakeholders, communication and dissemination strategies.

Table 4. Main events at CS and project level.

N	Task	Estimated timing	Goal
1	Case Study (CS) Kick-off Meeting (either physical or via skype)	M2 -5 Jul – Oct 19	To scope innovations. Identify stakeholder needs and challenges.
2	Scope, plan and initial stakeholder feedback	M5 Oct 19	Scope, plan and initial stakeholder feedback
3	1st prototype	M12 May 20	1st prototype
4	Evaluation of 1st prototype	M15 Aug 20	Evaluation of 1st prototype
5	CS 1st Barriers & Opportunities Meeting[5]	M15-18 Aug – Nov 20	To get feedback on the 1st prototype. To address WP4-WP8 demands.
6	Stakeholder feedback on 1st prototype	M18 Nov 20	Stakeholder feedback on 1st prototype
7	2nd prototype	M 30 Nov 21	2nd prototype
8	Evaluation of 2nd prototype	M33 Feb 22	Evaluation of 2nd prototype
9	2nd Barriers & Opportunities Meeting	M33– 36 Feb – May 22	To further develop innovations. To address WP4-WP8 demands.
10	Stakeholder feedback of 2nd prototypes	M36 May 22	Stakeholder feedback of 2nd prototypes
11	Final prototype	M46 March 23	Final prototype
12	Uptake meeting	M46 Jan - March 23	To present the final prototype. To summarise project outputs, lessons learnt and next steps at CS level (e.g. access to market, business plans).
13	Final meeting, scientific conference	M46 March 23	Scope, plan and initial stakeholder feedback

- *Tools*

The Communication Office will utilise the following tools to achieve its target audiences.

[5] Meetings at Case study level to identify the barriers and the opportunities in collaboration with stakeholders.

Table 5. Tools and related KPIs for main communication activities

Tool	KPIs
AquaVitae official website	**50,000 visits during the 4-year AquaVitae duration**
AV website will be launched at M3 and stay online until 2025. It will work as a digital repository of all digital contents and latest updates of the project. It will be hosted at www.aquavitaeproject.eu	
Social Media	**2,000 followers on Twitter, Instagram and ResearchGate**
AquaVitae is active on Twitter, Instagram and ResearchGate to contact new audiences, stakeholders and participates on dialogues on aquaculture.	
Press releases	**20 press releases distributed through a database of at least 50 media**
Press releases will disseminate the main AV results and activities among the local, regional, national and international media.	
Digital Newsletters	**8 newsletters**
The periodic distribution of AquaVitae newsletter at least twice a year will help to disseminate the project outputs among its audiences.	
Tailored communication material	**14 tailored products [11 products (1 per CS) + 3 per cross-cutting topics]**
The adaptation of the project's outputs into textual or visual material so that it can be easily understood by lay people will be undertaken by CETMAR in close collaboration with other partners**.**	
Practice abstracts	**20 structured abstracts**
Following European Commission's guidelines, the CSs outputs will be summarised in one page including a short summary with main results and recommendations using the agreed format. They will be developed at the beginning, in the CS plans, and at the end of the case study.	
AquaVitae Workshops and meetings	**45 events with > 400 participants**
Digital and face-to-face meetings will facilitate the celebration of workshops. 4 meetings will be organised at CS level in conjunction with the project annual meetings, and an international final conference.	
Open access peer-review publications	**12 publications in peer-reviewed journals**
AquaVitae academic results will be published in peer-reviewed publications with high impact and in compliant Open Access Journals or on compliant Open Access Platforms.	
Training activities	**50 certificates on AquaVitae training actions**
Training for professionals and students in the aquaculture field will be implemented with a Training of Trainers course (ToT), master course modules, Massive Open Online Courses (MOOCs) and an international industrial apprenticeship program.	
Videos	**5 videos on AquaVitae partners and collaborators**
Videos offer a channel for the transmission of real-life stories to which the audience can relate better, particularly to the impact of AquaVitae in the broader Atlantic area.	

