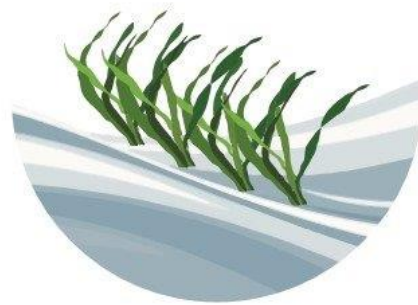


COST Action CA20106

TOMORROW'S 'WHEAT OF THE SEA': ULVA, A MODEL FOR AN INNOVATIVE MARICULTURE (SEAWHEAT)



SeaWheat
COST Action CA20106

TOMORROW'S 'WHEAT OF THE SEA': ULVA, A MODEL FOR AN INNOVATIVE MARICULTURE

Communication and Valorisation Strategy



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HISTORY OF CHANGES		
Version	Publication date	Changes
1.0	N/A	Initial version following adoption of Rules and Principles for COST activities (level A) and to the Rules for COST Actions (level B). Advance Copy - Restricted distribution to Action participants.
1.1	15.04.2022	Public distribution in the COST website. Rewording and text clarifications in the Annexes following further information on COST contractual conditions with the EC.



LIST OF CONTENTS

1. INTRODUCTION.....	5
2. ACTION DESCRIPTION.....	5
3. OBJECTIVE OF THE STRATEGY	6
3.1. Objectives for communication	7
3.1.1. Target audiences	7
3.2. Valorisation objectives.....	8
4. PROJECT VISUAL IDENTITY	9
5. COMMUNICATION STRATEGY.....	9
6. COMMUNICATION AND VALORISATION TOOLS TO MEET THE OBJECTIVES	10
6.1. Internal communication	10
6.1.1. CA20106 Scientific Communications Committee:	10
6.2. External Communication	10
6.2.1. Conferences and events.....	13
6.2.2. Online communication.....	14
6.2.3. Exhibition materials	15
6.2.4. Newsletters.....	15
6.2.5. Media	16
6.2.6. Infographics	16
6.2.7. Intermediary channels	16
6.3. Valorisation tools	16
6.3.1. Peer-reviewed publication	17
6.3.2. Protocol briefs/WG reports	17
6.3.3. International conference book of abstracts	17
7. VALORISATION APPROACH:	17
7.1. Exploitation of projects' results:	18
7.2. Importance of public context:	19
8. MONITORING AND EVALUATION	20
9. RISKS AND MITIGATION MEASURES	21
10. ROLE OF THE PARTNERS.....	22
11. DATA PROCESSING	22
ANNEXES	23
Annex 1: Key Messages per Audience	23
Annex 2: Objectives and terms of reference for the Communication Network	23
Annex 3. Extraction of keywords in the CA20106 projects	23

1. INTRODUCTION

In this document, the authors outline the dissemination and communication plan for the COST Action 'Wheat of The Sea': Ulva, a Model for an Innovative Mariculture" (hereafter SEAWHEAT or Action) to be implemented until October 3, 2025. This document acts as a 'living document', which will be iteratively referred to help guide the Action's outputs as they relate to the deliverables outlined in the Action's MOU. In addition, it reviews the communication and dissemination avenues that the Action will utilise to promote their message and products to advance their purpose. We hope to be consistent and coherent in promoting our message to enhance our impact for a better future.

The strategy includes the Action's approach to Open Science and Open Access according to the COST Action Principle of Openness¹. The CVS therefore reflects the Memorandum of Understanding (MoU), connecting the aims and objectives of the Action to Open Science and Open Access practises in the dissemination of SEAWHEAT results and outcomes. Indicatively, the COST Principle of Openness includes:

Adherence to principles of FAIR (Findable, Accessible, Interoperable, Reusable) data sharing;

- allowing Action activities to be openly accessible to interested individuals, to the extent practical;
- making any proceedings, material, or other object of interest to which the Action or Action activities contributed accessible to any interested third party;
- maintaining openness concerning strategic and operational choices by the Action, including openness on Action partners and potential Action spin-offs or follow-ups.

Furthermore, SEAWHEAT will produce at least one Open Access publication which summarises the main proceedings of the Action, and budget for such a publication is reserved within one grant period.

The SEAWHEAT CVS will remain live over the course of the project, and University College Cork (UCC) is responsible for keeping it up to date. Partners should add new opportunities for communication and dissemination as they arise and use the outreach record in the appendices to log outreach activities undertaken. This will be reviewed at the progress and interim reporting stages to identify any gaps (e.g., scientific, sectoral, or geographic) that need to be addressed.

2. ACTION DESCRIPTION

The main aim and objective of the Action is to create a step-change towards a green economy based on Ulva mass production and utilisation within the European community and beyond. The goal is the development of Ulva-based blue-biotech industries and the promotion of Ulva as a model organism in European algaculture.

The main challenges relating to the expansion of Ulva's biotechnological potential will be addressed through activation of all COST Action networking tools and by consolidating and unifying the currently scattered S&T knowledge from different geographical regions, scientific areas, technological and social disciplines. The Action will bridge the scientific, regulatory and applied knowledge gaps that still exist around Ulva mariculture, paving the way to scaled commercial production of this seaweed in the blue-biotech industries.

In particular, the Ulva COST Action will enhance societal acceptance of Ulva as food, feed, and source of bioactive products, providing policy and regulatory guidance for developing Ulva-based industries. The Action will expand the awareness of the nutritional value of Ulva in the human diet and will facilitate the acquainting of traditional European diet and taste with Ulva, as a new, sustainable, and

¹ For any reproducible item (including, but not limited to, articles, papers, books, manifestos, pamphlets, flyers, presentations, videos, and webinars) for which COST Grant is used, Open Access is mandatory.



safe food item. To achieve this aim, the Ulva COST Action will organise public events such as a ‘cooking day’ in which Ulva will be used in the preparation of nutrient-rich food to acquaint the European public with its taste. Moreover, a ‘school day’ will introduce school students to the first principles of seaweed farming and ecosystem services, highlighting the environmental and nutritional benefits of this novel new food source.

