

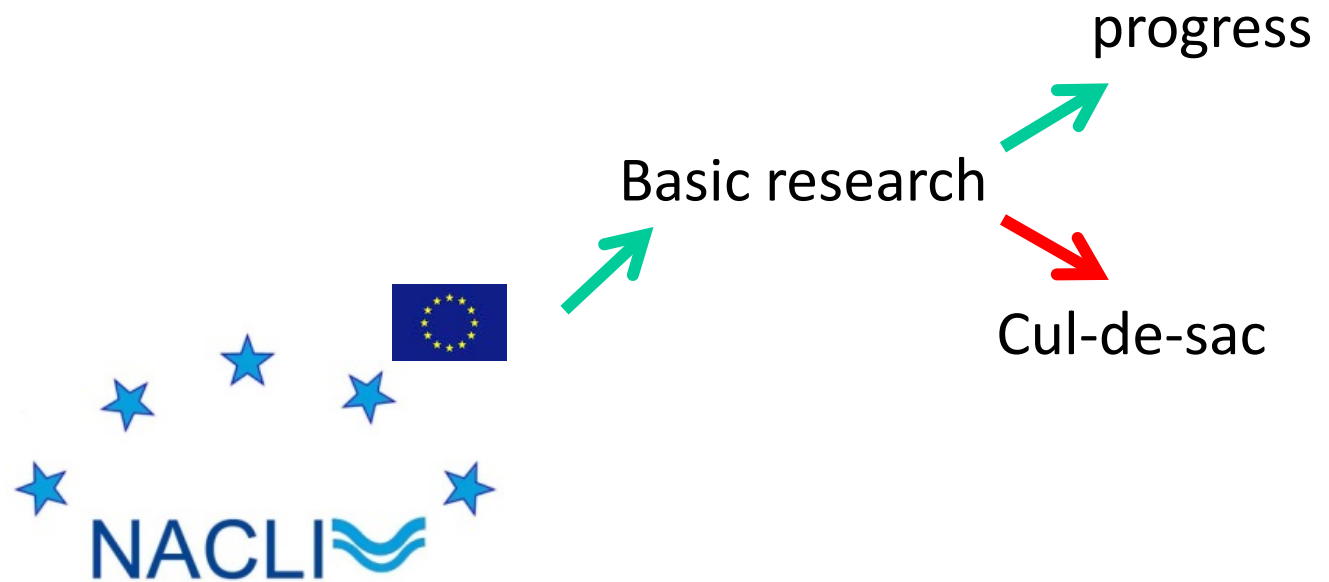


Highlights, lessons learnt and recommendations from NACLIM

Met Office, Exeter
06.10.2016

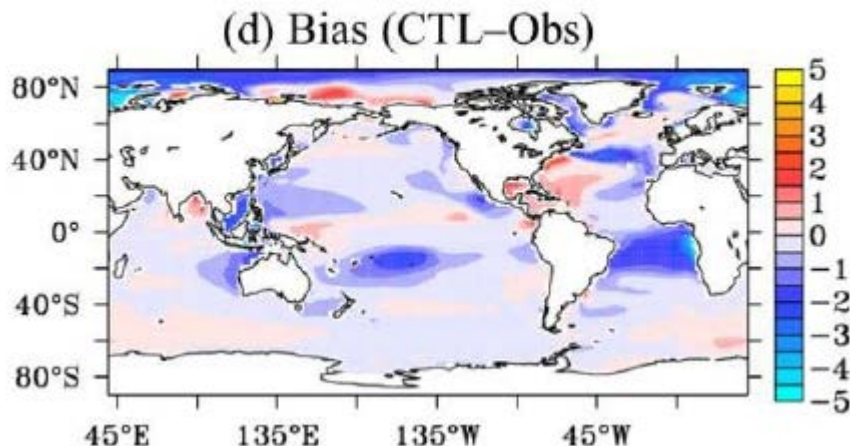
Detlef Quadfasel et al. - UHAM

Highlights and dissemination

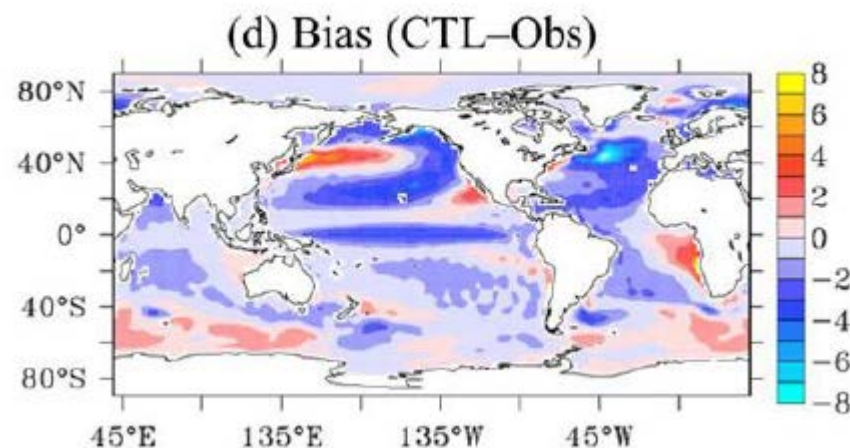


Highlights – example 1

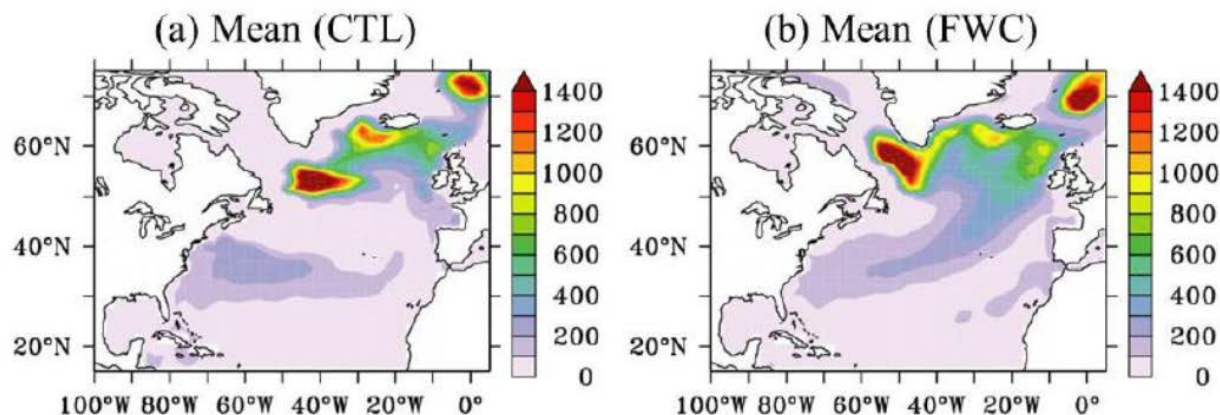
SSS



SST



Biases in the Kiel Climate Model



Convection sites and
depths after
freshwater flux
correction