Social Media Protocol

- Follow @aquavitaeEU on Twitter, Instagram, LinkedIn or ResearchGate. Tag us in your publication so that we can contribute to your digital communities. Use hashtags as #H2020, #FarmedintheEU, #BelemStatement

Compulsory Disclaimers and Logos

- All contents of AquaVitae must showcase the AquaVitae and the EU emblem, attach in the Annex I, together with the following disclaimers:
- This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 818173. This [publication/video/result] it reflects only the author's view and that the Commission is not responsible for any use that may be made of the information it contains.

CETMAR and NOFIMA will ensure that all partners use these logos and disclaimers in all presentations and events

4.- Dissemination plan

Dissemination involves spreading outcomes to audiences with minor adaptation of the content. It usually involves the publication of results or its presentation at scientific congresses of fairs.

- *Tools*

The main dissemination tools apply by the project will be:

Table 6. Main dissemination tools in AquaVitae

Tool	KPIs
Open access peer-review publications	**12 publications in peer-reviewed journals**
AquaVitae academic results will be published in peer-reviewed publications with high impact and in compliant Open Access Journals or on compliant Open Access Platforms.	
Training activities	**50 certificates on AquaVitae training actions**
Training for professionals and students in the aquaculture field will be implemented with a Training of Trainers course (ToT), master course modules, Massive Open Online Courses (MOOCs) and an international industrial apprenticeship program.	
Conferences, trade fairs and events	**10 events of international relevance**
Partners and collaborators will participate/present AV outcomes in conferences, symposia, trade fairs and events relevant for the audiences of the project (e.g. Aquaculture Europe and World Aquaculture)	
Final conference	**200 participants**
Towards the end of AquaVitae an international open conference will support the dissemination of the project activity among its target audiences.	

- *Scientific publications*

In the Horizon 2020 programme, partners are obliged to provide open access (free of charge, online access for any user) to publications related to project results. Each AquaVitae beneficiary must ensure open access (OA) to all peer-reviewed scientific publications relating to its results (Article 29.2 of the GA).

Beneficiaries must:

- As soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications; moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications;
- Ensure open access to the deposited publication, via the repository, at the latest:
  - on publication, if an electronic version is available for free via the publisher, or
  - within six months of publication in any other case.
- Ensure open access, via the repository, to the bibliographic metadata that identifies the deposited publication.

The project will apply a mix of Green and Golden Open Access for the publication of peer-reviewed articles.

- The Green Access concerns the archiving of non-definitive versions of the article in a repository (e.g., Zenodo). The European Commission accepts a maximum embargo period of 12 months for social sciences and humanities, 6 months in other cases. This might need for a re-negotiation of the contract with the editor.
- Golden Access is granted directly by publications upon the payment of a fee. The publications must acknowledge funding by the Horizon 2020 programme and the number of grant agreement.

The Exploitation and Dissemination Committee (EDC) will decide upon the publication of scientific articles under a Golden Access framework with AquaVitae budget.

Publication Protocol

- Acnowledge EU funding under the programme Horizon 2020 and the number of Grant Agreement 818173.

Golden Access Protocol

- Any partner interested on publishing a paper under a Golden Access solution must send an email to the EDC (info@aquavitaeproject.eu) outlining the title, contents, summarized outputs and possible publication outlets as soon as this information will be available. The EDC will evaluate all possibilities according to the possible impact and budget available.

- *Scientific publications*

Publication of non-scientific material (e.g., reports, dissemination material) will be issued, when possible, under a Creative Commons Attribution 4.0 International licence, when possible. Following the steps taken by the European Commission for facilitating the access and re-use of knowledge, the project will support this solution. Publication of public deliverables in the Zenodo repository will also be facilitated with the aim of provide them with permanent storage and a consistent DOI for each document.

