

An underwater photograph showing a dense field of green and yellowish-brown seaweed. The water is clear and blue. The text 'EU4Algae' is overlaid in white on the seaweed.

# EU4Algae

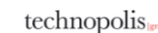
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## A collaborative European stakeholders' forum





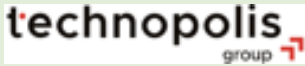
*The ultimate objective is to accelerate the scale up of a regenerative, resilient, fair and climate friendly algae industry in Europe.*

# About EU4Algae

EU4Algae Forum is aimed at gathering **algae interested parties**, from all relevant public and private organizations, **to jointly implement the EU Algae Initiative**, while offering a **forum to openly speak and discuss** market driven breakthroughs for the sector.



# Implementing partners

	<p><b>Project management;</b> Development of structure and governance model; Coordination, facilitation and management of EU4Algae; Strategic communication and community management; Communication activities; Awareness raising and stakeholder acceptance; Facilitation of WGs with communication; Continuity of EU4Algae stakeholders forum.</p>	Germany	Lead
	<p><b>Development of EU4Algae structure and governance model;</b> Facilitators of EU4Algae working groups; Supporting a sustainable development of the industry; Support bringing more algae species to the EU market either as traditional or novel food, or as food supplements; Quality management activities.</p>	Italy	Partner
	<p>WG facilitator for <b>macroalgae</b> production; Support Forum establishment preparation; Support analysis and stakeholder engagement to improve business environment and industry's sustainable development; stakeholder engagement with <u>Seaweed for Europe</u> Coalition; Quality Management Activities</p>	United Kingdom	Partner
	<p>Support to business environment, increased involvement of <b>young people</b>, collection and assessment of algae related projects, <b>Bioremediation</b>, etc.; Contribution to all other WP1 tasks, esp. the facilitation of EU4Algae online and physical working groups &amp; meetings; Contribution to WP2 tasks based on our experience in creating sustainable, self-financed EU wide multi-actor structures within the blue bioeconomy.</p>	Germany	Partner
	<p>Improving governance and the <b>regulatory framework</b>; Regulation WG Facilitator; Quality management activities.</p>	Netherlands	Partner

# EU4Algae Forum Hosting

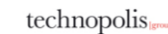
The screenshot displays the Maritime Forum website interface. At the top left is the European Commission logo and the text 'MARITIME FORUM'. A search bar is located at the top right. Below the header, a navigation bar includes 'Themes', 'Communities', 'Search', 'F.A.Q.', and 'EU Login'. The main content area features a 'Views count' section, a 'EU4Algae' title bar, and a large banner image of seaweed with the text 'EU4Algae'. Below the banner is a 'Working Groups' section with icons and labels for: Macroalgae Production, Microalgae production, Algae for Food, Algae for Feed, Ecosystem Services & Bioremediation, Materials, Chemicals, Bioactives & Algae Biorefining, and Youth & Entrepreneurship. On the right side, there is a 'Contact us' form with fields for 'Your full name \*', 'Your email address \*', and 'Your message \*', and a 'Submit' button. Below the contact form is an 'Upcoming events' section listing: 'Digital Ocean Forum 2023' (2 weeks 2 days hence), 'Register for Aegean autonomous boat race' (1 month 1 week hence), and 'DEEP DIVE INTO MARINE CONSERVATION: JOIN THE NAUTILOS...' (3 months 1 week hence).

## [Maritime Forum \(europa.eu\)](https://europa.eu)

EU4Algae is hosted in the **Maritime Forum**.

This includes the EU4Algae website, link for the Working Groups and respective Microsoft environment (SharePoint) for document hosting.