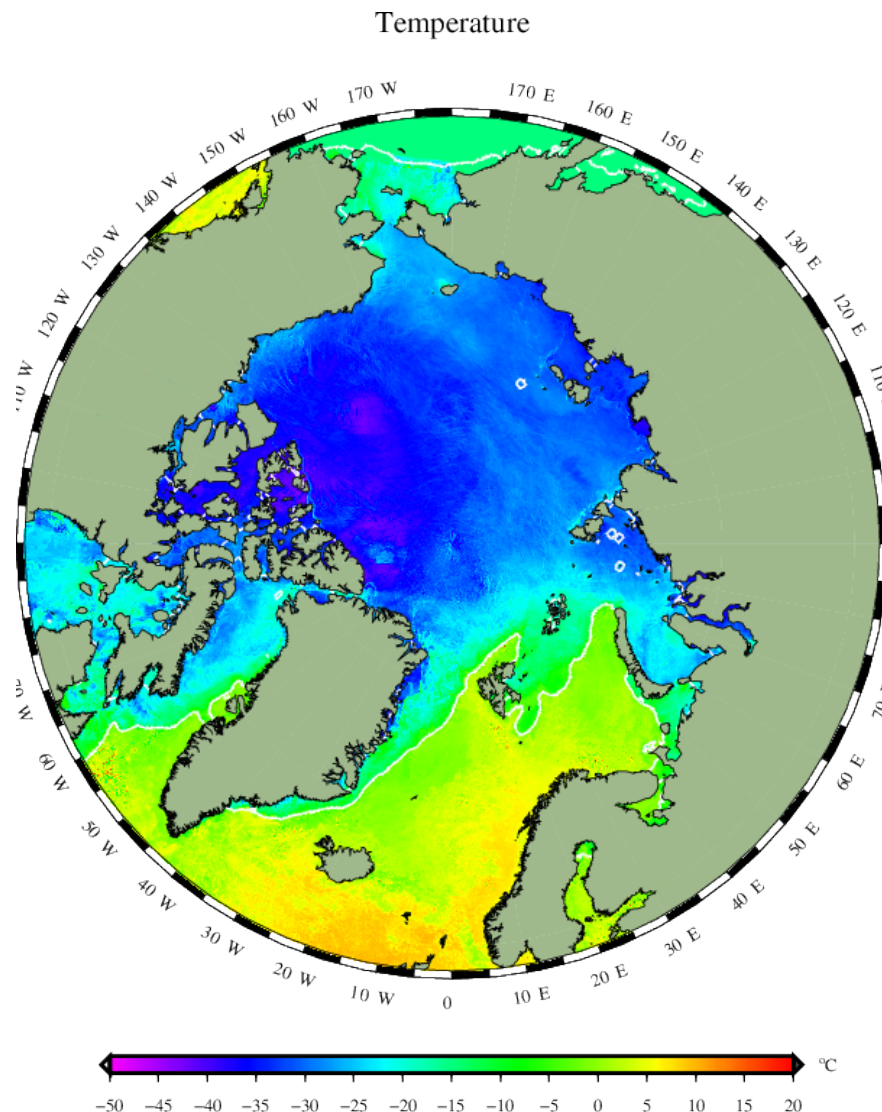
Park et al., 2016

Highlights – example 2

A new climate record (1982, ongoing) of Arctic and Antarctic Ice Surface Temperatures from thermal Infrared satellite sensors (AASTI), covering high latitude Seas, Sea Ice and Ice Cap surface temperatures based on satellite infrared measurements.

- It covers the marginal ice zone
- it is the first reprocessed high resolution IST climate record
- it is based on observations from a single sensor-type.

