

Status and perspective of the COHERENT research project

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The COHERENT research project was initiated in the autumn of 2017, and in this presentation we will discuss the estimation of dynamic cost functions from climate events in coastal areas, including the perspectives and limitations of approach taken.

The existing practice of estimating the economic costs of a storm surge involves a static approach, including simplified damage cost concepts that are focused on reconstruction of buildings and roads. To nuance this approach, the COHERENT project plans to include a broader range of cost concepts such as the cost of traffic delays, damage to environmental amenities, disruption of local business activity, decreases in real-estate prices and negative health effects. The dynamic aspect will be based on statistical analysis of recent storm damages and emergency responses.

Background for the COHERENT project

Coastal flooding hazard events have increased in magnitude and severity in recent decades in Denmark, Europe and globally. Rising sea levels and more extreme storms due to climate change are expected to increase these risks. Interactions between land use, hydrological systems, economic activities and human settlements in coastal areas can also increase vulnerabilities. COHERENT will facilitate integrated system views and expert, government and business interactions within these areas. In particular, physics, engineering, economics and social sciences are integrated in the COHERENT project, and a key project output is to produce a user-friendly digital platform in support of planning and for testing different coping measures and strategies. Value creation to society includes reduced flooding damage costs and business development with exports, employment creation and innovation in the clean tech sector. The project outcomes will provide benefits to a wide range of interest groups from citizens and municipalities to small consultancy companies and other SMEs to larger companies such as Danish engineering consultancies.
