

Conceptualization of Climate Change and Its Implications for Coastal Management in the Southern Baltic

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Very productive coastal ecosystems are usually multi-use and multi-stakeholder areas. It is expected that during the 21st century the global sea level will rise at a greater rate than anytime before. Polish coast is almost entirely covered by low-lying sandy beaches, very sensitive to climate change. This is why it is essential to include climate change into the future planning and long-term coastal management. While this is pretty obvious to researchers, it might not be so to the people responsible for decision making. We believe that it is of extreme importance to investigate how the authorities, environmental planners, teachers as well as the coastal societies perceive climate change and how much they really know about it. In order to investigate this hypothesis, we have developed a dedicated questionnaire in cooperation with the University of Linköping. Its primary goals were to identify (i) how the responders perceive major problems, (ii) what are their declared concerns about the environmental issues, (iii) what they recognize as foundations for the sustainable development and finally (iv) what are their information sources. The analysis of the last factor was also used as a proxy to help to understand how, if at all, scientific information is transferred from research institutes through education and public opinion to the decision makers. We have also used content analysis to investigate the management measures applied in the coastal areas and the Polish territorial waters. We studied the relations between the regulations and other policy drivers, including synergistic and antagonistic institutions. Our analysis reveals that problems related to climate change are not considered important. There is a common consensus that global warming causes problems but it is rather a hypothetical statement not reflected in operational goals. The objectives are usually limited to short term social and economic issues. The state of the natural environment is considered very important but this importance is often limited to fisheries, recreation and other direct uses of natural resources. The relation between the state of the environment and climate change seems not obvious to the respondents. Interestingly, current problems are expected to persist and to be equally urging in the future. Although we looked for the regional context, the global perspective prevails in the respondents' minds, and they disregard the scenarios relevant to Northern Europe. Most of the individual and institutional actors agreed that the importance of climate change will increase over time. However, the current situation seems more severe to some respondents than what others believe it will be in 100 years. We conclude that there is a gap between scientific research, policy making and public concerns. This results from the information bias: the latest discoveries rarely influence common thinking. An appropriate information strategy and lifelong education could definitely increase the social awareness of climate change issues. This awareness is essential for actions and decisions optimally based on inventory of possible policy options and their costs and benefits analysis.

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