

# Macroalgae Working Group - Kick-off

15. June at 14.00-16.00 CET  
online

Efthalia Arvaniti, PhD Programme Manager



GRASS



EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND

EUROPEAN UNION

# SUBMARINER Network members



- SME
- University
- Research Institute
- Science & Technology Park
- Government
- Regional cluster



- Sweden
- Germany
- Denmark
- Poland
- Lithuania
- Finland
- Latvia
- Estonia
- Norway

Bio-based Industries Consortium

SEAWEED for EUROPE

BIOMARINE Community

eur@cean



Innovation, Bioeconomy,  
Spatial Planning, Nutri, Tourism,  
Culture, Energy, Ship

# SUBMARINER topics

2021 – 2027

Macroalgae  
harvesting,  
cultivation &  
processing



Mussel  
Cultivation  
&  
Processing



Reed  
Beach Cast  
Macro-  
Halophytes



Cultural  
Heritage /  
EcoTourism



Blue Bio-  
technology  
Microalgae



Marine  
Litter



Side Streams  
New Species  
Aquaculture



Smart  
Combinations



## Strategic Action Fields

Actors &  
Match-  
Making



Digitalisation  
Data & Tools



Sub-  
regional  
solutions



Access to  
Pilot sites &  
Large scale  
Demonstrations



Training &  
Capacity Raising



Technology  
Development  
& Transfer



Finance  
&  
Funding



Regulation  
&  
Licensing



Awareness  
&  
Marketing



Multi-Actor and Sector Approach

Companies, Research, Authorities, Civil Society

Natural and Social Science, Informatics, Creative Arts, Economics

Vision 2030



Contribute  
to decrease  
of GHG  
emissions



Ecosystem  
Restoration  
Increase  
Biodiversity



A smart,  
resilient  
Baltic Sea  
Region  
Promote  
local, circular  
economy

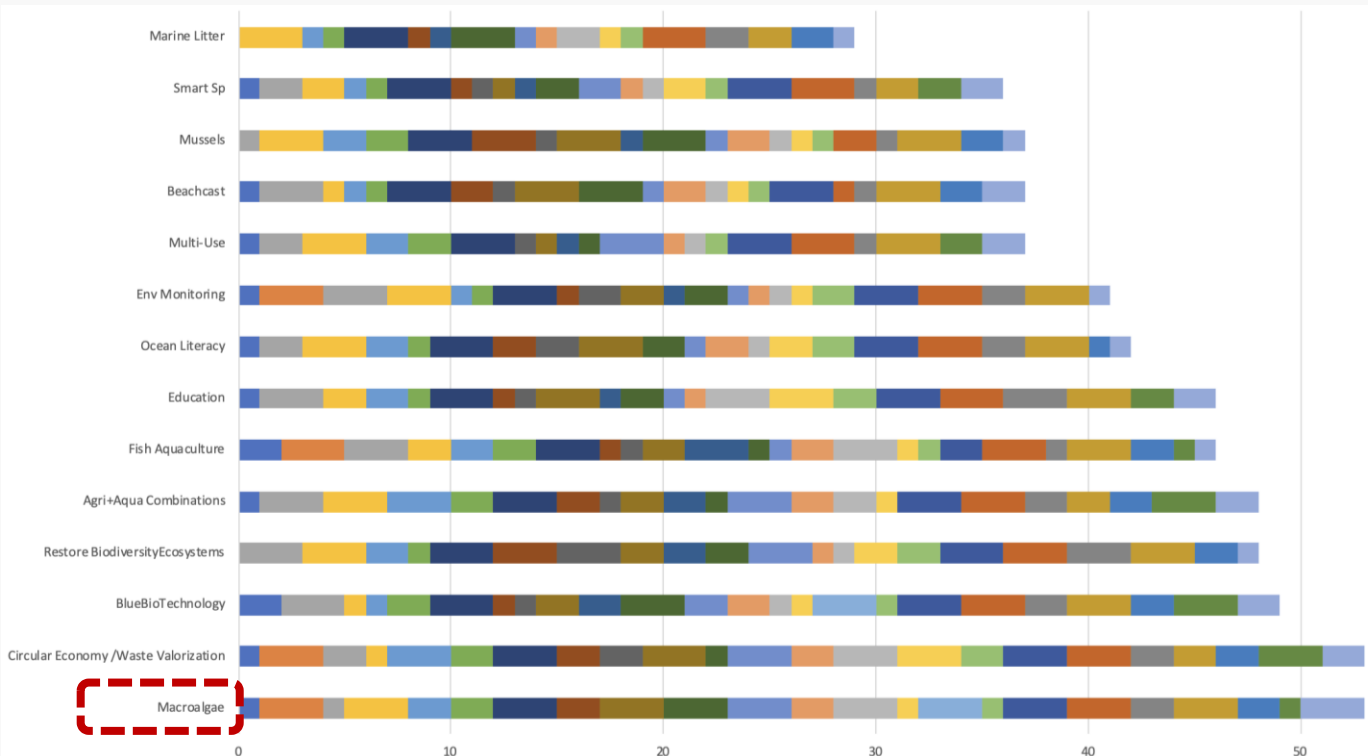


Improve  
human  
well-being



Promote  
bio-based  
innovation  
s

