

Gothenburg Marine Forecast Service

Anna Karlsson, DHI Sweden
M Sc Oceanography
Project manager, Specialist

Photo Port of Gothenburg



Agenda

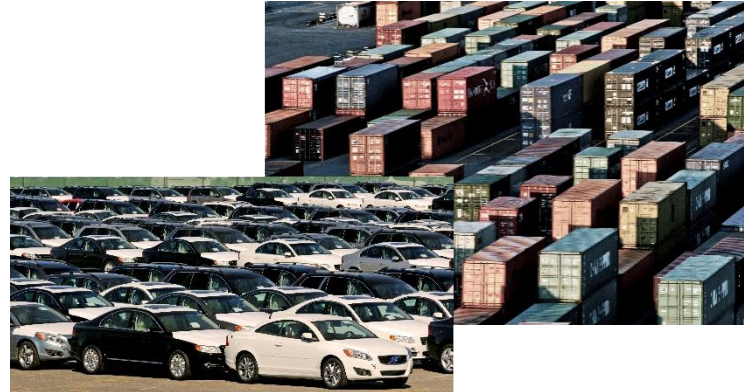
- Introduction and background
- The operational model – MIKE 3 FM
- GMFS live

The area



The Port of Gothenburg in short

- The Port of Gothenburg is the largest port in Scandinavia, with over 11,000 vessel calls each year. Almost 30 per cent of Swedish foreign trade passes through the port.
- The Port of Gothenburg is also the only port in Sweden with the capacity to receive the very largest ocean-going container vessels.
- At the Port of Gothenburg, there are terminals for containers, roro, cars, passengers and oil and other energy products.



Model vs. Measurements

Measurements gives reliable information on water levels, currents, waves and density in a limited area

while..

Models are used to broaden this information to whole areas of interest and make scenarios and forecasts

Why models?



Scenario tool

- Mitigation of environmental effects
- Cost efficiency – by evaluating different options
- Risk and vulnerability assessments
- For design purposes

Operational tool for planning and management – decision support

- Warning and emergency (water levels, strong currents, oil and other pollutants)
- Water quality – bathing water



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- Requirements
 - Hydrographic information – currents, water level, temperature and salinity
 - Hind cast, real time and prognosis
- Who
 - GHAB for planning and permissions
 - Pilots for safer navigation
 - Others

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- Operational model for the port of Gothenburg - web interface
- Forecasting currents, water level and density
- Presentation of results adapted to vessels with draught 9-19 m



