



# "Strengthening Circular Economy and Valorisation of side-streams in RAS Aquaculture" **AQUALOOP International Conference**

Transferring the Swedish concept of RAS fish on farms  
to Denmark - similarities and differences, next steps

**Is Denmark ready for Farm RAS?**

Bremerhaven, Germany | 25 February 2026

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# What is "Farm-RAS" ?



## SWEDISH CONDITIONS:

Nutrients from the indoors Farm-RAS can be part of the farm's crop fertilisation plan. The nutrient water from the production is controlled (before March) for its content of :  
phosphorous, nitrogen, heavy metals, cadmium and potassium

Average concentration of phosphorus is 15-20 mg/L

'Slurry' (slam in Denmark) from the production is controlled before use or sale (for i.e. biogas)

Average concentrations

Dry matter 28%

Phosphorous 0,6g/kg

Nitrogen: 1,9 g/kg



## Concept-transfer to Danmark – do-able?

# The operation needs to be sustainable!

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## WP4.1

- Protecting water quality by regulating the discharge of nutrients and chemicals.
- Preserving ecosystems and biodiversity by minimizing impacts on natural water bodies and sensitive species.
- Regulating the annual feed usage.
- Promoting sustainable resource use and responsible management of fish stocks.
- Ensuring compliance with relevant environmental laws and regulations.



# The business needs to be sustainable!

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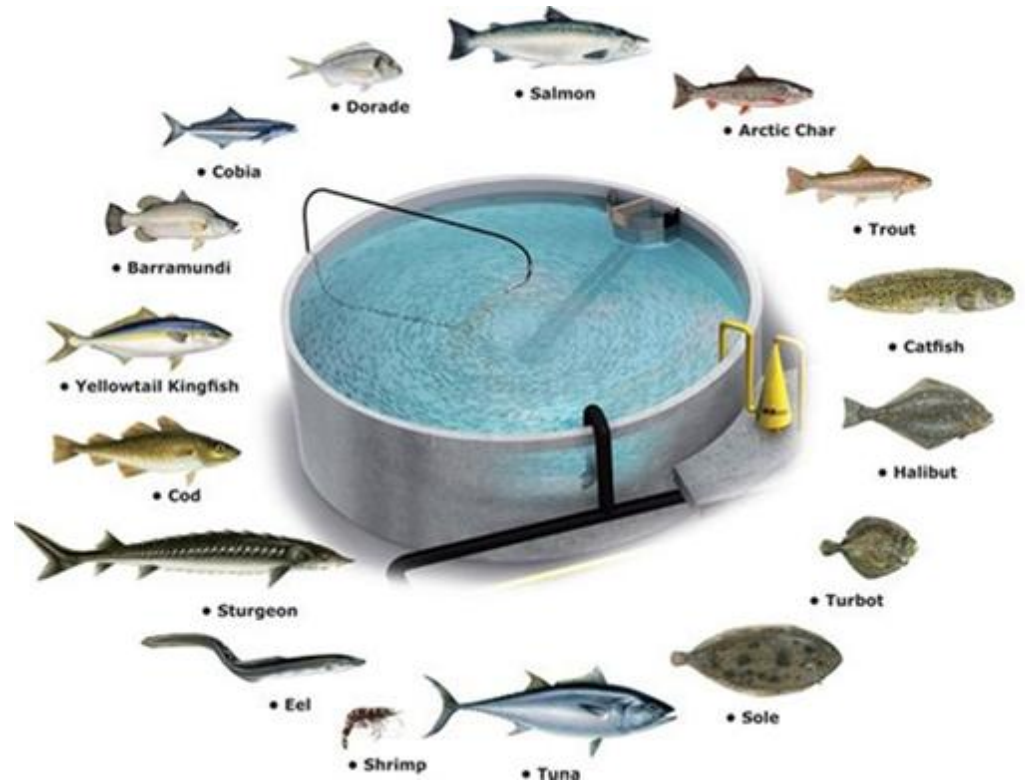
## The market – who will buy?

