SpaCeParti

Coastal Fishery, Biodiversity, **Spa**tial Use and **C**limate Change: A **Parti**cipative Approach to navigate the Western Baltic Sea into a Sustainable Future

The coastal fishery of the Western Baltic Sea is under high pressure, with unforeseeable consequences for the economic development of coastal communities. Human influences such as overfishing, over-fertilisation of the Baltic Sea and climate change are major contributors. In addition, fisheries increasingly suffer from spatial conflicts with necessary nature conservation areas to preserve biodiversity and wind farms to mitigate climate change. On land, growing tourism is taking up more and more space on the coasts, displacing fishers with recreational boats, for example. Therefore, the manifold conflicts between civil society, user and interest groups need to be recognised and solved in a sustainable way. The SpaCeParti project pursues the following goals:

GOALS

Develop scientific and policy expertise to help the coastal fishery of the Western Baltic into a sustainable future, while protecting biodiversity, taking into account tourism and offshore energy production.

1. Develop options to prevent the economic collapse of fisheries in the Western Baltic Sea and the resulting socio-cultural consequences.
2. Work with ideas for the transformation of coastal fisheries from an endangered economic entity to a sustainable social-ecological socio-ecological form of economy.
3. Find sustainable solutions to the manifold conflicts between user and interest groups as well as civil society.

The projects living labs are located in Stein-Wendtorf (federal state of Schleswig-Holstein) and Wismar (federal state of Mecklenburg-Vorpommern).

CONSORTIUM

Christian-Albrechts-Universität zu Kiel

Kiel Marine Science – Connected Research

Universität Hamburg – Der Forschung | Der Lehre | Der Bildung

GEOMAR

Centrum für Erdsystemforschung und Nachhaltigkeit (CEN)

THÜNEN

Exzellenzcluster Climate, Climatic Change, and Society (CLICCS)

Leibniz-Institut für ökologische Raumentwicklung

Universität Leipzig

iDiv

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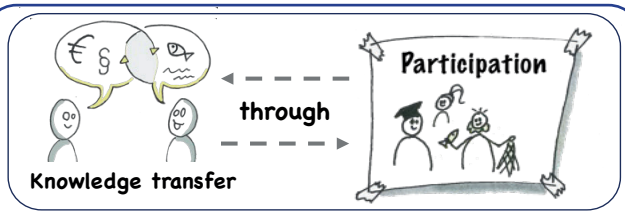
MV Mecklenburg-Vorpommern

SH Schleswig-Holstein Ministerium für Bildung, Wissenschaft und Kultur

Solution approach: Participative living labs

In living labs, stakeholders from science and society jointly seek solutions for the sustainable development of coastal fisheries. Our approach is „knowledge transfer through participation“ and the joint development of solutions. In the process, scientific results are transported into politics and society, which generates new knowledge for action.

This transdisciplinary cooperation is the key to sustainable developments because they are jointly envisioned, developed, tested and reflected upon by different stakeholders.



Examples of our approach in living labs:

With the approach „Coastal Culture Education Pathway“, knowledge is transferred between the stakeholder groups involved (incl. science) and out into society (e.g. tourists).

The additional training of sea rangers is a bottom-up development that can contribute to solving various pressing problems: e.g. preservation of coastal fisheries and nature conservation.

Living lab 1:
Info Trail Coastal Culture

Living lab 2:
Addon Education *Sea-Ranger*

Source: Ostsee-Zeitung 03.05.2023

Contribution to bridging current knowledge gaps

The practical relevance in the living labs is linked to 5 research work packages. The broad range of topics covers, among other things, understanding the functioning of the Baltic Sea ecosystem and its biodiversity, especially with regard to the fish species cod and herring. Various future scenarios are developed for both the trend of the fish population and the development of fisheries, which provide the basis for better fisheries management. In socio-economic analyses, political processes and constraints on fisheries are examined.

First results

The analyses of existing monitoring data show a temporal change in the composition of the fish community of the Western Baltic towards a regime dominated by some flatfish species, in which herring and cod play a minor role (WP2). The coastal fisheries governance system comprises different levels and a large number of actors and interactions, so that a first analysis of the system suggests a low adaptive capacity. However, the evaluation of a survey indicates a common basis of different stakeholder groups for a sustainable use of the Baltic Sea, so that there is hope that a transformation process is possible (WP3). Initial simulations with the further developed ecosystem and fishery models (WP 4) show that only a low catch of cod is possible in the future as well, but that the herring stock could be built up in such a way that higher catches could be achieved again.

Center for Ocean and Society

DAM Research mission
„Protection and sustainable use of marine spaces“
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