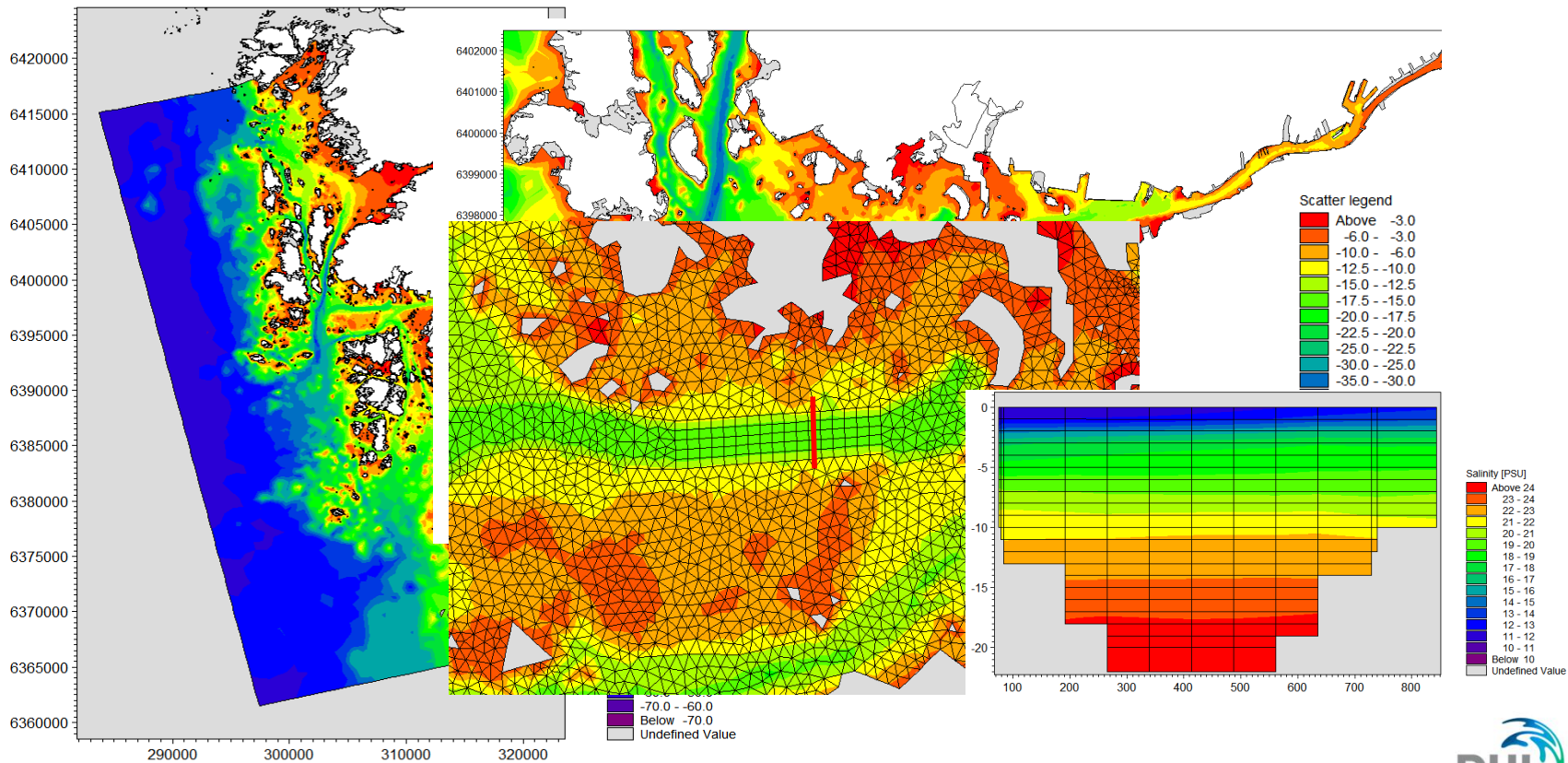
01.

The operational model

MIKE 3 FM



MIKE 3 FM

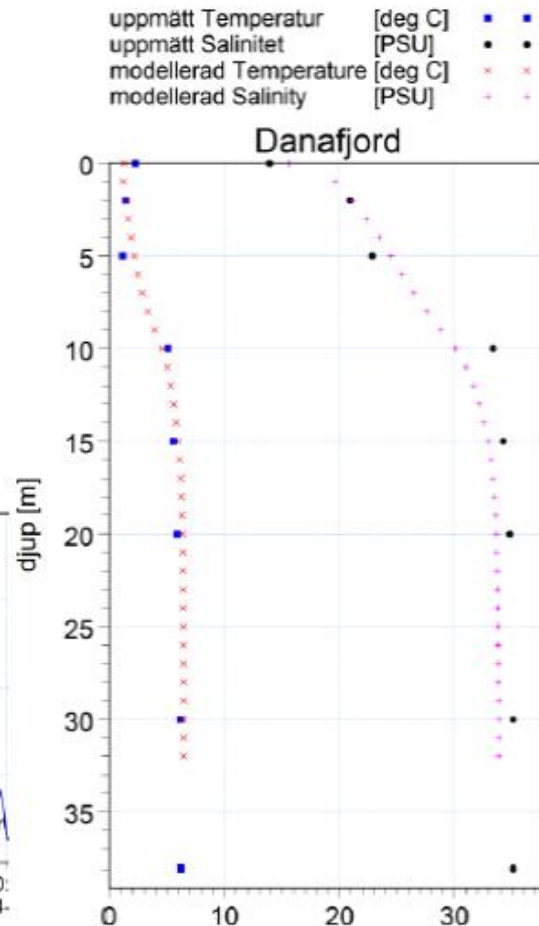
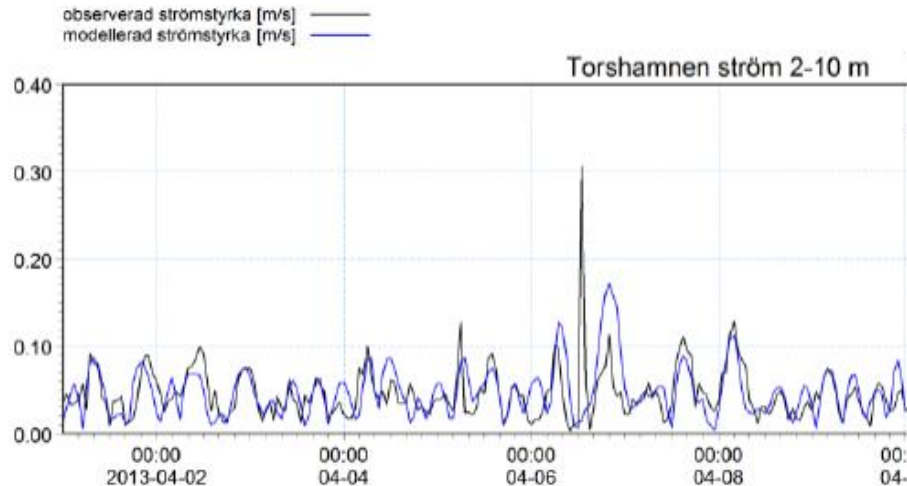


