NordKyst-800m
The Norwegian Coastal Model

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What

- NorKyst-800m is a model setup under development with 800 m resolution covering the entire Norwegian coast

- Flexible setup: run the whole or subdomains

- Present partners: IMR, met.no, NIVA

- Open access: Model grid and forcing available to everybody, pilot setup for the Regional Ocean Modeling System (ROMS). Other partners and other models are welcome.

Why

- Increasing interest in coast and fjord areas

– aquaculture, transport, tourism, ...

- Need knowledge for coastal management

- Operational use

– Shipping accidents, oil spills, harmful algae blooms

- Additional products

– Transport models: pollution, salmon lice, eggs and larvae of coastal cod

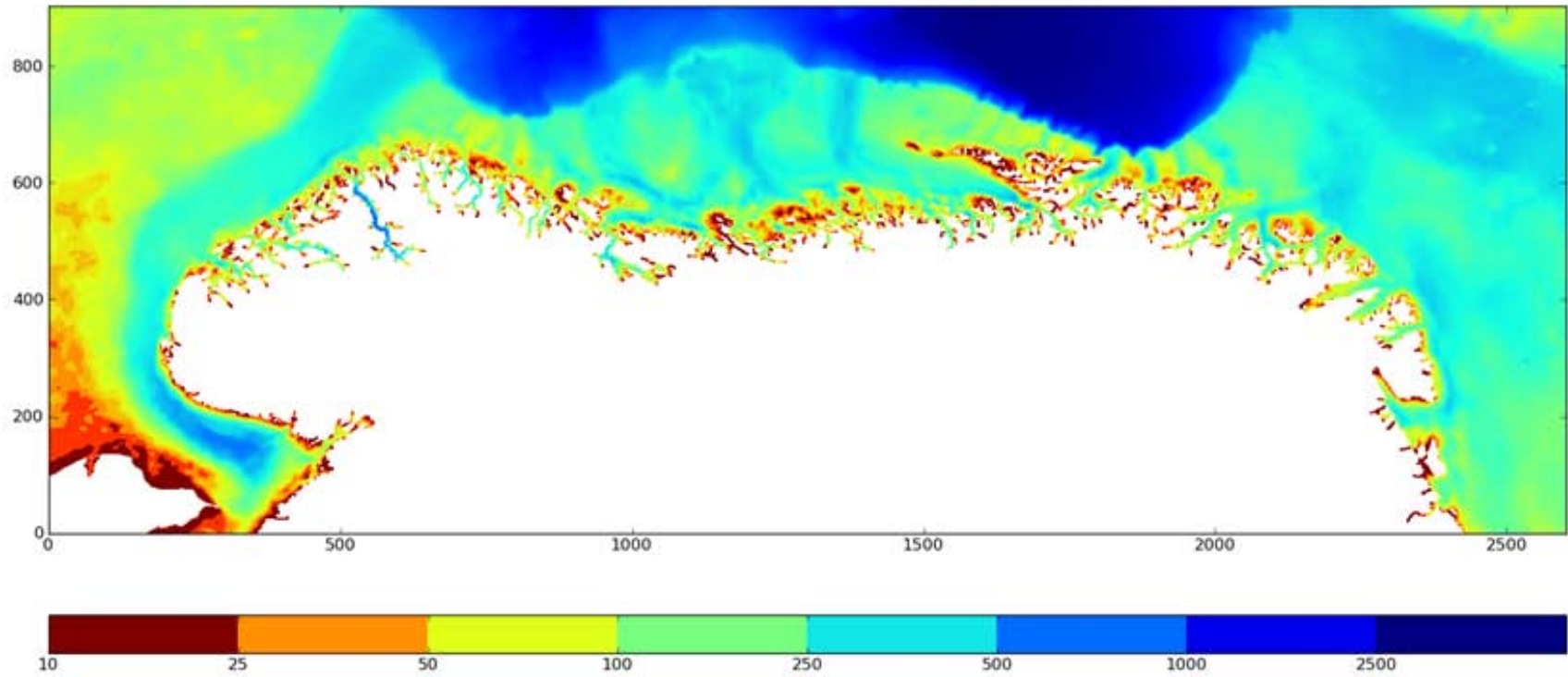- Provide input to higher resolution fjord models

