

EUMOFA Blue Bioeconomy Report 2020 - IMTA -

SUBMARINER Aquaculture Working Group
Innovative and Sustainable Aquaculture in the Baltic
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EUMOFA Blue Bioeconomy Report 2020



- Integrated Multi-Trophic Aquaculture
- Rest Raw Materials in Denmark
- Cellular Mariculture

<https://www.eumofa.eu/documents/20178/84590/blue+bioeconomy.pdf>

**BLUE BIOECONOMY
REPORT**

IMTA

- Mixing fed fish with absorption feeders eg seaweeds, horticulture crops; filter feeders eg mussels, scallops; browsers eg sea urchins; other detritivores eg mullet, carp, sea cucumbers
- Localised eg benthic; multi-use structures
- Diffuse/distributed/spatial IMTA eg balancing nutrient inputs and wastes in fish farming with nutrient extraction in same water system but at distance, like Lerøy Ocean Harvest
- Marine/off-shore in shelf and deeper waters
- Coastal, in tidal inlets or bays
- On-land for pond or RAS aquaculture
- More 'blue-skies' focus eg microbiome as part of the MT spectrum

IMTA and SUBMARINER

- Multi-Use projects eg MUSES – deliberate siting and harvesting
 - Wind farms
 - Platforms for oil/gas
- Marine ranching eg in Rødsand 2 OWF – opportunistic harvesting of natural upgrowth
- Potential for structure re-purposing
- On-shore promotion of aqua-horticulture eg Peckas tomatoes Sweden <https://peckas.se/> grown with rainbow trout
- Big possibility for Spatial IMTA
- Don't ignore the marine microbiome projects call!

Challenges

- Technical issues mainly round infrastructure incompatibilities, on-site management routines
- Training gaps eg for aquaponics, start-up owners not horticultural
- Remote monitoring
- Harvesting and transportation timelines
- Local regulation obstacles wrt zoning, MSP, coastal use
- Regional policy integration between and within coastal areas
- Cross-department [dis]harmony – energy vs environment vs agri/aqua
- One-entry/one-decision system eg as in Norway