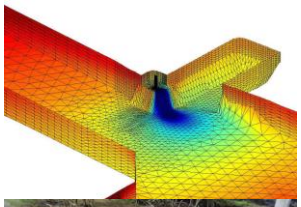
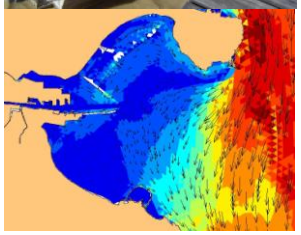
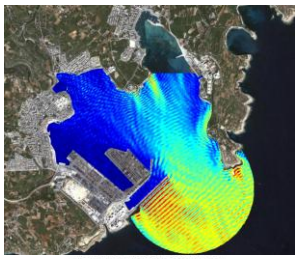
Svašek Hydraulics is a hydraulic engineering company based in the Netherlands. Since 1969 the company specialises in the hydrodynamic and morphological behaviour of seas, coastal areas and rivers. The company focuses on a problem solving approach. Svašek Hydraulics distinguishes itself from general technical consultants by its in depth knowledge of hydraulics, morphology and advanced numerical models. At the same time, Svašek Hydraulics is more than a research institute. We provide solutions not only studies.

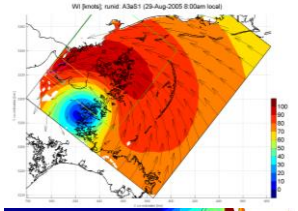


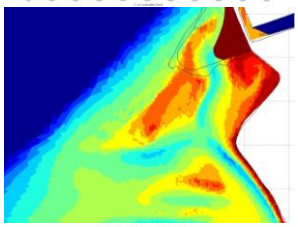
Our clients include governmental bodies, municipalities, port authorities, contractors, investors and industrial companies, worldwide. The extent of our services varies between expert's opinion report and detailed mathematical modelling, and from pre-feasibility study to preparation of tender documents and construction supervision.

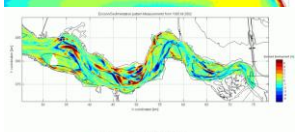
Svašek Hydraulics is at the front end of **hydraulic and morphological model** development. The main set of our in-house developed hydrodynamic models is based on the Finite Element Method. The main items of the total package are the hydrodynamic flow models FINEL2D, FINEL3D (resp. 2- and 3-dimensional) and the harbour resonance model HARES. Within FINEL2D, the MORFIN morphological modules are available to compute sediment transport and seabed development, both for sand and silt. MORFIN is also dynamically linked to the wave model SWAN. Being part of the same package the results of the various modules can easily be exchanged, e.g. changes in seabed level computed with MORFIN are directly linked to the hydrodynamic model.

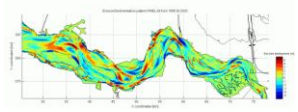












Our models are continuously subject to research and development. If required, we will adjust the model to suit specific questions, instead of having to simplify the problem to fit it to an existing model. Besides our in-house developed models, we are licensed users of several third party models. This way we are not bound to just one model, but we can use the best model fit for the project, instead of fitting the project to our model. Our staff combines the best of model developer and model user.

Svašek Hydraulics provides **surveys in complicated hydraulic environments**, preferably with a direct link to engineering or modelling. The involvement of the hydraulic expert in the survey enhances the output of survey work. Time schedules can be tighter if the same team does survey work, modelling and advice. Our staff combines the best of 'field' and 'desk' knowledge.

The **hydraulic engineering** expertise of Svašek Hydraulics is mainly related to dredging projects, conceptual design of hydraulic structures and layout optimisation. Here again, the combination of modelling work, sometimes fed by a survey program and hydraulic engineering adds up to more than the sum of the parts. The physical processes are the starting point of our design approach. ‘Building with nature' was Svašek's motto already far before this became common practise in coastal and river engineering.

Svašek Hydraulics provides free wave forecasts for the coming 7 days for almost all oceans and large seas of the world. The forecasts are based on the global NOAA wave model and are refreshed each 6 hours. Visit **www.worldwavedata.com** for more information.

Svašek Hydraulics

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