To improve European mariculture, and in the context of the food security, the Action will also evaluate the possibility of replacing existing protein components of fish meal with Ulva, which is already shown to be an effective alternative to terrestrial proteins such as those obtained from soy. At the same time, the Action will engage fish aqua-culturalists involved in R&D on Integrated Multi-Trophic Aquaculture and Marine Biotechnology to explore synergies and novel applications that can improve the economic, environmental, and societal benefits of an expanded Ulva industry.

The project is conducted by a high-quality network of different actors from twenty- nine (29) different countries in Europe and worldwide (fig. 1). These include 15 ITC countries and 27 COST members represented (Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Germany, Greece, Iceland, Israel, Ireland, Italy, Latvia, Lithuania, Malta, Montenegro, North Macedonia, The Netherlands, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom, Romania). The Action is led by the COST Action Chair Muki Spiegel from the University of Haifa (UoH), Israel, and counts more than 170 participants (data updated to June 2022)



Figure 1: Map showing geographic distribution of SEAWHEAT partners

3. OBJECTIVE OF THE STRATEGY

This document describes a general Communication and Valorisation Strategy (CVS) and specific activities dedicated to communication of the COST Action SEAWHEAT. The CVS is developed by the Scientific Communications Committee (SCC) in collaboration with Working Group (WG) leaders and will be implemented as part of WG 7: Coordination and dissemination. The CVS applies a collaborative approach to communicate and disseminate project activities, outputs, and findings throughout the



project to a variety of audiences. In particular, the CVS aims to address activities and communications that will:

- Advise and involve relevant European stakeholders;
- Increase recognition of the Action and its activities, objectives, and impact;
- Reach a wide network of the interested public, stakeholders, and professionals.

Communications and valorisation activities will run for the whole duration of the Action and will be updated in accordance with changing needs throughout the Action. The content of this activity involves all the relevant tasks that will allow the accomplishment of the highest level of valorisation and diffusion of the project objectives, actions, and results. Major target audiences include public authorities, private sector organizations, aquaculturists, food product manufacturers, academia as well as the general public. Planned deliverables subtending to the CVS are outlined in Fig. 2 and *inter alia* include a series of reports both annual project reports and reports detailing the outcomes of Short-Term Scientific Missions (STSM), Training Schools (TS), Workshops (WS) and Public Events (PE).

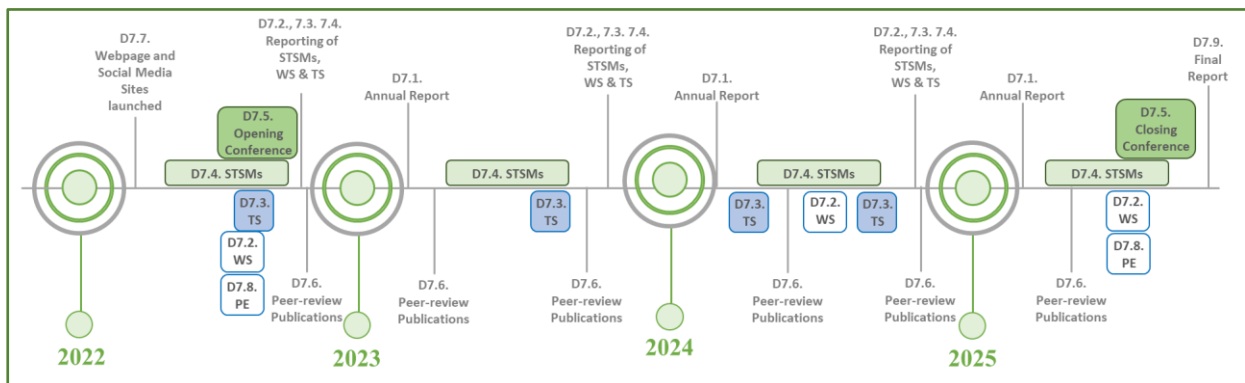


Figure 2. Approximated timeline for WG 7 deliverables associated with communication, dissemination, and valorisation activities. STSMs = Short Term Scientific Missions; WS = Workshops; TS = Training Schools; PE = Public Events.

3.1. Objectives for communication

The core objectives in communicating with external organisations and individuals about the SEAWHEAT project are to:-

- Grow the visibility to the Action during its lifetime.
- Build scientific literacy of *Ulva* as a sustainable new ingredient
- Build public knowledge of ecosystems and human health benefits
- Reach opinion formers, policy makers, funders, industry actors, students, and citizens
- Expand collaborations with scientists, SME/industries, NGOs, EU, and international organizations,
- Encourage dialogue on issues surrounding aquaculture intensification
- Ensure research stays relevant
- Ensure policy choices fully informed of consequences and relevant tradeoff

3.1.1. Target audiences

Key target audiences for SEAWHEAT will be:

- General public
- Governmental and policymakers
- Seaweed growers
- Seaweed-related industries
- Fish aquaculture industries
- European aquaculture markets



- Scientific communities, including relevant peers from scientific disciplines or fields not initially included in the Action
- ECIs – participate in, and lead the organization and evaluation, of workshops, STSMs, and Training Schools

We expect that our activities will target these specific audiences by:

- Enhancing awareness of Ulva
- Use the networking space afforded by conferences, workshops, and other targeted events to engage stakeholders, old and new,
- Promote Ulva as a model seaweed and directly address the issue of food security that faces the globe.

3.2. Valorisation objectives

The overarching mission of the COST Association is to enable breakthrough scientific developments leading to new concepts and products that strengthen Europe’s research and innovation capacities. Contributing to the achievement of this Mission, SEAWHEAT undertakes to valorise the Action results by facilitating their uptake, both by the European research and innovation community and society at large. During and after the lifetime of the Action, SEAWHEAT members will ensure communication of new knowledge on *Ulva* to communities of interest with the goal of transferring knowledge and technologies generated to decision makers, regulatory bodies, NGOs and end-users.

Methods to promote synergies and build capacity for more effective *Ulva* aquaculture, processing, and product development, between the Action and stakeholder groups will be identified. Building capacity for a sustainable blue economy, SEAWHEAT will host a series of stakeholder workshops and parallel training schools. Workshops will be attended by representatives from each step of the *Ulva* production chain including decision-makers, NGO, *Ulva*-based industries, and end-users. Training Schools will provide for advanced hands-on training in novel methodologies and key technologies developed. Outcomes and results from both activities will be disseminated through various media platforms including local and industry-focused publications, SEAWHEAT newsletters, social network platforms and at the SEAWHEAT annual conference.

