

Socio-economic consequences of improved water quality in the Szczecin Lagoon, Baltic Sea

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The German-Polish Szczecin (Oder-) Lagoon in the southern Baltic Sea is highly eutrophic coastal water that is affected by algae blooms during summer. To reach a good ecological status, as demanded by the EU Water Framework Directive, nutrient reductions in the river basin alone will not result in a sufficiently improved water quality.

Mussel cultivation seems to be a supporting internal measure to improve the ecosystem function of the shallow, oligohaline lagoon. Especially zebra mussels, *Dreissena polymorpha*, a species currently inhabiting the whole lagoon, help to clarify the water by high filtration rates. But presumably a lack of appropriate substrate has led to a decrease of the zebra mussel population during the last decades.

The cultivation of zebra mussels on lines or nets in combination with periodical harvest could reduce the turbidity and the nutrient content in the Szczecin Lagoon. In theory this could provide benefits for the regional economic development in future, as for example water transparency is a key factor for beach tourism. Also local fishermen could benefit by additional income from harvested mussels as well as from a changed fish community with a higher economic value.

To identify and value socio-economic consequences of an improved water quality, different target groups were interviewed. This included investigations of tourists' and residents' behavior and how improved water clarity could affect leisure activities around the lagoon.

A further study analysed the acceptance of local fishermen towards mussel cultivation. The results provide insight into possible use conflicts as well as opportunities for co-operation between traditional fishermen and enterprises engaged in marine sustainable aquaculture.

The presentation will give an overview about the findings of our interview campaigns. Different examples will show how socio-economic parameters are linked with water quality improvement as an ecosystem service.