



Meteorologisk
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Coastal ocean modeling at MET Norway

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Division for Ocean and Ice
Dept. of Research and Development
Norwegian Meteorological Institute

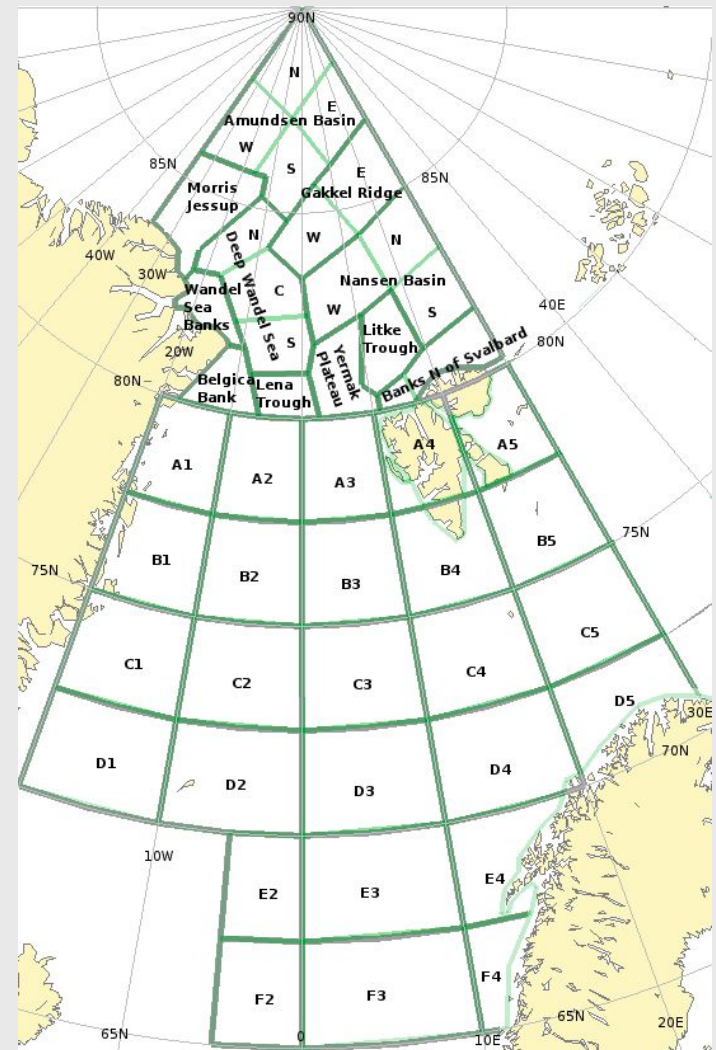
Oslo, October 31, 2018

The Division for Ocean and Ice

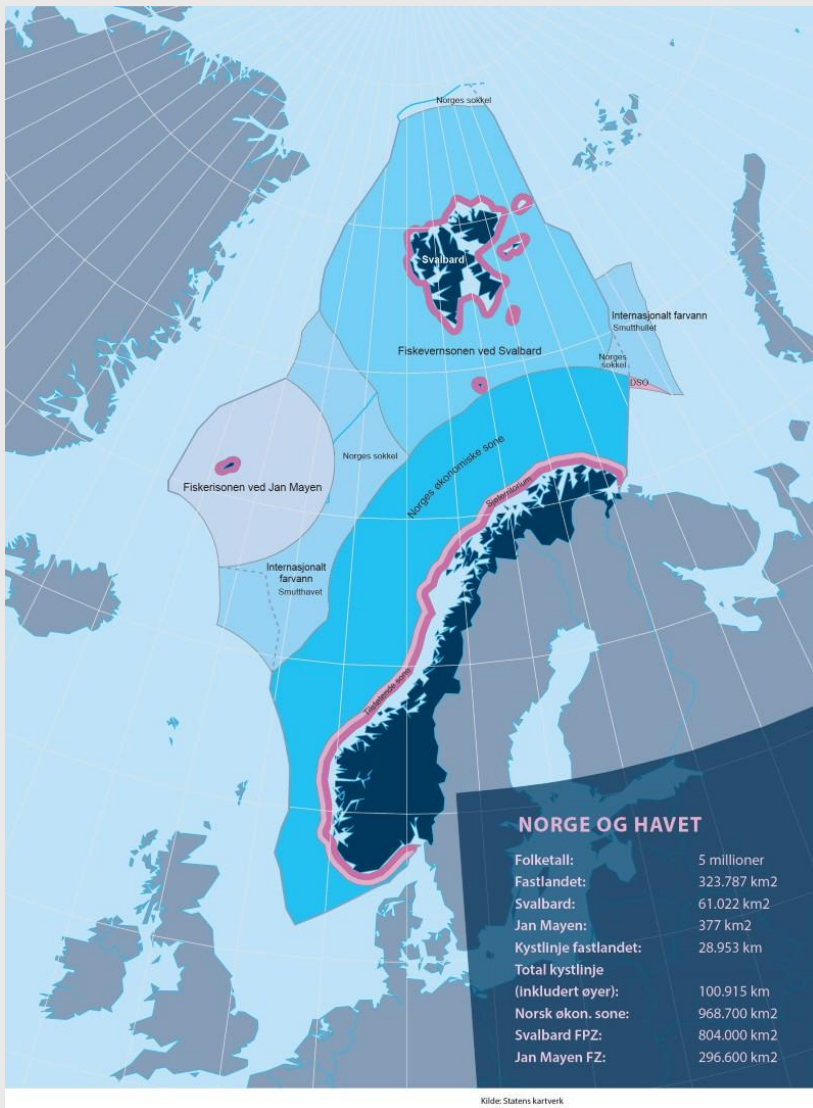
- We provide forecasts for
 - ocean currents,
 - surface waves,
 - storm surge,