A series of annual Short-Term Scientific Missions (STSMs) will also provide networking and training opportunities for Early Career Investigators (ECIs) to address identified gaps in scientific, regulatory, and social practical aspects of *Ulva* mariculture. Results and outcomes of STSMs will be disseminated through various channels, both *hard* and *soft*, including peer-review publications, SEAWHEAT newsletters and social network platforms.

Addressing societal questions, Action results relevant outside of the strict scientific sphere will be mapped and disseminated to appropriate interest groups as they are delivered. For example,

1. Information for consumers on *Ulva* products as food in terms of cultural aspects and food safety and quality.
2. Evaluations on economic aspects of *Ulva* industries and associated risks under various production scenarios and in different geographical locations, national regulatory environments for *Ulva* mass production and marketing of products (food safety and quality regulations).
3. Review of regulations relating to mass cultivation and potential conflicts of interest regarding spaces for large scale *Ulva* production vs. other uses for policymakers and other maritime stakeholders.



4. Communication of ecosystem services delivery by *Ulva* biomass production to environmental NGOs, policymakers, and the public.

Particular emphasis will be given to societal aspects for the successful development of *Ulva*-based blue biotechnologies, and the creation of business and job opportunities in maritime and coastal economies.

4. PROJECT VISUAL IDENTITY

The SEAWHEAT Action logo is to be used together with the COST logo. All dissemination materials will be prepared in line with the visual identity of the Action to enable effective “branding” of the project. The design of the project website will also represent the project identity. The logos will appear on all public documents, publications etc. in order to increase visibility of the Action. SEAWHEAT COST Action also contributes to the UN Sustainable Development Goals 14 (UNSDG), Life below Water, and Action members will be encouraged to reference SDG 14 in their dissemination materials and where possible, to map their activities to the Targets of SDG14 e.g., Target 14.2: Protect and restore [marine] ecosystems.

Partners will be provided with working tools to be adopted through the project implementation such as:

- Template for PowerPoint presentations
- Template for word documents
- Template for posters, programmes, badges, placeholders, banners

5. COMMUNICATION STRATEGY

This document is meant to detail the internal and external communication goals throughout the Action’s lifetime. The strategy sets up approaches and tools so actors in our network stay informed and the Action’s deliverables are fully visible to all involved. Communication objectives include the following:

- Ensure effective communication between the working groups;
- Meetings are consistent and planned one half year in advance;
- Quantify the results of the communication strategy execution and revise accordingly;
- In order to maximize the impact of communication efforts:
 - Activities need to be on time and regular;
 - Information communicated after a meeting must be accurate and checked by the relevant leaders;
 - Activities should fit the budget planned for them
- Where appropriate, communication activities will be implemented in partnership with other relevant/similar programmes or initiatives.

Results of the action will have a valuable impact not only on scientific sphere, but also on policy, industry, and society. The data provided by the Action will become an integral part of coastal regulatory and management frameworks. This will enable policymakers to formulate effective marine legislation, which will become an integral part of coastal regulatory and management policies. The results will reduce policy barriers and facilitate the design and implementation of better management directives, both environmental and industrial. Companies involved in supporting industries such as engineering and construction will benefit from a deeper understanding of *Ulva* biology and technological developments brought about by this Action. Suppliers of machinery and equipment, processing the products and distributors industries and marketing will also benefit from the COST Action. The general public will benefit from healthy seafood (including food additives from *Ulva*), which will improve the nutritional habits and even the gastronomic preferences of European citizens. Pollution of coastal waters



will be reduced, benefitting both the ecosystem and the human community as a whole. By having access to the updated knowledge through the conferences, website and outreach activities, the public will gain a better understanding of the health benefits of *Ulva* and related products such as food and the ecological benefits of *Ulva* as animal feed.

6. COMMUNICATION AND VALORISATION TOOLS TO MEET THE OBJECTIVES

The COST Administration provides a range of tools and trainings to allow COST Actions to improve and maximise the impact of its strategy on communication, dissemination, and valorisation. In close consultation with the Core Group and the Action MC, the SCC will see how these tools and trainings can be used to the advantage of the COST Action.

6.1. Internal communication

The project seeks to be transparent in relation to both the Action participants as well as external stakeholders with interest in the subject. Both a dedicated Microsoft Teams Channel and Action webpage (<https://SEAWHEATcost.haifa.ac.il/>) will be utilized throughout the project's implementation. These online collaboration environments are accessible from almost all devices and enable convenient storage, organization and sharing of information. Assistance to facilitate working with Teams for novice users will be provided by the SCC and only Action members that are provided access to the Teams Channel will have full access to all information.

6.1.1. CA20106 Scientific Communications Committee:

The role of the SCC is to operationalise the aims of WG7: Coordination and result dissemination, ensuring that all essential information (currently known and new) is shared with partners, end users, and other interested parties. The SCC will comprise a communications coordinator and one member acting as communications officer for each of the Action's six WGs.

6.2. External Communication

Information regarding activities to the wider network (external communication) will be accomplished via:

- EU/COST/International level
- Local level, for local stakeholders and target audiences

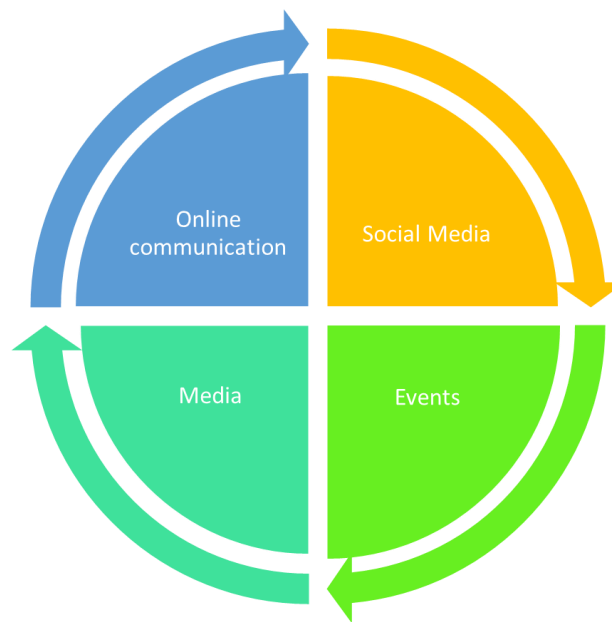


Figure 2. Schematic showing the channels for communication of SEAWHEAT activities and results to key target audiences listed in section 3.1.1.