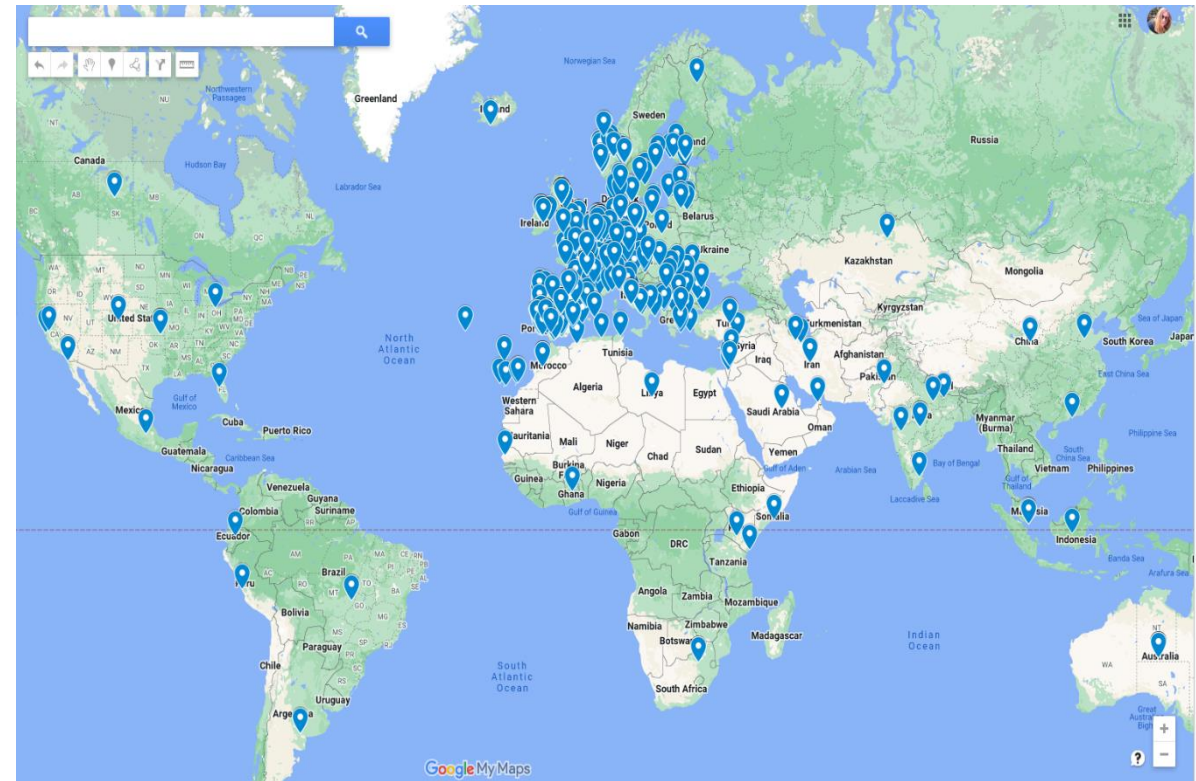
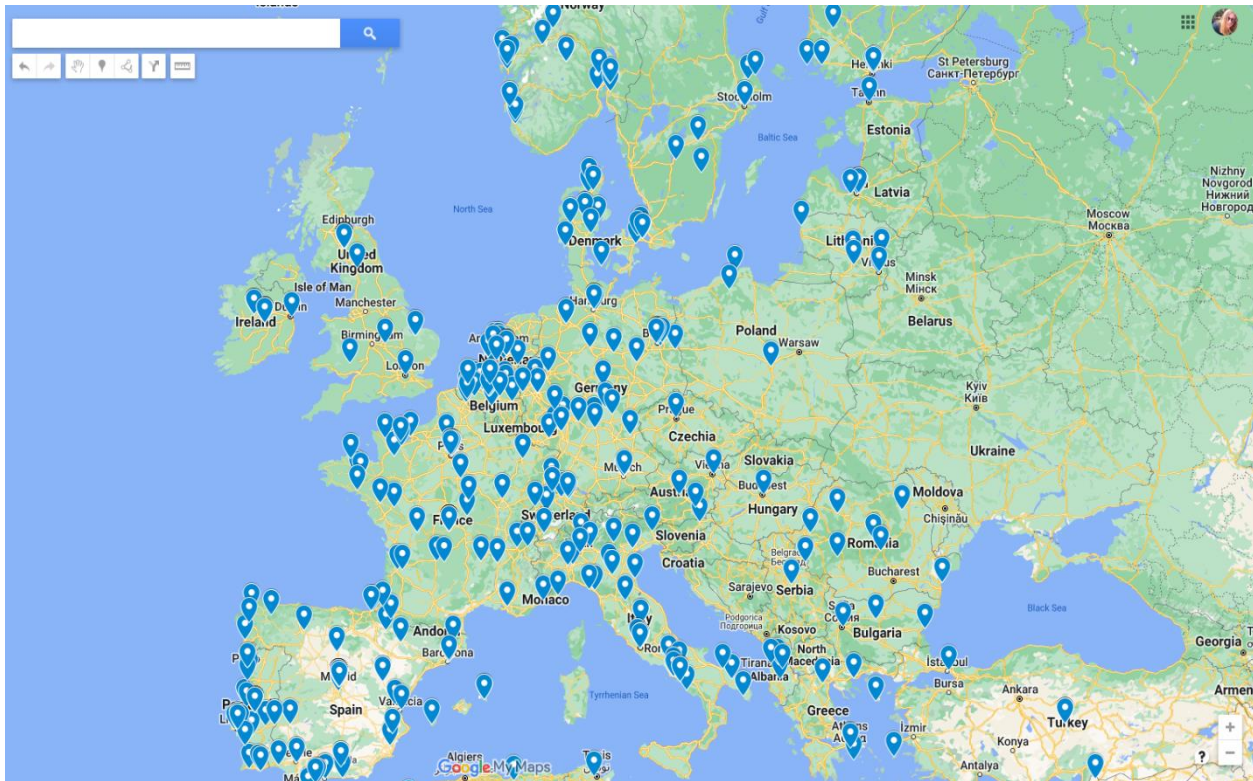
## EU4Algae