- *Training activities*

AquaVitae will support the development of new skills through the implementation of workshops, MOOCs and several exchange initiatives. The didactics and teaching programmes in aquaculture training are underdeveloped and lack a common structure. The objective of the "Training of Trainers" workshop is therefore to collect, evaluate, and document teaching practices and materials with the ultimate goal of providing and sharing a well-structured teaching portfolio for communication of and training in low-trophic level aquaculture.

AquaVitae will follow the principles and tools developed for the enhancement of higher education. The workshop will have a pre-assignment where each participant develops their teaching material and approach (learning outcomes in regards to knowledge gained, skills obtained and general competence with goals for each session e.g. lecture/seminar/laboratory exercise). This will be presented in working groups during the workshop and peer review of teaching will be conducted in pairs. Lectures and seminars will be streamed and collected together with teaching material and curriculum for the AquaVitae teaching portal. The outcomes of the workshop will feed into the Massive Open Online Courses (MOOCs).

Existing exchange and teaching programs at the partner universities will be mapped and the success rate of these programs evaluated, based on questionnaires distributed to AquaVitae partners. Based on this evaluation we will activate student exchange. AquaVitae wishes to use existing programmes as much as possible and reactivate currently inactive exchange programs among universities. Additionally, we will initiate new connections among key universities, research institutions, and industries by industrial apprenticeship and student exchange programs, based on existing study programs. Relevant existing study programs at the partner universities will be identified to facilitate the use and exchange of training programmes at university level such as master course modules. The aim is to enhance knowledge building and innovation within aquaculture low-trophic species feed and technology.

General guidelines for planning and facilitating the scientific and sectorial collaborative events at case study level will be developed by CETMAR and the University of Tromso. The main aim is to ensure that AquaVitae outcomes are exploited and further developed outside of the project e.g. in industry or new research projects.

Table 7. Training activities throughout AquaVitae project life.

Training format	Activity	Date	Participants (profile and number)
Industry apprenticeships	Capacity building and networking	2020-2022	5 Apprentices
Student exchange	Capacity building, transversal skills and networking	2020-2022	5 University students
Train the Trainers	Capacity building among teachers minimum two events a year	2020-2022	All consortium
MOOC launched	Online course and training material on Sustainable Aquaculture for Low Trophic Species (SALTS)	By 2023	All consortium and the world

- *Synergies – Networks of impact*

AquaVitae has started its collaboration with sister project BG-8[A] CSA project AANChOR, funded to support the Atlantic Interactions Research Agenda; in particular, regarding maximising dissemination of activities, environmental monitoring results and training actions. The first meeting with AANChOR projects and sister project TRIATLAS and iATLANTIC was held on the 2nd July 2019 with the aim of improving collaboration. AquaVitae and the other projects funded under the BG-08 call will actively contribute to the All Atlantic Ocean Research Portal and social networks by sharing relevant news, opportunities and other information. In the framework of the All Atlantic, AquaVitae has identified possible synergies: training courses, MOOCs (students, industrial apprenticeships); build trans-Atlantic industry/research networks collaborations; use of AquaVitae case studies as possible links to industries in the Atlantic context (basin-scale) and case study regions. The strategies are content-driven: the different loop stages set the pace to plan for networking activities. In this manner, networking activities are prioritised after having new content or prototype versions developed.

Table 8. Planning of networking activities throughout the project life.

Activity	M6	M18	M36	M48
AANChOR – All Atlantic Research Alliance	Internal meetings to outline synergies.	Common meetings and activities.	Common meetings and activities.	Common meetings and activities.
European Commission (e.g., DG Research and Innovation, DG MARE)	Permanent communication, collaboration in sectoral events and ad-hoc meetings.	Permanent communication, collaboration in sectoral events and ad-hoc meetings.	Workshop "Towards increased and sustainable aquaculture production in the Atlantic" (T9.4.3)	Communication on final prototypes and outcomes, and final conference.
JPI Oceans	Active monitoring of activity. Scoping initiatives in LTS aquaculture.			
FAO	Active monitoring of activity. Scoping initiatives in LTS aquaculture			
European Fisheries Area Network – FARNET	Active monitoring of activity. Scoping initiatives in LTS aquaculture			
European Science Events Association – EUSEA				Present outputs of training activities (e.g., MOOC).
European Marine Science Educators Association – EMSEA				Present outputs of training activities (e.g., MOOC).
Canadian Network for Ocean Education – CaNOE				Present outputs of training activities (e.g., MOOC).

