

Status of the Biogeochemical North Sea Climatology

I. Hinrichs,

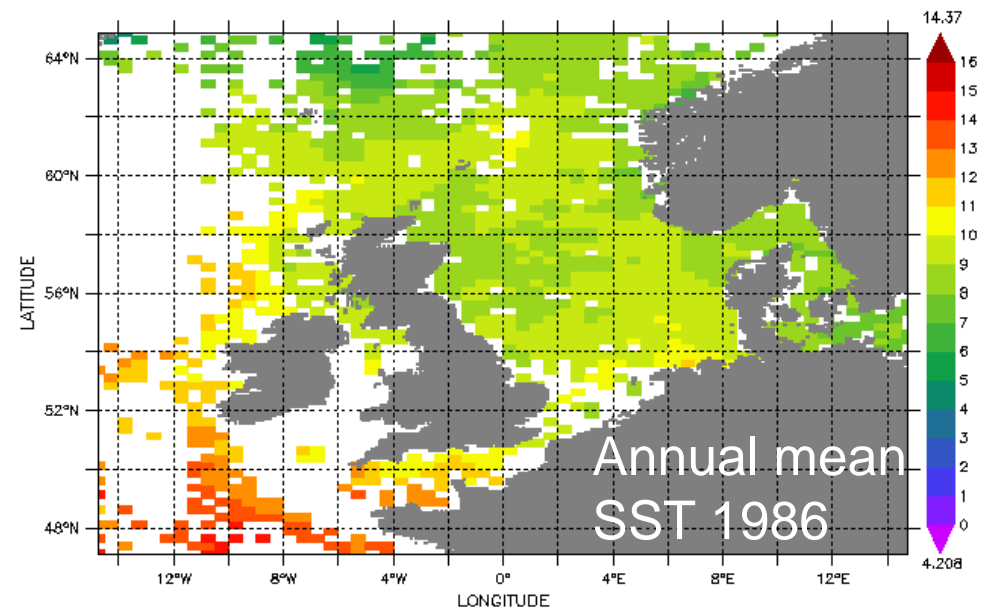
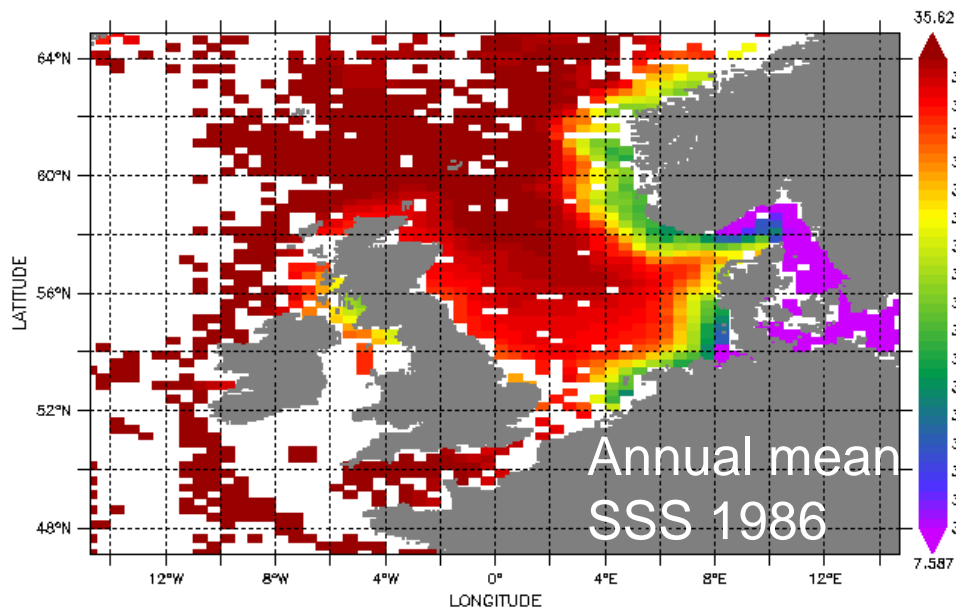
M. Bersch, K. Emeis,
V. Gouretski, J. Pätsch, D. Stammer

