



ECOOP Data Management System for oceanographic in situ data

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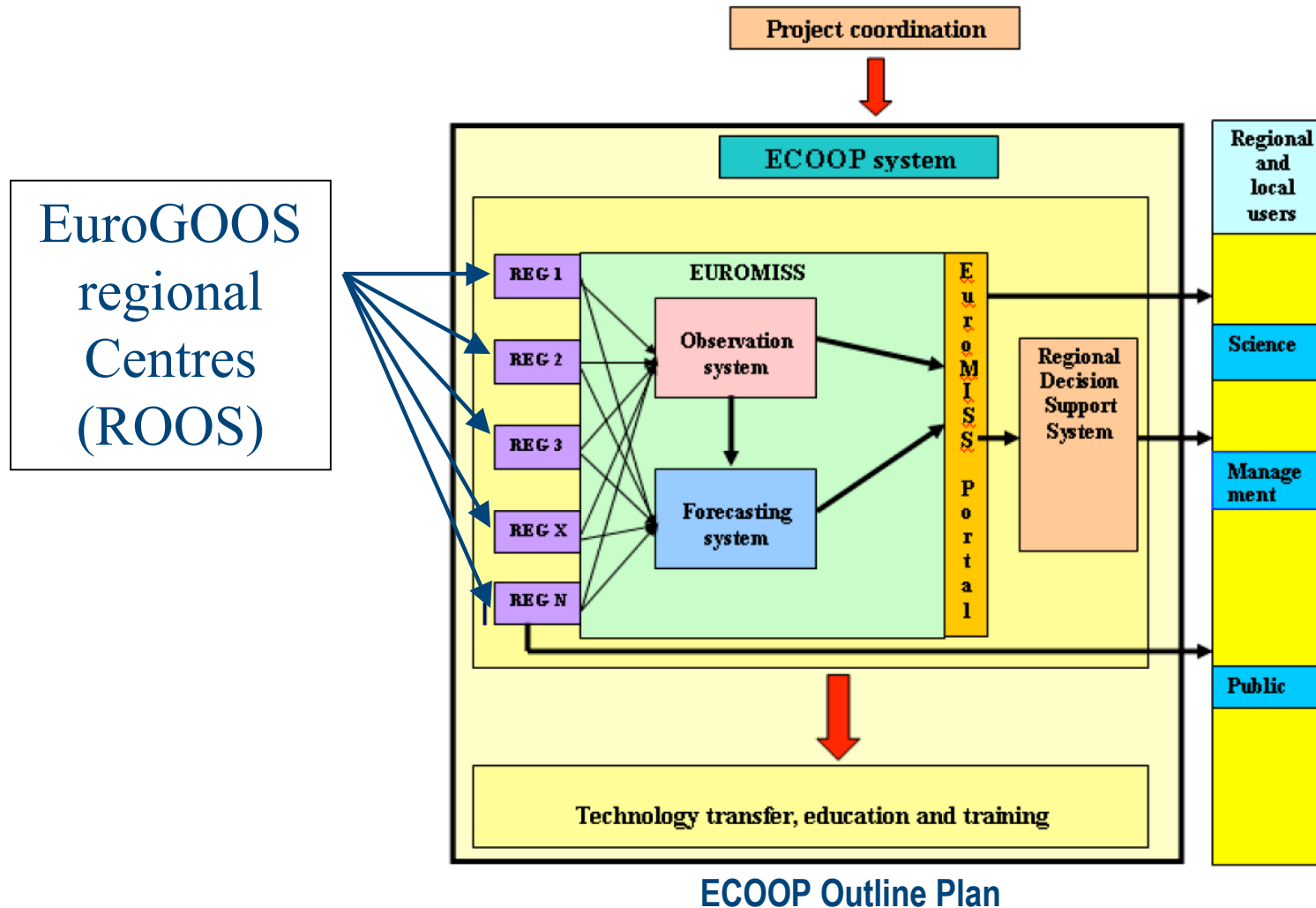
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