# Current SUBMARINER interests in topics



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# The Baltic Blue Bioeconomy hub ...

## Communication/Dissemination:

- **Blue Platform Repository & Think-tank**
- Social Media – **Conferences**
- **Position & policy papers, Roadmaps**
- 6,000 Actors mapped

## Services to Members:

- Promotion of members' competences
- Funding Opportunities; **Match-Making**
- **Project Development**
- **Workshops**
- Access to searchable stakeholder database

## Expert Advice & Coaching:

- **Accelerator**, Company Corner, Start-ups
- **Research – Company – Policy**





# Actors mapping

- **46 members**, 260 partner organizations
- 6,000 actors throughout BSR, 1700 institutions
- approx. **650 companies** in blue bioeconomy linked via SUBMARINER



All (1642)

Austria (1)

Denmark (277)

Estonia (81)

Finland (223)

Germany (266)

Latvia (90)

Lithuania (43)

Norway (2)

Poland (347)

Russia (133)

Application

All (1642)

All (1642)

Anti fouling systems (13)

Bioremediation (45)

Cosmetics (73)

Energy (118)

Farming harvesting (210)

Feed (81)

Fertilizer (30)

Food (307)

Health care (80)

Nutra & pharmaceuticals (76)

Topic

All (1642)

All (1642)

Algae (229)

Blue biotechnology (317)

Energy (204)

Environment (220)

Marine litter (18)

Maritime cultural heritage (54)

Maritime spatial planning (86)

Mussels (120)

Other (443)

Reed/beach cast (53)

# Baltic algae companies 2021



oceanBASIS  
sea.science.solutions.



NORDIC  
SEAFARM

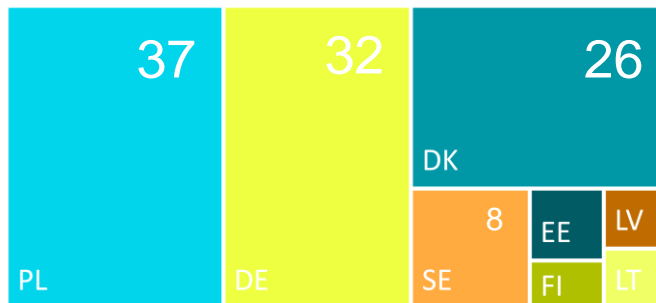
ROCKET  
CLUSTER



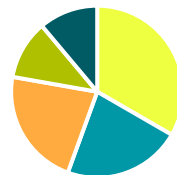
## COMPANY CATALOGUE

Showcasing products  
and services of the Blue  
Bioeconomy developed  
by blue companies in  
the Baltic Sea region

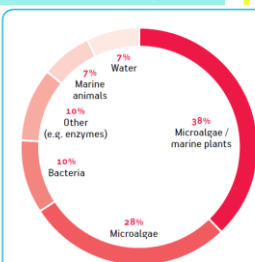
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■ EE ■ LV ■ LT ■ PL



