

Can fisheries and mariculture help to reduce eutrophication in the Baltic sea?

The Baltic sea is one of the most eutrophicated seas in the world. This is a significant problem that leads to harmful algae blooms and depletion of oxygen. Eutrophication is caused by excess nitrogen and phosphorus accumulation, this is linked to the planetary boundary biogeochemical flows which has been crossed. Previously, the approaches to finding a solution to this issue have been centered around land based practices and limiting harmful products from entering the sea. Our approach to solving the issue is from the sea itself, looking into the research question “Can fisheries and mariculture help to reduce eutrophication in the Baltic sea?”.

We focused our research on three main areas which have shown to be efficient in removing excess nutrients from the sea: managing fisheries, mussel- and seaweed-farms. There are several approaches to managing fisheries in the Baltic sea with a focus on social benefit instead of private profit. These could increase nutrient removal from the Baltic compared to the fisheries as of now. As for the two other approaches, mussels and seaweed have both proven to be efficient ways to remove excess nutrients from already polluted waters. Both these methods are extremely cost efficient and could potentially serve as food sources.

In conclusion, addressing the issue of eutrophication in the Baltic sea requires innovative and new sea based solutions. Our research on the use of fisheries and mariculture as tools in nutrient removal demonstrates solutions which are not being applied today. These approaches present promising ways for mitigating eutrophication in the Baltic sea, and can contribute to its ecological restoration and long-term sustainability.

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