 - sea ice,
 - hydrography (salinity, temperature).
- Our mission is to safeguard life and property:
 - search-and-rescue,
 - oil spills and ship drift,
 - navigation and offshore operations.
- We are part of the Copernicus Arctic Marine Forecasting Centre (ARC-MFC) lead by NERSC.
- High resolution modeling systems are *nested* into the Copernicus model to serve our needs in the coastal zone.



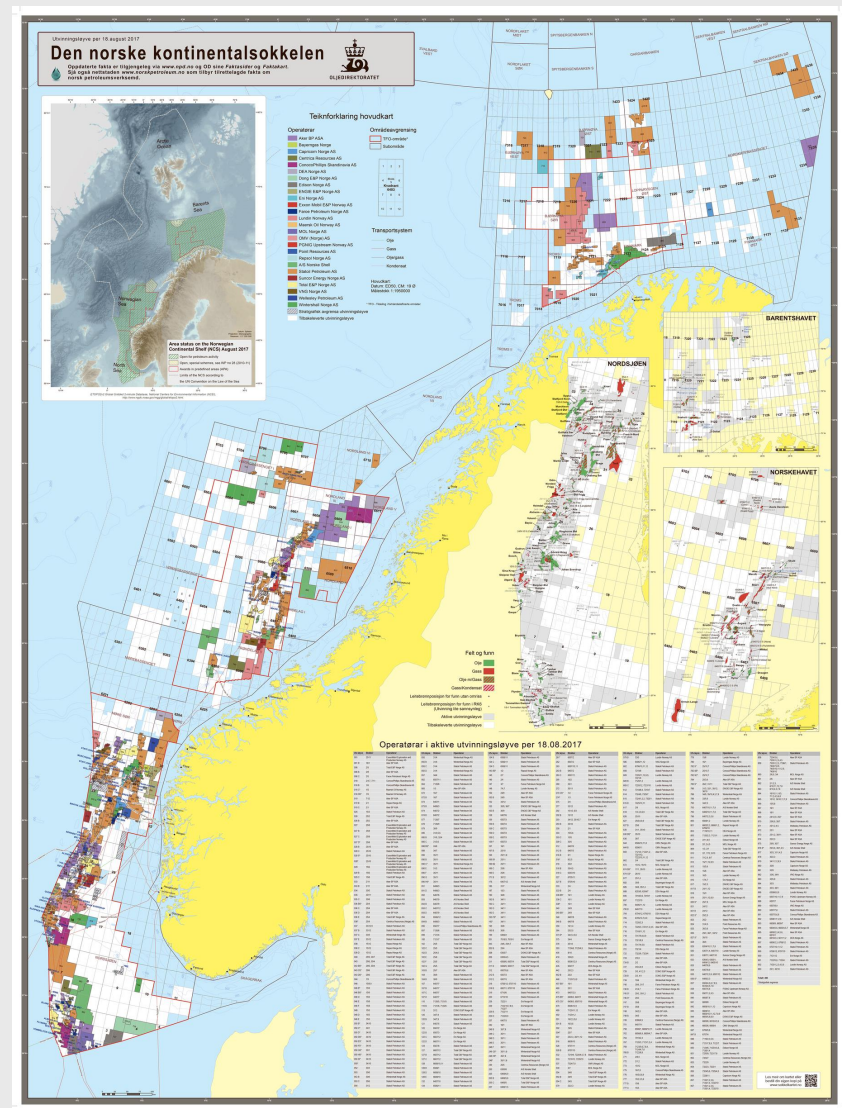
Search-and-rescue (Arctic Council)



