Low-Trophic Cultivation

How much can it contribute to freshwater and ocean regeneration?

Date: Thursday, 25 April 2024

Theme: Ocean Regeneration

Workshop Summary

In the Arena 2 workshop on low-trophic aquaculture, participants had the opportunity to discuss the case for low-trophic cultivation in freshwater and ocean regeneration. The workshop began with a presentation from **Frederick Bruce** (SUBMARINER Network), who laid the foundations for the discussion by arguing that diversification is vital to the future of our oceans and waters, and that low-trophic cultivation is an important form of diversification that can make aquaculture more sustainable and contribute to freshwater and ocean regeneration.

The workshop continued with a presentation by **Sander van den Burg** (Wageningen University) and **Sophie Koch** (Sjokovin), both representing the SEAMARK project, which aims to scale-up seaweed cultivation in Europe. In their presentation, van den Burg and Koch emphasised the importance of sufficiently valuing ecosystem services, as this can make them more attractive to businesses and help to widen and strengthen the sector. For example, in some cases seaweed ecosystem services are valued through voluntary credits, voluntary credits with third-party certification, and inclusion in national carbon accounting. In addition, this presentation focused on quantifying impacts of seaweed cultivation through various types of data. It can be difficult to ascertain exactly how low-trophic aquaculture is contributing to ocean regeneration, but this presentation provided several key methologies for assessment.

The workshop continued with a presentation from **Mats Heitzmann** (Gothenburg University), who presented his work on the influence of bivalve farming on local biodiversity. In his presentation, he discussed the two methods of data collection used in his study: eDNA and Autonomous Reef Monitoring Structures and his preliminary results, which indicate that bivalve cultivation may play a role in improving local biodiversity.

In the final presentation of this workshop **Jonne Kotta** (University of Tartu) spoke on progress in developing a monitoring system for mussel farms, as a systemic and standardised approach has been lacking thus far. In his work, Kotta has been monitoring mussel farms in the Baltic Sea in order to determine their potential for contributing to ocean regeneration. One key finding from this work is that sedimentation from mussel farming is not a significant problem in the Baltic Sea. In fact, mussel farming can help to decrease nutrient loads in the seas. In order to further work on the role of mussel cultivation on ocean regeneration, Kotta emphasised the importance of developing a standardised approach to monitoring mussel farms.

The workshop concluded with an interactive group discussion, in which participants were given the opportunity to reflect on the potential of the European Strateg for the Baltic Sea Region in supporting low-trophic aquaculture. In the end, groups ranked the Strategy on average at 17.6/27 points, with strong critiques of the Strategy's handling of topics such as health, education, hazards, and emission reductions. The groups finally highlighted the most important action points for the future of the Baltic Sea region, which you can see in our Roadmap.