## Accelerator cases 2020+

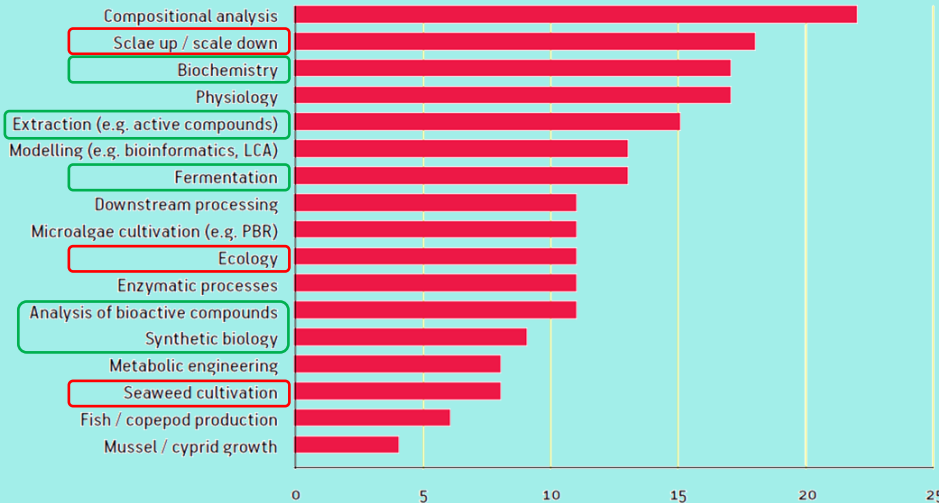


- Algae/marine plants
- Water
- Diverse
- microalgae
- Bacteria





# Baltic blue biotech R&D expertise



Source: Arvaniti, E.; Schultz-Zehden, A.; Blümel, M.; Kaartokallio, H.; Luhtanen, A-M.; Tasdemir, D.  
(2019): **Findings from the Alliance mentoring and accelerator programme**, Baltic Blue Biotechnology Alliance project. SUBMARINER Network for Blue Growth. Berlin.



# Macro-algae



About Macro-algae

FAQs

The SUBMARINER Network is a partner in the GRASS project - Growing Algae Sustainably in the Baltic Sea. Through capacity building and awareness raising, GRASS will result in a demand for macroalgae and unlock the potential of macroalgae production and application sectors in the Baltic Sea Region. This webpage presents the key facts, reports, networks and other relevant information on macro-algae in the Baltic Sea.

GRASS project flyer

Career, Youth & Training Opportunities

EU Algae Biomass Portal

- Meet the Baltic Sea Macro-algae Community
- Projects
- Reports
- Data and tools
- Finance and legislation
- Macroalgae in the media/ Videos
- Latest news on macroalgae
- Upcoming events

<https://www.submariner-network.eu/macro-algae-topic>

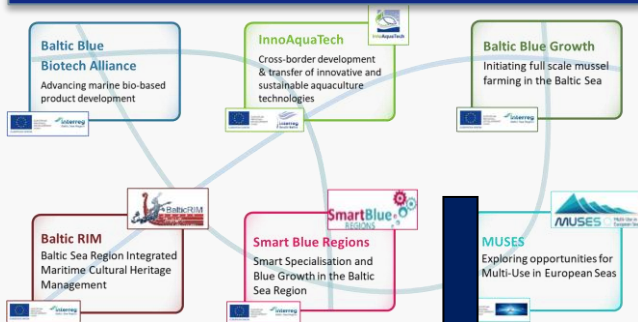


EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND

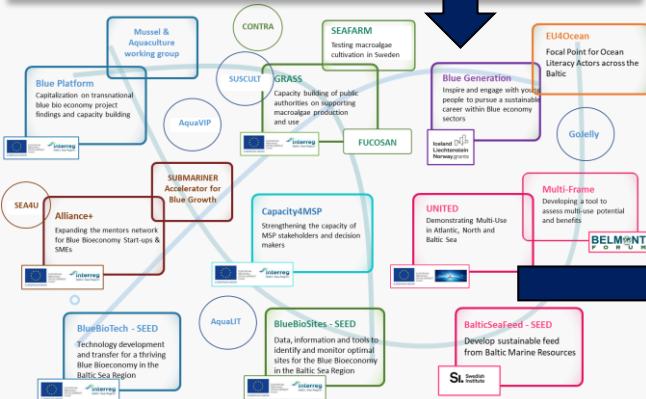
Blue Platform

# From projects to working group & vice versa

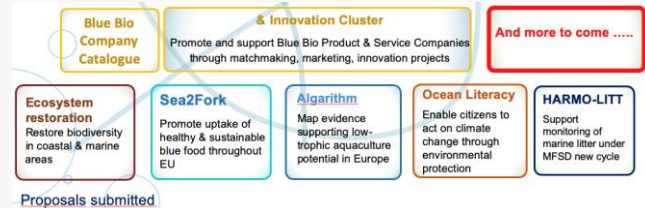
## Completed projects (2014-2019)



