

QualiSea

Enhancing and controlling the quality of cultivated seaweeds for large-scale production and a sustainable supply chain to food and feed markets

About the Project

QualiSea aims to solve bottlenecks for further growth in European seaweed farming, and for the implementation of seaweed as a raw material for food, feed, materials, and higher-value products. Seaweed cultivation in Europe is yet in its infancy, and the production volumes are small. The dominating application is as food and feed, with only a limited degree of processing. For a growth of the industry, the markets must be expanded. This requires a stable and reliable supply of biomass with a predictable, stable, and traceable quality.

The production is currently distributed on a high number of small farms, and the seaweed are processed, or packed and frozen, close to its point of harvest. Increased production volumes will imply larger and/or an increased number of farms and increased transport distances, which in turn may entail need for initial or intermediate stabilisation.

The project will address current and future supply chain challenges related to maintaining biomass quality from harvesting to processing. Standardised conditions for transport and storage will be established. To enable a year-round supply of biomass to the processing facilities, new acid-based preservation methods will be developed. Preserved biomass will be assessed as food and feed ingredients to identify anticipated beneficial effects of the acid preservation. Instrumental methods for quality control and tracking will be assessed. Logistic models for operational planning and decisions, and a supply chain management model for strategic planning and decisions, will be developed based on existing models for the fish farming industry, and for biorefineries handling land-based biomass, respectively.

QualiSea will focus on food and feed applications, as these are the main markets for European cultivated seaweed today and is expected to represent a substantial market share also on a longer term. However, the results and outcome will be highly relevant for other applications of the biomass.



Project Overview

1st Additional Call | 2021

Project Partners:

- **Mrs. Inga Marie Aasen**
SINTEF Industry, Biotechnology and Nanomedicine.
- **Mr. Sverre Marvik**
Anteo AS.
- **Prof. Rando Tuvikene**
Tallinn University, School of Natural Sciences and Health.
- **Mrs. Maren Sæther**
Seaweed Energy Solutions AS.
- **Dr. Geert Bruggeman**
Nutrition Sciences NV.
- **Prof. Maria Guðjónsdóttir**
University of Iceland, Faculty of Food Science and Nutrition.

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preservation,
tracing,
supply chain optimization,
food and feed properties.

Priority Area:

Advancing the supply systems in the blue bioeconomy value chains



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