

Prosjekt AURORA (2019-2026)

IMTA in North-Norway



Torben Marstrand, Folla Alger AS



Folla Alger AS

Illustrasjon: SINTEF Ocean AS

AURORA (2019-2026)

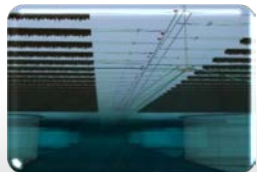
Main objective:

Providing knowledge and develop an (i) Industrial solution for integrated aquaculture with Salmon and Seaweed for testing IMTA-effects in North-Norway and (ii) New seaweed based feed ingredients.

Sub-objectives:

- Develop a prototype installation for fullintegrated industrial production of Salmon and Seaweed.
- Automatization in the Seaweed operations (stocking, harvesting etc)
- IMTA-effects; Impact on the Seaweed.
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- Methods for pre-processing of seaweed biomasses to be used in fish feed.
- Testing Seaweed based feed ingredients; Impact on fish health, sealice, feed convention ratio and pellet quality.

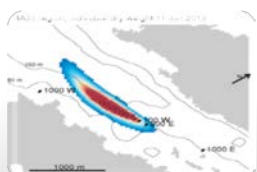




WP 1 Prototype installation



WP 2 Automatization



WP 3 IMTA-effects



WP 4 Processing



WP 5 Seaweed based feed ingredients

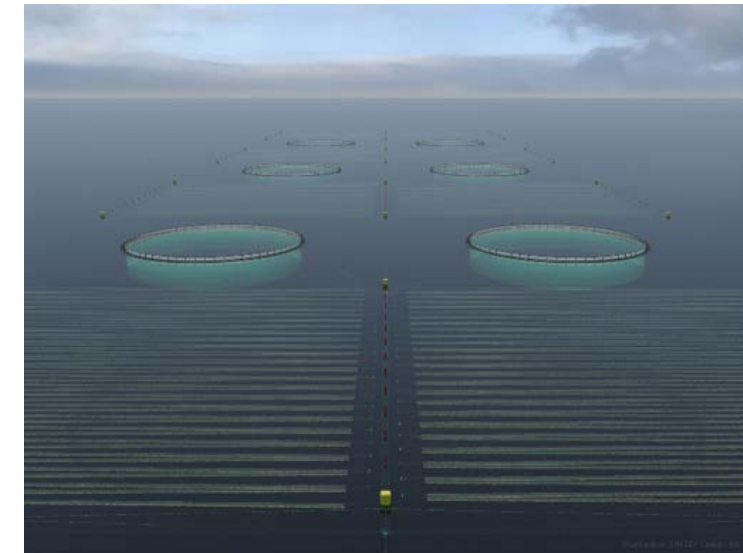
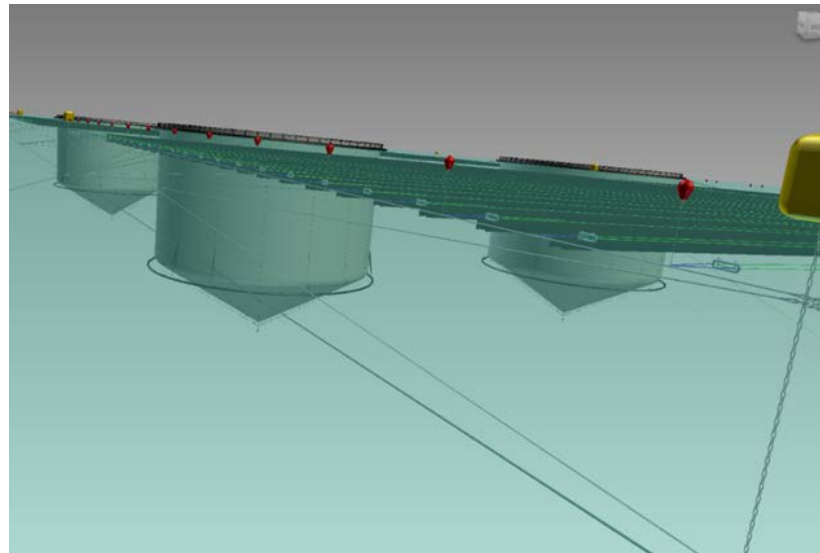
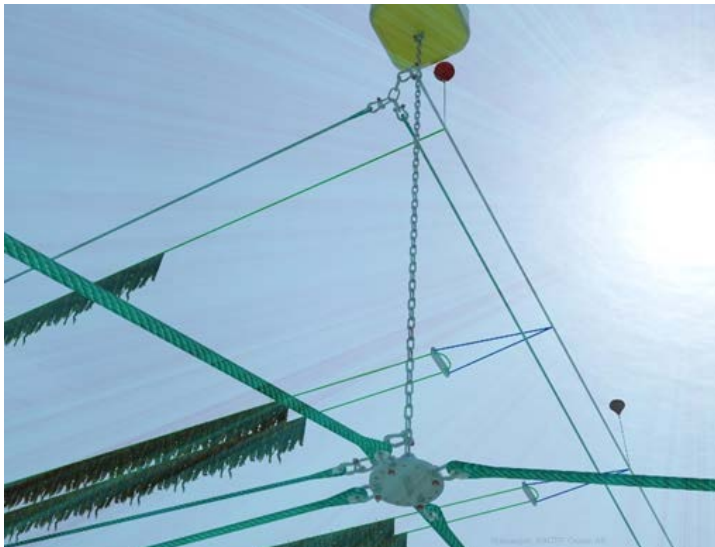
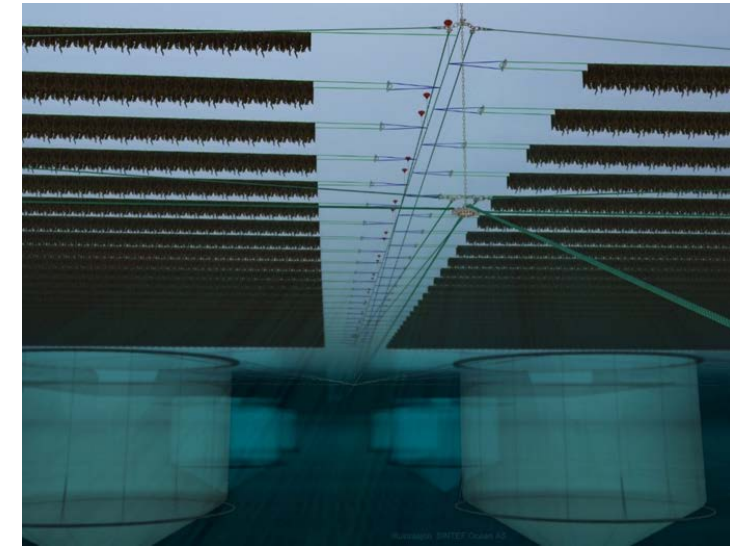