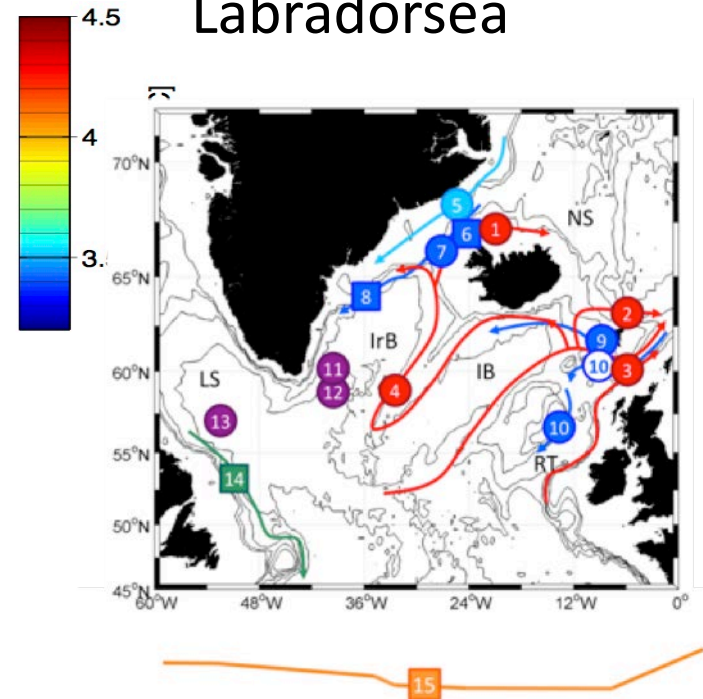
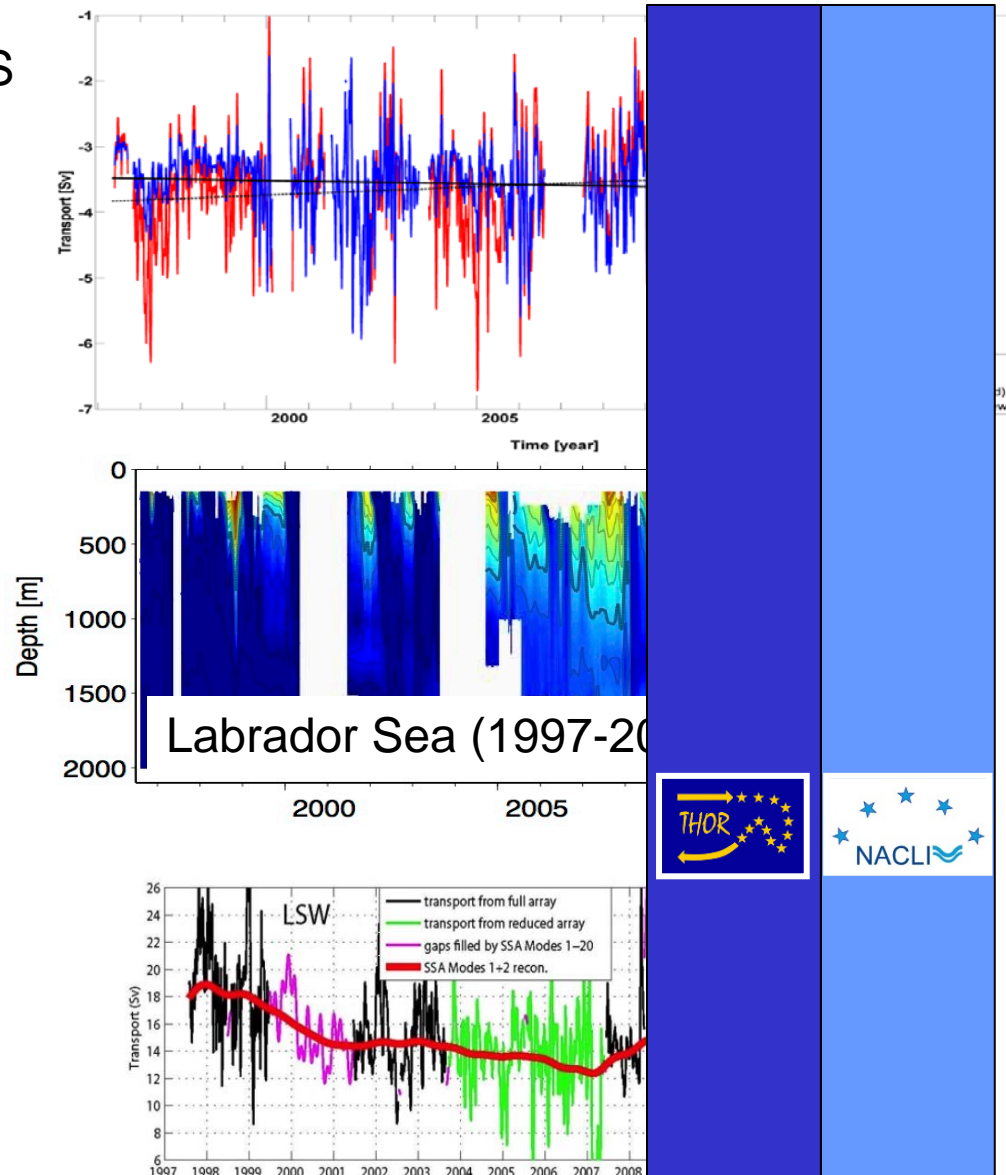
Danish Meteorological Institut



Highlights – example 3

DS

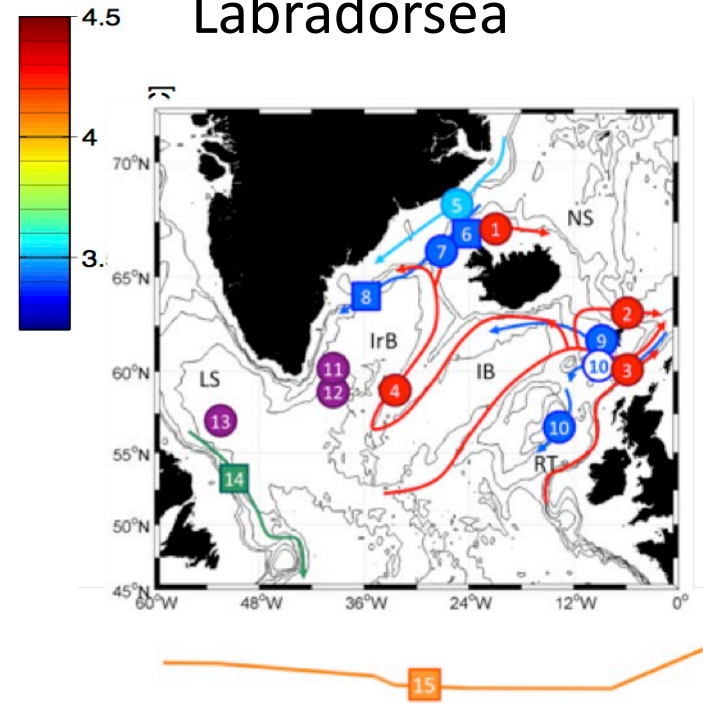
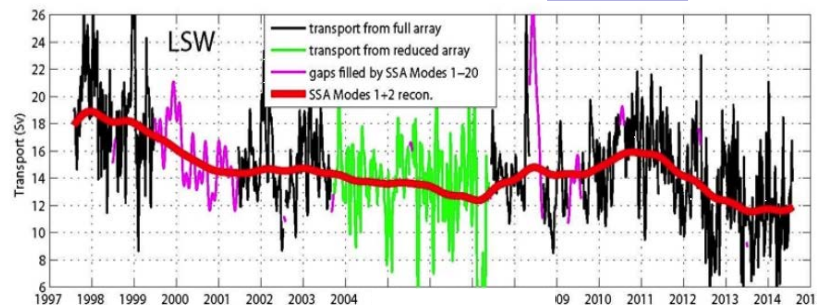