# EU4Algae registered members

+850 members registered and participating in WGs discussions



# EU4Algae Working Groups



**WG 1**  
Adrien Vincent



**WG 2**  
Jean Paul Cadoret



**WG 3**  
Vitor Verdelho



**WG 4**  
Kim Anderle



**WG 5**  
Eftalia Arvaniti



**WG 6**  
Gabriel Acien



**WG 7**  
Frederick Bruce

**WG1**  
Macroalgae Production

**WG2**  
Microalgae production

**WG3**  
Algae for Food

**WG4**  
Algae for Feed

**WG5**  
Ecosystem Services & Bioremediation

**WG6**  
Materials, Chemicals, Bioactives & Algae Biorefining

**WG7**  
Youth & Entrepreneurship

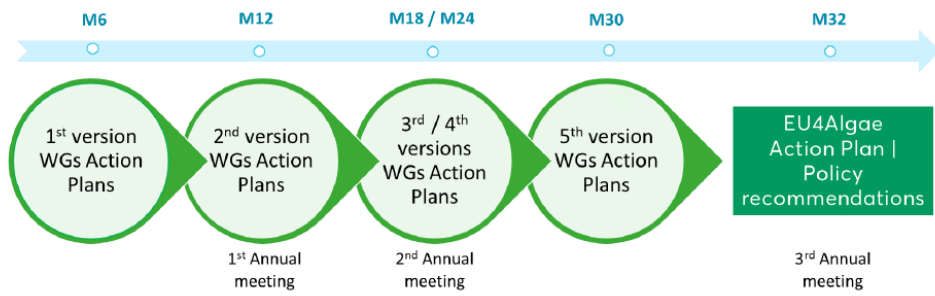


Figure 12: EU4Algae Working Groups workflow and outcomes

# Working groups – Action Plans

- ✓ Constraints and challenges
- ✓ Objectives
- ✓ Actions
- ✓ Outcomes
- ✓ Next steps



Policy recommendations

European algae stakeholders' forum (EU4Algae) and bringing more algae species to the EU market  
01.7: 1st version of WGs action plans