WP 6 Fish health

AURORA

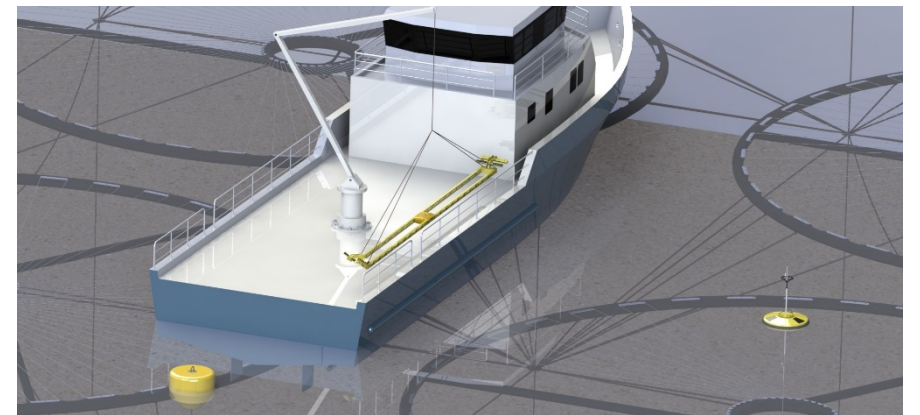
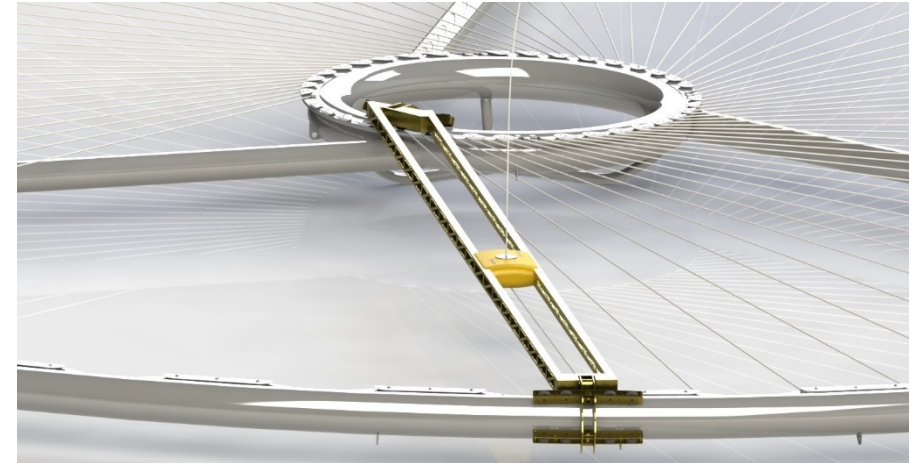
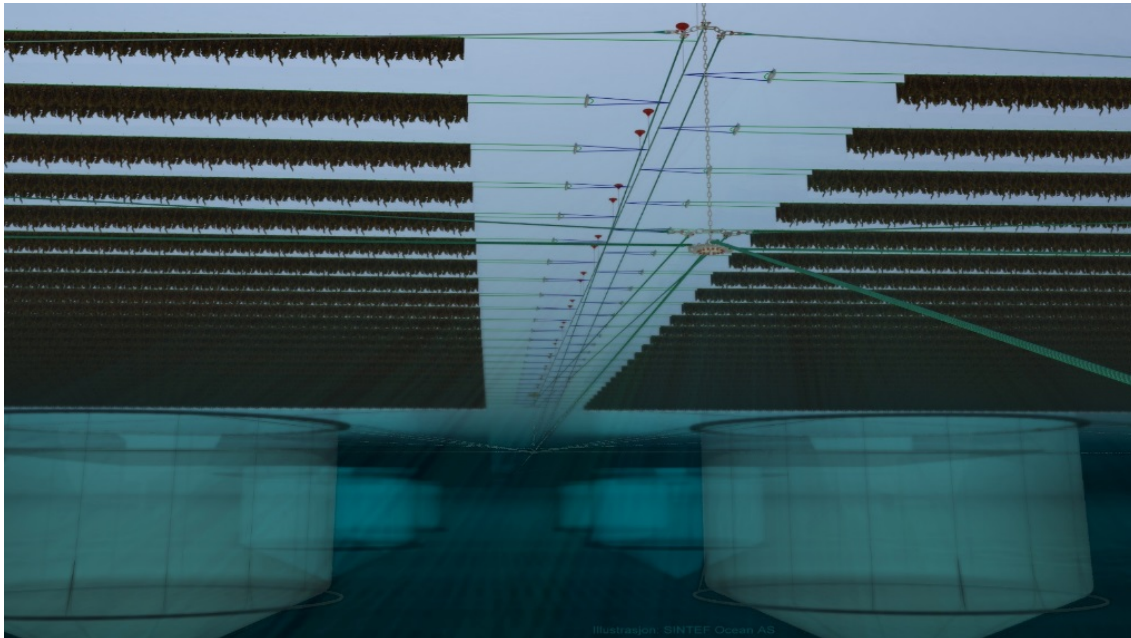
WP₁ Prototype

- Prototype for fullintegrated production of Salmon and Seaweed
- Configured on one Mooring for the Cages as well as for the Seaweed farming



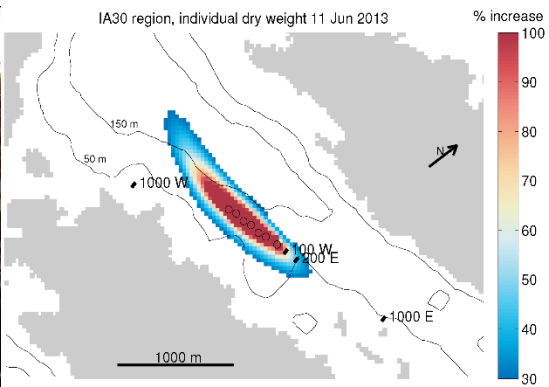
WP₂ Automatization

- Automated solutions for Seaweed operations on the site (stocking and harvesting)
- Preparing for standardization and upscaling
- Target is a production of 100 - 200 tonnes per HA



WP3 Ecosystem and IMTA

- IMTA can be a more efficient use of aquaculture areas by producing more species, using the nutritions to improve growth and reducing the footprint from salmon farming
- How impact IMTA the water quality and enviromental conditions on the site?
- Fouling is a show-stopper for year-round production of Seaweed, do North-Norway have advantages?

