

Policy Brief #1

HERRING

Towards a sustainable management of coastal spawning grounds

Herring is one of the most important pelagic species in the Baltic Sea. It is important not only for the marine food chain, but also greatly contributes to the livelihood of fisheries in the Southern Baltic. Since centuries herring is an important economic good and is considered as a cultural heritage in many regions along the Southern Baltic coast.

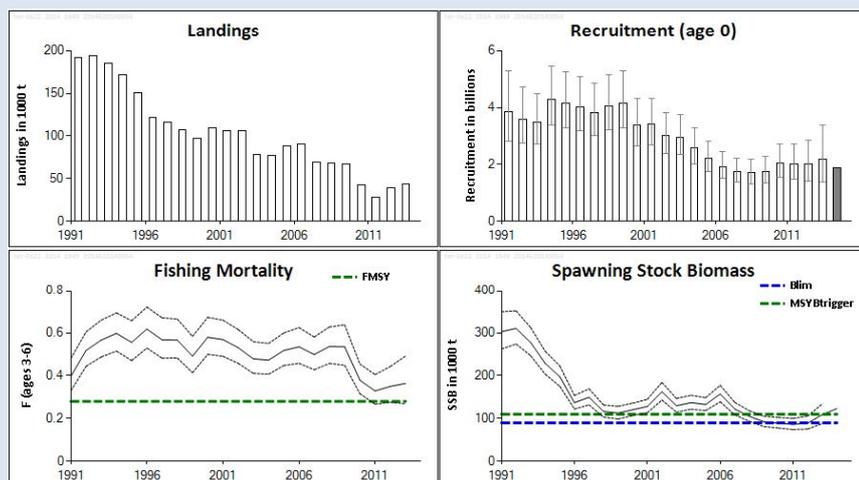


Fig.:1: Stock assessment Western Baltic Spring Spawner (ICES 2013)

However, the monitoring of the last two decades show a significant decrease in spawning biomass, landings and reproduction for the two main herring stocks, the Western Baltic Spring Spawner and the Central Baltic herring.

A good status of herrings' coastal spawning grounds is essential for healthy and resilient stocks. But these areas are put under increasing pressure due to various human activities. Currently coastal spawning grounds are hardly considered by policy makers and stakeholders. Therefore, an improved, sustainable management is needed.

Recommendations for an improved management

HERRING project recommends to include the monitoring, assessment and management of coastal spawning areas into the agenda of the „HELCOM State and Conservation Group“ and the „HELCOM Monitoring and Assessment Strategy“. More specific we propose the following:

- Identification and mapping of important coastal spawning grounds, as the currently available spatial information is highly insufficient or outdated.
- Inclusion and linkage of the current scientific knowledge, assessments, policy implications and future outlooks on coastal spawning grounds into HELCOM assessment products such as fact sheets, thematic assessment reports and holistic assessments reports.
- Support of the dissemination of knowledge and awareness raising on coastal spawning grounds among the public.
- Publication of approaches for an improved management of coastal spawning grounds in the HELCOM HABITAT recommendations series.