December 9th, 2014

Motivation

KLIWAS North Sea Climatology

- based on quality-controlled observational data (1890-2011)
- result: time series of annual and monthly mean fields on 179 depth levels



Bersch, Manfred; Gouretski, Viktor; Sadikni, Remon; Hinrichs, Iris; (2013):
KLIWAS North Sea Climatology of Hydrographic Data (Version 1.1);
World Data Center for Climate (WDCC).
doi:10.1594/WDCC/KNSC_hyd_v1.0

Motivation

Biogeochemical North Sea Climatology

- Completion of the hydrographic climatology
- Analysis of data,
e.g. climate variability, anthropogenic effects
- Reference data set for
ocean biogeochemical modelling in the North Sea region
- Validation of model results

Biogeochemical North Sea Climatology

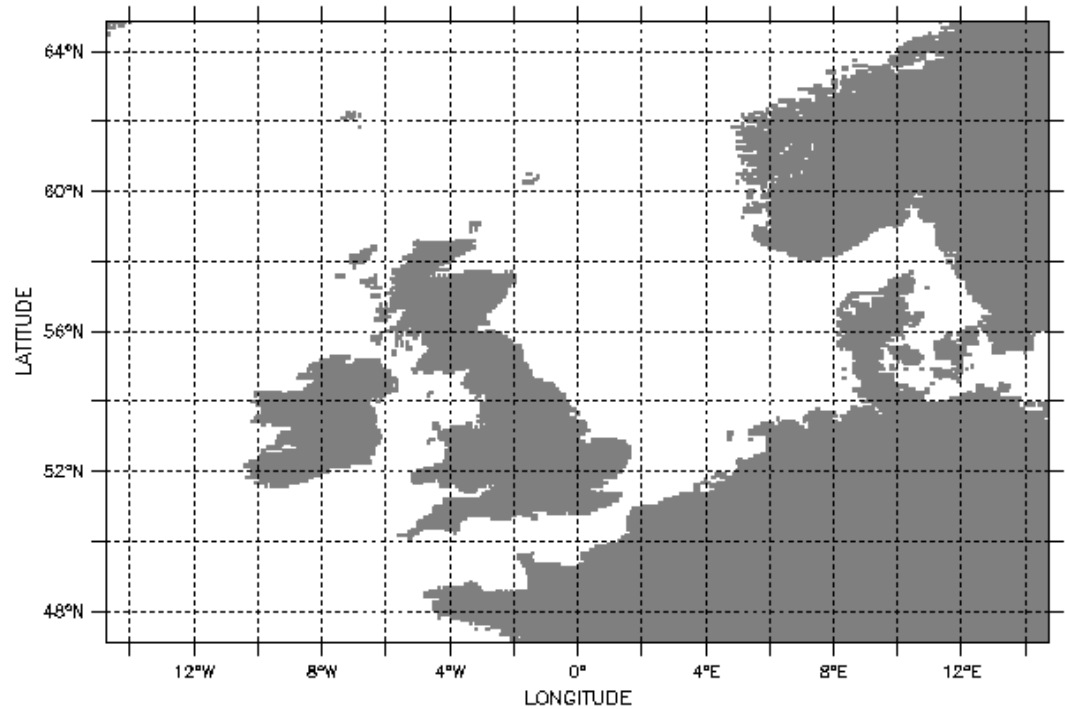
first outline

Parameters:

- Nitrate
- Ammonium
- Phosphate
- Silicate
- Oxygen
- Chlorophyll-a

----- if available -----

- DIC
- TA
- pH
- SPM



Time period: 1960-2014

Spatial dimensions: 3D

Biogeochemical North Sea Climatology

„history“

03/2014

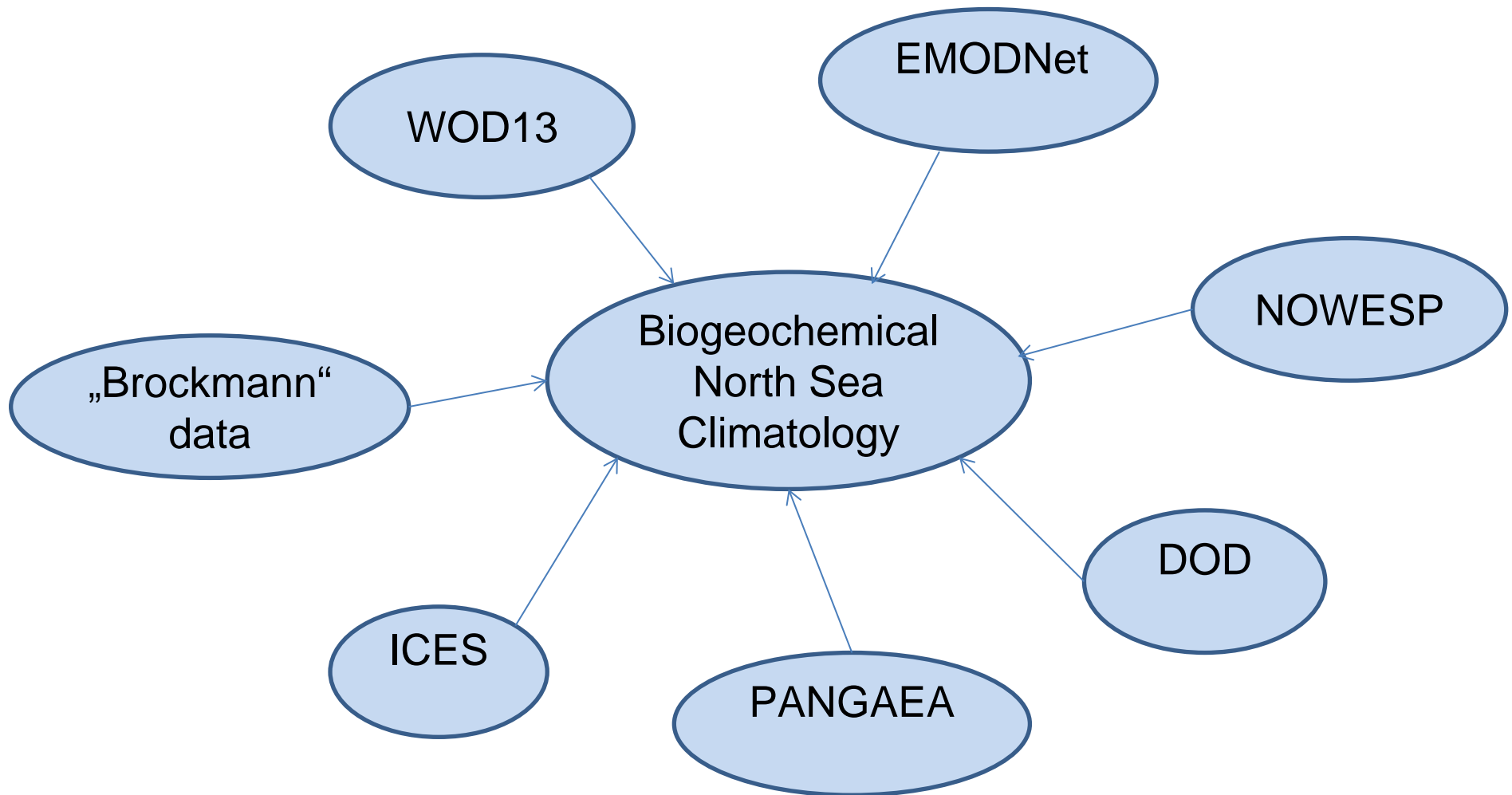
07/2014

data
collection



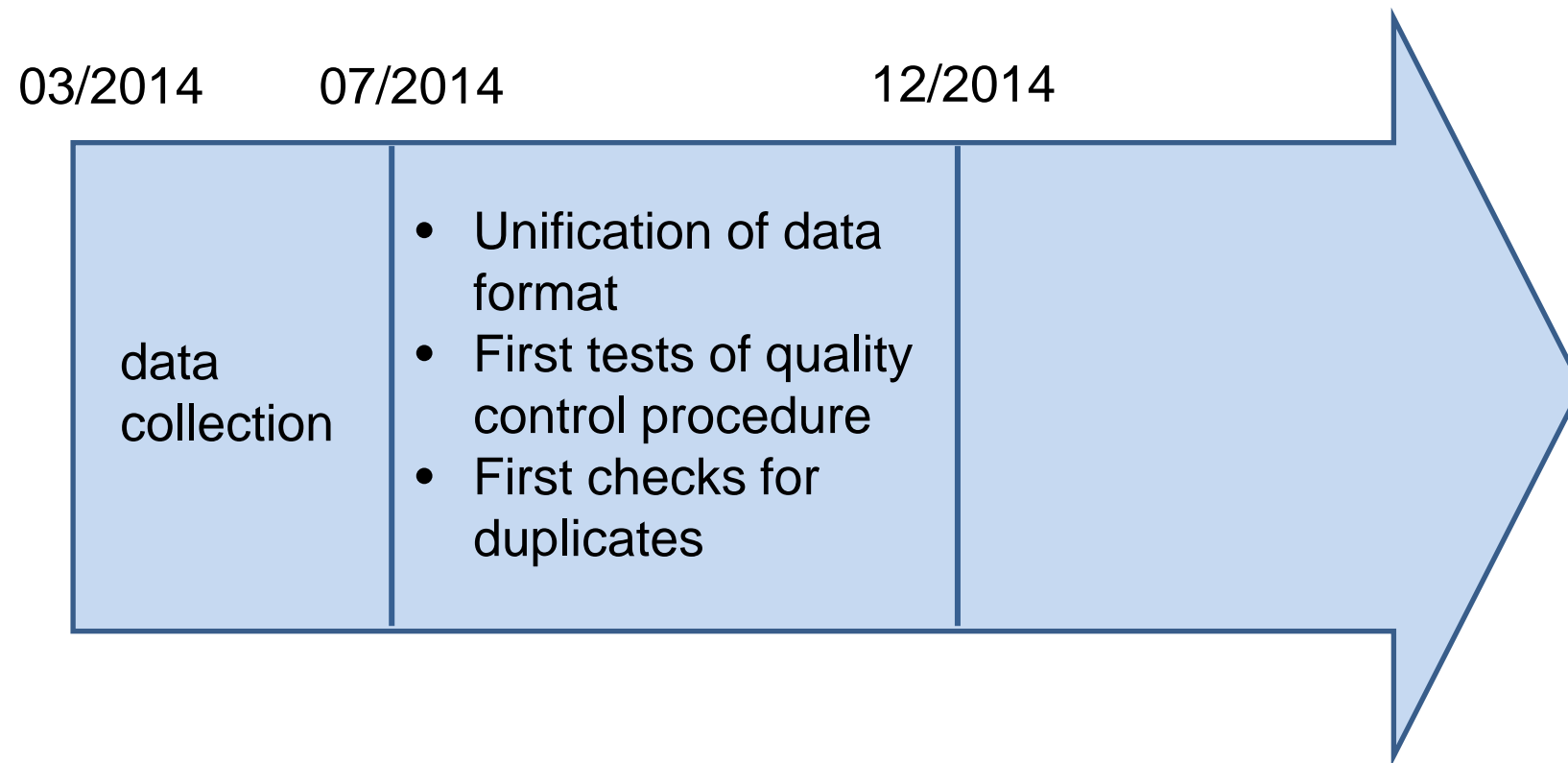
Biogeochemical North Sea Climatology

data collection (observational data)