Specific approaches to external communications include:

- Establishing various social media platforms (e.g., Twitter, Instagram, FB, etc.), through which public interest activities, events, results, and conclusions are disseminated and project visibility is enhanced.
- Presentation at stakeholder events of methods, conceptual approaches, and innovative technologies for the culture of selected *Ulva* spp. (schedule of some target events is provided in 6.2.1. below).
- Dissemination of project goals and activities to international, national, and regional media publications targeting aquaculture industry sectors.
- The Action will establish an online SME platform to facilitate direct interactions and collaborations with industrialists. Annual F2F meeting of platform members will also be organised
- In addition to the communications strategies outlined above, the SCC will establish a quarterly Seminar program to facilitate the sharing of SEAWHEAT results and standardisation of outputs between scientists, industry, and citizen stakeholders. The seminar program is additional to communications commitments outlined in the MOU and is planned for commencement in the second grant period i.e., October 2022. By design, the seminar series will encourage interdisciplinary discussion and serve as an ancillary means to channel feedback from practitioners and policymakers into the development of best practises. The program will be delivered via Zoom or by Teams and the general public invited to attend through both the Action website and various social media platforms.
- Results and outcomes of Action STSMs, Workshops, Training Schools, and Public Events will be disseminated through various media platforms, both hard and soft, including peer-review publications, SEAWHEAT newsletters and social network platforms.

Table 1. Summary of various communication channels, methods, tools, and materials which will be employed during the SEAWHEAT project.



Audience	Channels	Methods	Tools	Materials
General public	SEAWHEAT website and social media sites, local and national media (print and online), Public events including school visits and cooking days public maritime events e.g. SeaFest, Irish National Maritime Festival, European Maritime Day.	Social media posts activities, results, and outputs. Newsletter subscription. Articles in local and national media. . Exhibition at maritime events	Project website. SEAWHEAT social media accounts. Project newsletters	Social media posts. Links to longer reads made available through newsletters, website, and social media platforms.
Government and policymakers	DG Maritime Affairs and Fisheries (DG MARE); National marine institutions	Direct cooperation. Participation in and exhibition at maritime events	National outlets: online/radio/TV	Publishing in grey literature outlets in national/local area, press releases, news interviews and white papers (where relevant)
Seaweed growers	SEAWHEAT SME platform; BlueInvest Platform. Industry Networks, Global Seafood Alliance, Blue economy stakeholder and brokerage events; SEAWHEAT workshops and training days.	Participation in and exhibition at aquaculture events. Practical use cases and peer-to-peer discussion fora	Interregional innovation investments initiative as part of the European Regional and Development Fund (ERDF)	Interviews, daily/weekly newspaper and magazine outlets
Seaweed-related industries	Industry Networks, Global Seafood Alliance, Blue economy stakeholder and brokerage events; SEAWHEAT workshops and training days.	Exhibition stand; Practical use cases and peer-to-peer discussion fora	BlueInvest Platform; Interregional innovation investments initiative as part of the European Regional and Development Fund (ERDF)	Workshops, exhibitions, conferences, publications



Audience	Channels	Methods	Tools	Materials
Fish aquaculture industries	Industry Networks e.g. Marine Ireland Industry Network, Global Seafood Alliance, Blue economy stakeholder and brokerage events e.g. BLUEINVEST Days; SEAWHEAT workshops and training days.	Exhibition stand; Practical use cases and peer-to-peer discussion fora	BlueInvest Platform; Interregional innovation investments initiative as part of the European Regional and Development Fund (ERDF)	See above
European aquaculture markets	Industry Networks, Global Seafood Alliance, Blue economy stakeholder and brokerage events; SEAWHEAT workshops and training days.	Exhibition stand		Workshop trainings, exhibitions, conferences, publications
Scientific communities	Peer-reviewed journal articles; scientific conferences; collaboration with other projects and Mission "Sea 2030"	International Conference on Blue Economy and Blue Growth		Conference proceedings
Early Career Investigators	Workshops, STSMs, and Training Schools; EIT Food Aquaculture Strategy		Social media, blogs, peer-reviewed articles, conferences, exhibition, workshops, and training schools, STSMs	

6.2.1. Conferences and events

In order to achieve the maximum exposure of the project results and to encourage the involvement of all relevant stakeholders, the members of the Action in collaboration with the WG leaders and the Action Chair will present SEAWHEAT in major relevant conferences and workshops. A number of forthcoming events have been identified and are listed in the below table. The list will be of reference also for requests for an ITC Conference Grant, addressed to PhD students or an Early Career Investigator (ECI), affiliated with an institution located in an ITC country participating in the Action.



This list will be continuously updated with new events as suggested by the Network of actors. To facilitate this process, the list of forthcoming conferences and events will be shared with the Action participants as a separate document.

Table 2. Scheduled meetings of Action members and examples of forthcoming mariculture related conferences and events which Action members will participate in.

Title	Date	Location	Action Member
CA20106 events and meetings			
MC Meeting Rome	22/03/2022	Rome (hybrid)	Management Committee
From fundamental biology to aquaculture: state-of-the-art, bottlenecks and gaps	September 13 – 25, 2022	Cádiz (Spain)	All
Participation of CA20106 in selected EU/international events			
Seagriculture Conference EU 2022	June 29 – 30, 2022	Bremerhaven (Germany)	All
Aquaculture EUROPE 2022	September 27 - 30, 2022	Rimini (Italy)	All
Seaweed4Health Conference	August 24 – 26, 2022	Galicia (Spain)	All
EIT Food - Sustainable Aquaculture INSPIRE Autumn School	Online	01-26 November 2022	ECIs, Seaweed growers, Seaweed-related industries, and SMEs

6.2.2. Online communication

Our main form of communication will be carried out through the project’s website, distribution of newsletters and Wikipedia articles concerning SEAWHEAT. Webmaster Hagai Nativ of the Morris Kahn Marine Research Station will assist the Grant Holder to update the website, working closely with the Scientific Communications Committee and GH manager Dr Leigh Livne to update stakeholders and public on the Action’s activities.

