

The SUBMARINER Network as  
facilitator for sustainable & innovative  
blue growth cooperation



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*Programme Manager*

# SUBMARINER Network members



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



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



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



# 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



Contribute to decrease of GHG emissions



Ecosystem Restoration Increase Biodiversity



A smart, resilient Baltic Sea Region based on local, circular economy

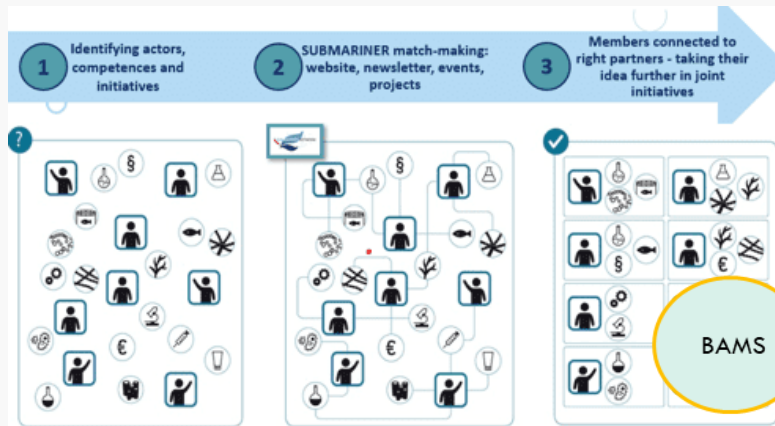


Improve human well-being



Promote bio-based innovations

# SUBMARINER Project Cloud



- € 300.000 membership fees
- 20 transnational projects
- € 41 million total
- € 30 million Baltic
- 43 members (2021)
- 150 partners
- NO** strategic funding



# Actors mapping

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

**Blue Platform**



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)
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)
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)

## Infoportal on Baltic Blue Bioeconomy

<https://www.submariner-netw>

- News, opinions
- Reports, data, guidelines, tools, training material, projects, links
- Good Practices
- Events, Workshops, Training, Study tours, Summer Schools
- Who is who
- Closed section for members

### Information hub on Aquaculture

EUMORA Monthly Highlights May 2020 (including two market studies on seafood consumption)



Meet the Baltic Sea Aquaculture Community

- BioCon Valley
- University of Gdansk
- Klaipeda Science and Technology Park
- Klaipeda University
- Danish Technology Institute
- Women in Aquaculture: Dr. Yvonne Roesener




Finance and Legislation

- Blue Platform Aquaculture Legislation Position Paper (May 2020)
- EU Baltic Sea Region Strategy
- Helsinki Declaration on Competitive and Sustainable Aquaculture in the Baltic Region
- HELCOM Recommendation 25/4 on limiting the pollution from fish farms to the Baltic Sea
- AquaRest Recommendations for Regulatory Improvements
- Marine Strategy Framework Directive
- Guidance on sustainable aquaculture activities in the context of the Natura 2000 Network
- Towards a Blue Revolution: Capitalizing private investments in sustainable aquaculture production systems




Projects

- InnoAquaTech
- AQUA-LIT
- AquaCross
- SUBMARINER
- AQUASPIRA
- AQUASPACE
- FLAVOSPHAGE
- CLEANAQ
- AquaVIP
- WassceBI

Data and Tools

- InnoAquaTech Decision Support Tool
- Web tool: analyses of aquaculture technologies and local adaptations (InnoAquaTech)
- Economic feasibility tool (for fish farming (AquaRest))
- AquaLinks Tool (AquaBest)
- AquaRest Recommendations
- Tools and methods supporting FAA: finding the gap towards an environmental Cost Benefit Analysis (AquaCross)
- AquaSpace: Tool to support MSP
- The Fish Site - website




Mussels



Blue Biotechnology



Aquaculture



Macro-Algae



Maritime Spatial Planning



Multi-Use



Marine Litter



Maritime Cultural Heritage



Selected reports and websites

- Spatial planning guidelines for Baltic Sea Region aquaculture (AquaBest)
- SUBMARINER Network Compendium: Aquaculture. Chapter
- Factsheet on Decision Support Tools (InnoAquaTech)

## Good Practice Collection



Blue Lobster App: Digital Marketplace to buy and sell low impact and fair seafood



