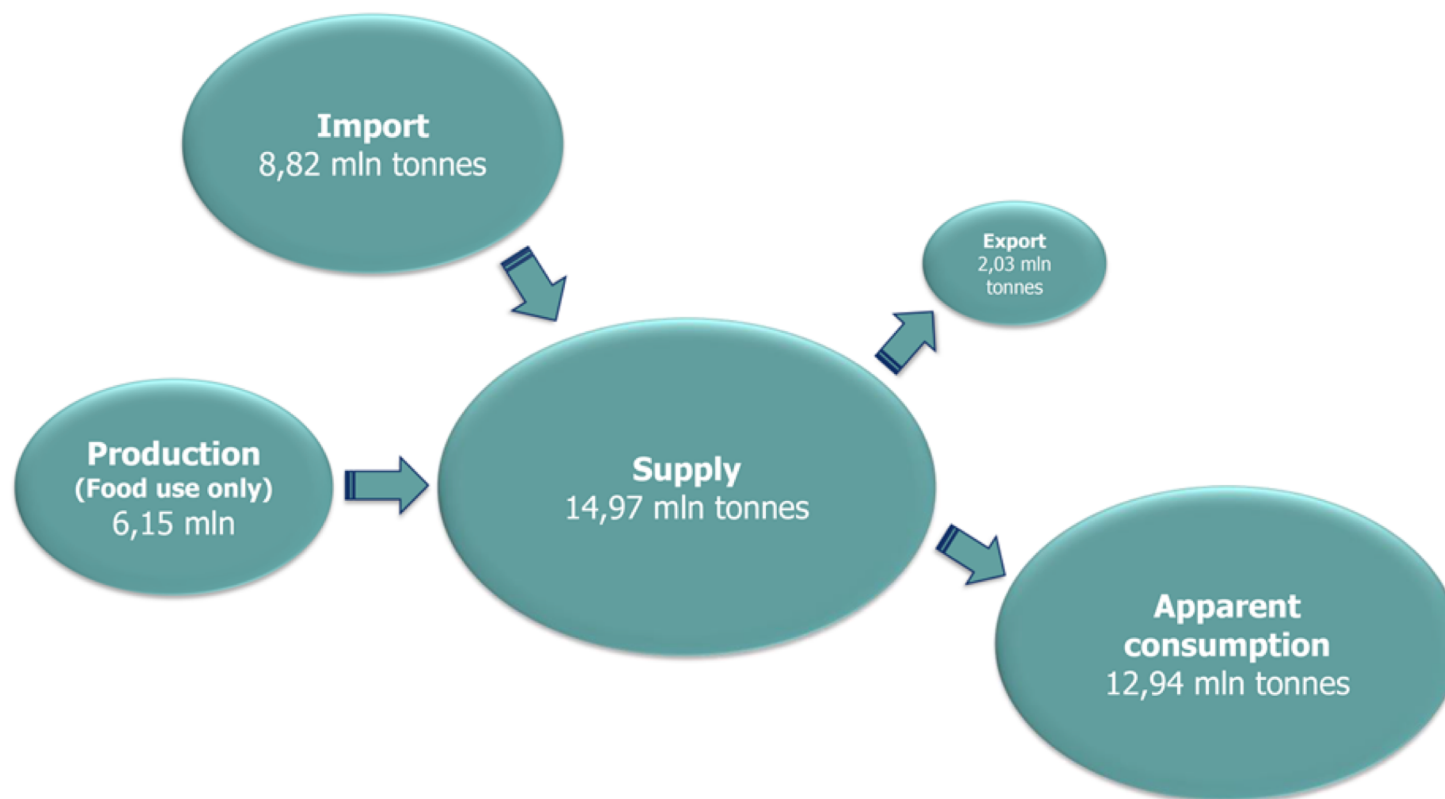




BALTIC AQUA INNOVATION DENMARK – A NEW DEMONSTRATION PLATFORM

Per Dolmer, Orbicon
Malmö April 2019

Mapping the Blue bioeconomy potential

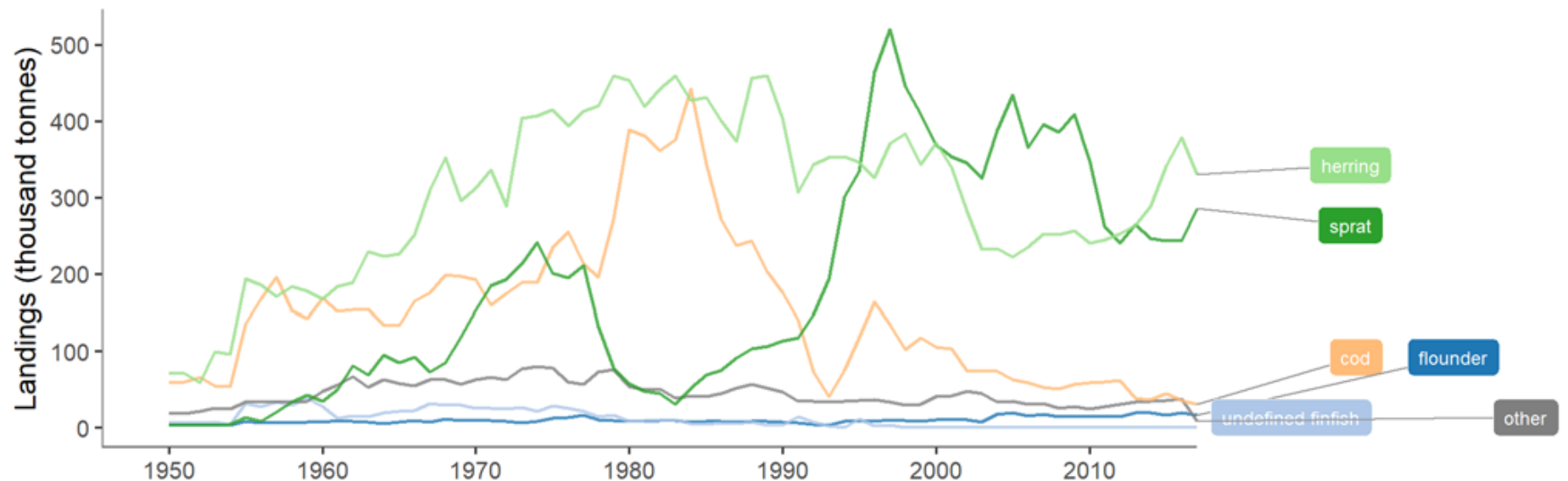


ICES Baltic Sea Ecoregion – Fisheries overview

- Fishery for cod reduced
- Fishery for herring and sprat- used for feed

How can the cod fishery be replaced by aquaculture – recirculation of nutrients by mussels and use of local produced feed from herring/sprat.

