Hydrodynamic modelling - how do we utilize it in planning

Hydrodynamic modelling is utilized broadly in different type of projects, that have effects on water environment, flow conditions and morphology. In Sitowise, Delft3D suite is used to simulate detailed flows, water levels, waves, sediment transport and morphology. Hydrodynamic modelling tools have been important part of the planning processes in river, lake, and sea environments, and they are typically important part of the environmental impact assessments in projects that includes dredging or construction in water environment. Model results are also utilized in many other areas of an environmental impact assessment from morphological studies to water quality and aquatic species.

One important theme that have emerged in many projects, is the importance of good quality measurement data from the study sites. Good quality input data is the backbone of a successful modelling project. The importance of good quality bathymetry data is clear for anyone who works with the models, but in many cases the problem is lack of good quality data for model calibration and validation. Good quality in-situ observations are not always available, or the project doesn’t have time to conduct these kinds of field surveys nor is it always necessary.

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