MET Area XIX (WMO)



Norway's maritime borders





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Regjeringen skrur på trafikklyset

Pressemelding | Dato: 30.10.2017

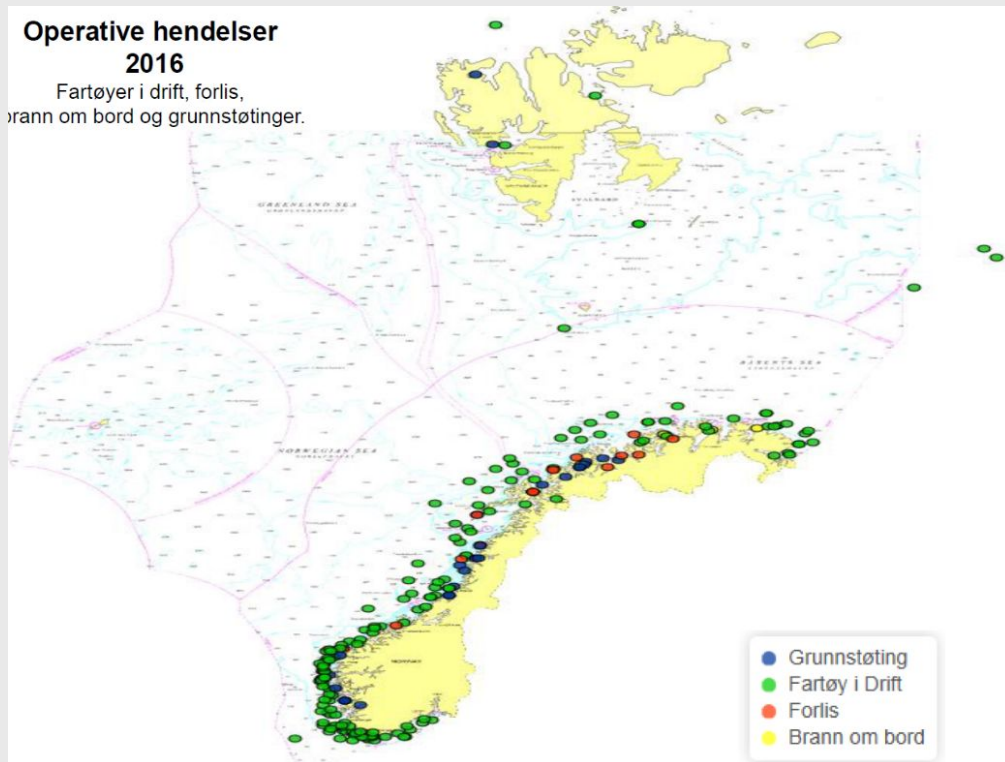
Regjeringen har besluttet hvilke farger de 13 ulike produksjonsområdene for oppdrett av laks, ørret og regnbueørret får i 2017. Beslutningen kan potensielt gi en vekst på om lag 24 000 tonn.