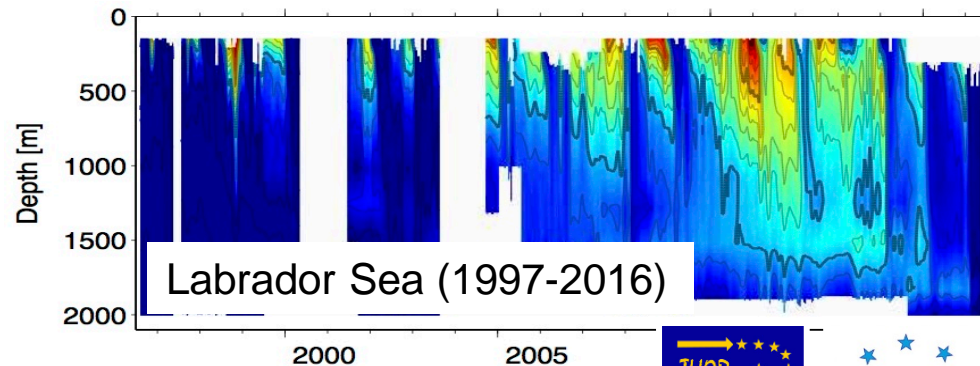
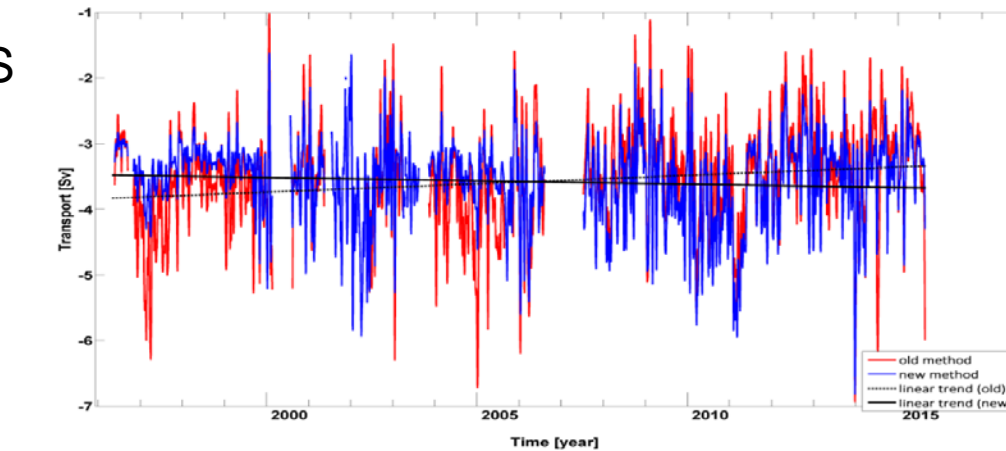
Gathering of long time series in the North Atlantic – Greenland Scotland Ridge, Irminger Sea, Labradorsea