## Current projects (2019-2021)



## Next GEN SUBMARINER projects (submitted)



Proposals submitted

## Permanent Working Groups

Mussels

Fish & Shrimp Aquaculture

Accelerator for Blue Growth

Macroalgae

EU4 Ocean Literacy Platform

Marine Litter

# Members of the mussel WG



Mussels

Upcoming WG meeting: 24th June  
2021 at 15:00-17:00 CEST



Kalmar kommun



Borgholms kommun



Coastal Research & Management



LÄNSSTYRELSEN  
ÖSTERGÖTLAND



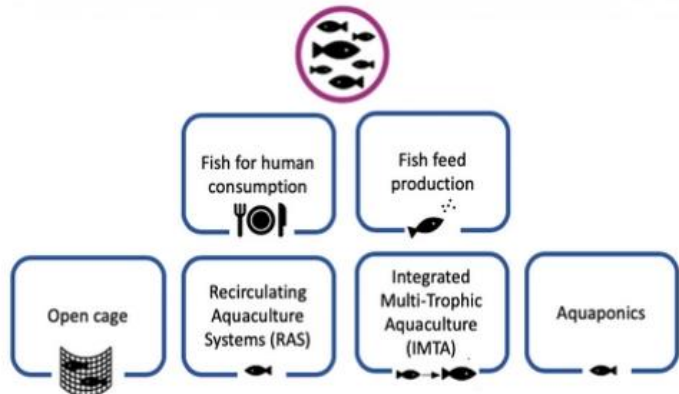
Linnæus University



## Incentives

- International **collaboration** & **knowledge transfer**
- **Unified** voice & **definitions** of aquaculture
- Identify **synergies** and **circular economies**
- Baltic **representation** on international scale

Quarterly meetings: Last meeting 26. May 2021





# SUBMARINER Accelerator for Blue Growth



Meeting every 3<sup>rd</sup>  
Friday of a month at  
09.30-11.00 CET

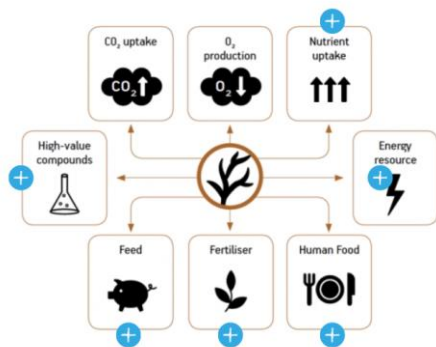
- 70+ active mentors and service providers from BSR and beyond
- **12 active cases, 28 alumni cases**
- 12 private investors regulars in our events
- **60% find partners, reach higher TRL, accelerate product development**
- 2 pitching / match-making events per year in BSR
- Monthly Expert/Mentors' forum meetings, also with invited guests
- Several tools



# About GRASS



## POSSIBLE APPLICATIONS OF MACROALGAE HARVESTING AND CULTIVATION



→ GRASS aims to raise **awareness** and build **capacity** on macroalgae cultivation & applications among public authorities, ministries, planning regions and counties who are the key **legislative & funding** bodies to facilitate growth of the sector



UPPSALA  
UNIVERSITET



NATIONAL  
MARINE  
FISHERIES  
RESEARCH  
INSTITUTE



GRASS Project Flyer

GRASS Dissemination Plan

<https://submariner-network.eu/grass>



## Project Outputs

Work Package 2

Work Package 3

Work Package 4

Raising capacity of public authorities and practitioners on the environmental and ecological benefits and risks of macroalgae cultivation and harvesting in the BSR:



2.1: Pan-Baltic map depicting potential of macroalgal cultivation and harvesting



2.2: Manual on the efficient production methods of macroalgae farming in the Baltic Sea region



2.3a: Report on ecological impacts of macroalgae cultivation in the Baltic Sea region



2.3b: Guidelines for undertaking Environmental Impact Assessments for macroalgae

# WG Kick-off meeting agenda 14.00-16.00 CET



- Welcome
- Tour de force – Sli.Do.
- Set up the Macroalgae WG – Sli.Do. Survey 1
- *5 min comfort break*
- Macroalgae policy paper: status, timeline and roles
- Exchange on news, events, project developments
- Guests speakers: 1-2 speakers from the industry
- Available funding from public funding programmes.