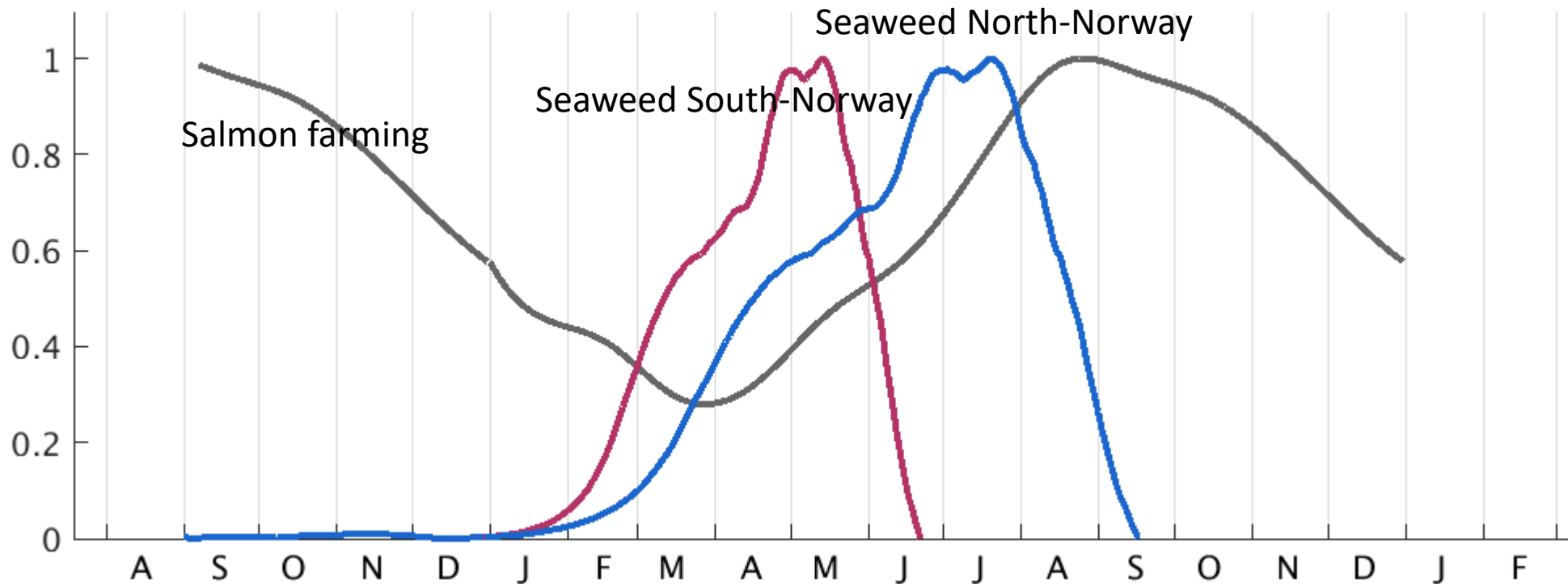


WP3 Ecosystem and IMTA (2)

