



AlgeCenter Danmark

12TH NORDIC SEAWEED CONFERENCE

SEAWEED FOR EMISSION CAPTURE & UTILISATION



ABSTRACT BOOK

11th and 12th of October 2023
Kysthotellet
Grenaa, Denmark

12TH NORDIC SEAWEED CONFERENCE

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PROGRAMME WEDNESDAY 11TH OCTOBER:

10.00 – 11.00 **REGISTRATION**
11.00 – 11.15 **Welcome**

SESSION 1: SEAWEED FOR EMISSION CAPTURE: CULTIVATION, Chair: Teis Boderskov

- 11.15 – 11.45 Keynote talk: The Use of *Ulva* in Integrated Multi-trophic Aquaculture (IMTA), an Ecological Approach for A Sustainable Aquaculture.
Dr. Muki Shpigel, Professor of Marine Sciences, University of Haifa, Israel.
- 11.45 – 12.00 Sugar kelp cultivation in the north of Norway.
James Philip, Senior scientist, Nofima, Norway.
- 12.00 – 12.15 Effects of population and photoperiod on early sporophyte growth in Sugar kelp.
Marie Lillehammer, Research Scientist, Nofima, Norway.
- 12.15 – 12.30 Establishing a Wet-Based, Organic-Certified Supply Chain for SEAFLOUR.
Morten Hørby Pedersen, Senior process engineer, International Flavors & Fragrances, Denmark.

12.30 – 13.30 **Lunch**

SESSION 1, CONTINUED: SEAWEED FOR EMISSION CAPTURE: CULTIVATION, Chair: Teis Boderskov

- 13.30 – 13.45 Scaling Sea lettuce in the ocean & into the food system.
Simon Johansson, CEO, Nordic SeaFarm, Sweden.
- 13.45 – 14.00 Indoor cultivation and utilisation of seaweed in borehole seawater.
Arnar Þór Skúlason, PhD student, University of Iceland.

SESSION 2: SEAWEED FOR EMISSION UTILISATION: BIOPLASTICS, Chair: Nicolaj Ma

- 14.00 – 14.15 AlgaePlast - a new bioplastic,
Søren Krogsager, Co-inventor and CEO of Scienciox A/S and Arianna Rech, PhD student, DTU, Denmark.
- 14.15 – 14.30 Upscaling the seaweed-based bioplastic from pilot to industrial scale - An LCA perspective,
Maddalen Ayala, PhD, Aalborg University, Denmark.
- 14.30 – 14.45 New sustainable way to create plastics from seaweed.
Julia Marsch, CEO and co-founder of SWAY, California, USA (Recorded talk).

14.45 – 15.30 **Coffee and cake**

SESSION 3: SEAWEED FOR EMISSION UTILISATION: FOOD, Chair: Marianne Thomsen

- 15.30 – 15.45 Developing successful food products with Nordic seaweed.
Sofie Raae, Product developer, Kost Studio, Denmark.
- 15.45 – 16.00 Fermented seaweed for food applications.
Maren Sæther, Project manager, SEAPRO, Norway.
- 16.00 – 16.15 Plant-based seafood from seaweed and microalgae.
Ditte Hermund, Food scientist, National Food Institute, DTU, Denmark.
- 16.15 – 16.30 How does different precipitation strategies affect the final protein product and yield from *Ulva* sp.?
Louise Juul, Postdoc, Dept. of Food Science, Aarhus University, Denmark.
- 16.30 – 16.45 Environmental and nutritional performance of plant-based alternatives to meatballs.
Maxime Ekoule, PhD student, Dept. of Food science, University of Copenhagen, Denmark.
- 16.45 – 17.00 Climate positive value chains from gentle harvest and processing of Sea lettuce – mission possible?
Irsa Anwar, PhD student, Dept. of Food science, University of Copenhagen, Denmark.
- 17.00 – 17.15 Innovative Food Startup for Seaweed Products - Oceanfruit and BettaFish.
Miriam Goessmann, Food Scientist, Wunderfish GmbH, Germany.

17.15 – 18.15 **TASTE AND TALK – SEAWEED HAPPY HOUR – POSTER SESSION**

19.00 – 23.00 **Conference dinner at the Kattegatcenter** (Færgevej 4, 8500 Grenaa).
We meet in the hotel lobby at 19.00 and walk for 10 minutes to the Kattegatcenter.





PROGRAMME THURSDAY 12TH OCTOBER:

07.45 – 09.00 Choose between two options: Sunrise with the penguins at the Kattegatcenter or company visit at PureAlgae. Both tours depart from the lobby at 7.45 o'clock.

09.25 – 09.30 Welcome back at the conference.
Please, remember to check out no later than 10 o'clock.

SESSION 4: SEAWEED FOR EMISSION CAPTURE AND UTILISATION: ECOSYSTEM SERVICES, Chair: Annette Bruhn

- 09.30 - 10.00 Keynote talk: Seaweed-based emission capture and utilization in regenerative circular bioeconomies.
Marianne Thomsen, Professor, Dept. of Food Science, University of Copenhagen, Denmark.
- 10.00 – 10.15 3 Phases Towards an Industrial Land-Based Seaweed Cultivation,
Esben R. Christiansen, CEO and founder, Pure Algae, Denmark.
- 10.15 – 10.30 Does circular nutrient management imply increased sustainability of future Recirculation
Aquaculture System? – a case study of the ValueFarm solution,
Cecilie Heide Nielsen, PhD student, Dept. of Food Science, University of Copenhagen, Denmark.
- 10.30– 10.45 We need to improve our understanding regarding potential toxic elements in seaweed
before we can succeed in expanding the seaweed industry in Europe.
Ingrid Olesen, Senior scientist, Department of Production Biology, Nofima, Norway.

10.45 – 11.30 Coffee break

SESSION 5: SEAWEED FOR EMISSION CAPTURE & UTILISATION: FEED, Chair: Mette Olaf Nielsen

- 11.30 – 11.45 Inclusion of *Bonnemaisonia hamifera* in the diet of dairy cows reduces enteric methane missions
Mihai Victor Curtasu, Post Doc, Dept. of Animal and Veterinary Sciences, Aarhus University, Denmark.
- 11.45 – 12.00 Seaweed extraction and fractionation as a strategy to identify bioactive compounds with methane
mitigating potential.
Natalja P. Nørskov, Ass. professor, Dept. of Animal and Veterinary Sciences, Aarhus University, Denmark
- 12.00 – 12.15 Potential anti-obesity impacts of Nordic macroalgae.
Prabhat Khanal, Associate professor, Faculty of Biosciences and Aquaculture of Nord University, Norway.

12.15 – 13.15 Lunch

SESSION 6: SEAWEED FOR EMISSION UTILISATION: HEALTH & HIGH VALUE PRODUCTS, Chair: Susan Løvstad Holdt

- 13.15 - 13.45 Keynote: Neuroprotective activities and mechanisms of actions of marine-derived natural products:
current status and future perspective.
Wei Zhang, Professor, Finders University, Australia (Recorded talk).
- 13.45 – 14.00 Effect of different purification methods on the stability of R-phycoerythrin from red seaweed,
Furcellaria lumbricalis.
Sruthi Kumar, PhD student, Dept. of Food Science, Aarhus University, Denmark.
- 14.00 – 14.15 Possible effects of seaweed traditions on iodine intake.
Susan Løvstad Holdt, Associate Professor, DTU Food, Denmark.

14.15 – 14.30 Goodbye for now!
14.30 – 14.45 Coffee and cake.