6.2.2.1. Website

The website is being developed by UoH and the domain name [<https://SEAWHEATcost.haifa.ac.il/>] has been purchased. The site was developed using through an in-house developer of the Grant Holder and is designed to be mobile friendly. An outline scope was agreed with partners prior to commencing creation of the website. Now that the main framework of the site is built [by a specialised internal company], UoH in collaboration with the SCC will take over the task of editing content and keeping the site up to date. Other project partners should send any suggestions, content, or amendments to the SCC for action. It is intended that this website is available for the duration of the project (as per the GA) and will be updated regularly. The outputs of SEAWHEAT are likely to be highly relevant for a period of time thereafter and it is suggested the website will be available for at least 2 years after the official project end date, although there is no guarantee it will continue to be updated.



6.2.2.2. Social media

Communication has experienced, in recent years, an elevated level of interpersonal connectivity and of information generated in the network. This fact encourages progress towards more collective forms of knowledge sharing, among other things. Through social networks we will aim to provide timely and up to date information about project activities, interacting thus with the target groups involved and concerned by the Action. All the content that will be uploaded on the projects' website will also be shared across the project's social media accounts. By doing so, we will gain more visibility for the project, managing thus, to extend the coverage of the project and improve our Google search ranking. SEAWHEAT project is active in the main social media platforms, including Facebook, Instagram, LinkedIn, and Twitter, where the SCC periodically shares posts about the project. Accounts are managed by Viviana Pasquini, from the University of Cagliari (Italy). These platforms represent a useful tool to communicate with the general public interested in the upgrades and development of the project. To increase the visibility and the flow of information a list of hashtags was designed specifically, which are used to spread and share information.

6.2.2.3. Newsletters

Newsletters will be communicated through the website and Facebook, as well as press releases, at regular intervals. Tailored versions of these products will be sent on our social media channels. The Core Group will oversee the SCC team's PR and Newsletters before publication. Newsletters will communicate project activities from the preceding three months, spotlighting research results, journal publications, events etc. and will provide the context for upcoming quarter activities.

6.2.3. Exhibition materials

The SCC will produce a portfolio of printed exhibition materials conveying a rounded impression of the project in a way designed to draw attention and create interest. These will include a flyer, a leaflet and a banner which will be made available on the Teams site and can be printed on demand by Action members participating in outreach and conference events (see example events in Table 2). The banner will carry key information on the Action and the accompanying flyer and leaflet will further expand on the aims of SEAWHEAT. Designs will be agreed with all partners before being printed and delivered to each partner. English text will be translated by European partners as required.

Texts for exhibition materials should be short and simple and photographs to illustrate the Action and its context should be used where possible. If relevant, paper copies will be provided. An informative flyer will be produced at the beginning of the project and distributed to the relevant target groups. It will contain information about the project, an overview of the topics of the working groups and activities and include information about how to join the Action. The flyer will be distributed mainly in electronic format. A poster describing the Action will also be adjusted, following the design of the flyer to be consistent. All this material will form a communication package, delivered to partners to ease communication. The principle applied will be to 'adopt/adapt/create' in order to respect local differences in culture, language, social contexts and needs, yet fosters application of standards (with all the exploitation benefits that result).

6.2.4. Newsletters

A newsletter will be published every four months in order to report on the project activities and develop awareness about the topics tackled but more importantly about the Action and the network. The Newsletter will be edited by SCC representatives from WG:4, Dilek Unal, Balicek University and WG: 6, Karina Bāliņa, University of Latvia in close collaboration with SCC and the Core Group members. The main contents of these newsletters shall include, but shall not be limited to, the following items:

- Welcome note
- A brief summary of the newsletter content



- Reporting on events
- List of relevant upcoming workshops, training schools, short-term scientific missions and public events.
- Progress of the Action in terms of publications and activities/results
- Personal stories (e.g., STSMs activities, *Meet the Researcher*)

The first newsletter will be published by December 2022.

6.2.5. Media

Media is known to be an effective way to reach not only stakeholders, but also the public. The members of the Network will look for opportunities to publish articles about the project in local and European journals. Links to these publications will be included both in the Action newsletter as well as in the Web site.

6.2.5.1. Press releases

All partners will contribute to the production of press releases which can be included in relevant publications and periodicals for example, aimed at the coastal and marine stakeholder communities. A sample list of potential titles to target includes:

- International:
 - Aquaculture Magazine;
 - IntraFish;
 - Fish Farmer
 - Aquaculture North America
- European:
 - Eurofish Magazine,
- National:
 - The Skipper Journal (Ireland & UK);
 - Aqua Revue (France);
 - Alieftika Nea (Greece);
 - Aquatic Magazine (Spain)
 - Shetland Fishing (UK)

6.2.6. Infographics

Infographics will be designed containing data, which is interesting for targeted stakeholders as well as for the EU in general, even EU institutions at a central level. These may be used on the website, in conferences and workshops as posters.

6.2.7. Intermediary channels

Depending on each case, intermediary communication channels will be used when necessary. These intermediary channels might include channels such as national research news services, to be chosen in collaboration with the national communication networks.

6.3. Valorisation tools

It is important to develop tailored valorisation tools for diverse types of target audiences. The most appropriate outputs depend on whom SEAWHEAT wants to address and at what level. For example, policy briefs are more relevant tools for policy makers, while practice briefs would be more suitable for farmers or the industrial sector. Such outputs will be written in plain (non-scientific) language and focus on the implications of SEAWHEAT work for the specific target group(s) and sectors to which it is addressed (e.g., food sector, plant sector, etc.). This work will be conducted through working with the Core group and within working groups.



6.3.1. Peer-reviewed publication

At least 12 peer-reviewed articles and reviews and several grey publications orientated towards specific target audiences (D7.6), will be published during the Action lifetime. Whenever possible, peer-reviewed publications will be open access. In the second grant period, each Working Group will publish a general review of their subject matter in a peer-reviewed journal. In addition, we expect 1-2 scientific articles per grant period as a result of the STSM calls.