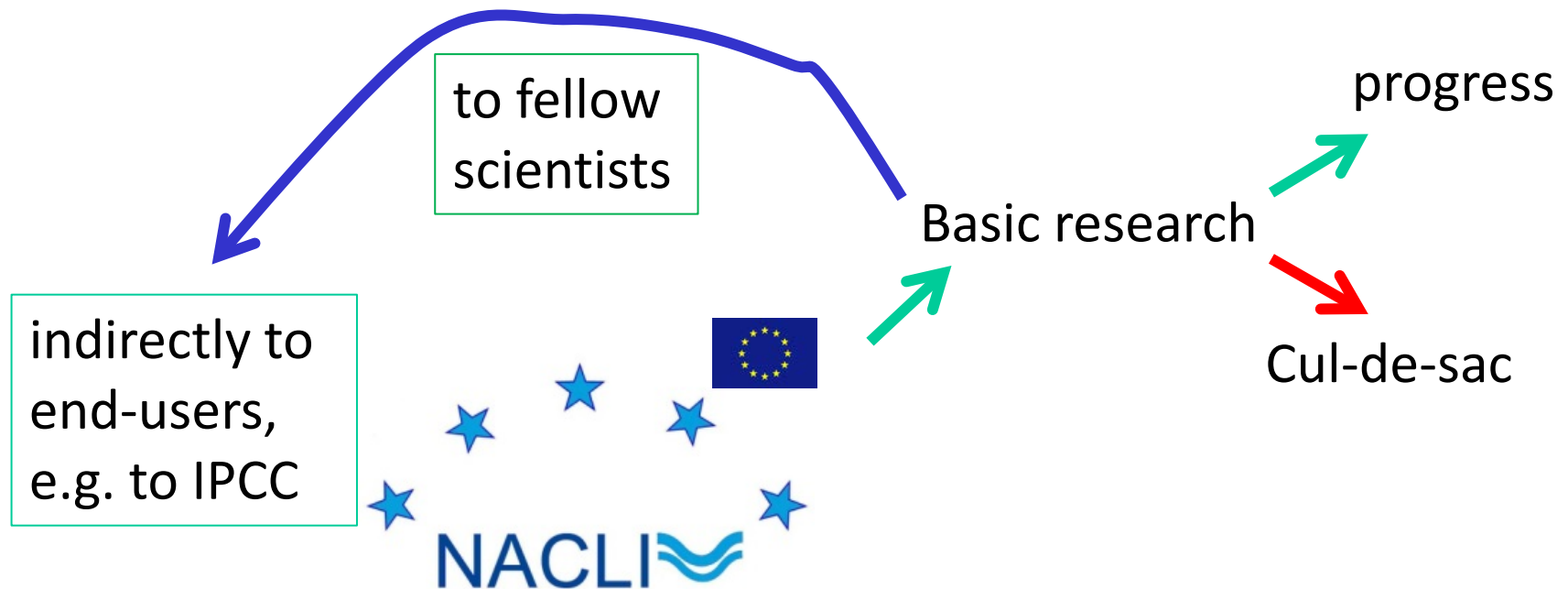
Highlights – example 3

DS

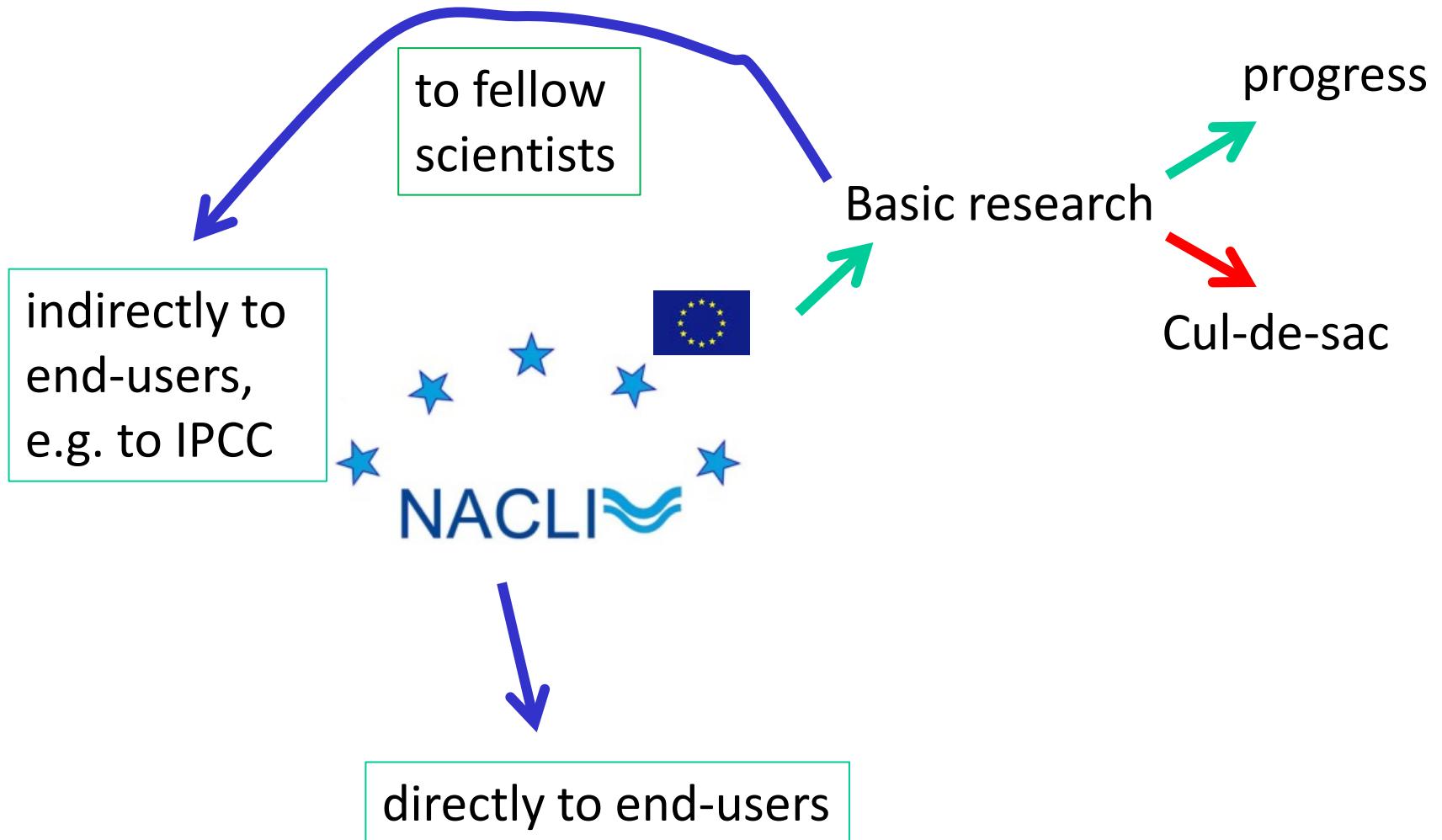
Gathering of long time series in the North Atlantic – Greenland Scotland Ridge, Irminger Sea, Labradorsea



Highlights and dissemination



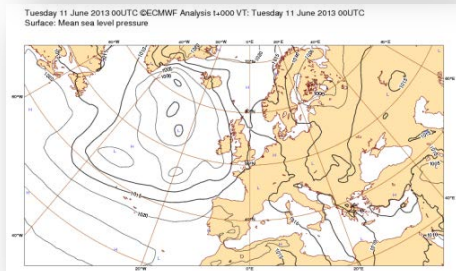
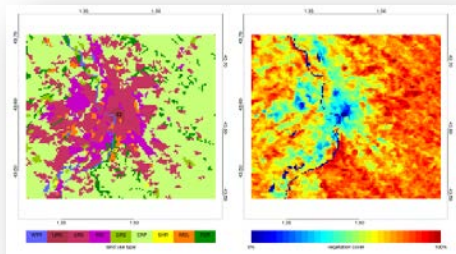
Highlights