Traffic lights for the salmon farming industry

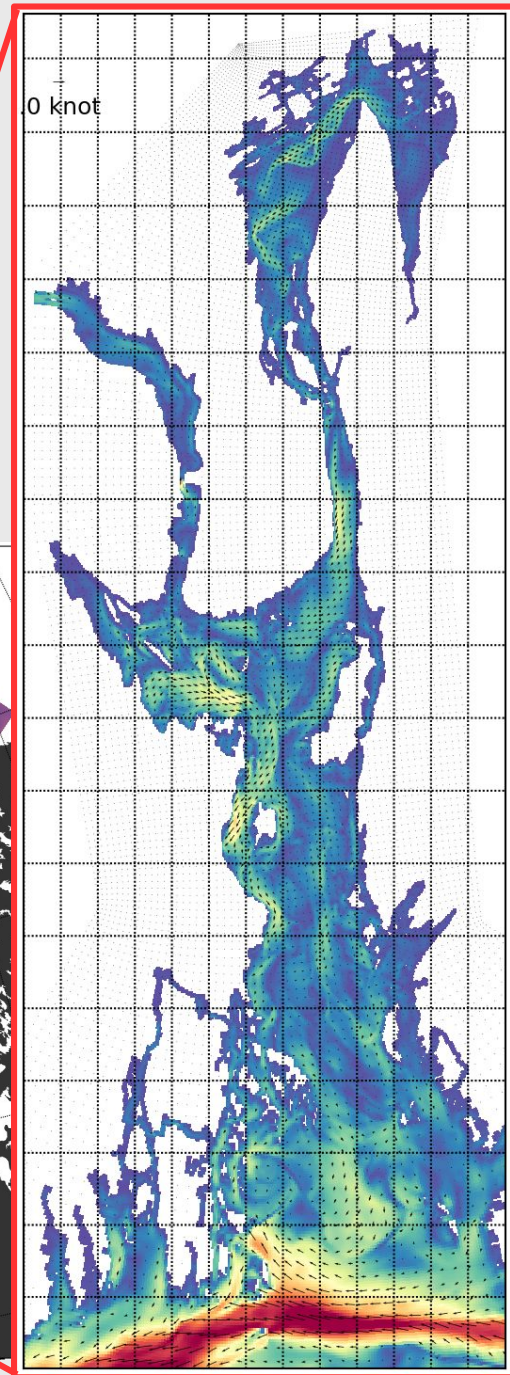
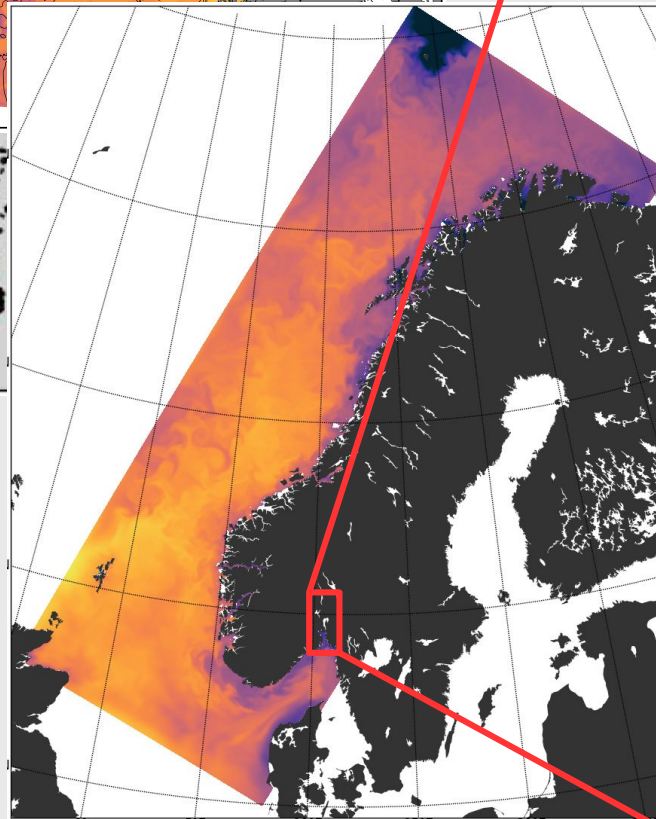