- Awareness – about the fish, about the mission
- Tastings
- Pricing
- Cooking tips and recipes
- Availability

# A Vision for local fish farming? Why do it?

A holistic vision for sustainable local RAS fish-farming that builds on inspiration and experiences with aquaculture and agriculture focusing on:

- Stable production and resource-efficiency
- Knowledge and Innovation
- Circular bioeconomy
- Education and Training
- Wider product choice – consumer awareness
- Jobs and Start-ups
- Educational Tourism
- Cross-sector development



# And we are no longer alone – Oct 25

BUSINESS | 16-10-2025 14:41

## Dansk landbrug får nye muligheder i vandet: Fiskeopdræt på land kan blive næste grønne væksteventyr

Landbaseret fiskeopdræt rykker tættere på mark og stald. Med ny teknologi og cirkulær tænkning kan landmænd både styrke klimaindsatsen, udnytte arealer bedre og skabe nye indtægtskilder. Det viser et sønderjysk projekt, hvor Spiras spiller en nøglerolle.



# What is needed to get Landbrugs RAS going? (Missing) value chains – what we now know..

- National authorities: CHR, Food Authority
- Local authorities – water management authority
- Veterinary services - Insurance
- Retail feed, pH-water regulation products
- Slaughter, packing, product development, processing
- Retail buyers
- Consumers
- Skill sets - education
- **COMMUNICATION - Story Telling!**