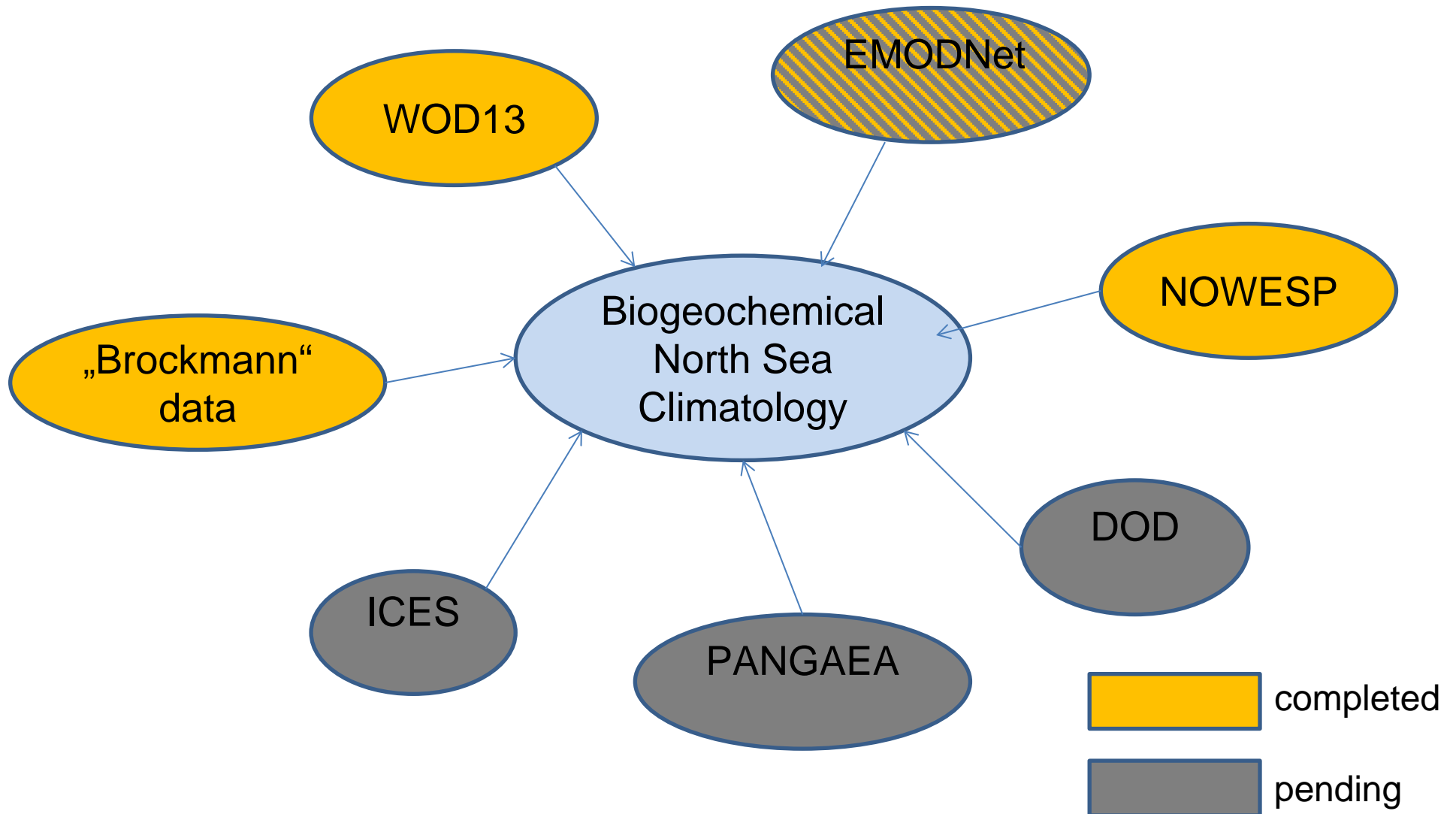
Biogeochemical North Sea Climatology

„history“



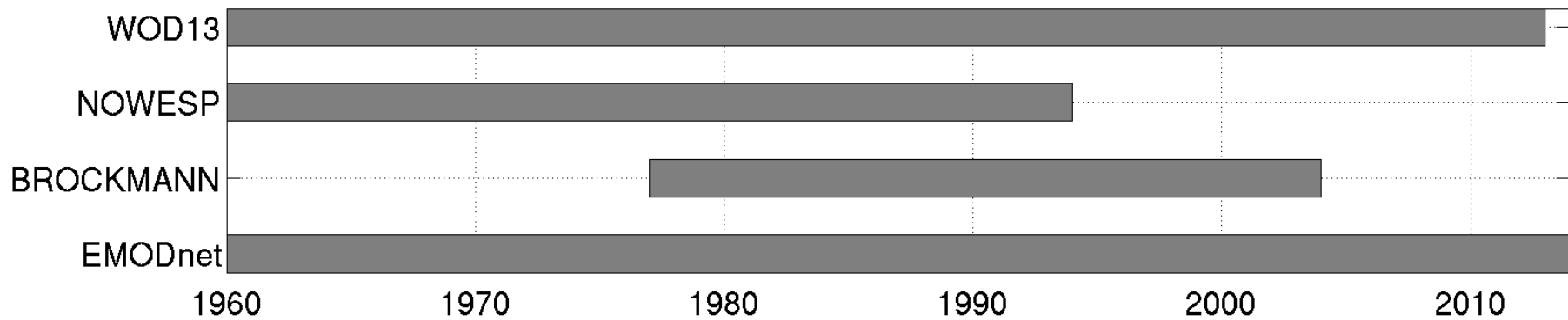
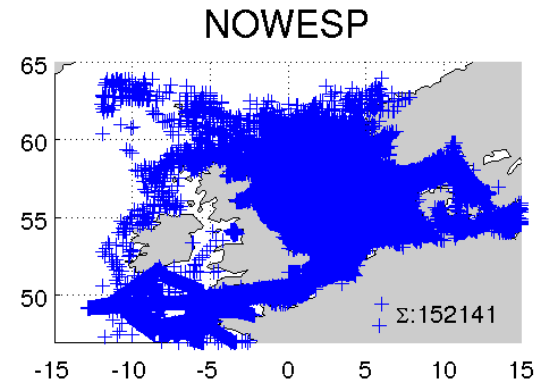
