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Futures for the use of Baltic herring catch in 2040

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Baltic herring is the most important commercial catch species in the Baltic Sea in terms of volume, and like many other small pelagic species, majority of the catch is used for industrial purposes. The demand for seafood is expected to grow globally and in the Baltic Sea region and therefore, the competition between the different uses of captured fish, namely food and feed, is likely to increase. However, owing to the current ecological state of the Baltic Sea, dioxin levels in Baltic herring are high and its use as food and feed is restricted in the EU. The aim of this paper is to explore the possibilities of Baltic herring fishery to contribute to global food security and safety objectives in 2040. This is done by 1) building exploratory future scenarios for the Baltic Sea based on existing regional and global scenarios, literature and expert consultations, 2) examining how uncertainties related to Baltic Sea governance and human impact on Baltic Sea environment shape the possible synergies and trade-offs between fisheries management and food security and safety related objectives. In this paper, we present the storylines created for each scenario and elaborate on how social, technological, economic, environmental, political and value-based trends and drivers change across each scenario and impact food security and safety. Based on our results, we argue that there is a call for elaborated discussions on how to link ecosystem-based management to food security and safety more efficiently.

Key words: Baltic Sea scenarios, Baltic herring fisheries, food security and safety, ecosystem-based management

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