Besides, these activities the aquaculture sector holds numerous international conferences and workshops, symposiums, congress, trade fairs and other events joining the different profiles involved in the sector. Partners are encouraged to present AquaVitae in their local events, keeping the participation cost-effective. The EDC will evaluate the preliminary agenda to keep the participation of the project partners to those meetings that will have the greatest impact. AV will guarantee its participation not only in aquaculture conferences and events but also in those events related to All Atlantic and Belem Statement

Table 9. Preliminary list of possible aquaculture events.

2019	Conference	Location
9 - 11 Sept	World Seafood Congress	Penang, Malaysia
9 - 12 Sept	9th International Conference on Diseases of Fish and Shellfish	Porto, Portugal
10 - 11 Sept	Aquaculture Innovation Summit	London, Uk
7 - 10 Oct	Aquaculture Europe 2019 - Our Future Growing from Water	Berlin, Germany
14 - 18 Oct	49th West European Fish Technologists Association (WEFTA)	Thorshavn, Faroe Islands
21 - 24 Oct	GOAL 2019 - The Global Aquaculture Alliance's annual conference	Chennai, India
11 - 12 Nov	International Conference on Aquaculture and Fisheries 2019	Bangkok, Thailand
13 - 15 Nov	XV International Symposium on Aquaculture Nutrition	Merida, Yucatan, México
17 - 20 Nov	4th International Conference on Integrative Salmonid Biology (ICISB 2019)	Edinburgh, Scotland
19 - 22 Nov	Latin American & Caribbean Aquaculture 19	San José, Costa Rica
20 - 21 Nov	Focus Fish	Bremerhaven, Germany
20 - 22 Nov	Sustainable Ocean Summit	Paris, France
20-nov	Oceans of Knowledge	London, Uk
2020	**Conference**	**Location**
6- 7 Feb	All Atlantic Ocean Research Forum	Brussels
9 - 12 Feb	Aquaculture America 2020	Honolulu, Hawaii USA
19 - 21 May	Aquaculture UK 2020	Aviemore, Scotland, UK
8 - 12 Jun	World Aquaculture 2020	Singapore
30 Aug - 2 Sept	AQUACULTURE CANADA and WAS NORTH AMERICA 2020	St. John's, Newfoundland, Canada
8 - 10 Sept	13th International Sea Lice Conference	Thorshavn, Faroe Islands
29 Sept - 2 Oct	Aquaculture Europe 2020	Cork, Ireland
16 - 17 Nov	RASTECH 2020	South Carolina, USA

- *Reporting*

All partners will be asked to periodically report these activities. This will enable the review and monitoring of the action, as well as allow for the implementation of corrections in the strategies, if needed.

Table 10. Reporting table for communication and dissemination activities.

Date	Title	Partner	Type of dissemi-nation or communicati on activity	Type of audience	Coun-tries	Size of audience	Budget	Link
…	…	…	…	…	…	…	…	…

5.- Exploitation plan

Exploitation involves the effective use of the project outputs. As such, it will not begin until the latest stages of the project. However, AquaVitae has implemented a strategy to monitor Technology Readiness Level (TRL) development of the case studies main results as well as the measures needed for the other project outputs (e.g., CEN Workshop Agreement, Internet of Things devices, methodology).

IPR Background

AquaVitae has ten companies acting as partners who have indicated an initial interest on exploiting particular project outcomes commercially, and that they want to retain Intellectual Property Rights (IPR) on some of the research that they have contributed to. As an indication of the commitment of these partners, they are funded by 50% (or in some cases, for industry partners who do more research, 25%) of their own costs in the project. The IPR in question is related to the developments and improvements made by these partners in their own processes or products in the framework of WP1-4.