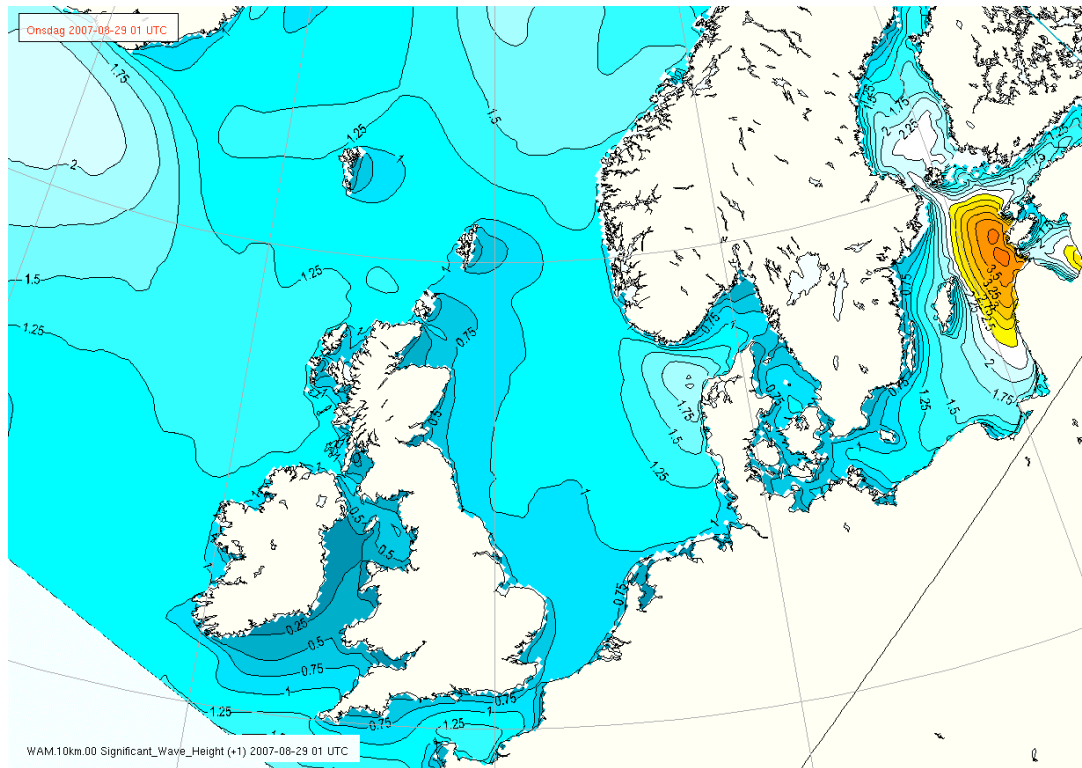
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ECOOP: European COastal-shelf sea OPerational observing and forecasting system