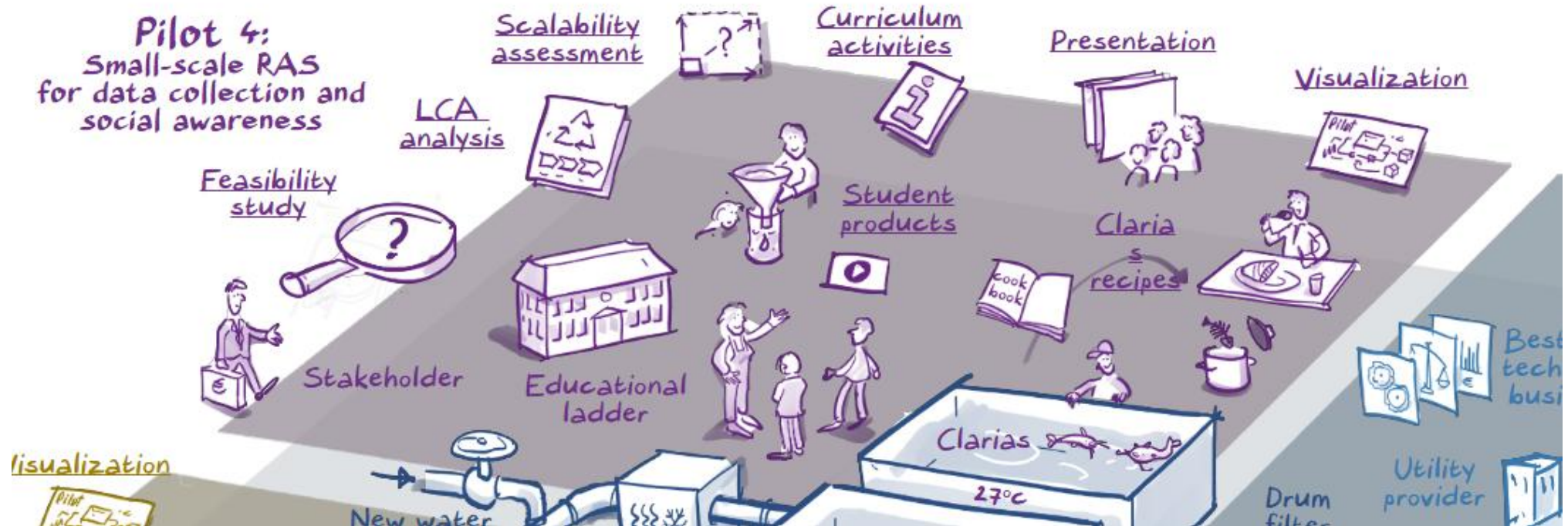
# Practical Skills – Farm RAS

## A good place to start: RAS for Dummies 😊

- **RAS technology** - *Subject/interest: Plumbing, Electrician, Mechanics, IT*
  - Operation, cleaning and maintenance – pumps and filters
  - Understanding water dynamics, set up and adjusting - PLC, VPN access, regulation of temperature / ventilator unit
- **Water** - *Subject/interest: chemistry, biotechnology, environmental sciences*
  - Water samples: pH control, ammonia, nitrite, water temperature, salts
- **Fish** – *Subject/interest: biology, husbandry, biotechnology, microbiology*
  - Fish welfare and behaviour, observations and slaughter, mortalities
  - Feed calculations, fish weighing, observations of feeding behaviour
  - Understanding microbes, bacterier and the biofilter
  - Administration – bio-security, rules and regulations



# Pilot #4: Small scale RAS for improved social awareness



# TETRAS pilot 4: Focus areas

**Demystification**

**Education**      **Biodiversity**      **Nutrient cycles**  
**Water quality**

**Data collection**      **RAS Aquaculture**

**Resource efficiency**

**Awareness-raising**

# TETRAS Pilot 4 - 2025

**Interreg**  
Baltic Sea Region



Co-funded by  
the European Union

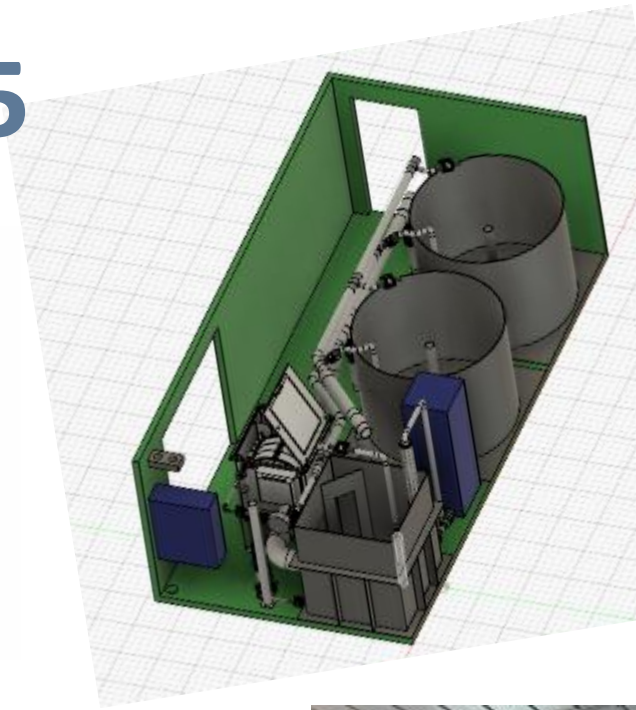


BLUE ECONOMY

TETRAS

**OUR OWN HANDS-ON  
EXPERIENCES**

- Future home for the RAS demo – HampensHus





## Gastronomy Line – CELF students – Clarias tastings March 5<sup>th</sup> & 6<sup>th</sup> 2025

- Clarias for the CELF Food students came from Gårdsfisk, Sweden
- 8 variations of clarias prepared by 8 groups (students and canteen employees) presented to 5 judges, 3 were prominent gastronomy profiles
- The judges selected 3 of the 8 variations for tastings at the Danish National Food Summit 15-17 May, where ca. 3000 pcs were served as Street Food
- The students thought that clarias fish meat was good to work with, when they first had found out how to filet the fish!

# Thanks for listening !

## Contacts

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