Herring and sprat fisheries remove 20.000 t N ~ 2.000.000 t mussels



Historical Nominal Catches 1950-2010,
Official Nominal Catches 2006-2016,
Preliminary Catches 2017. Accessed 2018/August. ICES, Copenhagen.

Interactions with seals may explain collapse of cod stocks



Cod liver worm (*Contracaecum osculatum*) lifecycle

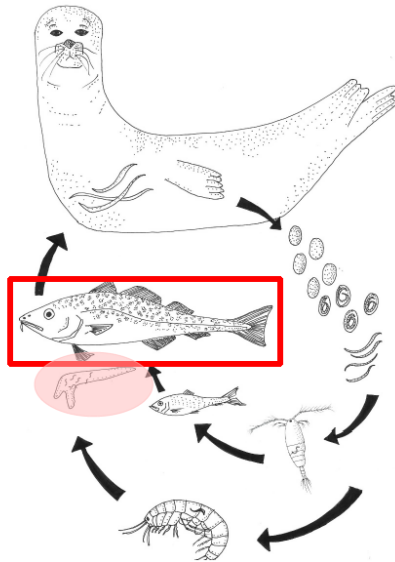
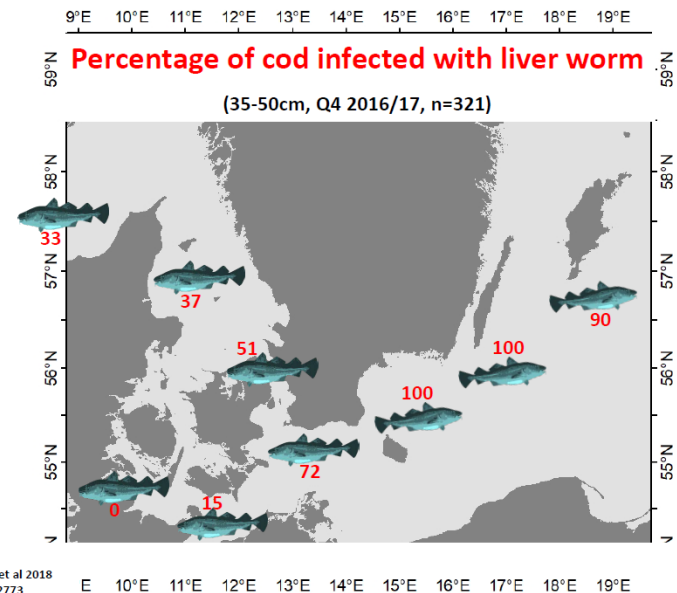


