

What is the SUBMARINER Network for Blue Growth?

A strategic approach to implement actions towards promoting sustainable and innovative uses of marine resources in the Baltic Sea Region



SUBMARINER topics

Macroalgae harvesting and cultivation

Mussel Cultivation Reed & Beach Cast

Marine Cultural Heritage Blue Biotechnology

Marine Litter Sustainable Fish Aquaculture

Combinations with Offshore Wind Parks

















strategic action fields

Actors & Match-Making

Data & Tools Sub-regional activities

Access to Pilot sites & facilities

Training & Capacity Raising

Technology Development & Transfer

Finance & Funding

Regulation & Licensing

Awareness & Marketing



















vision 2030



A smart Baltic Sea Region – making use of blue-green combined solutions



Maintaining the Baltic Sea Region's natural capital



Marine resources as part of the BSR sustainable energy and biomass portfolio



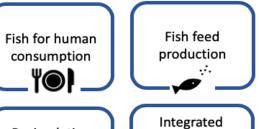
Improve human wellbeing via new marine products



The Baltic Sea Region – a biobased innovation showcase

What do we promote concretely?

- Low trophic aquaculture: algae & mussel cultivations
 - Novel food ** novel feed ** nutrient uptake ** regional protein resources
- Sustainable forms of fish aquaculture
 - Recirculating Aquaculture Systems **₩** IMTA **₩** Offshore Aquaculture
- Valorization of 'waste'
 - Use of fish side streams ** use of non-quota ,small' fish ** insects on beach cast
- Multi-Use / additional income fields
 - Offshore wind & fishery .. & mariculture .. & tourism .. & nursery
 - Pesca-tourism .. fishery & environmental awareness
 - Fishing for Litter ... incentives for fishermen
- Improved communication between Baltic producers and consumers
 - Transparency of product value chains Convenient regional products for the modern consumer



Open cage

Recirculating Aquaculture Systems (RAS) Multi-Trophic Aquaculture (IMTA)

Aquaponics

Creating a critical mass for action





Identify topics, actors, competences and initiatives



SUBMARINER match-making



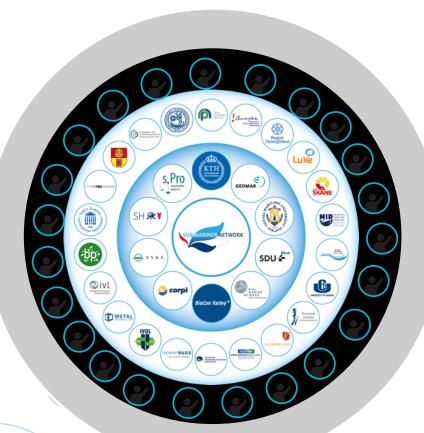
Members connected to right partners – joint initiatives











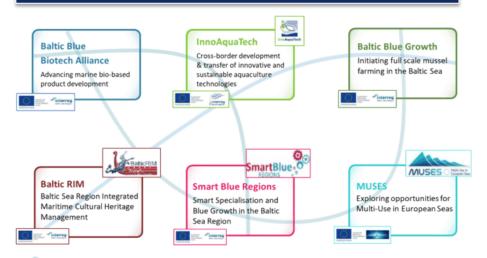




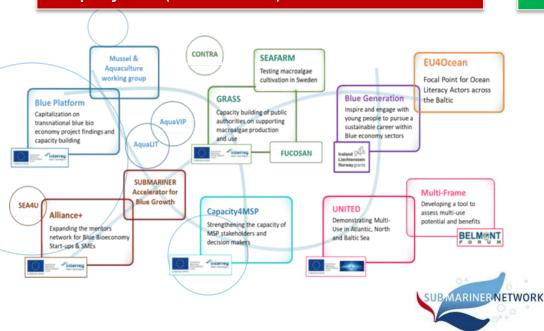
- 32 members
- 16 projects € 25 mio
- 260 project partners
- 1700 institutions
- 3000 individual actors
- 900 companies & start-ups



1G projects (2014-2019)



2G projects (2019-2021)



Next GEN projects (2020 beyond)