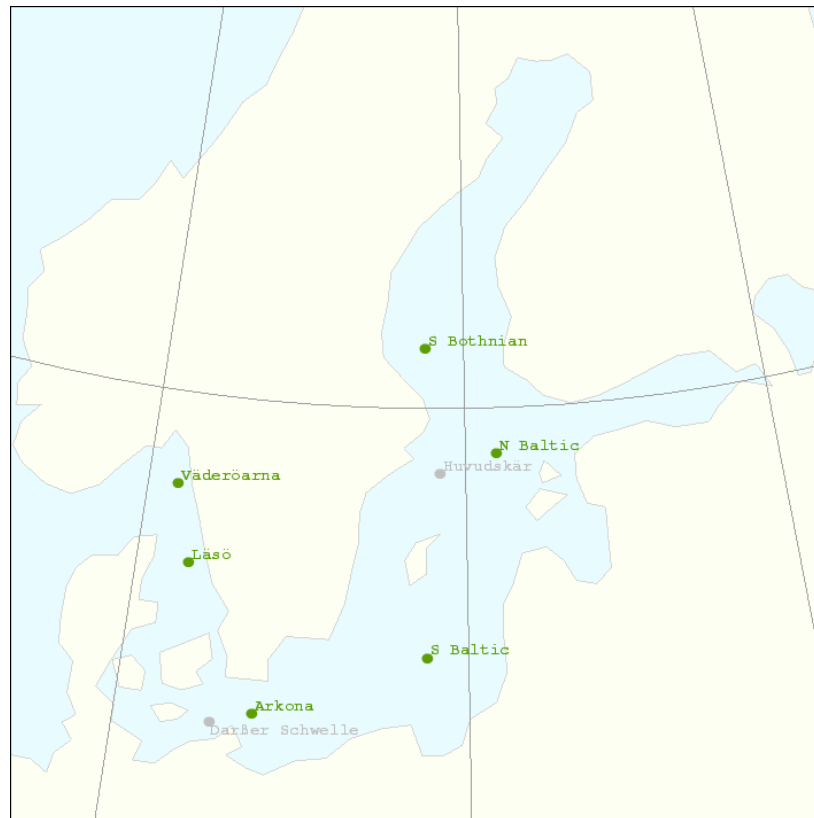


MFC (Model & Forecasting Centres)



Forecasting model - e.g. product: wave height model

TAC (Thematic Assembly Centres)

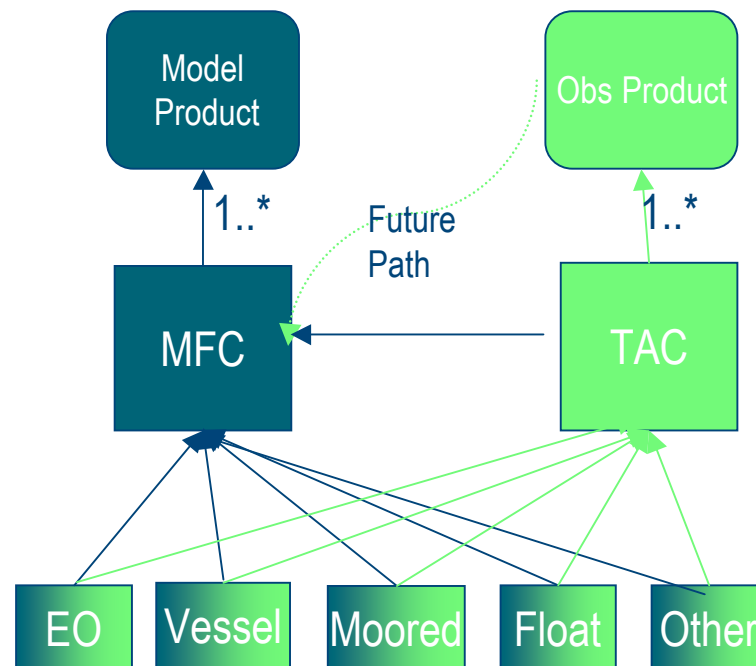
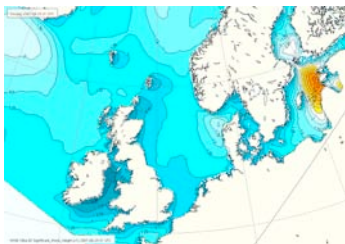


Observation data - e.g. product: SST

MFC (Model & Forecasting Centres) TAC (Thematic Assembly Centres)

