

## Economic Effects of Maritime Environmental Legislation in the North and Baltic Sea Area: An Exploratory Sequential Mixed Methods Approach

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**Abstract :** Environmental legislation to protect North and Baltic Sea areas from harmful vessel-source emissions has received increased political attention in recent years. Legislative measures are expected to show positive effects on the health of the marine environment and society. At the same time, compliance might increase the costs to industry and have effects on freight rates and volumes shipped with potential negative repercussions on the environment. Building on an exploratory sequential mixed methods approach, this research project will study the economic effects of maritime environmental legislation in two phases. In Phase I, exploratory in-depth interviews were conducted with 12 experts from various stakeholder groups aiming at identifying variables influencing the relationship between environmental legislation, freight rates and volumes shipped. Influencing factors like compliance, enforcement and modal shift were identified and studied. Phase II will comprise of a quantitative study conducted with the aim of verifying the theory build in Phase I and quantifying economic effects of rules on shipping pollution. Research in this field might inform policy-makers about determinants of behaviour of ship operators in the face of the law and might further the development of a comprehensive legal system for marine environmental protection. At the present stage of research, first tentative results from the qualitative phase may be examined and open research questions to be addressed in the quantitative phase as well as possible research designs for phase II may be discussed. Input from other researchers will be highly valuable at this point.

**Keywords :** clean shipping operations, compliance, maritime environmental legislation, maritime law and economics, mixed methods research, North and Baltic Sea area

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