6.3.2. Protocol briefs/WG reports

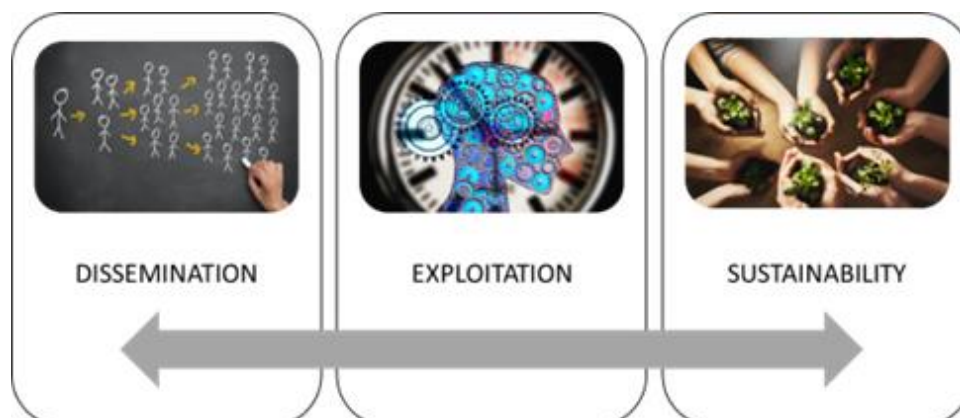
Workshop reports to consolidate knowledge and identify knowledge gaps will be prepared after each Workshop and key findings from these collated into subject-specific protocol briefs (e.g., *Ulva* cultivation, processing and product development, health and nutrition, ecosystems services etc.). A minimum of 2 policy briefs (1 specifically regarding aquaculture regulatory issues) will be published for targeted dissemination among key audiences within the policy, industry, and academic domains. Protocol briefs drafted by WG 2: *Ulva* in aquaculture will address safety and best-practice for *Ulva* spore collection and preservation, seeding, cultivation and harvesting in land- and sea-based systems. All protocols will be compiled as a handbook for both scientists and stakeholders and published at the end of the Action. A final report (D7.9) titled ‘ULVA – Tomorrow’s Wheat of the Sea’ will include all the reviews, protocols, and reports and which should become the ‘gospel’ for students, scientists, producers of *Ulva*, and other seaweed stakeholders.

6.3.3. International conference book of abstracts

The 1st [International Conference for COST Action 20106](#) was hosted by CTAQUA in the city of Cádiz, Spain, in cooperation with COST, University of Haifa (CA Grant Holder), University de Cádiz, SEA-DOC and CEI MAR. The main aim has been to provide a forum for conversation and to facilitate integration across various aspects, and to bring together researchers, professionals, ECI and students researching the *Ulva* species. The conference was held over three days, from 13 to 15 September 2022. The conference consisted of one plenary speaker (Prof. Jang Kim) and three keynote speakers (one presenting online). Each speaker and presentation were invaluable to national and international guests. Dr Sotiris Orfanidis was responsible for compiling our ‘book of abstracts’ for the 2022 SEAWHEAT conference, available [here](#) for download from Dropbox. Throughout the action’s lifetime, we will choose one researcher from the CA20106 network to lead this archive.

7. VALORISATION APPROACH:

Valorisation of the Actions results will be carried out with a view on optimizing their value, strengthening the impact of seaweed sector, and transferring them to other seaweed species to promote their exploitation. Results will be integrated into the bioeconomy in the most sustainable ways available and will be used actively in systems and practices at local, regional and European level.





SEAWHEAT will consolidate and increase knowledge on Ulva, from basic biology, through to identifying the key elements for Ulva mass production and valuable products production, social benefits and environmental impacts. By collaborating with senior and young scientists, SME/industries, NGO, and European/international organisations, the Action will establish a network that transcends borders and disciplines. Resources will be pooled, and knowledge will be shared. This blending of a large variety of expertise will have complementary and synergistic effects, generating new networks of common interest and enabling the diffusion of Action results to policy actors, stakeholders and public alike.

Any new knowledge will be transferred to all the target groups including the general public, either directly in the short term (via in-person and online conferences and workshops), or via publications (minimum of 2 policy briefs, 1 specifically regarding aquaculture regulatory issues). At least a dozen (whenever possible, open access) articles will be published in scientific literature, and several articles in popular journals, depending on the target audience). Final protocols will be published as a handbook for both scientist and stakeholders at the end of the Action. Direct interactions with industrialists throughout the Action will be guaranteed via the SEAWHEAT SME platforms. The Action will generate a dynamic and productive network with entirely open lines of communication to enable efficient information sharing and knowledge transfer via Internet (e.g., SEAWHEAT webpage, other linked pages, social media). This body of collaborations has a scope that extends far beyond the point impact of the COST Action. Our Action is fully committed to the education of the next generation of scientists, graduate students, and undergraduate students. It will take care in particular to involve ECI in the participation, organisation and evaluation of the workshops and TS. ECI involvement in all WGs via the STSMs instrument will also serve to advance and transfer knowledge on key aspects of Ulva mariculture.

Results of the Action will be valorised through new collaborations formed during the action which address research priorities in food, feed and ingredients security. Networking opportunities provided through regular WG meetings, and Action conferences will also create new research links for the development of strong consortia for participation in future research calls such as Horizon Europe, EU Mission: Restore our Ocean and Waters, Blue bioeconomy, Sustainable Aquaculture, Farm to Fork. Participation of the Action in platforms such as EU4Algae will provide for the further transmission of Seawheat innovations, technologies, techniques and strategies to end-users, including aquaculturists, policy-makers, environmental NGOs etc.

7.1. Exploitation of projects' results:

The Action will be relevant to the scientific community, generating and integrating relevant knowledge about Ulva into life-sciences, engineering, economics and sustainability disciplines. Implementation of the SEAWHEAT Action will create an authoritative stakeholder network, that will advance and augment the current body of knowledge on Ulva. Data obtained will be used to build a sustainable valorisation system that will create a knowledge base of value not only to science and further research communities, but for society in general. Scientific knowledge transfer to primary producers, seaweed processors, product developers will be provided by organizing, creating, capturing or distributing knowledge to ensure the availability of results for future applications.

