

Integrated plan of the upper sea Scheldt: towards a sustainable future

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The Scheldt estuary is the carrier of economic, societal and environmental functions in one of the most developed regions of Western Europe. Development put a lot of pressure on the system functioning, finally leading to the definition of a Long Term Vision for the Scheldt estuary, to which all new projects must be submitted. The functioning of the Upper Sea Scheldt, though part of the estuary, never really was considered to the full extent.

Embedded in the Agenda of the Future, the Integrated Plan for the Upper Sea Scheldt aims at improving the understanding of the upper estuary system functioning, as a basis for proposing measures to improve its functioning. The Integrated Plan continues from the safety and habitat objectives agreed in the Sigma Plan and aims at bringing them to the level of restoring estuarine system functioning, and safeguarding the estuary functions within the limits of its autonomous development and taking into account the cumulative effects of human activities.

In the study, estuarine planning alternatives are being compared using a state of the art integrated modeling instrument, including 3D-hydrodynamic and sediment transport models, ecosystem and habitat models. Simplified 1D-hydrodynamic and morphological modeling is used to study possible building-blocks. These vary from introducing sills and spurs, to the restoration of intertidal area (depoldering) and flood channels, referring to experience in the Scheldt and other estuaries. Based on promising hydrodynamic and morphological response, alternatives will be composed for analysis with the detailed integrated modeling instrument. This selection of building-blocks is discussed with stakeholders.

The presentation will focus on the selection and study of these building-blocks, and first results of the calculations. The authors invite conference participants to come into debate during the poster session and contribute with original ideas and arguments or counter-arguments for the selection of building-blocks and alternative composition.