Highlights – example 4



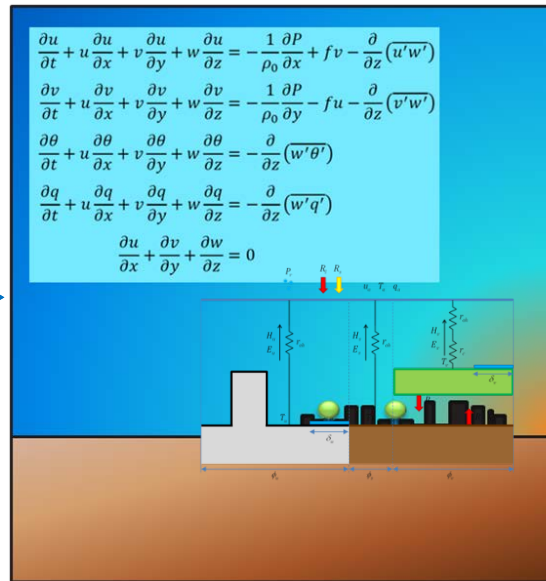
terrain



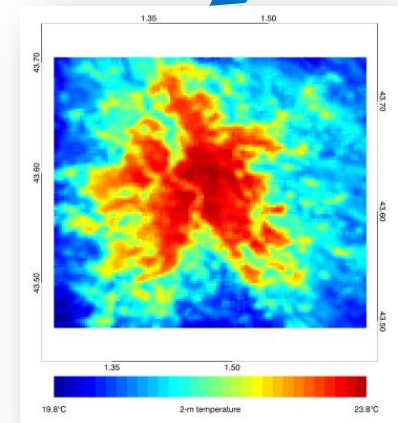
large-scale meteorology

De Ridder et al., 2015

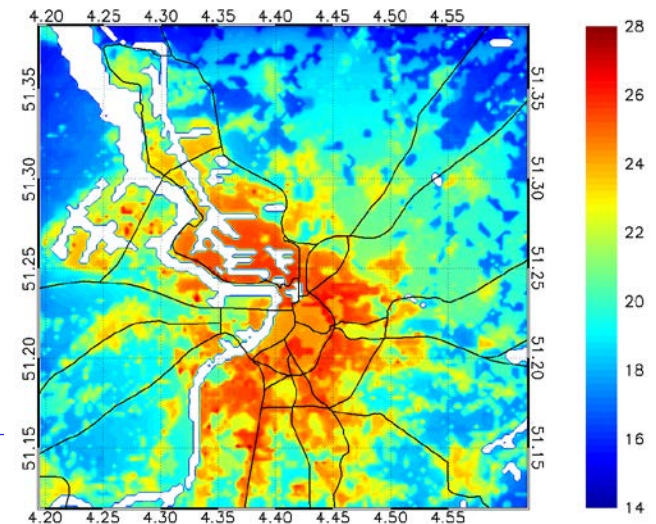
Urban heat islands



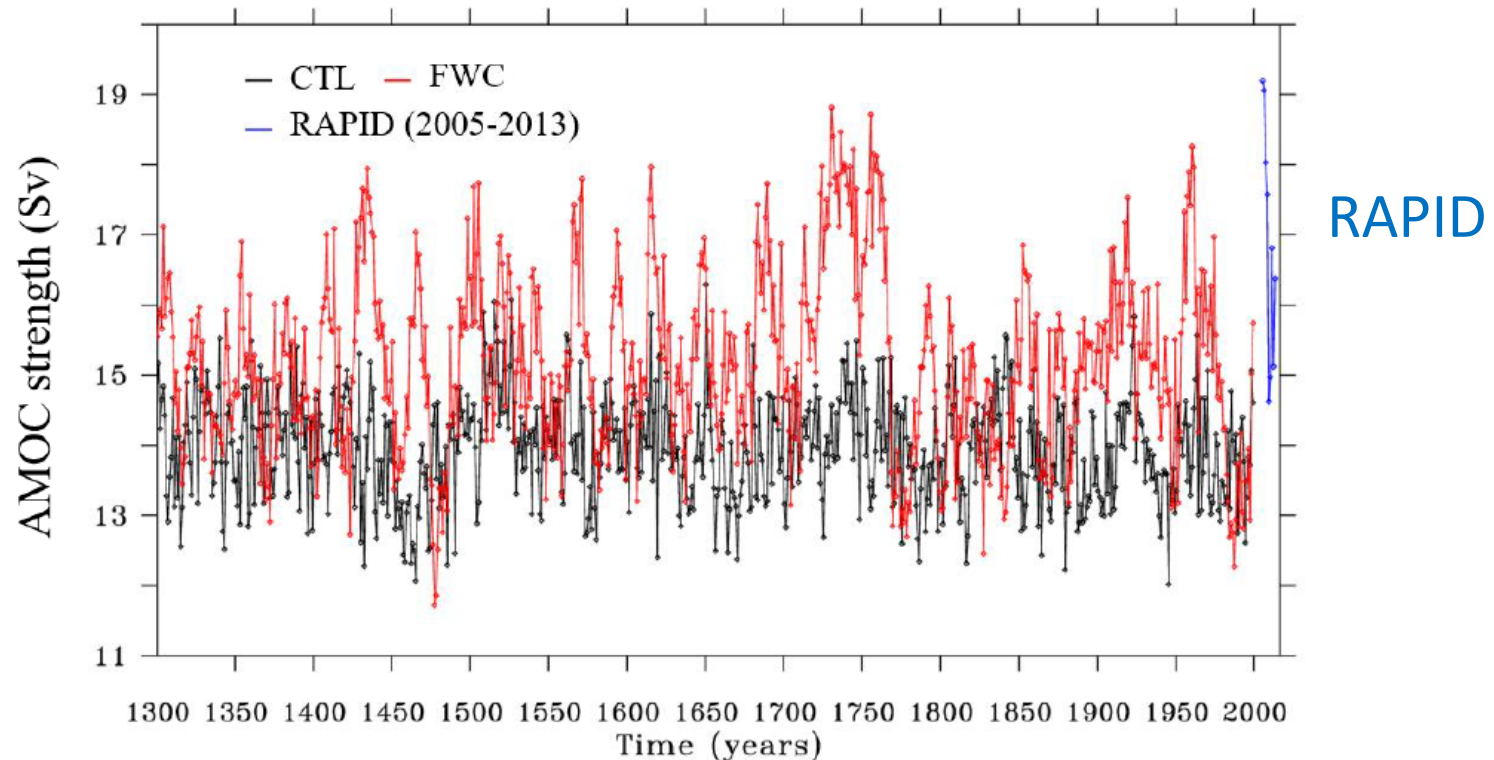
temperature



Projection
2080-2100



Lessons learnt and recommendations

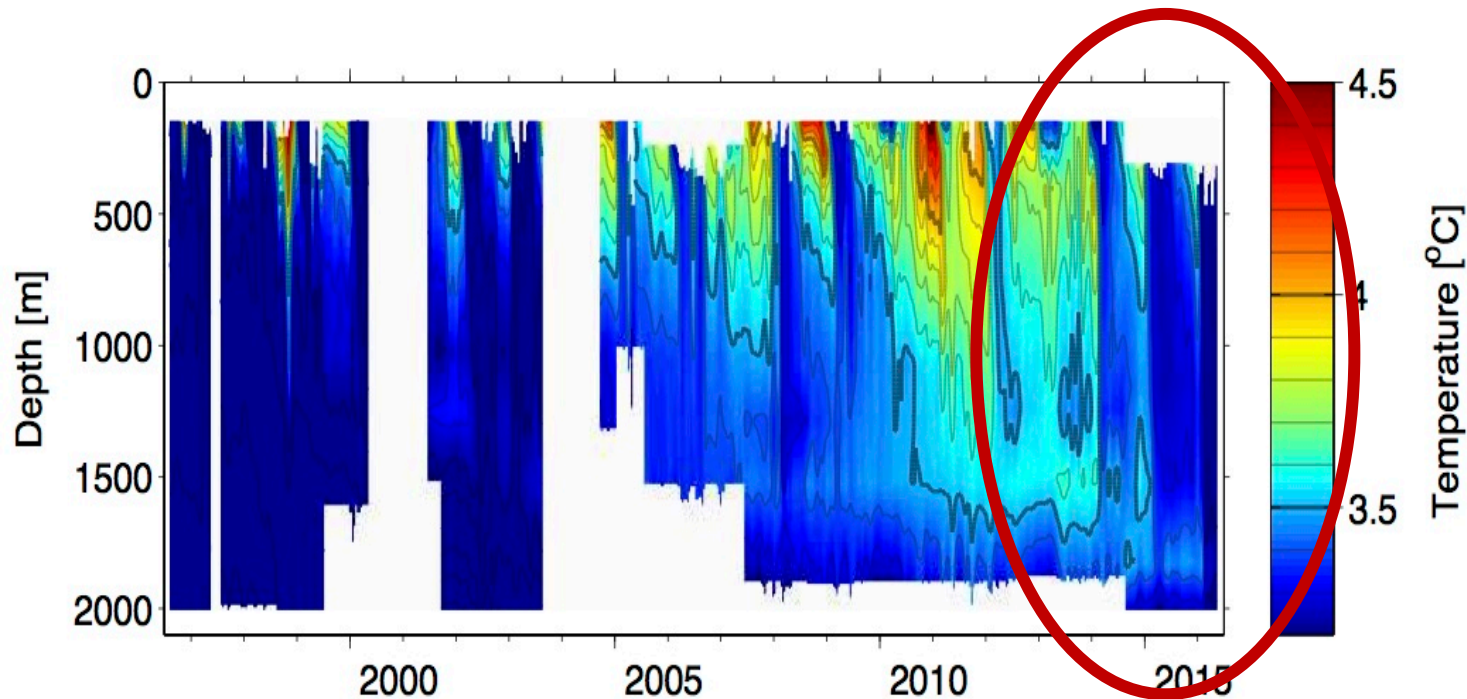