More standardised:

regular gridded
datasets in
CF netCDF



Less standardised:

e.g. various netCDF,
ASCII dataset formats

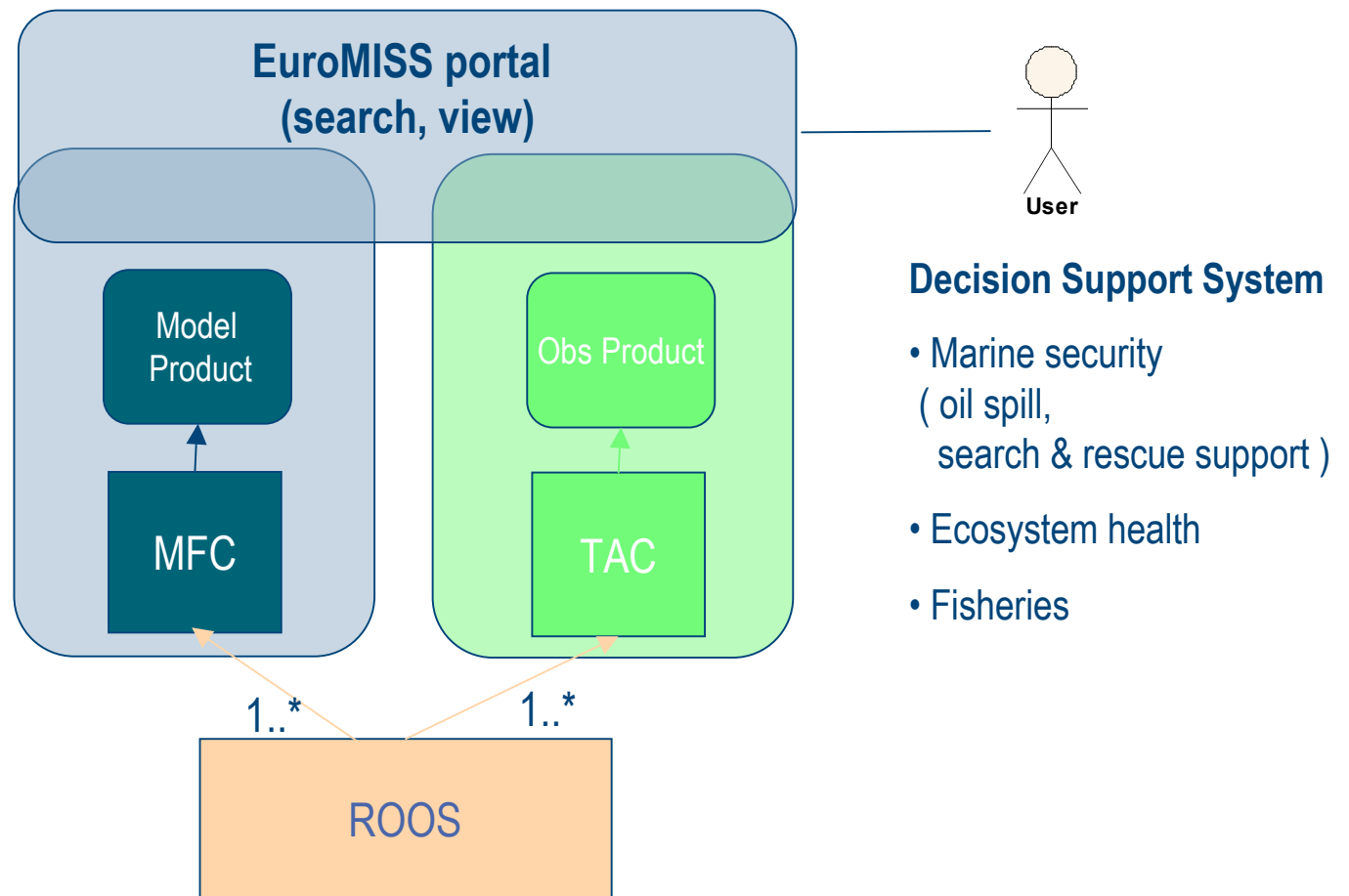


Observation networks


- Various sampling regime (fixed instrument, vessel, aircraft)
- Various sampling features (point, profile, trajectory, grid)