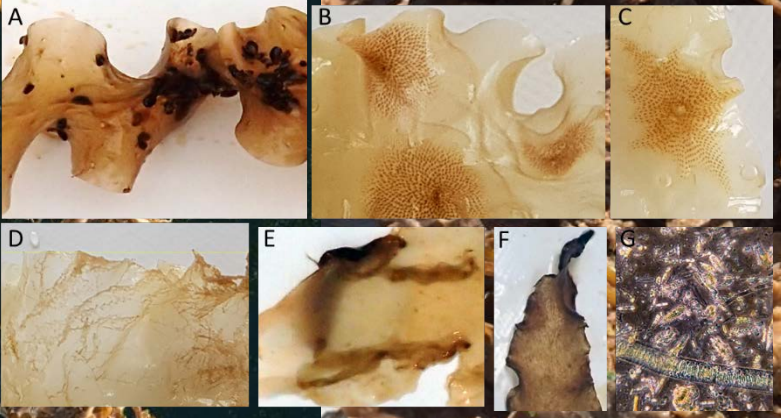
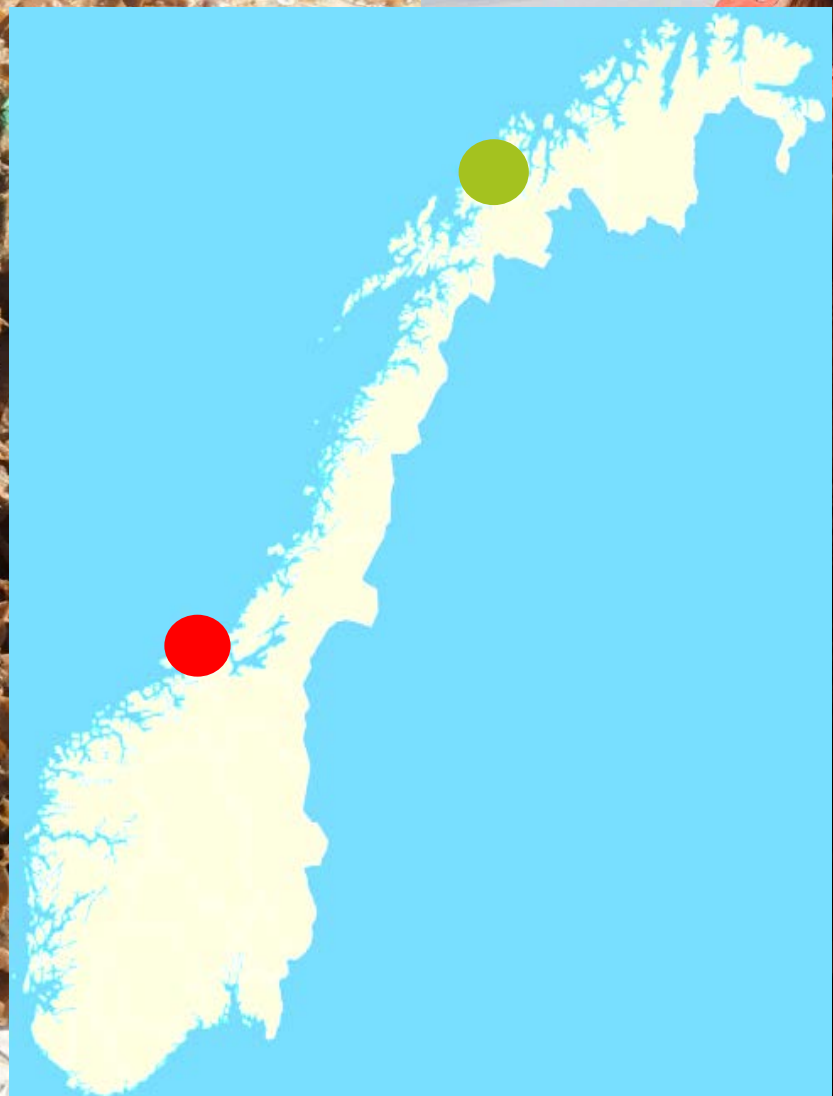