Illustration by Kurt Buchmann,
Copyright International Wildlife
Association, from Haarder et al 2014

Spatial occurrence of liver worm in cod



Adapted from Sokolova et al 2018
doi.org/10.3354/meps12773

Benefits from aquaculture

- ✓ Fish-farming based on local produced feed and/or in combination with musselfarming. RAS or offshore open systems.
- ✓ Mussels important as feed and as nutrient catch in IMTA
- ✓ The used fishfeed are cleaned for dioxine and other toxins – Healthy fat fish from the Baltic.
- ✓ High outtake of fish from the system due to low mortality
- ✓ Production can be wellplanned – and all biomass landed and useed incl sidestreames.
- ✓ New jobs in coastal areas on the harbours

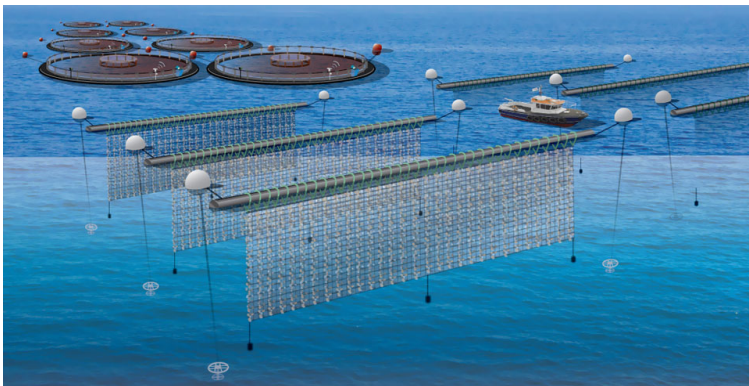


Analysis: Local potential for Blue bioeconomy

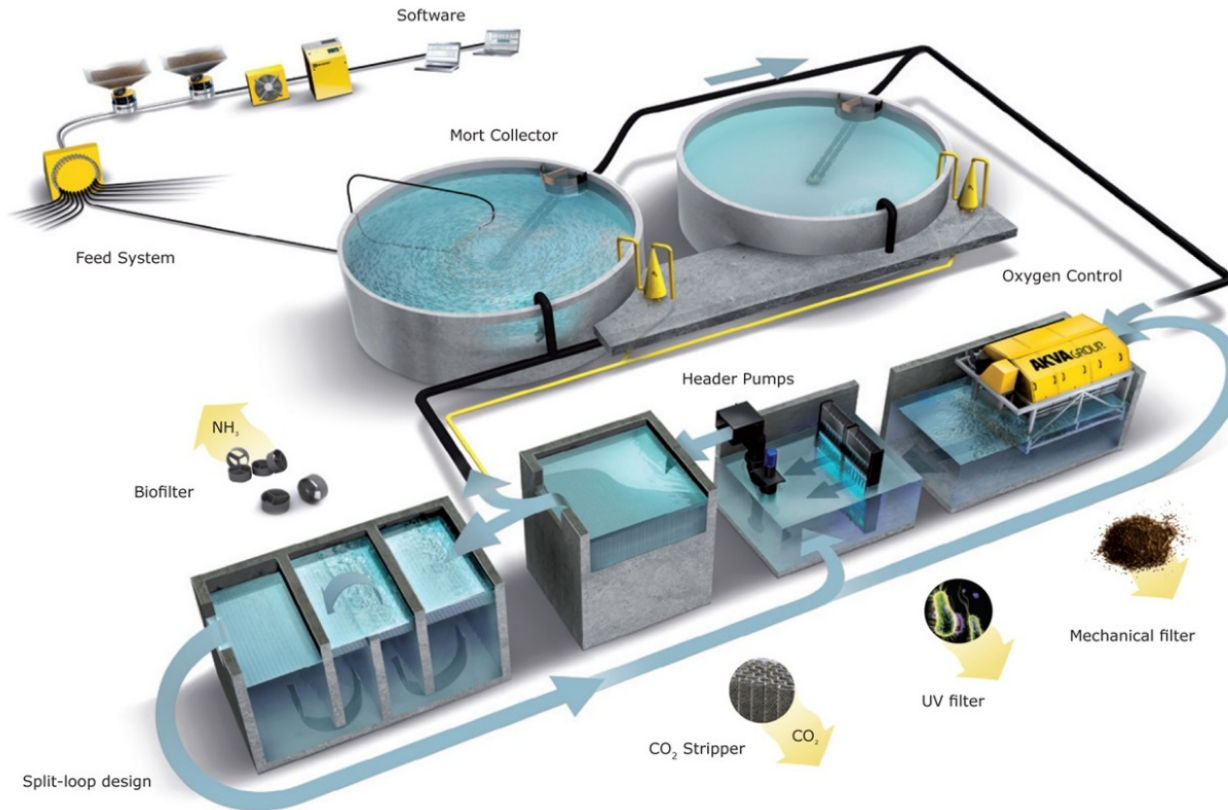