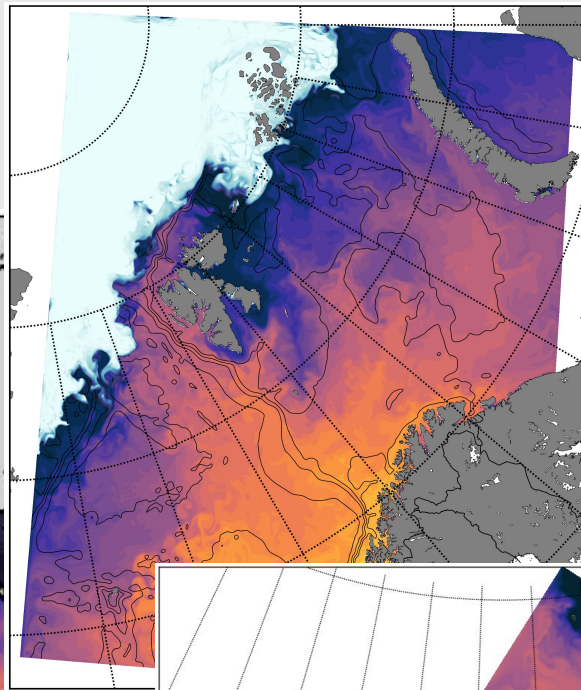
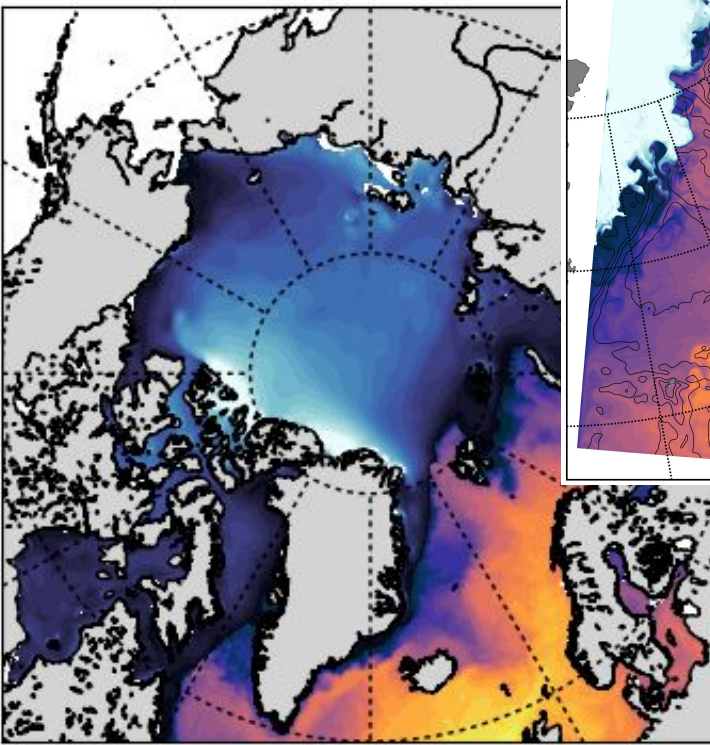
Operative hendelser 2016