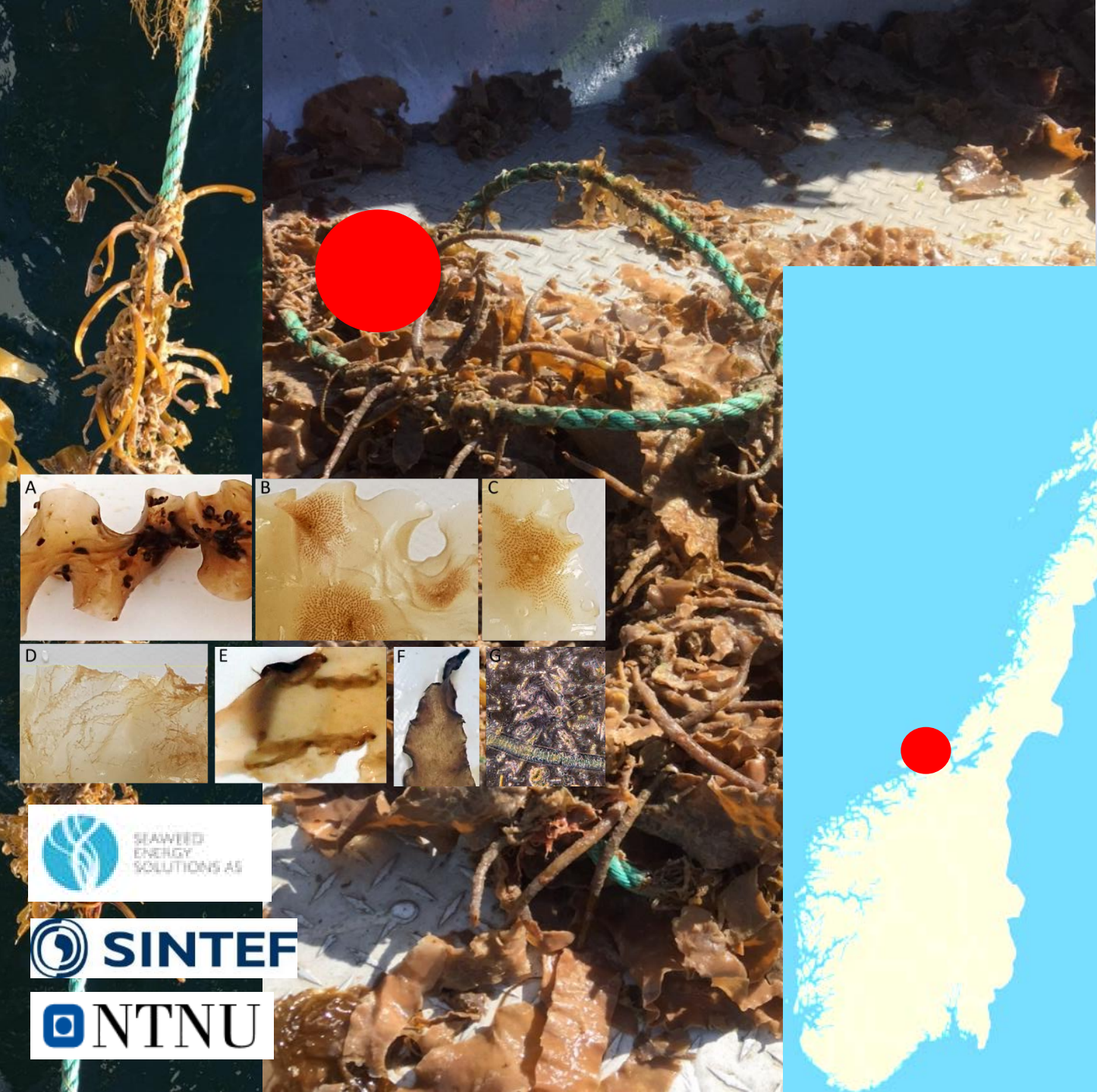
Better match between the production cycles Seaweed and Salmon in North-Norway?