A successful execution of AquaVitae and potential exploitability of results, hence new solutions and technologies, is highly dependent on a good intellectual property rights (IPR) management.

The following IPR-guidelines highlights the project's exploitation objectives and means, the roles and responsibilities with regards to ensuring implementation and execution of the guidelines, relevant background IPR and how to handle the foreground IPR. The above-mentioned points are closely linked to the Consortium Agreement, so that the formal measures and steps regarding IPR-handling are clearly anchored among the Consortium Participants.

IPR Guidelines

The IPR-guidelines are based on the background knowledge and foreground interests of the participating partners in AquaVitae (defined in the Consortium Agreement), the project description, consortium agreement, and grant agreement.

The objectives of these guidelines are to:

- To provide guidelines and processes on how to handle arising IPR in AquaVitae
- To define roles and responsibilities linked to the exploitation of results and IPR processes

- To maximize impact and competitive advantage for the project participants during exploitation of results

The Project Management Group (PMG), consisting of the Coordinator and selected WP and CS leaders and the Innovation Manager at AWI (Matt Slater) are jointly responsible for the assessment of innovation opportunities. The PMG will together with the Innovation Manager advise on IPR discussions and related exploitation opportunities during and after the course of the project.

An innovation and IPR evaluation will be undertaken at month 18 and 36 of the project by WP 1, 2 and 3 leaders and the Innovation Manager at AWI in consultation with the PMG. All WP leaders are responsible for idea and Intellectual Property reporting to the Innovation Manager and PMG during the course of the project.

Main IPR guidelines of the AquaVitae project are:

- All project beneficiaries are responsible for making themselves familiar with the IPR-guidelines, and will actively contribute to documentation of ideas and results of their work.
- Each partner will identify their area / domain of interest in the project in order to avoid conflicts later
- Clarify that patent applications will not be led or financed by the AquaVitae project, but by the individual company or entity's legal department or their identified lawyer
- We will not go into agreement with third parties that require sharing of confidential information or project results during the project period.

Ownership of foreground IP generated in the project will follow these guidelines:

- The results are owned by the Party that generates them,
- Joint ownership is governed by Grant Agreement Article 26.2 where the joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership ("joint ownership agreement"),
- Unless otherwise agreed: Each of the joint owners shall be entitled to use their jointly owned Results for non-commercial research activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s), and
- Each of the joint owners shall be entitled to otherwise exploit the jointly owned Results and to grant non-exclusive licences to third parties (without any right to sub-license)
- Participants will ensure that they provide appropriate access rights to their IP which is necessary to carry out the project by the other partners of the consortium (Consortium Agreement "Section 9: Access Rights").

Confidential information shared in the project needs to be clearly marked as "confidential" and managed following:

- Handling of confidential information is defined in the Consortium Agreement "Section 10: Non-disclosure of information".
- The receiving part commits non-disclosure under the Grant Agreement for a period of 4 years after the end of the Project:

- Not to use Confidential Information otherwise than for the purpose for which it was disclosed;
- Not to disclose Confidential Information without the prior written consent by the Disclosing Party;
- To ensure that internal distribution of Confidential Information by a Recipient shall take place on a strict need-to-know basis; and
- To return to the Disclosing Party, or destroy, on request all Confidential Information that has been disclosed to the Recipients including all copies thereof and to delete all information stored in a machine-readable form to the extent practically possible.

Exploitation of results

Exploitation of results involves the protection and/or commercial utilization of results from the AquaVitae project. We will apply the principles of the European IPR Helpdesk "Your Guide to IP Commercialization"[6] as a working tool. If a partner wants to exploit a project result, we will consider the most suitable way of protecting the IP, otherwise we will publish the result which have a public character to make it accessible for others.

We will assess scalability of the developed solutions so that a high TRL can be achieved by the end of the project period, which increases the likelihood of actual innovations impacting the market. In the short term, members of the consortium will create associated foreground IP, which will be shared between the companies, involved in producing it.