# Now to you!

## Interactive Survey 1 – Tour de force

Join at  
**slido.com**  
**#MACROALGAEWG**



**Present your self to the Working Group: 1) Name, 2) organisation, 3) country, 4) industry, 5) highlight, 6) specific needs & barriers (e.g. tech transfer, market, regulatory, value chain).**

0 0 0

Participants can vote at [slido.com](https://slido.com) with [#MACROALGAEWG](https://twitter.com/MACROALGAEWG)  
(15 - 17 Jun) or anytime at [this link](#)



# Setting up the Macroalgae WG

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- SUBMARINER Network: Roles expectation and ambition
- GRASS Macroalgae conference Sli.Do results



# Macroalgae WG - Roles expectations and ambitions

- Roles: facilitator, members, guests
- Meeting regularly – how often?
- Low barrier admin
- Bottom-up approach: Agenda, tasks force, activities/ outputs, projects
- Who can participate – who can be an official member?
- New SUBMARINER web-page, MS Teams group page

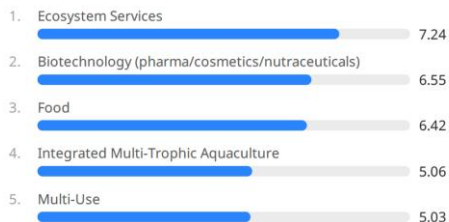


# Sli.Do results from 7. May 2021

Survey (2/16)

0 3 3

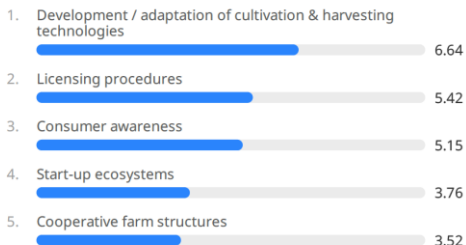
**For what purpose do you think macroalgae cultivation makes sense in the Baltics?**  
(1/2)



Survey (4/16)

0 3 3

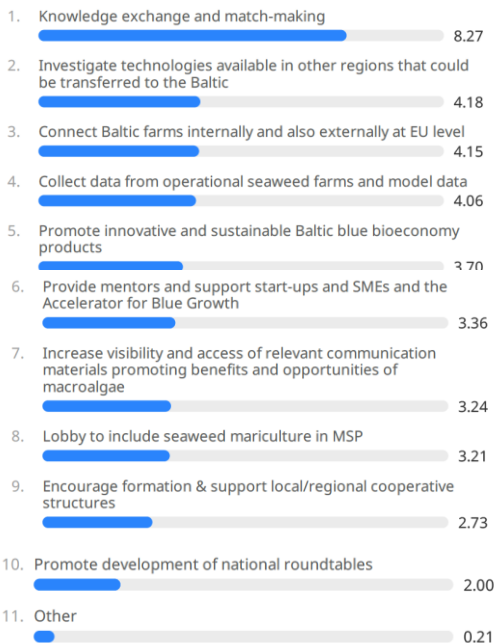
**Rank these improvements needed in the Baltic seaweed sector.**  
(1/2)



Survey (13/16)

0 3 3

**What do YOU value in a new Baltic macroalgae WG?**  
(1/3)



# 1) Macroalgae Policy paper



1. Objective: Highlight benefits, opportunities and needs of the sector, knowledge gaps, and innovation barriers and make recommendations for advancing Baltic macroalgae sector
2. Peer-reviewed publication with author list
  - Baltic task force
3. End- users
  - For public authorities and policy makers of Baltic states, EU COM
  - Planning authorities
  - Funding programmes
4. Timeline – Summer/Autumn 2021



# Macroalgae Policy paper - TOC



1. Environmental benefits and opportunities of macroalgae production and use
  - a. internal nutrient load reduction
  - b. secure ecosystem services with validated environmental monitoring data
2. Bottlenecks and potential solutions for Baltic macroalgae innovation
3. Baltic-wide and national R&I agendas with RIS3 e.g. selection of sites, species, technologies, combinations, product markets.
4. Combinations of seaweed farming with other uses, e.g. tourism or off-shore wind farms.
5. Baltic-wide seaweed and socio-economic benefits e.g. repurpose facilities, skills (fisheries).