Nutritions
(~39-45% N)
(~21-24% P)



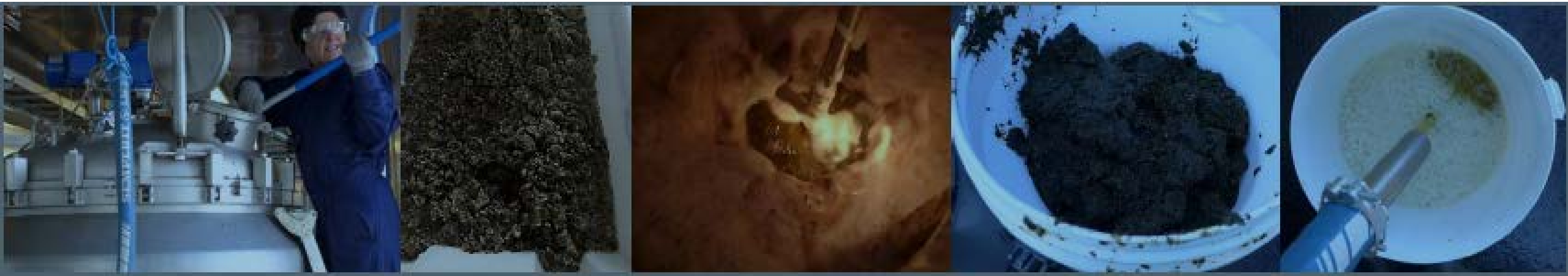




WP4&5 Processing and feed ingredients

Processing brown Seaweed (*Saccharina latissima*)

- Developing processes for extraction of bioactive compounds like Fuciodan and laminarin
- Producing Alginates to be tested i pellet



WP6 Fish health



Develop new Seaweed based feed ingredients.