The choice of the most suitable form for IP protection, as well as the duration and geographical coverage depends on the results at stake, but also the business plans for their exploitation and legitimate consortium partners.

Subject Matter	Patent	Utility Model	Industrial Design	Copyright	Trade Mark	Confidential Information
Invention	X	X				X
Software	X[5]			X		X
Scientific article				X		
Design of a product			X	X	X	
Name of a product, service/project					X	
Know-How						X
Website			X	X	X	

Figure 3. Protection pathways for different research outputs. Image extracted from "IP issues in brokerage events"[7].

[6] Link
[7] Document by the IPR Helpdesk. Link

Dissemination for exploitation by other actors and stakeholders

Project results that do not fall under the commercial interest of one of the consortium members will be published and made accessible for other market actors during and after the project.

Possible formats of exploitation of project results, knowledge and IPR after the project period include the use of research results in further research activities (internally and/or as background), development and creation of new services and/or products and viable commercial exploitation solutions estimated by the PMG.

Other AquaVitae outputs that will be openly available are:

- The data collected in the project and shared after project end.
- The draft version of the European standard (the CWA) that AquaVitae will develop.
- The training materials and public reports will be distributed on the project website and relevant workshops.

Business plan for exploitable AquaVitae outputs

The AquaVitae outcomes will be assessed for commercial potential after projects end, mainly as an output of task 7.5. At the project end, most of the case studies innovations intend to be at a Technological Readiness Level of between 6 and 7.

Business plans (BP) for specific case studies will describe options and actions towards further commercialisation, based on relevant and important information on production technology, the value chain, profitability, socio-economic and environmental impacts, regulation and public policy. The BPs will be important for the commercial utilisation of specific case studies, but also for building a lasting network of aquaculture industry partners along and across the Atlantic Ocean, and facilitating opportunities for industrial apprenticeship, researcher exchanges and more. Therefore, BPs will be important materials in developing business partnership among stakeholders and partners along Atlantic Ocean.

BP's will be delivered to AV partners, stakeholders, investor and public through workshop, academic conference, seminar and training activities. BP's aim to target the stakeholders and new investors in order to commercialize the AV results. In addition, results of WP7 are expected to be published to academic journals, and briefs in local and international newspapers.

Annex I- Official logos and compulsory disclaimers

"This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 818173. This [publication/video/result] it reflects only the author's view and that the Commission is not responsible for any use that may be made of the information it contains"

Annex II – One page on AquaVitae

https://nofimaas.sharepoint.com/:b:/r/sites/extranet/aquavitae/WP9/Outreach%20Material/av_one_page_vfinal.pdf?csf=1&e=NLVg3T

AquaVitae

Unlocking the Potential of Sustainable Aquaculture in the Atlantic Ocean

WHAT FOR?

AquaVitae aims to increase aquaculture production in and around the Atlantic Ocean by developing new species, processes and products. The focus of the project is placed on low trophic species (e.g. algae, echinoderms, shellfish), contributing to the circular economy and the Belém Statement.

AquaVitae will offer new opportunities to enhance the environmental, societal and economical wealth of aquacultures communities. The project will implement 11 case studies across the Atlantic basin (Europe, Africa, South America) taking into account several cross-cutting issues: biosensors, Internet of Things, market potential, sustainability, business and socio-economic analysis, policy framework and training.

The project will work to create real and meaningful collaboration between researchers, industry and other aquaculture stakeholders in the Atlantic area.

EXPECTED RESULTS

- To develop new aquaculture species and value chains using a zero-waste approach.
- To implement new or improved aquaculture processes (e.g. improved IMTA).
- To deliver new products from aquaculture value chains (e.g. feed ingredients).
- To test new and existing sensors for the aquaculture industry.
- To investigate consumers' preferences, food safety aspects and product characteristics.
- To assess environmental sustainability and provide recommendations for its improvement.
- To analyse aquaculture economic and social sustainability.
- To analyse policy and governance issues, contributing to the implementation of the EU-Brazil-South Africa Belém Statement.
- To support skills development through training programmes.
- To build an aquaculture network along and across the Atlantic Ocean.