Blue BioTech

Technology development and transfer for a thriving Blue <u>Bioeconomy</u> in the Baltic Sea Region

BlueBioSites

Data, information and tools to identify and monitor optimal sites for the Blue Bioeconomy in the Baltic Sea Region

BalticSeaFeed

Develop sustainable feed from Baltic Marine Resources

Blue Bio Company & Innovation Cluster

Promote and support Blue Bio Product & Service Companies through matchmaking, marketing, innovation projects

And more to come
e.g. Green Deal

BBI Blue Platform

Matchmaking database for processing technologies for marine resources

Algarithm

EU wide study on nutrient and carbon uptake of algae & shellfish maricultures

SYMBIOTECH

Unlocking the symbiosis potential for added value ingredients

Permanent Working Groups

Mussels & Aquaculture

Blue Growth Accelerator

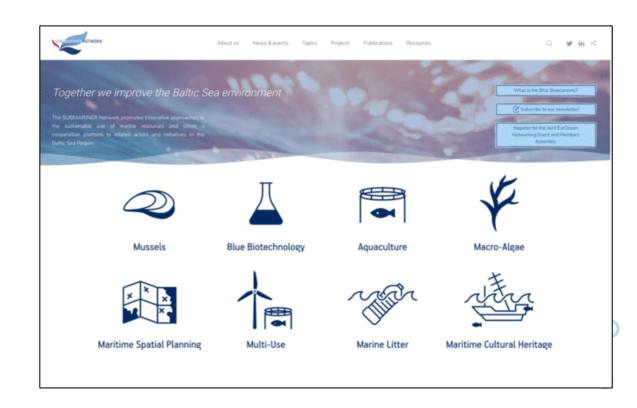
EU4Ocean Literacy Platform

Blue Platform: from website to infoportal on Baltic Blue Bioeconomy



- Reports, data, guidelines, tools, training material, projects, links
 - Events, Workshops
 - Study tours
 - News, opinions
 - 'Who is who' members, incl. business corner
 - Match-making / cooperation requests
 - Training opportunities, summer schools
 - Newsletter service
 - Closed section for members

https://www.submariner-network.eu





SUBMARINER Network in the Baltic States



The SUBMARINER Network in Estonia







The SUBMARINER Network in Lithuania













The SUBMARINER Network in Latvia





Country Profiles:

https://submarinernetwork.eu/countries







Baltic States Opportunities for Biotechnology / Blue Growth







EUROPEAN REGIONAL DEVELOPMENT **FUND**

Partners:







There are many start-ups in the **Baltic States!**



Past Alliance+ cases from Baltic States:











Baltic States Opportunities for RAS and Multi-Use

Recirculating Aquaculture Systems (RAS)



SUB MARINER NETWORK



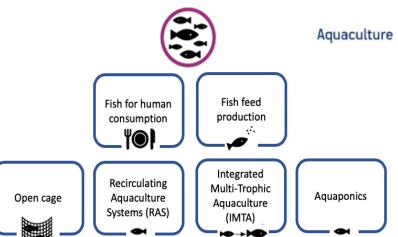






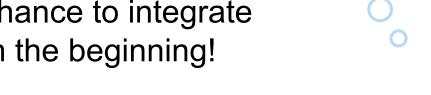
Partners:

Pilot Lithuania: Zero emission RAS system (white shrimp) combined with geothermal energy





Highly relevant since there is no OWF YET – so a great chance to integrate multi-use right from the beginning!





Baltic States Opportunities for Mussels and Algae Cultivation









Pilot farms in the Baltic States

Baltic Blue Growth

Mussels





Not so much yet but good potential for mussels and algae!

