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# DELIVERABLE REPORT

Project Acronym: KELP-EU

## Deliverable 2.2 - Summary of activity in task 2.1 for public dissemination

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## Overview of the work undertaken in Task 2.1

Conduct seaweed supplier analysis questionnaire of 10 European sustainable seaweed farmers, to understand projected annual tonnage and price of seaweed over the next five years, and harvest period.

We are very grateful to the farmers who participated in the questionnaire and thank them for their time helping us with this deliverable. The answers they provided in the questionnaire are confidential, and this document is a generalized summary of the results.

### A quick word on the seaweed industry

The seaweed industry, while having historical roots, remains small in Europe. As of 2018, Asia represented 99% of the seaweed production market ([The Global Status of Seaweed Production, Trade and Utilization](#)), a market which has tripled between 2000 and 2018 to production of 32.4 million tonnes with a value of \$13.3 billion (€11.3 billion) ([Investor Memo](#)). Currently, most of the seaweed produced in Europe is from wild harvest, with a nascent but growing seaweed farming sector, which Oceanium and the KELP-EU project hope to unlock.

## Methodology

Oceanium selected 10 farmers from 6 different countries across Europe to interview from the database. These calls were conducted in November and December 2021. The farmers were chosen based on variation in geographic variation and stage of development to get a full picture of trends, progress and commonalities.

The design of the questionnaire addressed the following:

- Seaweed species
- Location
- Harvest timing
- Farming area (ha)
- Licences
  - o Current licenses
  - o Licences applied for
  - o Licences planned
- Tonnage
  - o Current tonnage
  - o 2-year, 3-year, 5-year and 10-year tonnage projections
- Current and future daily harvesting capacity
- Price per tonne
  - o Current price
  - o 2-year, 3-year, 5-year and 10-year price projections
- Level of technology and R&D in seed deployment and expanding harvesting capacity
- Pre-processing capabilities: chopping, freezing and drying
- Transport links
- ESG commitments across environmental and social impacts

## Summary of key findings

Overall, findings revealed that there is a huge amount of goodwill and determination in the sustainable seaweed industry, with exciting plans to expand operations and apply innovative methods of farming to expand yield.

There was also a very strong commitment to sustainability factors. While environmental and social impacts are important throughout the licensing process for farms to be established, the farmers that were interviewed also showed how they were going above and beyond the requirements of licensing. For instance, several farmers have found innovative ways of recycling and reusing equipment.

Price is a key challenge - until the industry grows, it will be difficult for farmers to achieve economies of scale. In the meantime, high prices may be reductive for processors and divert capital to paying high raw material costs and away from R&D.

Future harvest capacity was also revealed as a challenge. With growing capacity for growth and high growth projections, there may be challenges in harvesting the growing amounts with capital needed for additional vessels, people power and post-harvesting capability.

Harvest period in Europe for *saccharina latissima* is from April to May for product that is likely to be high-nutrient, while not being too young. Some farmers may also harvest in June to take into account different applications' needs and nutritional content.

## Recommendations to help unlock the industry

Based on the interviews, two key issues arose where we believe institutional support could play an important role in further unlocking the industry.

### Funding for post-harvest capabilities

- The industry is still at an early stage of development, with few farms having steady harvests and revenue streams. This means that there is limited capital available for farmers to buy the equipment they made need to freeze or dry their produce in order to sell it. Equipment can be costly, and there could be benefits to regional hubs for freezing and drying that a cluster of farmers could use. Funding for such infrastructure costs would be useful in alleviating the potential capital burden on farmers.

### Licensing support

- While high licensing standards are absolutely vital to ensure that farms and farming practices are sustainable and responsible, licenses remain a significant barrier to entry, with a long application process that can often take well over a year and a pathway which is not always clear, with numerous stakeholders. Support could be given to seaweed farmers to navigate this process, building on the [Seaweed for Europe Licensing Toolkit](#). Additional funding to application processors to expand the teams could also help speed up the process.



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