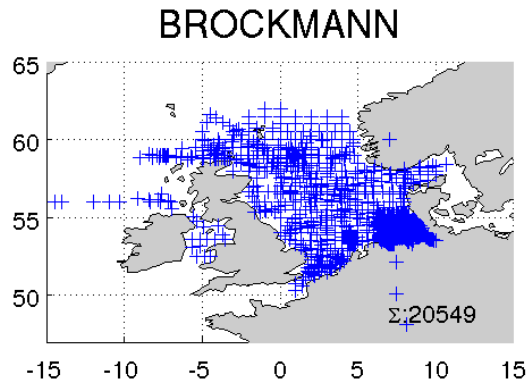
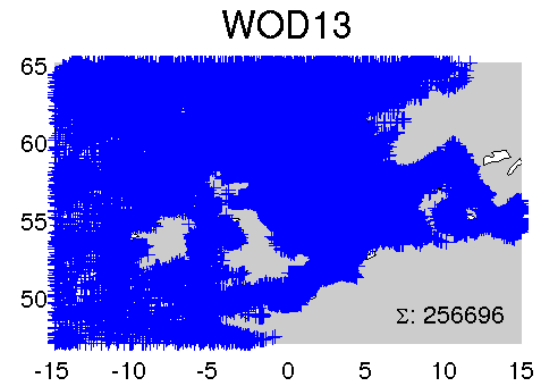
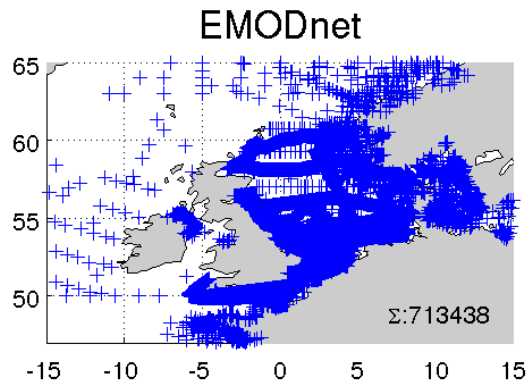
Biogeochemical North Sea Climatology