Vormsi island (EE) 40m2 test units in addition to a test farm

Coast of Kurzeme (LV) Testing a submerged farm on 1 ha

SUBM Mussels Working Group

Potential SUBM Seaweed Working Group

Estonia: 2 companies harvest Furcellaria *lumbricalis* (and 2 companies exist in Latvia):









GRASS











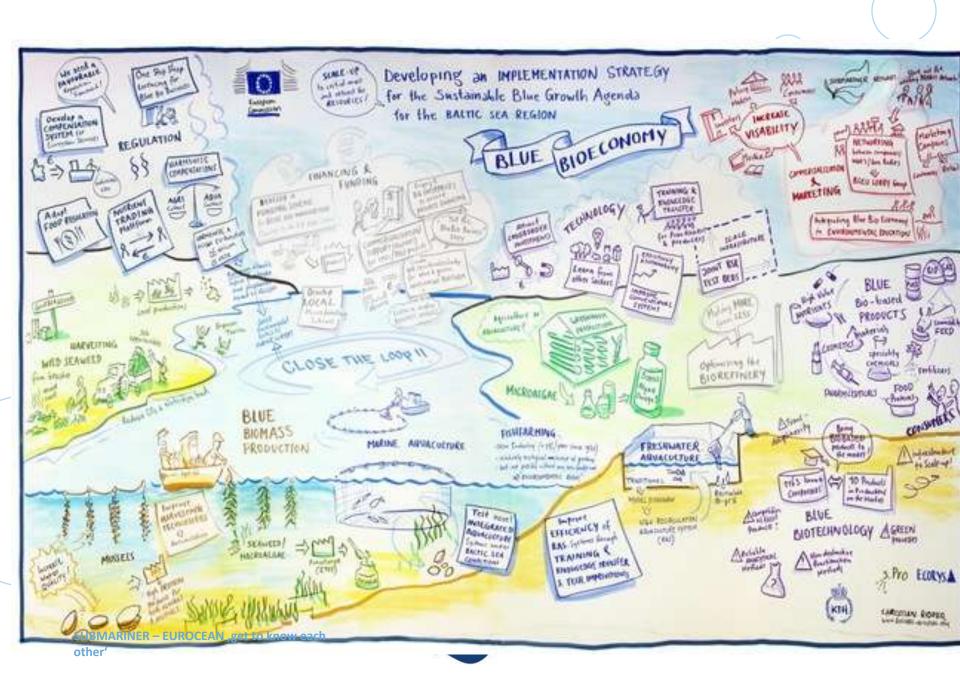
A personal network full of trust (and fun)



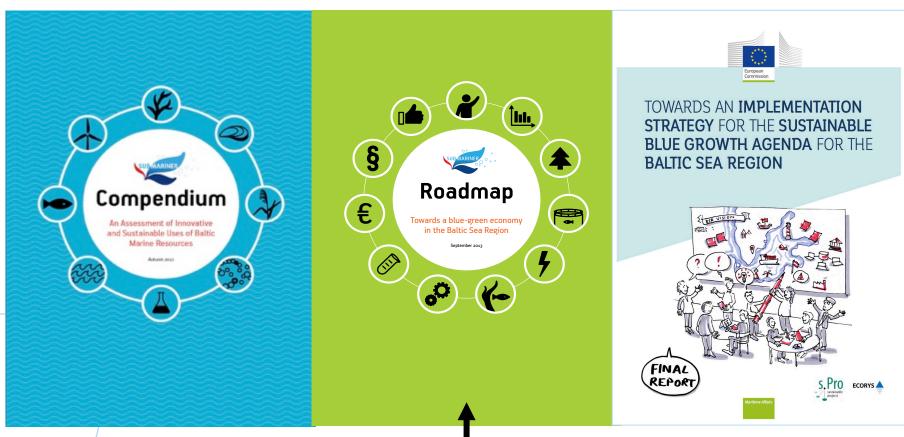
Side by side with research & policy initiatives
Long standing & growing network
Blue & diverse – regional & global – mutual interest
Bottom up with dedicated secretariat



And still a lot needs to be done



Key Reference Documents



New version coming in 2021 – your input is welcomed and highly valuable!



SUBMARINER Roadmap 2021 - 2030

Overcome regulatory

barriers: inter-ministerial

working group

New ways of fundin the blue bio econom investors, retailers water improvemen funds, etc.

Feed from Baltic Marine Resources: Macro- microalgae, mussels



Actions towards
improved consumer
od

skill

bn)

Currently being updated!

restoration &
Marine Litter

Technology Development:

biomass production, harvesting, drying, processing, upscaling



Company Corner & Services



Digitalisation:
effective &
efficient
monitoring &
information











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