Bioactive components in Seaweed biomasses which can have positive impact on the fish health especially intestinal health, the immune system and reduce skin wounds

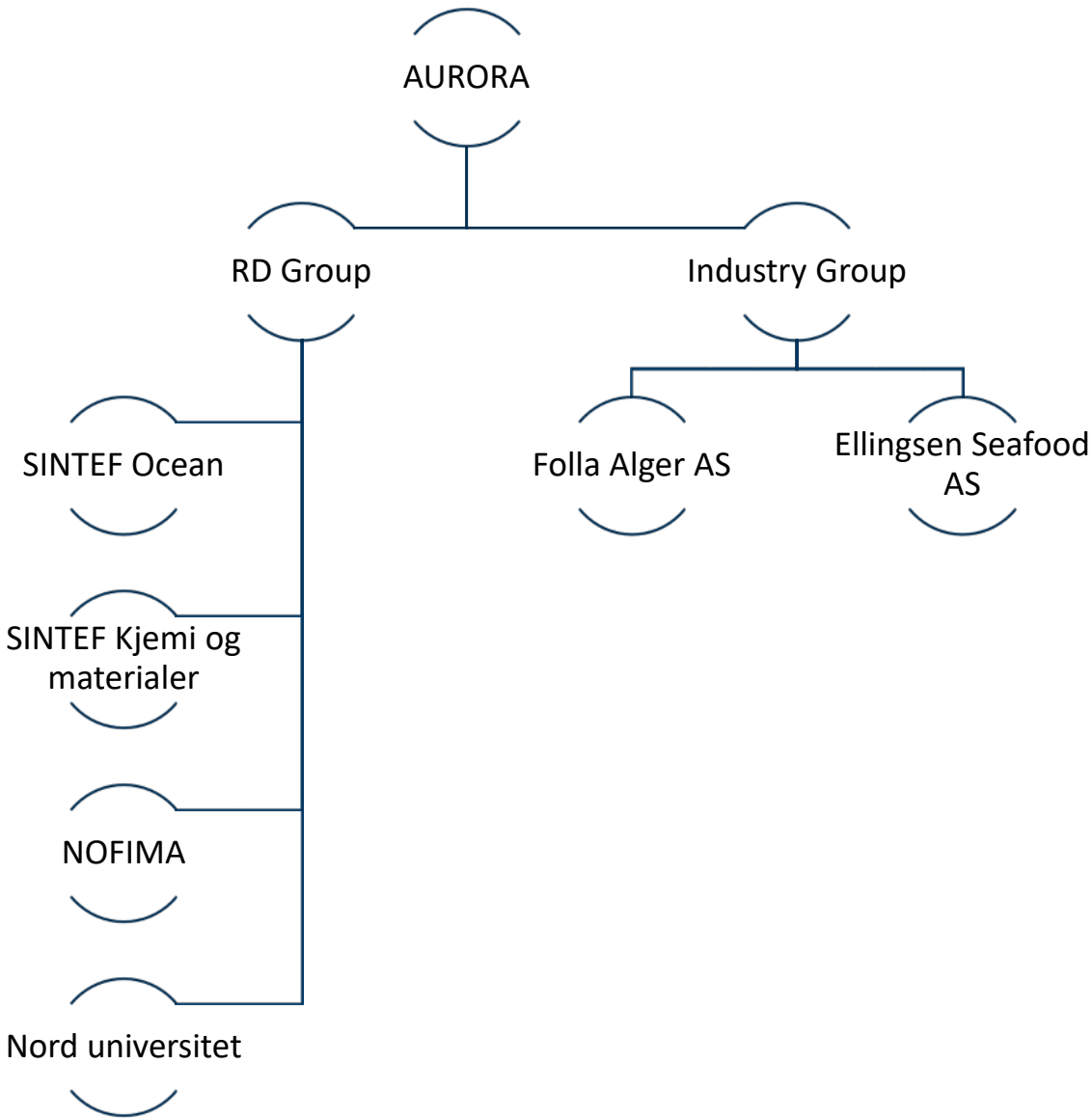
1) Experiments feeding fish with feed including ingredients from Seaweed

- Small-scale experiments in tanks on land to identify ingredients with positive impact on fish health
- Experiments with larger biomass in seawater

2) Feed production

- Feed formula which include bioactive ingredients
- Feed formula which include use of alginate to improve the pellet quality

AURORA consortium



- RD Responsible: SINTEF Ocean (Aleksander Handå)
- Project owner: Folla Alger AS