Park et al. 2016

The AMOC in the Kiel Climate Model
black: no freshwater flux correction, red: with correction

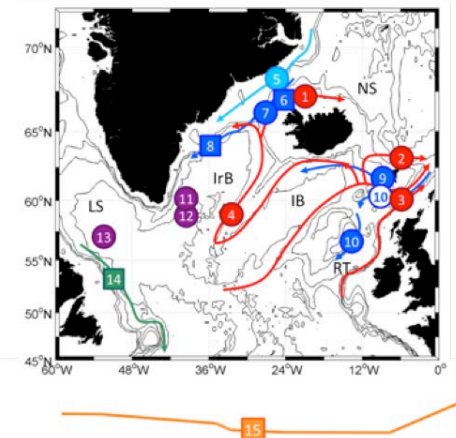
Bias reduction is a topic worth tackling

Lessons learnt and recommendations



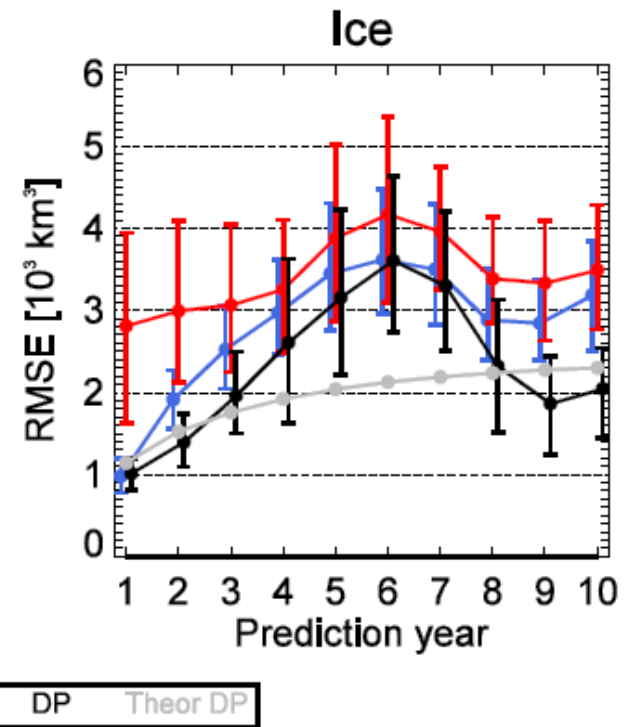
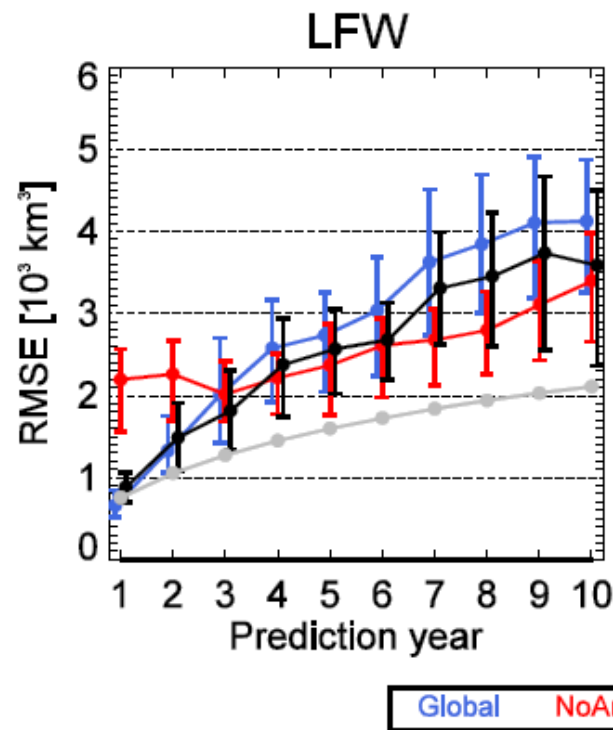
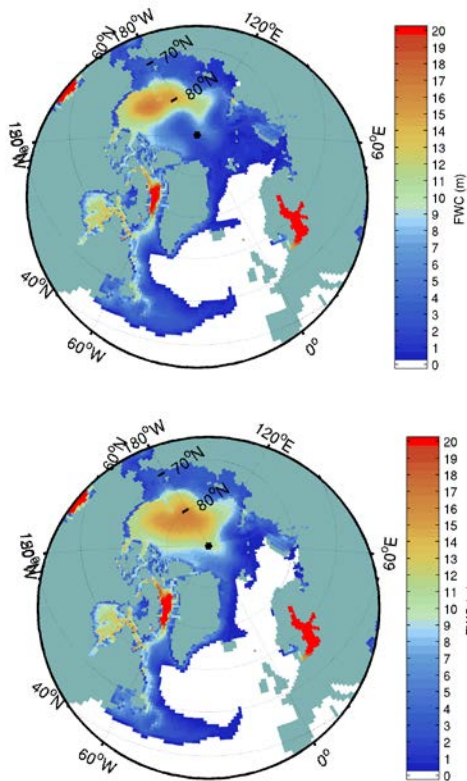
The return of the deep convection