VALUE CHAINS & CASE STUDIES

1. Macroalgal production: new species, offshore production, and post-harvest processes
2. Integrated Multi-Trophic Aquaculture (IMTA): land-based and sea-based, new species and systems
3. New echinoderm species: sea urchins and sea cucumbers
4. Existing shellfish species: oysters and mussels
5. Optimised production of finfish species

AQUAVITAE IN NUMBERS

8 million euros in funding from the EU's Horizon 2020 programme

36 participants from Europe, Brazil, North America and South Africa

16 Countries

20 + members in the Industry Reference Group (IRG)

5 selected value chains including macroalgae, IMTA, echinoderm species, shellfish and finfish

11 innovative case studies

4 years (June 2019 – May 2022)

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THE BELÉM STATEMENT

AquaVitae contribution will be focused on:

- Setting up a network for knowledge and research exchange through the Atlantic.
- Sustainable use of marine resources with a circular economy approach.
- Better monitoring of aquaculture activities through new and emerging technologies.
- Contributing to the well-being of aquaculture communities.
- Enhancing citizen engagement through training and outreach activities.
- Setting up students exchanges and industrial apprenticeships

GETTING INVOLVED

AquaVitae has set up two groups to incorporate external stakeholders in the project: the Industry Reference Group (IRG) and the Policy Advsory Group (PAG). Both groups will remain open during the project lifetime to incorporate those participants needed to ensure the relevance of the outputs.

CONSORTIUM

1. Nofima (Norway)
2. Empresa Brasileira de Pesquisa Agropecuaria- Embrapa (Brazil)
3. Universidade Federal do Rio Grande- FURG (Brazil)
4. Universidade Federal de Santa Catarina (Brazil)
5. Universidade Estadual Paulista Julio de Mesquita Filho (Brazil)
6. University of New Brunswick (Canada)
7. Danmarks Tekniske universitet (Denmark)
8. Syntesa ASP (Denmark)
9. SPF Ocean Rainforest (Faroe Islands)
10. PF Fiskaaling (Faroe Islands)
11. Alfred- Wegener-Institut Helmholtz-Zentrum fur Polar- Und Meeresforschung (Germany)
12. Verein Zur Forderung des Technologietrasfers an der Hochschule Bremerhaven EV (Germany)
13. Matis OHF (Iceland)
14. Galway-Mayo Institute of Technology (GMIT) (Ireland)
15. University of Namibia (Namibia)
16. Miljostiftelsen Beliona (Norway)
17. Norut Northern Research Institute AS (Norway)
18. Universitet I Tromsoe – Norges Arktiske Universitet (Norway)
19. Universidade do Porto – CIIMAR (Portugal)
20. Centro de Ciencias do Mar do Algarve (Portugal)
21. Rhodes University (South Africa)
22. Stellenbosch University (South Africa)
23. Biolan Microbiosensores SL (Spain)
24. Centro Tecnológico del Mar – Fundación CETMAR (Spain)
25. Agencia Estatal Consejo Superior de Investigaciones Cientificas – CSIC (Spain)
26. Universidad de Las Palmas de Gran Canaria (Spain)
27. IVL Svenska Miljoeinstitutet AB (Sweden)
28. The Scottish Association for Marine Science LBG (United Kingdom)
29. University of New England (United States)
30. Primar Aquacultura Ltda (Brazil)
31. Scea France Haliotis (France)
32. Cartron Point Shellfish LTD (Ireland)
33. Algaplus Producao e Comercializacao de Algas e Seus Derivados LDA (Portugal)
34. Marifeed PTY LTD (South Africa)
35. Wild Coast Abalone (South Africa)
36. Bohus Havsbruk AB (Sweden)

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