RMS salinity: Fixed locations [ppt]

v8: dt=0.50 m, no wind
v8: dt=0.25 m, no wind
v8: dt=0.25 m, with wind
v7: dt=0.50 m with wind

RMS salinity: buoys eastern Haringvliet [ppt]

v8: dt=0.50 m, no wind
v8: dt=0.25 m, no wind
v8: dt=0.25 m, with wind
v7: dt=0.50 m with wind

Verification of the Zeedelta model

For the management of the Dutch Waterways, a comprehensive set of models is made by the Dutch government. The WAQUA/TRIWAQ numerical flow program is used to compute 2DH/3D hydraulics, salinity profiles and particle tracks.

Calculation times can be significantly reduced in the recent updated parallel version of the TRIWAQ (3D) program using domain decomposition in both the vertical and horizontal plane. This means that it is possible to calculate very extensive models with a sufficient number of vertical layers for a long period of time. For this project Royal Haskoning has verified the latest version of the Zeedelta model by a quantitative comparison of the model results with water level, current and salinity measurements with four different river discharges as boundary conditions. The measurements used are from fixed stations and from one comprehensive measurement campaign in the Haringvliet. The verification of the model is emphasised on the influence of the salt intrusion in the Nieuwe Waterweg and the Haringvliet estuary.

The calculations have been carried out at the Unite parallel super computer facility in Amsterdam (SARA)

SVASEK HYDRAULICS
COASTAL, HARBOUR AND RIVER CONSULTANTS