Carry on the monitoring



Lessons learnt and recommendations

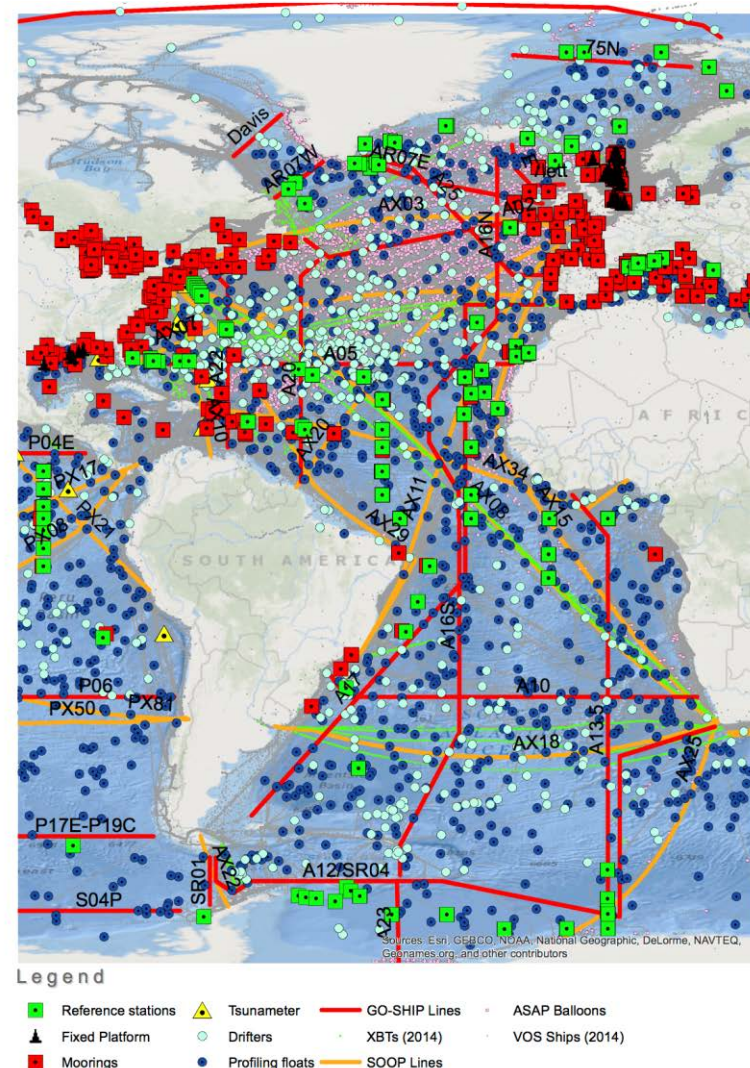
Initialization with the upper Arctic stratification is essential for the predictive skill of both fresh water storage and sea-ice volume, and thus the stratification in the North Atlantic.



(Schmith et al. in revision).

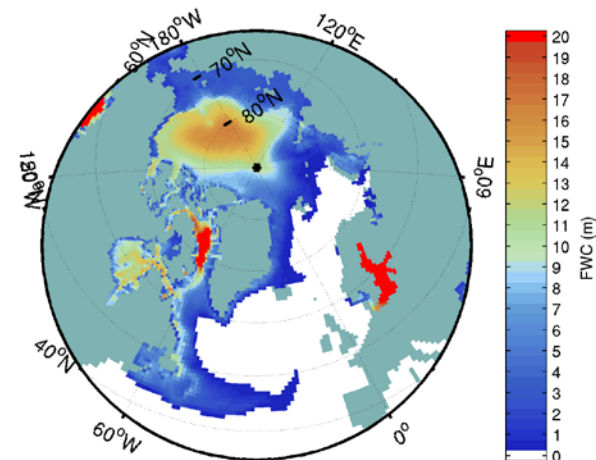
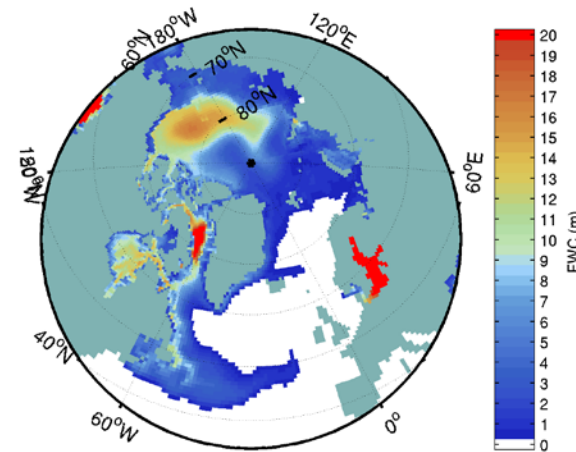
AtlantOS

Integration of the so far loosely-coordinated set of existing ocean observing activities to a more sustainable, more efficient, and fit-for-purpose Integrated Atlantic Ocean Observing System.



Blue Action

- will actively improve our ability to describe, model, and predict Arctic climate change and its impact on Northern Hemisphere climate, weather and their extremes.
- will deliver valuated climate services of societal benefit.
- To make a significant contribution to YOPP and AR6.



Start Dec. 1st, 2016 and Kick-off meeting Jan. 18-20.

Free and independent basic research is a prerequisite for good science. Let the growing number of science administrators not prescribe what kind of research you have to do and how.

The research leading to these results has received funding from the European Union 7th Framework Programme (FP7 2007-2013), under grant agreement n.308299

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