## 2) EU COM Open consultation on algae



- The EU algae initiative, aims to increase sustainable production of algae and algae-based products, ensure their safe consumption and boost their innovative use in the European Union.
- With the consultation, the COM wants to collect facts and opinions about current challenges related to algae production and consumption as well as ways to resolve them.
- **The consultation runs until 11 August 2021** and is targeted at EU citizens as well as all relevant stakeholder groups, including industry, NGOs, public authorities, civil society, research and academia.

Submit a  
joint  
response  
on 1<sup>st</sup> half  
of July

NEWS ANNOUNCEMENT | 19 MAY 2021

### Consultation - Towards a strong and sustainable EU algae sector

The European Commission has launched an open public consultation on the EU algae initiative.



# Now to you!

## Interactive Survey 2 – Shape the Macroalgae WG



Join at  
**slido.com**  
**#MACROALGAEWG**



Which 5 topics do you feel are the most important for Baltic countries to cooperate on? 000

- Tech transfer  
☐ 0%
- Ecosystem services  
☐ 0%
- Environmental monitoring  
☐ 0%
- Legislation/lobbying  
☐ 0%
- Market development  
☐ 0%

# 5 minute comfort break

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# Now to you!

## Interactive Survey 2 – View results



Join at  
**slido.com**

**#MACROALGAEWG**



Which 5 topics do you feel are the most important for Baltic countries to cooperate on?

000

Tech transfer

☐ 0%

Ecosystem services

☐ 0%

Environmental monitoring

☐ 0%

Legislation/lobbying

☐ 0%

Market development

☐ 0%

# Who has prepared to present something?

>> TEN ISLAND SEAFARM



# *HEU calls opening in October 2021*

- 2022-Farm2Fork-02-08: Innovative food from marine and freshwater ecosystems
  - IA, 18m€ in total, 3 projects (6 m€)
- 2022-CircBio-01-07: Marine microbiome for healthy oceans and a sustainable blue bioeconomy
  - RIA, 10m€, 1 project
- 2022-Farm2Fork-01-06 :Integrated and sustainable freshwater bioeconomy: Combining aquaculture, biodiversity preservation, biotechnology and other uses
  - RIA, 10 m€, 1 project



## ***The Algae call:***

### ***HORIZON-CL6-2021-CIRCBIO-01-09: Unlocking the potential of algae for a thriving European blue bioeconomy.***

- upscale and demonstrate the techno-economic viability of **algae cultivation and biotransformation** concepts with positive environmental, social and economic impacts.
- Strengthen the competitiveness of the European blue bioeconomy and **marine biotechnology industry** by reducing technical bottlenecks and by developing **promising business models** making the whole algae sector more attractive to investment
- Provide scientific evidence on **environmental benefits** - including on ecosystem services, if relevant - and **on risks of algae cultivation**. Deliver - if applicable - a comparison between the environmental footprint of algae-based products and their land based counterparts.

**Deadline**  
**September 2021**

**9million € (2 projects)**

**Industry-led: IA;  
TRL 5-7.**



# *Now to you!*

## *Interactive Survey 3 – Open questions*



*Macroalgae WG kick-off 15. June 2021*

Join at  
**slido.com**  
**#MACROALGAEWG**



Which 5 topics do you feel are the most important for Baltic countries to cooperate on? 0 0 0

Tech transfer	<input type="radio"/> 0%
Ecosystem services	<input type="radio"/> 0%
Environmental monitoring	<input type="radio"/> 0%
Legislation/lobbying	<input type="radio"/> 0%
Market development	<input type="radio"/> 0%

# Any other news & events?

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Danish GRASS/Fucosan webinar in mid – August TBD

- 7th Conference of the International Society of Applied Phycology (ISAP2021) on 14. maj-13. August
- SEAGRICULTURE 2021: 10th International Seaweed Conference on 15 September – 16 September 2021



GRASS



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DEVELOPMENT  
FUND

# Thank you for joining!

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- See you soon!

