Development of the seaweed industry and R&D in Norway

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Abstract

The seaweed cultivation industry in Norway, like the rest of Europe, is relatively young but holds significant potential for value creation and is gaining momentum. The first licenses to cultivate kelp in Norway were granted in 2014. Since then, the number has increased significantly, to 566 licenses distributed across 117 sites in 2024. Of these, 197 licenses are currently registered as being in operation by 24 different companies. Sugar kelp (*Saccharina latissima)* and winged kelp (*Alaria esculenta*) are the two species cultivated commercially in Norway, where the latter one has the highest production volumes.

The amount of cultivated kelp in Norway has steadily increased, despite annual variations. In 2023 as much as 770 tons of kelp were harvested, however production declined again in 2024 to 470 tons due to low market demand. We also see a shift from companies controlling operations along the whole value chain towards a specialization into different steps; production (seeds and/or sea cultivation), processing, products or market.

Over the past 17 years SINTEF has conducted numerous national and international projects covering various aspects of seaweed cultivation and utilization. In 2022 they established The Norwegian Seaweed Centre, a national research infrastructure that promotes research and facilitates the development of new technologies for industrial cultivation and use of seaweed. There is a trend towards upscaling and multiuse of ocean space, and an overview of the most relevant ongoing projects is given touching upon IMTA, carbon capture, offshore farms and technology development.

Speaker Introduction

Silje Forbord is the Research Manager for the Seaweed Technology group at SINTEF Ocean and has 17 years' seaweed cultivation experience from land-based nursery and sea cultivation. She is also the project leader for The Norwegian Seaweed Centre, a national dedicated research infrastructure that promotes research and facilitates the development of new technologies for industrial cultivation and use of kelp. She holds a PhD in cultivation of sugar kelp with a focus on nitrogen uptake kinetics, growth characteristics and chemical composition. She has a broad company network and is active in the Norwegian Seaweed Cluster.