Results in variety of dataset models

MFC and TAC Deployment

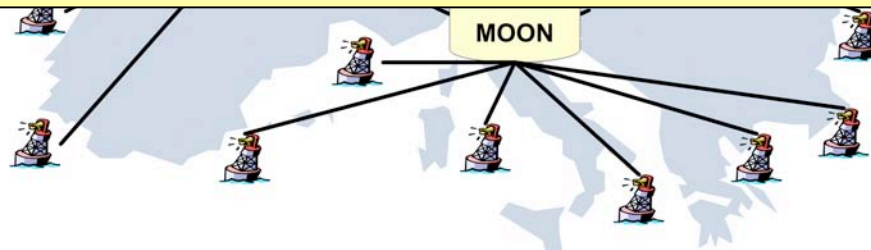


ECOOP Data Management System for Observation Data

 In-situ observation platforms
operated by national/multi-
national agencies, etc.

in situ
parameters...

Goal:
Harmonisation



ECOOP Data Management System

In situ data harmonisation: consensus

- Look at other initiatives (in no particular order):
 - INSPIRE (*Infrastructure for Spatial Information in Europe*)
 - MERSEA/MyOcean (EU project)
 - SeaDataNet (EU project)
 - DISMAR/InterRisk (EU project)
 - SEPRISE (EU project)
 - EuroGOOS DATA-MEQ (EuroGOOS Working Group)
 - (data management, exchange & quality)
 - etc.
- Look at two communities:
 - Oceanographic community
 - GIS community
- Still work to do as technology is still evolving towards harmonisation

ECOOP DMS Architecture Framework

INSPIRE service terminology

1. Data discovery services
2. Data download services
3. Data view services

(INSPIRE: Infrastructure for Spatial Information in Europe)

Download Services

- FTP
 - Need a common data transport format
- OPeNDAP
 - DAPPER (OPeNDAP for in situ data)
- WFS (Web Feature Service)
 - GeoServer
 - Need a common GML Application Schema: CSML (part of MarineXML)

Data Format Harmonisation for FTP

- In situ data types:
 - point time series
 - profiles
 - trajectories
- Unidata – Common Data Model
 - Ongoing harmonisation work with netCDF, HDF, etc.

Data Format Harmonisation for FTP

- ECOOP DMS selected in-situ formats currently available:

Modified ODV spreadsheet

- ASCII format (SeaDataNet project)
2. OceanSites v1.1
 - netCDF format (OceanSites project)

Discovery Services

- Currently under examination

Modified ODV spreadsheet

- Separate metadata: CDI (Common Data Index)

