

D3 – Recommendations for SLO for seaweed farming in a communicable format: farming brief

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| Version | Date | Editors | Edits |
|---------|------------|--|---|
| 1 | 07/01/2023 | Suzi Billing | Using D1 and D2 to produce a non-technical brief on the measures that may increase SLO for seaweed farming in the UK. |
| 2 | 02/04/2023 | Suzi Billing | Integrating feedback from seven seaweed industry companies on the guide. |
| 3 | 07/09/2023 | Suzi Billing Mollie Gupta Julie Rostan | Addressing change requests and comments from WWF-UK. |

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DEVELOPING SOCIAL LICENSE TO OPERATE FOR UK SEAWEED FARMING

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With special thanks to all of the participants that freely contributed their time and expertise to this work.

- Seaweed farming is gaining global and UK recognition as a means to generate environmental, economic, and social benefits. Prior research has determined that social license to operate (SLO) will be pivotal to establishing seaweed farming in developed nations as the industry expands. This brief offers an overview of the attributes perceived by stakeholders and communities of place and interest, that are believed to contribute to SLO for seaweed farming in the UK.
- Seaweed farming in general in the UK is perceived as benign or environmentally beneficial by most coastal communities. Yet, some stakeholders and coastal communities can be opposed to seaweed farming operations in their local area.
- Environmental sustainability, communication and meaningful engagement with the general public, coastal communities, communities of interest and other marine users about seaweed farming and its uses is key to increasing SLO of seaweed farming.
- Coastal communities and the general public have limited understanding of what seaweed farming is and what seaweed is used for. This increases the likelihood of incorrect comparisons to other, more familiar industries that may have different environmental and social impacts than seaweed farming (e.g. farming of finfish, farming of mussels, mechanical harvesting of wild seaweed).
- Developing a context-specific approach to site selection for seaweed farms is crucial. This approach should encompass an early understanding of how the farm might interact with local communities and relevant stakeholders, including those who rely on the area for their livelihoods or recreation. This proactive approach is vital for increasing the success of planning and licensing applications and promoting socially responsible growth of the UK seaweed farming.

Background: Across Europe and the USA, seaweed farming is being looked to as a source of low-carbon food, feed, and chemical production. It has the potential to provide important ecosystem services, such as bioremediation through uptake of excess nutrients, and coastal protection. Seaweed farming may also support sustainable rural and island coastal communities through job-provision and value-chain development. Despite the potential for seaweed farming to contribute to sustainable “Blue Economy”, it can still be subject to social opposition.

Evidence from France shows that social opposition by local conservation organisations, coastal community groups and inshore fishers can reduce the size of farming concessions and delay farm deployment. Evidence from Scotland shows that coastal communities support seaweed farming in general but are more sceptical of it in their local area and may require certain conditions to be met in order for farms to develop a ‘social license to operate’.

With seaweed farming in the UK currently in a nascent state, there is the opportunity to learn from other aquaculture sectors and identify and implement steps that can be taken to foster positive relationships between seaweed farmers and local communities, communities of interest such as conservation organisations, regulating authorities, and other stakeholders. Building SLO for seaweed farming in the UK will benefit the industry as it grows, reducing the likelihood of conflicts with stakeholders and communities, and potential delays and costs associated with social opposition.

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Methodology: The information provided in this brief is sourced from a WWF-UK funded research project which was undertaken by the Scottish Association for Marine Science between 2021 and 2023. The project included a desk-based review of relevant literature and project reports, in-depth interviews ($n=25$) with stakeholders in three case studies in England, Wales and Scotland, where there are already small-scale seaweed farms, seeking perspectives on how seaweed farming can develop in a socially acceptable way. It also included in-depth interviews ($n=18$) in Lowestoft, Suffolk, England where there is no history of aquaculture to compare the results of areas with and without a history of aquaculture.

Results and conclusions

- Environmental sustainability is viewed key to social license to operate for seaweed farming by coastal communities, conservation organisations, fisheries organisations, policy and government representatives and most seaweed farmers and farming organisations.
- Communication and meaningful engagement with coastal communities and stakeholders is central to building positive relationships. This can help identify areas of conflict and possible resolutions, particularly with those who rely on the same area for their livelihoods (e.g. fishers, marine tourism etc).
- Smaller-scale seaweed farms are more likely to be perceived as environmentally sustainable by coastal communities and conservation organisations in areas where there are already aquaculture operations but are also more likely to be perceived as less economically viable by potential seaweed farmers.
- Ownership of seaweed farms by multinational companies was perceived negatively by all study participants. They advised that globalised ownership models can result in negative consequences for the environment and for those who live near such operations.
- Engagement, monitoring and adaptation, and regulation are essential components in the social safety net that reassures coastal communities that have no knowledge or experience of aquaculture, that seaweed farming in their local area will develop in a controlled manner with adequate protection for the interests of local stakeholders and the environment.

What seaweed farmers can do to foster social acceptability

- ✓ Build a context-specific approach to site-selection and farm development. Take into consideration how a new farm might fit within the local community, how it might impact current users of the area, and whether it will change the livelihoods and culture of people living in the area. What might be acceptable in one location will not necessarily be acceptable in another.
- ✓ Engage with local communities, communities of interest and other relevant stakeholders (e.g., fisheries, conservation groups, recreation organisations) about the environmental sustainability of the farm and farming practices. This may include answering questions about day-to-day operations, end-uses for the seaweed, the economic viability of the farm, and how the seaweed farms' environmental impacts might compare to other local industries.
- ✓ Adapt farming practices to improve environmental sustainability as more science becomes available and talk about these improvements with local communities and relevant stakeholders. Where feasible, engage in environmental and biodiversity monitoring to evidence sustainability.
- ✓ Develop and/or contribute to activities that will improve the general public's knowledge of what seaweed farming involves, from hatchery through to product. This should include the positive and negative aspects of the industry, to help manage expectations around what seaweed farming can achieve. This will prepare the general public for seaweed farming expansion and may reduce the spread of damaging misinformation and comparisons to controversial activities (e.g. mechanical harvesting of wild seaweed). Being transparent about potential negative interactions or events and how they are being managed, can improve trust in farmers and companies.
- ✓ Communicate with seaweed cultivation industry bodies and/ or regulatory agencies about seaweed farming experiences, and where regulations and planning processes could be improved.



Further resources

WWF-SAMS Guide to developing social license to operate for seaweed cultivation in the UK. Available on SAMS website.

EU H2020 GENIALG project handbook on social license to operate for seaweed cultivation in Europe.

[https://www.sams-enterprise.com/t4-media/sams/pdf/Handbook-on-Social-License-to-Operate-for-Seaweed-Cultivationv4\(2\).pdf](https://www.sams-enterprise.com/t4-media/sams/pdf/Handbook-on-Social-License-to-Operate-for-Seaweed-Cultivationv4(2).pdf)

Argyll and Bute Council Seaweed Feasibility Study: [https://www.argyll-](https://www.argyll-bute.gov.uk/sites/default/files/seaweed_farming_feasibility_study_for_argyll_and_bute_report_december_2019.pdf)

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