Interactions of human uses and herring spawning grounds

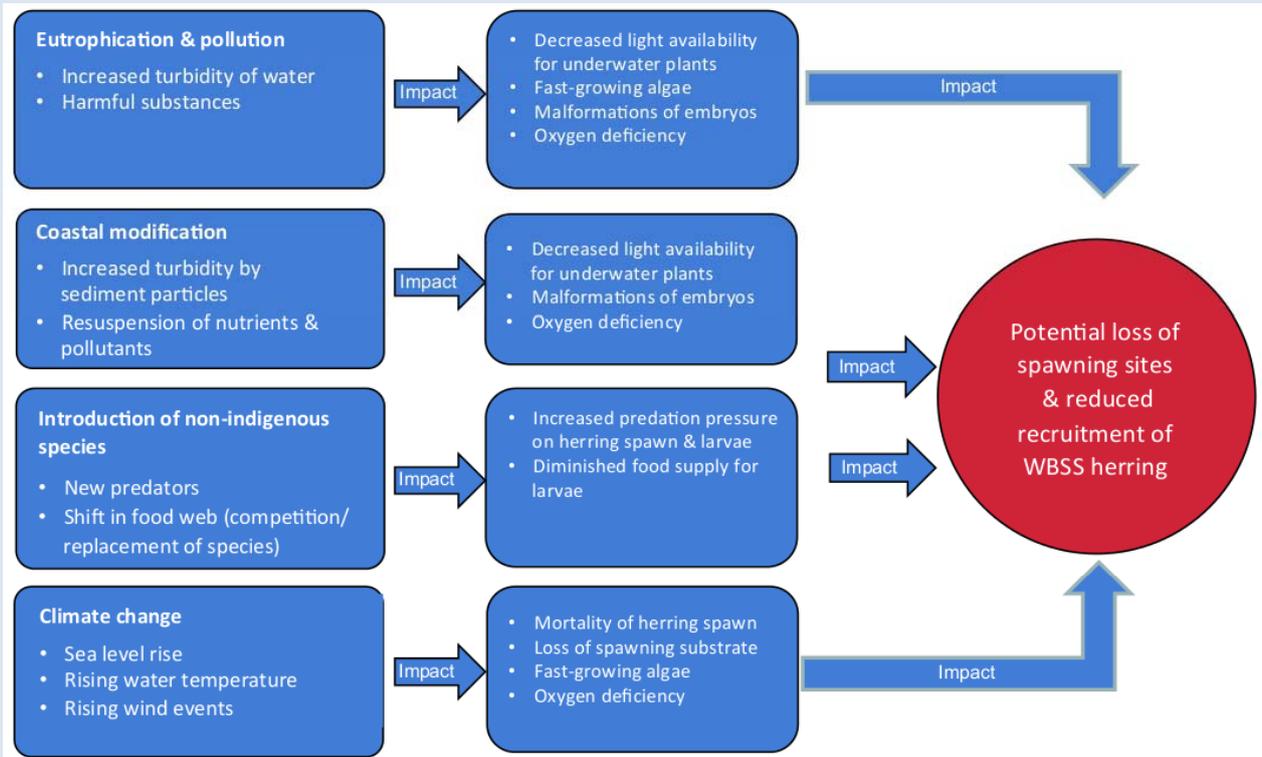
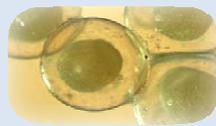


Fig.:2: Interaction of multiple anthropogenic effects on spawning sites and recruitment of herring (TI-OF, D. Moll)

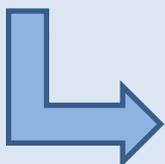
There is high confidence, that the interaction of multiple impacts as shown in Fig.2 have high potential to adversely effect spawning and recruitment success. A priority setting among the case study areas revealed (1) Eutrophication and (2) Coastal modifications, for example dredging as the most critical factors.



Algae bloom and litter at the coast of the Greifswald Bay ©Gerald Schernewski



Different stages of herring egg and larvae ©Katarzyna Horbowa



Eutrophication and the input of pollutants have potential adverse effects on spawning and the development of different larvae stages

Current management of spawning areas

The HERRING project showed that the awareness about the importance of coastal spawning grounds is extremely deficient among relevant stakeholders and institutions. Currently there exists not active management for spawning grounds. The regulations and institutions which govern e.g. dredging, shipping, fishery or tourism hardly consider spawning grounds, if at all. They are also only marginally included in national and international conservation and protection policies. The lacking awareness among stakeholders, the deficient knowledge about exact locations and potential natural and anthropogenic impacts on spawning grounds must be improved for a more sustainable management.



1.) Shipping channel near the Lubmin industrial area ©Lars Tiepolt .2.)Stralsund shipyard ©Conny Deiter. 3.) Herring eggs attached to submerged vegetation ©Philip Kanstinger

Project HERRING

The **Objective** of the HERRING project is to improve the consideration of coastal spawning areas in order to foster a sustainable and integrated management of the Southern Baltic Sea area. The project is based on the idea that the coastal spawning grounds are key for a more sustainable management of the natural resource herring. To achieve this, the project analysed the drivers and impacts of human uses in three case study areas that represent important spawning areas of the WBSS and Central Baltic herring (Greifswald Bay in Germany, Vistula Lagoon in Poland, Hanö Bight and Blekinge Archipelago in Sweden). Secondly, the project analysed the multi-level institutions and management instruments that govern the use and protection of coastal spawning habitats.



HERRING Project Partners:

- EUCC – The Coastal Union Germany, Germany
- Thünen Institute of Baltic Sea Fisheries, Germany
- National Marine Fisheries Research Institute, Poland
- World Maritime University, Sweden

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This is the 1st of 5 policy briefs which have been produced within the HERRING project