For primary producers of seaweed biomass most relevant results will be technology advances, in terms of optimised seeding, cultivation and harvesting techniques. Results will allow to identify and create space for sustainable seaweed aquaculture. Eventually, it will ensure application of environmentally sustainable cultivation methods while offering ecosystem services, such as bioremediation for coastal pollution, localized control of ocean acidification, mitigation of climate change, and habitat for other marine organisms.



For secondary producers, which are using seaweed biomass as a raw material, results will be applicable in form of standardised methods ensuring compliance with EFSA/ISO regulatory standards for food and feed grade biomass/extracts e.g. drying, pre-treatment, storage, bioactive extraction. EU level assessment of legal aspects and risk assessment of Ulva farming and biorefinery systems will facilitate the start-up of local and regional algae-related businesses.

Results of the Action will accelerate the development of a biobased and circular bioeconomy, by strengthening the eco-efficiency of the processes and substituting terrestrial biomass with aquatic biomass from marine environment.

Practical impact of Action results can be relevant at different levels: within the seaweed farming and industry, as employment increase in the biorefinery sectors, triggering new investments, unlock incentive and favouring the integration of renewable energy within the overall energy system. The Action will contribute towards fast and more sustainable transition towards bio-based economy in European level with added value in terms of:

Interdisciplinarity, which includes life-sciences, humanities and engineering;

Hybrid character, by including higher education institutions, an institute of applied research, and an agro-food industrial cooperative allowing a quick transition from fundamental to commercial research application;

Internationality, by covering all countries where marine resources are available.

7.2. Importance of public context:

Throughout the Action, research outputs will be aligned to current social needs (s underpinned by the UN SDGs at local, national and European levels. Knowledge generated will provide every citizen with the agency to better understand the impacts and benefits (environmental, social and human health) of large-scale Ulva cultivation, allowing citizens to make informed evaluations on new Ulva productions and product developments. The Action will communicate this knowledge as broadly as possible, using accessible, non-technical language, ensuring knowledge uptake and integration into the public narrative on social aspects including environment, health and sustainable production. The Action will generate a dynamic and productive network with entirely open lines of communication to enable efficient data sharing and knowledge transfer via the internet (e.g., web page, social media). Knowledge generated will furthermore inform decision-making by EU policy-makers and implementers, strengthening environmental policies and directives to protect and restore common natural resources, aquatic ecosystems and biodiversity (i.e. EU Biodiversity Strategy 2030) and reducing pollution (i.e. EU Action Plan towards Zero Pollution [...]).

WG6 will specifically address the importance of public context in the development of best practises for expansion of Ulva mariculture. For example, WG6 will compile a report concerning social aspects of Ulva cultivation, processing and marketing on various communities (e.g. social acceptance of Ulva as food, improved nutrition in the communities as well as job creation, increasing community income and education) (D 6.1). This report, and the relevant knowledge underpinning it, will be transferred to all target groups including the general public, stakeholders EU policy-makers and industrialists. Direct interactions with industrialists will be guaranteed throughout the Action via the dedicated SMEs platform. Conflicts of interest regarding space for large scale production of Ulva vs. other maricultured organisms and other users of the sea (shipping, fishing, leisure, etc.) will be also tackled and the information be transferred to related governments with suggestions for possible amendments. In the short term knowledge transfer will be via conferences, workshops, public days and TSs, with targeted and discrete public engagement also scheduled within WG6. The generation of publications and final protocols after the Action will also ensure ongoing dissemination of results beyond the project lifetime.



8. MONITORING AND EVALUATION

An action of communication can be defined as “effective and efficient” when it reaches and is received correctly by its target. The effectiveness and efficiency of the actions of information and public awareness depend on (i) the content transmitted, and (ii) the channel used. The target audience should then recognize the information transmitted and understand it, as it was intended by the publisher of the news. In order to measure the efficacy of the tools included in this Plan, the SCC will keep track on the below-mentioned indicators that will determine the efficient implementation of the Communication Plan. For consistency purposes, it is suggested to perform this exercise at the same time as reporting to the COST Association.

- Appearance of the logo in all material and dissemination activities created under the Action.
- Number of visits to project’s website.
- Quantity of appearances in media (e.g., articles published in press/online, interviews etc.).
- Events attended by Action members and presentations recorded on behalf of the Action
- Number of newsletters and flyers disseminated.
- Subscription counter for newsletters
- Followers of various social media accounts
- Number of conferences and workshops organized.
- Number of scientific publications.

Table 3. Suggested indicators to be used for monitoring communication activities undertaken through the Actions lifetime (Document updated to Sept 1, 2022).

Indicators	Year 1 (Oct 1-Sept 30)	Year 2 (Oct 1-Sept 30)	Year 3 (Oct 1-Sept 30)	Year 4 (Oct 1-Sept 30)
Logo				
Number of visits to project’s website	First reporting after GP1			
Quantity of appearances in media.	First reporting after GP1			
Number of events attended by network members relevant to the Action.	5	6	7	8
Number of newsletters disseminated	4	4	4	4
Number of flyers disseminated	500	500	500	500
Number of recipients/subscribers of the Action’s newsletter	150	200	250	300
Number of conferences and workshops organized.	+2	+2	+2	+2
Number of Tweets on the Action’s Twitter account and re-tweets	50	80	120	200
Number of followers on the Action’s Twitter account	60	70	80	100
Number of members on the Action’s LinkedIn account	60	70	80	100



Number of presentations of the Action at conferences or events (presentation, poster, paper)	4	6	10	15
Number of scientific publications	1	4	6	8

In addition, project partners must ensure that:

- Signed list of participants in hardcopy is kept for all workshops, conferences, seminars, and events organised under the project.
- Presentations are in accordance with the specific template provided.
- Photos are being taken as evidence of action implementation.