How

- Cross-institutional collaboration
  - Presently IMR, met.no, NIVA

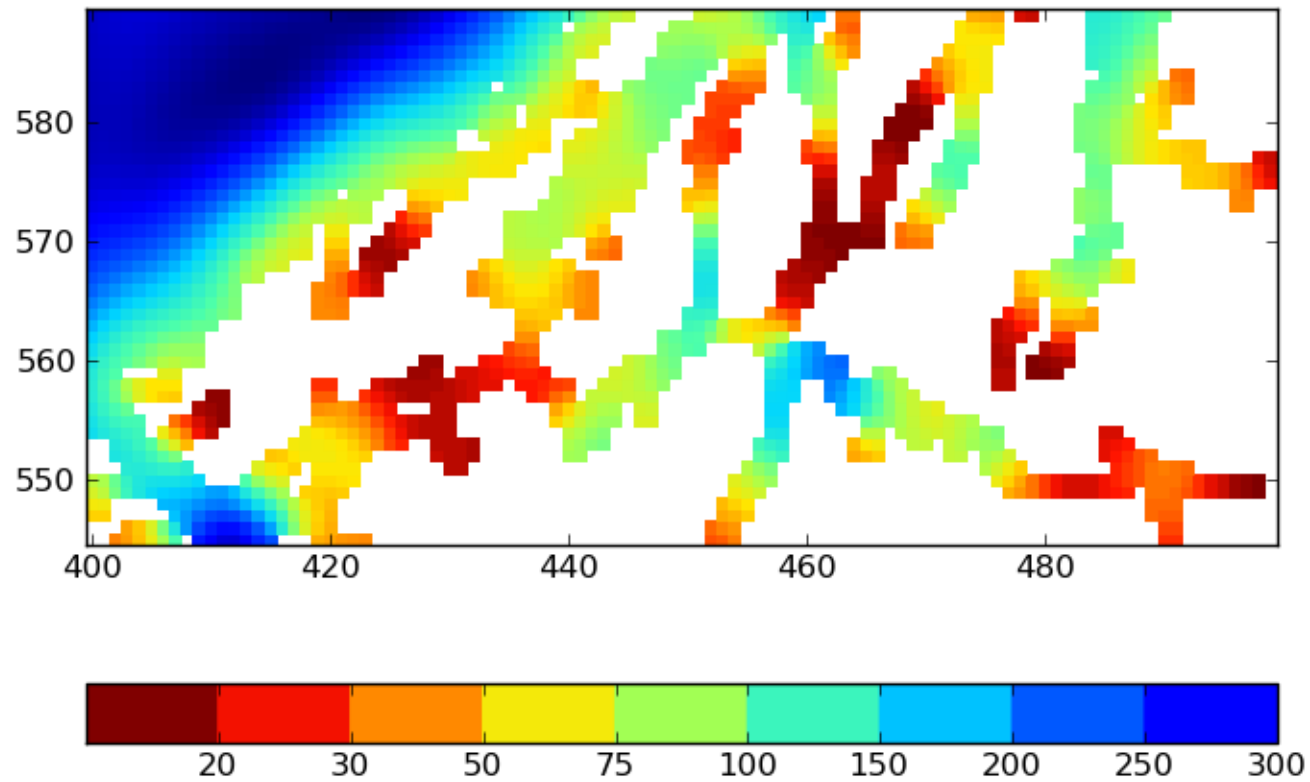- Initiative and project leader:
  - Lars Asplin, IMR