Forcing

- Meteorology from StormGeo
- Hydrography from the operational DHI model for the Baltic/Kattegatt/Skagerack
- River flow from the Göta älv and Sävån (~550 m³/s)

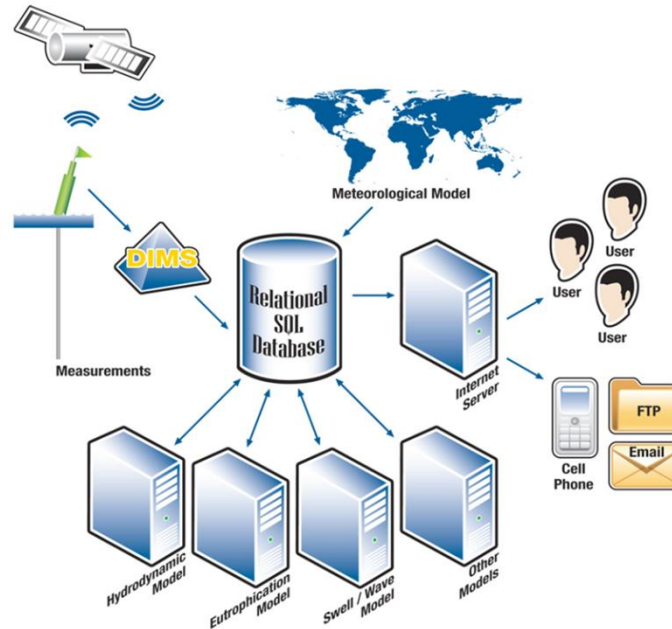
Validation

- Three current meters
- Water level at Torshamnen
- Salinity and temperature from BVVF
- Wind at Vinga



Forecasts

- The model is run twice a day at DHI:s operational forecast center in DK
- Up to 3 days



GMFS - in short

Parameters:

- Currents (direction and strength) depth averaged
- Wind (10-min and gust)
- Water level
- Density

The current is depth averaged over a certain draught. Predefined intervals are: 0-9, 0-13, 0-16, 0-19 m.

02.