Fartøyer i drift, forlis,
brann om bord og grunnstøtinger.



Joint Rescue Coordination Centres: incidents at sea in 2016

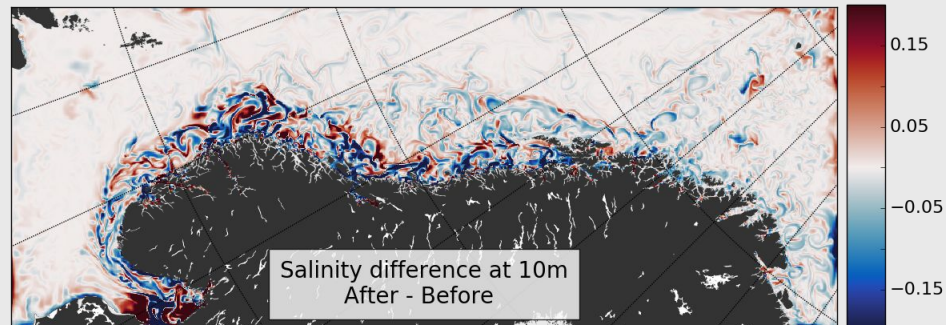
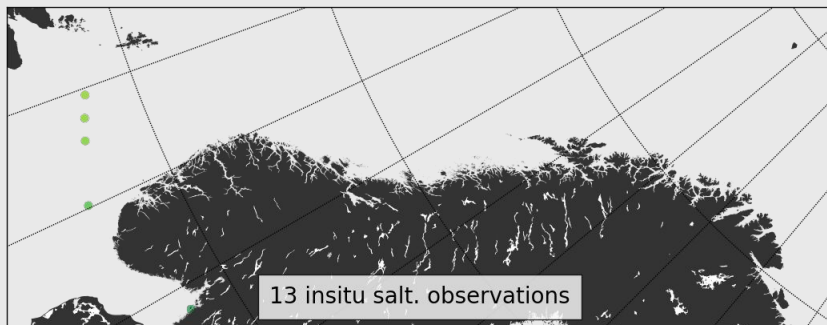
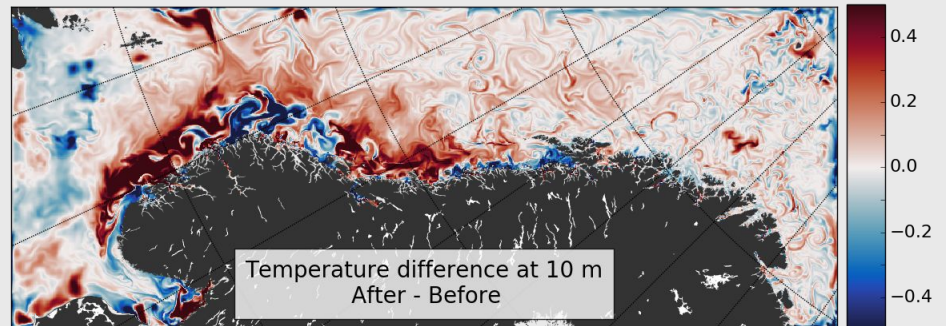
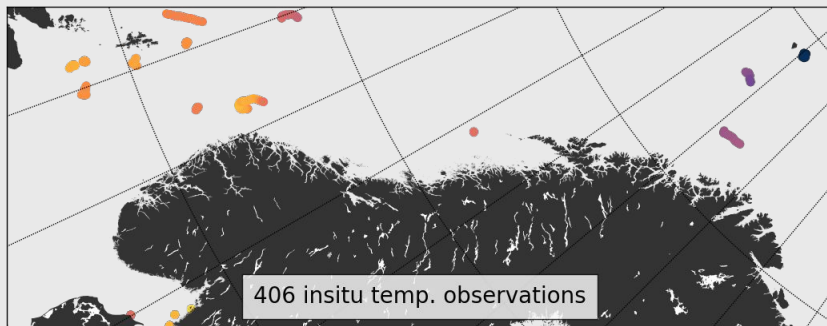
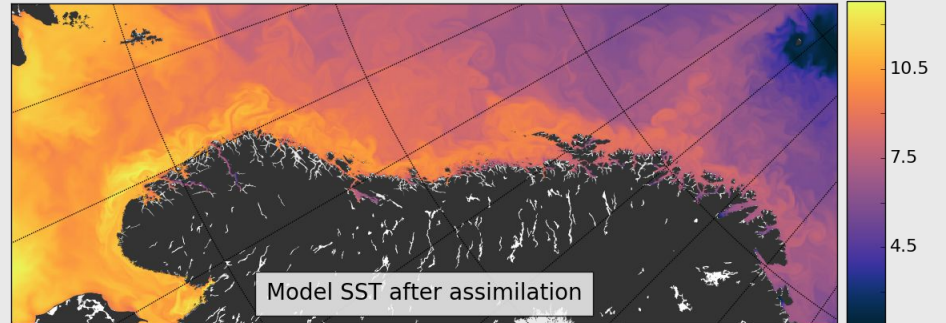
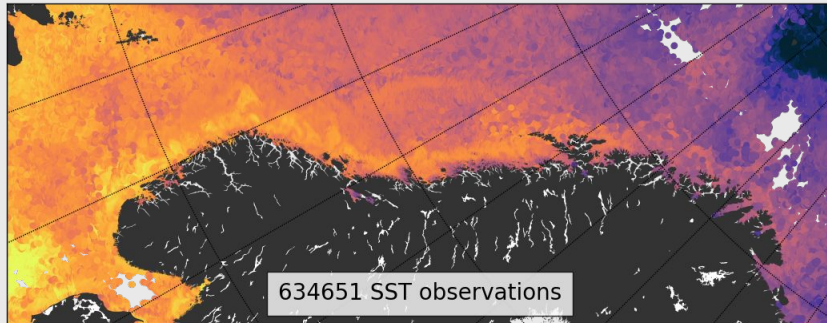
Ocean models