1. Production of mussels and seaweed



2. Sustainable marine fish farming



3. Fishfarming in RAS



6. Alternative proteins

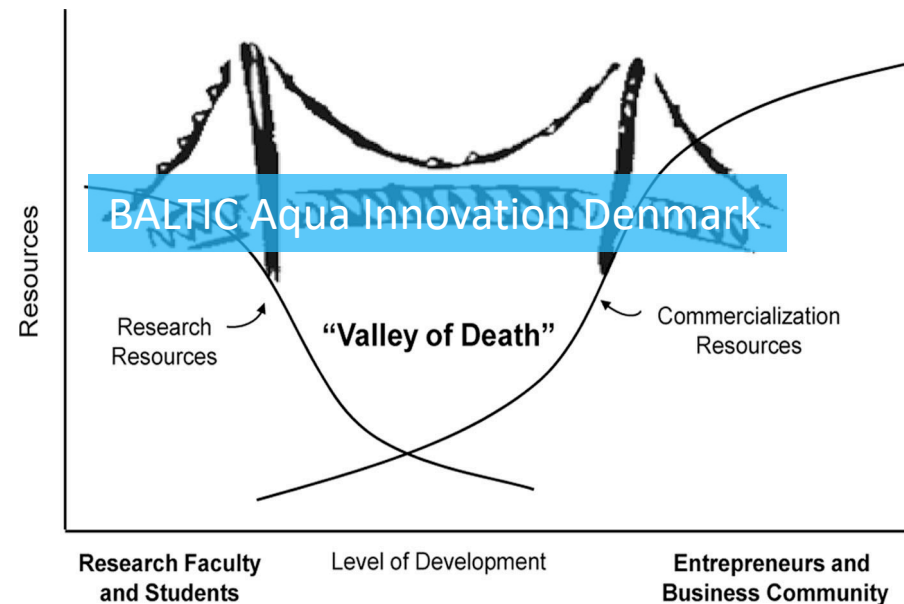


6. Tourism



Vision for BALTIC Aqua Innovation Denmark

Demonstration platform
Business development
Communication
Education



Feasibility of BALTIC Aqua Innovation Denmark -

- Map relevant network, potential partners and focus areas.
- Analyse how to supply relevant and science based and independent communication and identify need for education and training.
- Feasibility studie for the center. Develope business case
- Models and specific strategies for the first 3-5 years af the center

Thank you for your attention!

This work was supported by (add your logos and references as needed, NOT bigger than the EU flag!):