GMFS - live

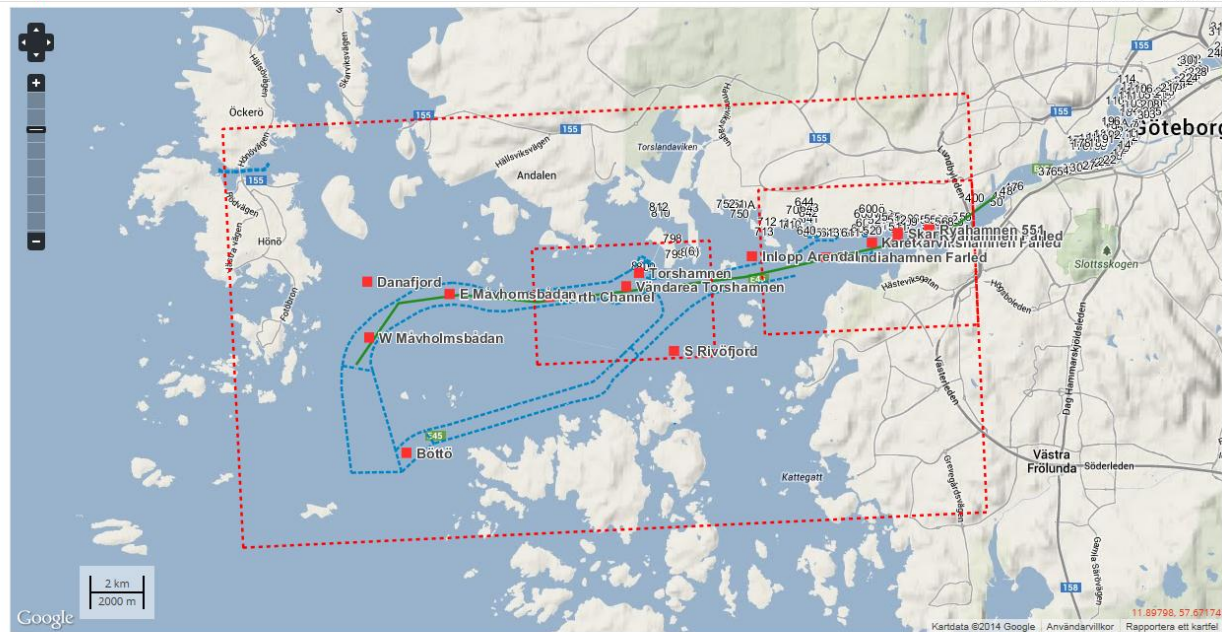


Live...

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Water Forecast by **DHI**

gothenburg.waterforecast.com/public



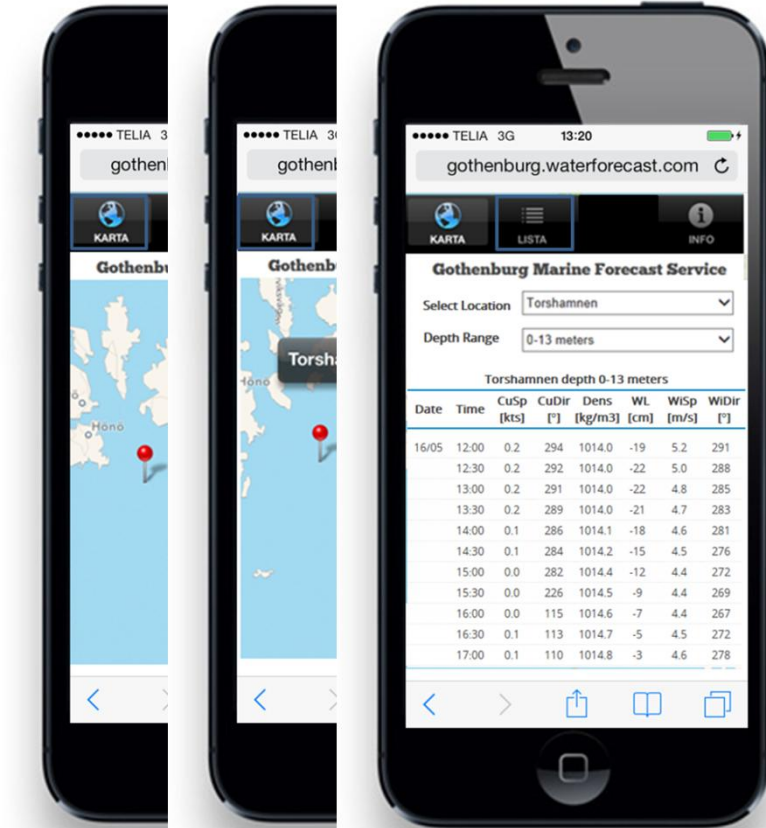
Utvecklingsmöjligheter

Mobilanpassad hemsida

- Prognos för varje halvtimma och 6 timmar framåt i tiden
- Kartvy och listvy

Fler djupintervall

- T.ex. ytan, 0-6 m osv.



Tack!

anna.karlsson@dhi.se