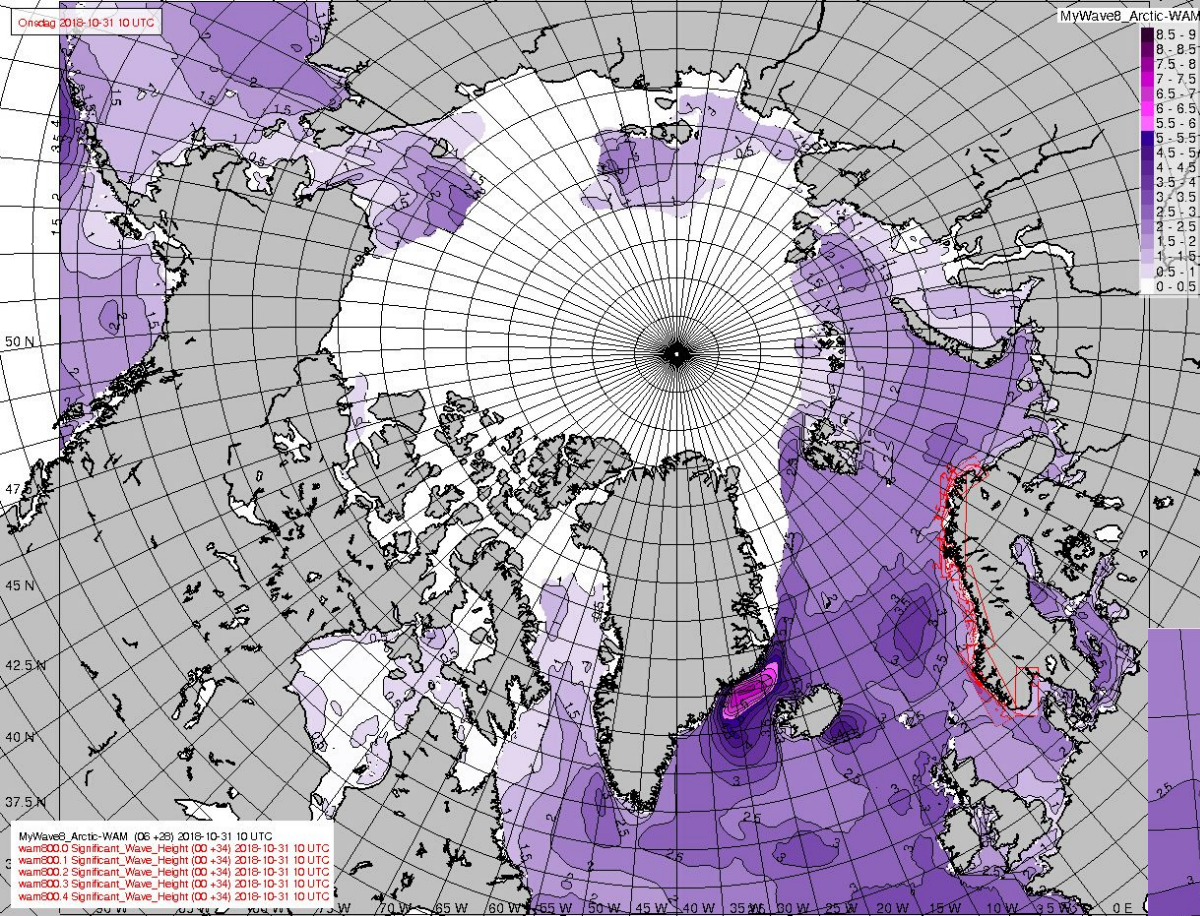


- 1) ARC MFC (Copernicus)
- 2) NorKyst-800m
- 3) Barents-2.5km
- 4) Fjord models

Coastal Data Assimilation

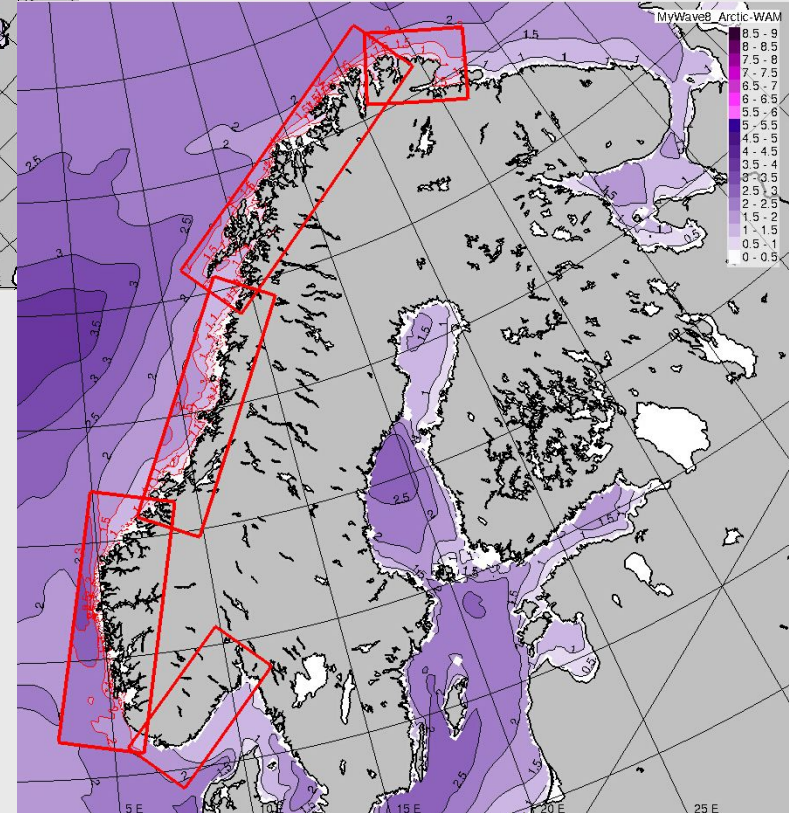
NorShelf Data Assimilation System 2018-10-30





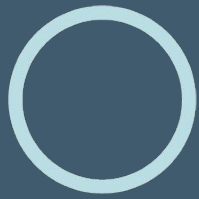
Wave models

- 1) ARC MFC (Copernicus) 8km
- 2) M-Wam-4km
- 3) M-Wam-800m coastal models



Summary

- MET Norway produces ocean forecasts relevant to stakeholders in the coastal zone.
- Our models utilize Copernicus modeling systems for *nesting*, and also ingest Copernicus observations using advanced data assimilation techniques.
- We focus on the physical aspects of the ocean, but collaborate closely with other institutions in Norway and abroad on a wide range of topics (biogeochemistry, plankton transport, marine litter etc).



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