What

- Topography, land mask – Jon Albretsen, IMR

 –Cartesian grid in polar stereographic plane

 –2602 x 902 grid cells

 –Resolution approx. 800 m

 –Topography from GEBCO-08

 –Land contours from Norge digitalt

Bottom matrix
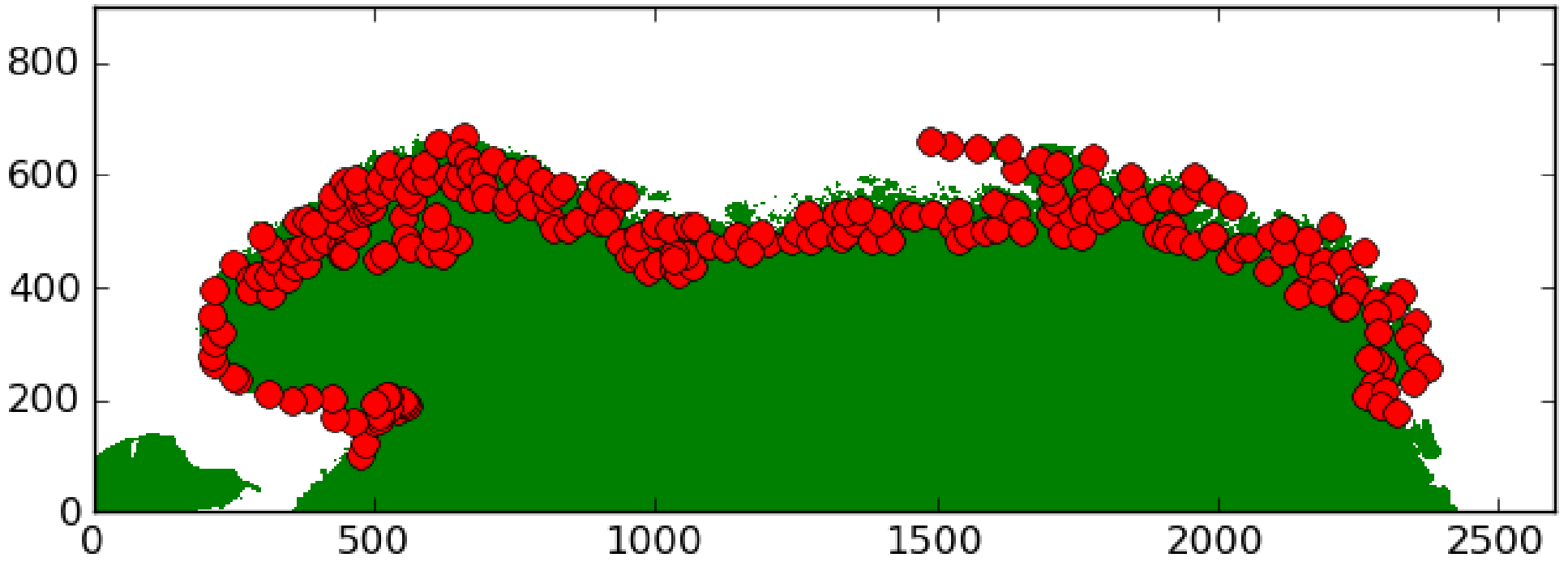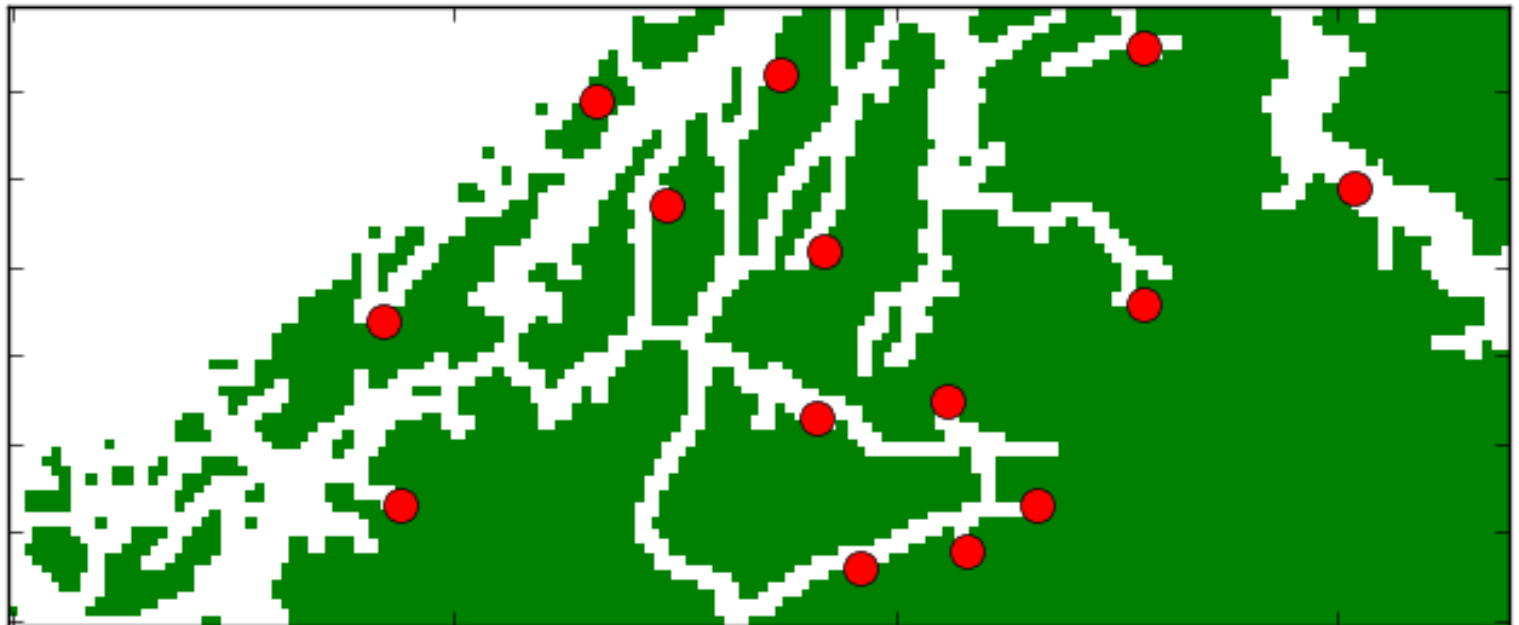
Bottom matrix around Askøy

What

- Topography, land mask – Jon Albretsen, IMR

- Tidal forcing – Ann Kristin Sperrevik, met.no

– 8 constituents

- K2 S2 M2 N2 K1 P1 O1 Q1

– Data from TPXO, Oregon State University

What

- Topography, land mask – Jon Albretsen, IMR
- Tidal forcing – Ann Kristin Sperrevik, met.no
- **River forcing – André Stålstrøm, NIVA**
- 247 rivers
- Data from NVE

River positions

Version zero

- Interpolation from met.no operational 4 km to 800 m grid, no separate model run

- Early start for developing diagnostics, validation tools and other products around the model

- No extra cost: interpolation needed anyway to provide initial and boundary conditions

Version one

- Atmospheric, river and ocean boundary forcing available

- Setup for Regional Ocean Model System (ROMS)

- Test runs

Further work

- Operational use at met.no

- Distribution of operational results and forcing to partners

- Flexible ROMS setups at IMR, NIVA

- Validation

- Distribution of results and added products to users