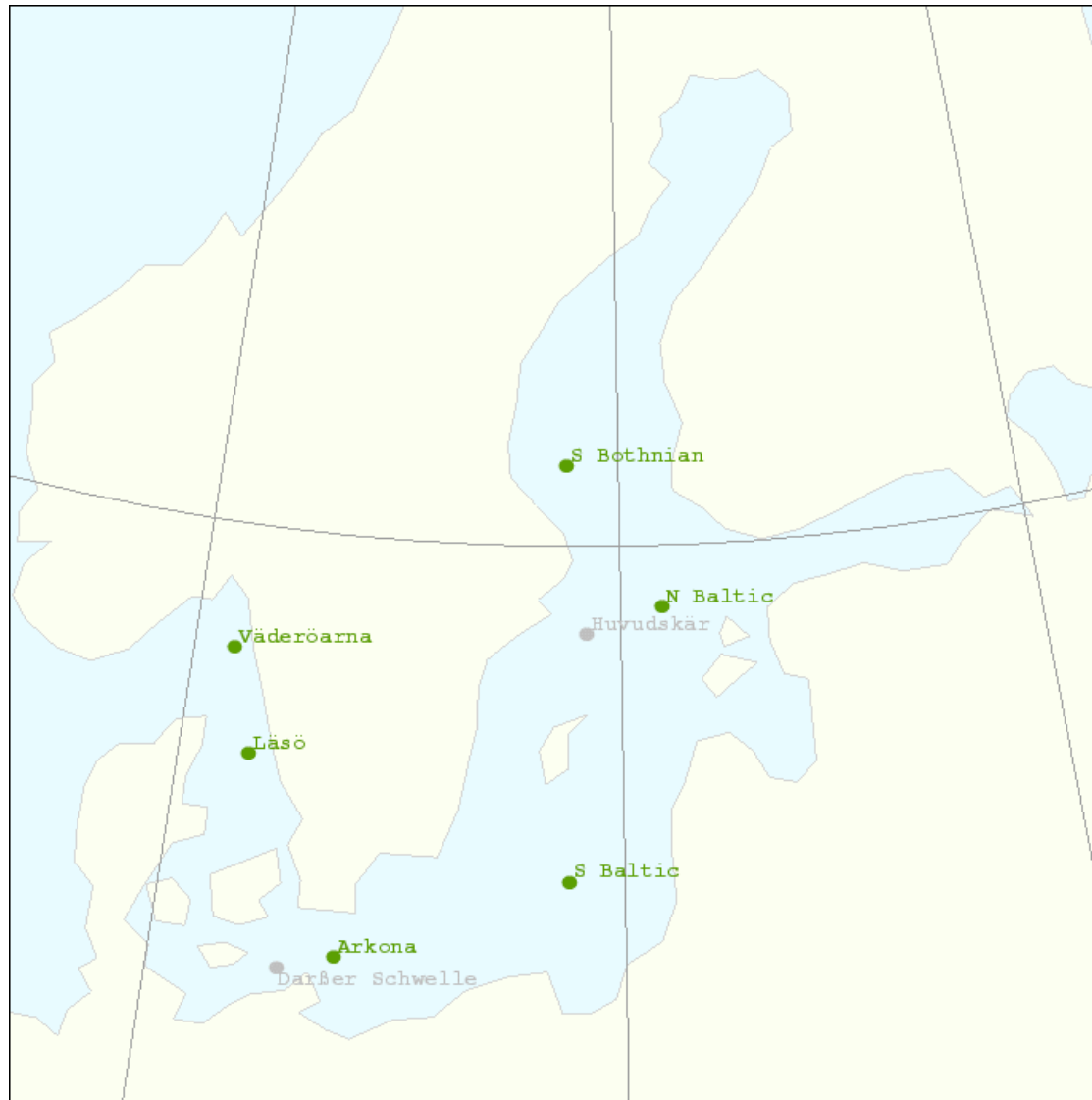
OceanSites v1.1

- Embedded metadata: within netCDF file

View services