EU4ALGAE WORKING GROUPS ACTION PLAN – 1<sup>st</sup> VERSION

Working Group 1. Macroalgae Production

WG Name	Macroalgae Production	WG Number	1
Facilitator	Adrien VINCENT	Organization	SYSTEMIQ
Identified Constraints, Obstacles, and Issues			
<p>A robust demand for high-quality, traceable, sustainably grown seaweed is expected to increase significantly in the coming years. However, if this demand is met through imports, Europe will miss out on many of the benefits associated with seaweed farming (e.g. innovation, ecosystem services, coastal jobs). Satisfying this growing demand translates into the need to produce millions of tonnes of fresh seaweed each year, which is far above current production levels. While Europe can build on expertise and know-how from decades of science, wild harvesting and processing activities, production growth of this magnitude will depend on cost-efficient farming scale-up, which must meet sustainability criteria.</p> <p>Today, cultivated European seaweed is insufficient in volume, too expensive and produced by a fragmented supply chain. So far only a few companies have managed to secure a license for large-scale operations and leverage sufficient funding to expand. Besides, high quality, traceability and local sourcing are value-adds that can justify a price premium for European seaweed versus imported Asian products. However, European seaweed will not be viewed as an economically viable source of large-scale future supply if the price structure does not change – the current price premium often makes it ten times as costly as imports. To enable this change and help propel European producers up the ladder of preferred sources of supply, production costs in Europe have to be cut drastically. Economies of scale will naturally occur as farms grow bigger in size and assets like boats or seeding and harvesting machinery can be amortised.</p>			
General Objective			
Support the sustainable and cost-efficient scale-up of European seaweed cultivation			
Specific Objectives			
<ul style="list-style-type: none"> <li>Create useful centrally accessible knowledge and facilitate knowledge and experience sharing between seaweed farmers</li> <li>Create a bridge between the seaweed farmers community and other stakeholders groups (e.g., policy makers, journalists, investors, etc.)</li> <li>Inspire new entrants to launch and develop a seaweed farm in Europe</li> </ul>			
Working Groups Actions			
<p>A.1. Upgrade and maintain up to date the Licensing Toolkit developed by Seaweed for Europe</p> <p>A.2. Organize knowledge and experience sharing sessions with farmers from other continents</p> <p>A.3. Organize webinars presenting latest scientific developments and new technical solutions for seaweed cultivation</p> <p>A.4. Facilitate organisation of on-site trips for journalists and policy-makers/ politicians to visit farms and meet seaweed farmers</p> <p>A.5. Explore potential to create a public seed bank at European level</p> <p>A.6. List and profile success stories of seaweed farmers</p> <p>A.7. Identify potential sources of financing for seaweed farmers (types of capital + potential partners)</p> <p>A.8. Host 5x WG meetings (online or in-person) with rotational chair / host</p>			
Outcomes			
<p>O1. Online licensing toolkit available on EU4Algae online forum, enriched with country profiles and maintained up to date</p> <p>O2. 3 sessions organised (1 per year) with farmers from e.g. Asia, North America, Africa</p> <p>O3. 3 webinars organised (1 per year) presenting latest scientific developments and new technical solutions for seaweed cultivation</p> <p>O4. 3 on site farm visits for journalists and policy-makers/ politicians (1 per year) co-organised with local partners in e.g., France, Netherlands, Portugal</p> <p>O5. Scoping document for the set up of a public seed bank at European level</p> <p>O6. Fact sheets / profiles of European seaweed farmers success stories</p> <p>O7. Mapping of potential sources of financing for seaweed farmers (types of capital + potential partners)</p> <p>O8. 5x WG meetings (online or in-person) with rotational chair / host</p>			
Next Steps			
<p>S1. Contact WG participants with summary (meeting agenda, action plan, tasks forum pre-registration, Doodle for 1<sup>st</sup> WG meeting Q3/4 2022)</p> <p>S2. Identify WG chair for the next 6 months</p> <p>S3. Scope activities, expectations from WG participants and timeline for the outcomes</p>			



*"EU4Algae already played an important role during the preparation of the EU Algae Initiative, and I am very thankful for that!*

*Moreover, I trust that EU4Algae will play an active role in making the EU Algae Initiative a success story. Such a collaboration is crucial as ultimate goal of the initiative is to support algae sector that at the end of the day will create the added market value.*

*So, the Commission will continue to work hand in hand with the EU4Algae and other relevant stakeholders to let the EU Algae sector to thrive."*

*Delilah AL KHUDHAIRY  
Director of MARE Directorate A: Maritime Policy and Blue Economy  
EU4Algae meeting 12 December 2022*



The background of the slide features a close-up, slightly blurred image of green seaweed or algae in an aquarium setting. The lighting is somewhat dim, creating a naturalistic underwater atmosphere. The seaweed has long, flat, blade-like structures.