work in progress: unification of data format



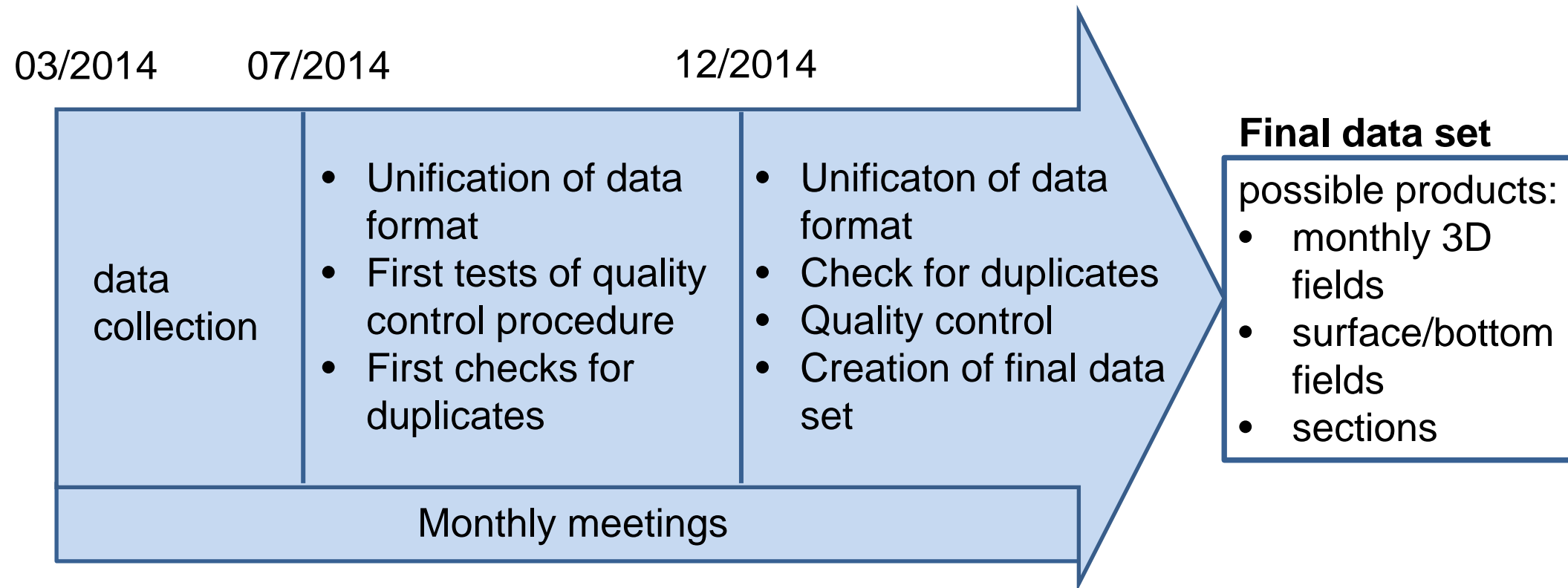
Data in unified format (status 12/2014)

spatial and temporal coverage



Biogeochemical North Sea Climatology

„history“ and outlook



Acronyms

DOD: Deutsches Ozeanographisches Datenzentrum

EMODNet: European Marine Observation and Data Network

ICES: International Council for Exploration of the Sea

KLIWAS: Research project by „Bundesministerium für Verkehr und digitale Infrastruktur“,
Klimawandel und Wasserstraßen

NOWESP: North West European Shelf Programme