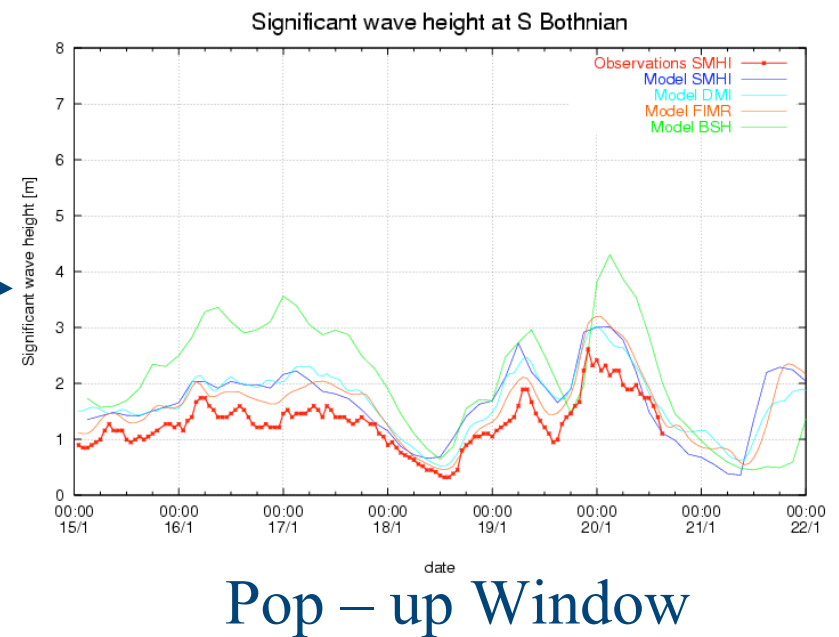
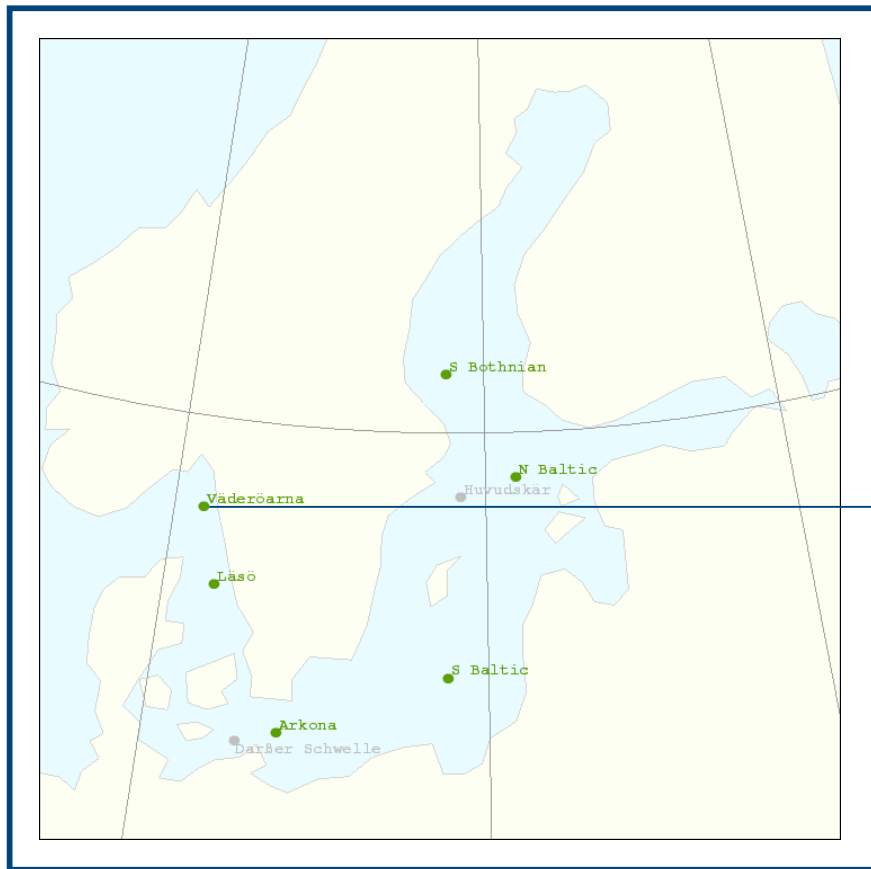
- Use OGC web mapping technology
 - Web Map Service (WMS)