# EU4Algae

**How you are contributing to implementing the EU Algae Initiative as EU4Algae member....**

# EU Algae initiative policy actions

adopted on 15 November 2022

**ACTION 1** - starting in 2023 and in close collaboration with relevant stakeholders, develop a new algae farmers' toolkit;

**ACTION 2** - Work with Member States to facilitate access to marine space, identify optimal sites for seaweed farming and include seaweed farming and sea multi-use in maritime spatial plans;

**ACTION 3** - By the end of 2026, together with the European Committee for Standardization (CEN), develop standard testing, quantification and extraction methods for algae ingredients and contaminants;

**ACTION 4** - By the end of 2026, together with CEN, develop algae biofuel standards and a certification methodology for algae-biofuel products to be used in various transport sectors, particularly heavy road, aviation and maritime transport;

**ACTION 5** - Starting in 2023, assess the market potential, efficiency and safety of algae-based materials when used in fertilising products and the need to amend Regulation (EU) 2019/1009 on EU fertilising products to include algae-based materials.

## EU4Algae direct contributions

WG1 is promoting and upgrading and updating the **Licensing Toolkit** developed by Seaweed for Europe at EU4Algae website

EU4Algae presented the status quo, current challenges and existing efforts in a workshop organised with MS

Dedicated Work Package and WG3 is dedicated to support bringing more algae species to the EU market either as traditional or novel food, or as food supplements

EU4Algae is exchanging regularly with the CEN

Insights from industry collected by WG 6-EABA to address regulation issues regarding biofertilisers and other potential applications

# EU Algae initiative policy actions

adopted on 15 November 2022

**ACTION 6** - Starting in 2023 and together with the algae industry, examine the algae market and propose market-stimulating mechanisms to support and promote the transfer of technology from research to market;

**ACTION 7** - By the end of 2024, based on the good practices, feed indicators and other relevant information develop specific guidance to promote replacing fish-based feed with algae-based feed;

**ACTION 8** - Work with the algae industry and Member States to: identify valid and safe alternatives to the use of nutrients and CO<sub>2</sub> from various sources for microalgae cultivation and organic certification; promote the extraction of nutrients from algae biomass support the life cycle assessment of the environmental and climate impact of algae cultivation and production by considering the development of monitoring methodologies and indicators to measure the environmental impact and sustainability of seaweed cultivation;

## EU4Algae direct contributions

EU4Algae Task 1.6 aims at driving forward the EU algae business environment improvement and stimulation actions, promote entrepreneurship and business creation and compile calls and EU funded projects related to blue bioeconomy/algae.

WG4 is developing insights to better understand the feed market and consumer trends, and to raise awareness about algae-based feed

WG 2 is discussing how to expand the current microalgae production capacity/technologies

EU4Algae Task 1.9.2 together with WG5 are assessing the bioremediation potential of algae = nitrogen, phosphorus and carbon uptake, impacts of algae cultivation on the health of the ocean and humans, as well as broader ecosystem services

# EU Algae initiative policy actions

adopted on 15 November 2022

**ACTION 9** in 2023/2024, pilot project(s) supporting the reorientation of fishers' careers from fishing to regenerative ocean farming;

**ACTION 10** enhance targeted support for innovative SMEs and projects in the algae sector through the scaled-up activities of the BlueInvest Platform;

**ACTION 11** starting in 2023, facilitate sea basin and macroregional cooperation by promoting innovative interregional partnerships (e.g. the blue bioeconomy, focusing on algae), through smart specialisation strategies and the S3 Sustainable Blue Economy Platform

## EU4Algae direct contributions

WG1 is sharing inspiring **experience from existing seaweed farmers** + Licensing toolkit helps understand the regulatory process to apply for a concession

WG7 is exploring tools and initiatives to attract more youth and entrepreneurs into the algae industry.

EU4Algae will co-host a e-Pitching session with BlueInvest for algae start-ups in October and WG2 will organise a specific micro-algae Forum.

WG6 is developing a platform including the pilot and demonstration scale facilities available for sharing and collaborating in the development of new produced and processes.

