

CLIMAR – EVALUATION OF CLIMATE CHANGE IMPACTS AND ADAPTATION RESPONSES FOR MARINE ACTIVITIES

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The North Sea is a vulnerable ecosystem characterised by a high productivity, highly diversified habitats and intensive use. This intensive use together with climate change has resulted in more vulnerability for ecological, social and economic communities associated with the North Sea. A sustainable and integrated approach is essential when studying this topic and it forms the basic principle of the CLIMAR project. Within the framework of CLIMAR, scenarios and adaptation strategies are developed which are relevant in the mid-term (2040) and long-term (2100).

The primary effects of climate change (e.g. sea level rise, storminess, temperature and salinity changes, etc.) were identified. By means of numerical models, effects caused by climate change on the North Sea environment have been established. Subsequently the secondary effects of climate change on the North Sea ecosystem and the social-economic activities (tourism, transport and harbour, wind energy, gravel extraction, etc) are studied. The methodology currently developed for two detailed case-studies (Belgian fisheries and coastal flooding) will serve as a blueprint for the assessment of the whole North Sea environment. An evaluation tool based on the principles of sustainable development will be generated to assess the impact of the proposed adaptation strategies. Finally, a policy and legal evaluation will be executed, and recommendations will be formulated.