Example map: in situ stations



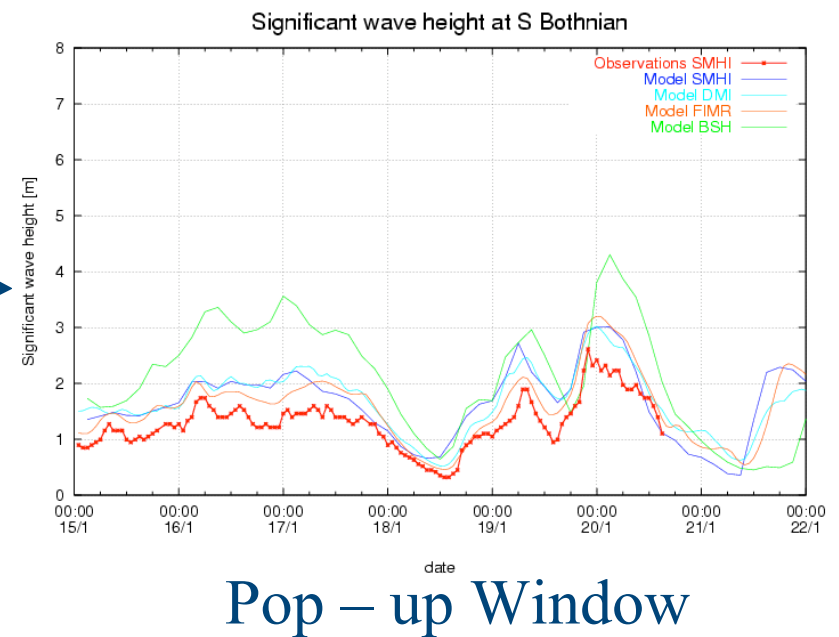
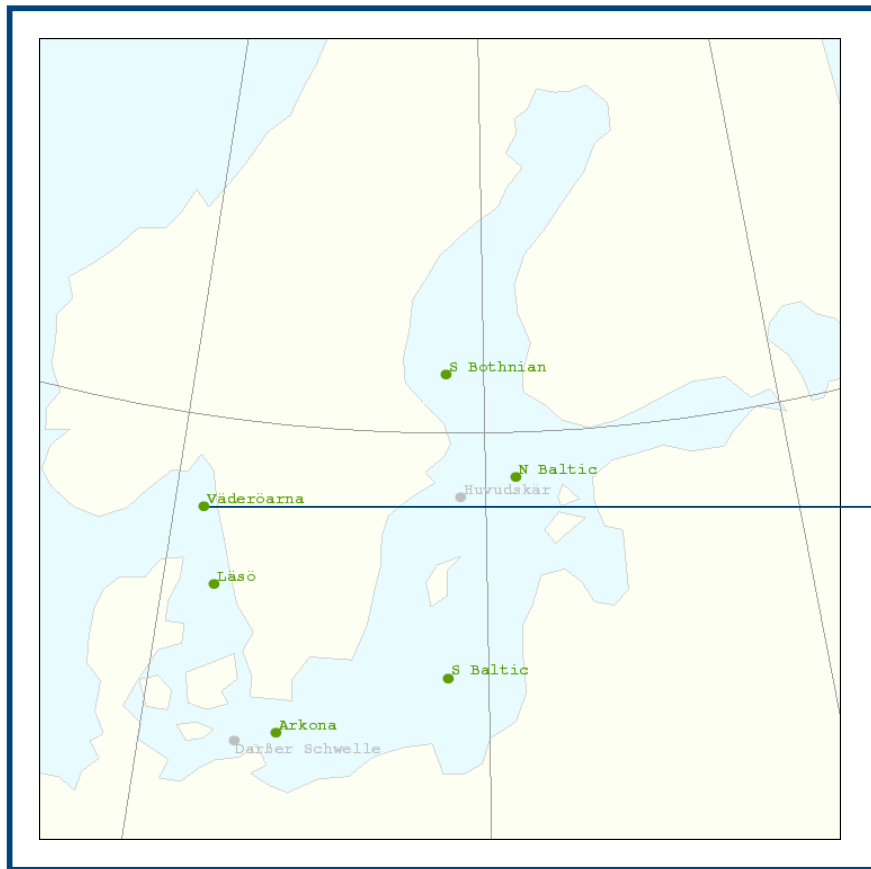
- WMS maps – relatively easy

Example map: in situ stations



More challenging:
Making Pop-up window OGC WMS compliant

Example map: in situ stations



Do coastal atlases need or desire
real-time operational oceanographic data?



Thanks for your attention

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