EU4Algae is promoting the work done by EU-funded collaborative projects and helps connecting dots between them and identifying synergies (e.g.; workshop held at the European Maritime Day 2023)



# EU Algae initiative policy actions

adopted on 15 November 2022

**ACTION 12** by the end of 2023, integrate algae sector knowledge into the EU aquaculture assistance mechanism;

**ACTION 13** by the end of 2025 and in collaboration with relevant stakeholders, do a study to gain better knowledge of seaweed climate change mitigation opportunities and the role of seaweed as blue carbon sinks;

**ACTION 14:** By the end of 2025 and in collaboration with researchers and academics, assess the options for an EU-wide approach to conserving seaweed biodiversity by maintaining and documenting European seaweed strains in a centralised biobank network or databank;

**ACTION 15:** Starting 2023 and subject to European Food Safety Authority advice start discussions on the establishment of maximum levels of contaminants and iodine in algae and/or the adoption of a new recommendation for algae species for which insufficient occurrence data for contaminants are available to allow the establishment of maximum levels.

## EU4Algae direct contributions

WG 5 is also looking at ecosystem services on carbon capture and utilization (CCU) provided by algae and the evaluation methodologies.

WG1 and WG2-EABA are addressing the biobanks topic, specifically through discussions with local biobanks, SeaStrains project and EMBRC.

WG3-EABA is looking at Algae for food, including food safety topics

Dedicated Work Package 3 to support bringing more algae species to the EU market either as traditional or novel food, or as food supplements

# EU Algae initiative policy actions

adopted on 15 November 2022

**ACTION 16:** Starting in 2023 and in collaboration with Member States, study existing monitoring schemes and available data on seaweed harvesting from the wild and from beachcast on EU coasts.

**ACTION 17:** Support, through Horizon Europe and other EU research programmes, the development of new and improved algae processing systems and novel production methods for high-value compounds traditionally sourced from algae processing algae to make circular bio-based products for multiple applications;

**ACTION 18:** Together with Member States, support, through Horizon Europe and other EU research programmes, the development of better and scalable algae cultivation systems or methods for dealing with the current technical constraints of macroalgae and microalgae production systems;

**ACTION 19:** Address algae biofuel-specific technological and systemic challenges and identify market take-up measures in the context of Horizon Europe.

**ACTION 20:** Starting in 2023, prepare an overview of the availability of algae-related data (e.g. production, employment, turnover and other socioeconomic data) and issue a recommendation on centralising the sources of such data.

## EU4Algae direct contributions

EU4Algae is promoting the work done by EU-funded collaborative projects and helps connecting dots between them and identifying synergies (e.g.; workshop held at the European Maritime Days)

WG6 is creating the platform and online course and webinars focused in biorefineries, agriculture products, bioplastics, etc. A repository with this material will be integrated into the platform

WG1 and WG2 are contributing to this topic, through knowledge curation on EU4Algae platform and organization of dedicated webinars for instance. WG6 platform will also contribute.

# EU Algae initiative policy actions

adopted on 15 November 2022

**ACTION 21:** Starting in 2023, support the raising of consumer awareness by: A. doing a consumer behaviour and preference analysis (Eurobarometer) of the perceptions of algae-based products; B. launching a fact-based EU-wide and/or, where relevant, regional or local communication campaign(s) to promote the variety of applications and benefits of algae-based products (algae cooking contest);

**ACTION 22:** raise the sustainability profile of algae-based products under sustainable food labelling framework (...) and green public procurement as part of the Farm to Fork Strategy.

**ACTION 23:** Starting in 2023, together with the EU4Ocean platform and Member States, promote awareness-raising actions for schools and universities on the blue bioeconomy and innovative solutions for regenerative aquaculture.

## EU4Algae direct contributions

EU4Algae Task 1.8 → EU4Algae will focus on the consumers, end users and the civil society to raise awareness and create consumer acceptance on algae products via social media campaigns + design and implement a fake online web shop with the purpose of testing consumer's preferences on algae products.

WG6 is developing different surveys about social and industrial acceptance of algae products and services

WG 7 is mapping stakeholders and relevant youth & entrepreneurship networks, creating online repository + algae apprenticeship scheme with relevant companies in collaboration and developing training materials for schools with EU4Ocean.

WG 6 is developing courses about algae biorefineries, online, webinars and presential. The first one will take place on July 3rd-7th, 2023 in Almeria (Spain).

EU4Algae is collaborating with DG MARE, The Global Seaweed Coalition, the French Ministry of Agriculture and the Prince Albert 1st of Monaco Foundation to support the organization of the first Algae Awareness Summit that will take place in Paris in October 2023

**Thank you for your attention!**



**#EU4Algae**  
Making change together.