Kerteminde: Denmark's first open-water mussel farm



Havhøst

Havhøst – Danish for "Ocean Harvest" – is the largest member organisation gathered around regenerative ocean cultivation in Denmark. Through events and activities, the organisation encourages the use of the blue areas in and around cities for



Berlin Farm: Urban Farming meets Aquaponics



Gårdsfisk : Sustainable aquaculture joins agriculture

<https://submariner-network.eu/good-practices-from-the-baltic-blue-bioeconomy>

# SUB MARINER

Since its founding in 2014, the SUBMARINER Network family has been continuously growing. It currently has 24 network members, representing all Baltic Sea Region countries. The network includes both public and private sector organisations, and reaches out to many more actors both within and beyond our project partnership.



## THE IDEA 2010

The project SUBMARINER (2010–2013) assessed, for the first time, the potential for innovative and sustainable uses of Baltic marine resources. It developed the idea for the network.



Combination with Offshore Wind Parks      Sustainable Fish Aquaculture

## COMPENDIUM 2012



Large-scale Microalgae Cultivation

Macroalgae Harvesting and Cultivation

Mussel Cultivation

Reed Harvesting

Baltic Biotechnology

## 2017 SUBNET CONFERENCE DECLARATION

The 2<sup>nd</sup> SUBMARINER Conference 'Better off Blue', hosted in Berlin on 27<sup>th</sup>-28<sup>th</sup> September 2017, marks another milestone.



The Baltic Sea Region – a bio-based innovation showcase



## NETWORK 2014

Foundation of the SUBMARINER Network for Blue Growth EEIG

## 2016 ROADMAP STATUS REPORT



# Initial conclusions

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- **No longer only research**
  - => more and more companies
  - => 650 companies earmarked
  - => more and more products on the market
- **Proof of Concepts**
  - => mussels, algae can be cultivated
  - => better knowledge on floating structures, beach wrack, biogas
  - => cost-effective nutrient removal, where needed
  - => negative environmental impacts limited
  - => RAS, aquaponics, IMTA
- **Successful services**
  - => Baltic info and data hub
  - => effective blue science-company interlinkage created

# SUBMARINER Status Quo Report

- **No longer only research**
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## **BUT**

- **Little biomass production**
  - => Demonstrators slow moving
- **Legal Barriers**
  - => lagging behind actual positive developments
  - => aquaculture behind agriculture

# SUBMARINER Status Quo Report

- Action 1. From projects to working group & vice

## Permanent Working Groups

Low Tropic: Mussel and Algae

Fish & Shrimp Aquaculture

Blue Growth Accelerator

Beach Wrack / Halophytes

EU4 Ocean Literacy Platform



- Action 2. Get pilots to the next level
- Action 3. Increase company involvement
- Action 4. Consolidate new focus areas



Mussels



## Members of the WG



Join the Mussels Working Group



Kalmar kommun



LÄNSSTYRELSEN ÖSTERGÖTLAND



# Better off Blue

Baltic Blue Bioeconomy Event Series  
Throughout 2021

<https://submarine-network.eu/better-off-blue-2021>

'Better Off Blue' is organised as a collaborative effort between



# Better off Blue

Event #5

27 April 2021

Maritime Spatial Planning & the Baltic Blue Bioeconomy



The Baltic Blue Bioeconomy Online Series



# Better off Blue

Event #2

18 March 2021

Launch of the Baltic Sustainable Aquaculture



# Better off Blue

Event #7

4 May 2021

Baltic Marine Litter



The Baltic Blue Bioeconomy Online Series



# Better off Blue

Event #3

24-25 March 2021

Better Off Blue Business Match-making event  
The Alliance+ Final Conference



The Baltic Blue Bioeconomy Online Series



# Better off Blue

Event #7

6-7 May - Baltic Macroalgae Conference

Benefits and opportunities of macroalgae production and use for the Baltic Sea



SAVE THE DATE  
& join the GRASS project  
Final Conference



# Better off Blue

Event #6

20 April 2021

Technology for the Baltic Blue Bioeconomy



The Baltic Blue Bioeconomy Online Series





*Join our cause!*

Norway

Denmark

Sweden



[www.submariner-network.eu](http://www.submariner-network.eu)



@submnet



submariner-network-for-blue-growth-eeig

southern Baltic Sea

Poland

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—barrier island

Russia

Lithuania