The SCC has created a ‘living’ spreadsheet to document all the dissemination activities conducted during the project and to monitor these using different metrics (e.g., number of publications, number of visits to the project website, number of flyers distributed). The spreadsheet will be available in the back-office environment (Google Drive and/or Microsoft Teams) and can be edited by all partners at any time, and will be made publicly available at the end of the Action’s life. The SCC will remind the members to update it particularly prior to reporting and MC meetings. The file is divided in the following sheets:

- Publications
- Events
- Website references
- References in social media
- Mailshots (i.e., newsletters or informational material sent etc.).

9. RISKS AND MITIGATION MEASURES

The implementation of the communication plan can be influenced by a wide range of factors, both internal and external.

Table 4. Potential risks (or threats) to the delivery of *Seawheat* project aims and associated risk-mitigation measures

DESCRIPTION OF THE RISKS	PROPOSED RISK-MITIGATION MEASURES
Low level of engagement/Disengagement of the Action members	Ensure equal interaction with all the members of the Action to ensure regular updates on activities.
Low level of awareness about the activities of Underground4value from the expert community and the general public	Regular updates of quality content related to the Action’s activities on the available Communication Channels (especially on the Action’s Webpage and Social Media Platforms)
Lack of structure in the communication activities	Set-up regular editorial meetings with the communication team of the Action and chaired by the Science Communication Manager to define the content and schedule of the communication activities.
Noncompliance to the agreed templates and/ or formats of documents, reports etc.	These will be agreed upon and made available to all from the initial stages. The Science Communication Team will monitor throughout the project and intervene to take corrective actions, where necessary.



DESCRIPTION OF THE RISKS	PROPOSED RISK-MITIGATION MEASURES
Insufficient effort by partners to publicize the project and its results at the nation or European level	The Science Communication Team will monitor effort at regular intervals and will discuss progress during MC meetings with the Core Group and Chair/Vice-Chair, so as to prevent or correct such incidences.
Lack of interest by stakeholder groups in the project	Efforts will be made at the initial project stage and throughout the lifecycle of the project through valorisation panel meetings, workshops etc. to engage and interact with the stakeholders to prevent or correct such incidences.
Inadequate quality of printed or other material delivered by a sub-contractor	The Science Communication Team will monitor the material produced. If it occurs, sub-contractors will be asked to replace the products as per instructions given in the beginning free of charge.

10. ROLE OF THE PARTNERS

One of the main problems of a community-oriented Action is the need to involve the existing community in the activities and ensure they feel part of the Action.

The SCC in close cooperation with the Coordinator of the COST Action, will be responsible for the project's dissemination and communication plan, guarantee consistency in the message delivered and ensure all the targets are successfully reached.

All partners will contribute to the implementation of the stakeholder and public engagement strategy and play a key role in networking with local stakeholders.

Specifically, all partners will be responsible for:

- Creating a bridge between the project and the networks they participate in;
- Providing input to the content of the project's website, communication materials and media channels;
- Disseminating the activities and results of the project through to their social media channels;
- Disseminating the activities and results of the project at specific events/fairs.

11. DATA PROCESSING

Data coming from the Action website usage, social media, and dissemination and networking activities will be electronically stored. Action members will also directly provide information about specific companies, contact people, etc., from the target groups of interest for the project. No personal information beyond name, corporate email address and company address, and telephone will be stored. The network and the COST Association officers will have access to this information. No use of this information unrelated to the Action will be made. The dissemination will take a position of 'in principle' to offer open access to all Action tools and publications and accept demand of aggregation from other initiatives (where feasible with initiatives that are already up and running). Third parties can use any public data published on the website. Network members only, with an individually granted access, on the other hand can use the back-office environment (Microsoft Teams).



ANNEXES

Annex 1: Key Messages per Audience

- General public
- Governmental and policymakers
- Seaweed growers
- Seaweed-related industries
- Fish aquaculture industries
- European aquaculture markets
- Scientific communities, including relevant peers from scientific disciplines or fields not initially included in the Action
- Young Researchers – participate in, and lead the organization and evaluation, of workshops, STSMs, and Training Schools

Annex 2: Objectives and terms of reference for the Communication Network

When COST Actions use the Action budget for communication, dissemination, or valorisation of Action results, COST Actions shall:

- Make any reproducible item (including, but not limited to, articles, papers, books, manifestos, pamphlets, flyers, presentations, videos, and webinars) financed with this budget publicly accessible according to principles of Open Access;
- Follow COST Visual Identity guidelines and acknowledge COST as funding source where relevant.

Annex 3. Extraction of keywords in the CA20106 projects

The following is non-exhaustive and indicative list of SEAWHEAT keywords for inclusion in, and to enhance the visibility of social media posts. If using new terms, please add them here as a reminder for others to use in subsequent posts. Please be aware that hashtag use reduces the number of characters available for new content, so choose your hashtags carefully.

#seawheat	use as often as possible and to the fore of posts especially in early project stages to grow awareness the Action
#seaweeds	number 1 seaweed-related hashtag, carried by ~61% of algae social media posts and reaching both professional, stakeholder and civic audiences
#algae	for use in posts broadcast to wider algae-stakeholder audiences
#ulva	for all posts reaching phycologists, amateur and professional, and to indicate specific focus to stakeholders and civic audiences
#phycology	reaching academic audiences
#phycologyfriday	this is a long running social media event with a large global following of professional and amateur phycologists active on both Twitter and FB e.g., AlgaTalk is a regular user (1.5k Twitter followers)
#worldalgaeday	Usually occurs in mid-October, this tag should be used on all Seawheat media posts posted three days either side of the official date.
#vegan	appears in more algae-related posts than any other, and necessary when targeting vegan/vegetarian audiences



#healthyfood	no. 2 on list of hashtags most used in algae-related posts. Essential in posts relating, for example, to food values e.g., protein quality, vitamin & mineral contents, unique to Ulva
#oceanprotein	used to emphasise marine origin of Ulva protein. Alternative is #ocean which is no. 7 on list of hashtags commonly used in algae-related posts
#marineskincare	for use with posts detailing cosmetics uses. Alternative is #skincare which is no. 6 on list of hashtags commonly used in algae-related posts
#nature	for capture by eco- and health-conscious platforms/users.
#greenfood	ensuring food-use posts reach potential consumers
#plantbased	ranked no. 10 on algae-related posts, ensuring food-use posts reach health- and eco- conscious consumers.