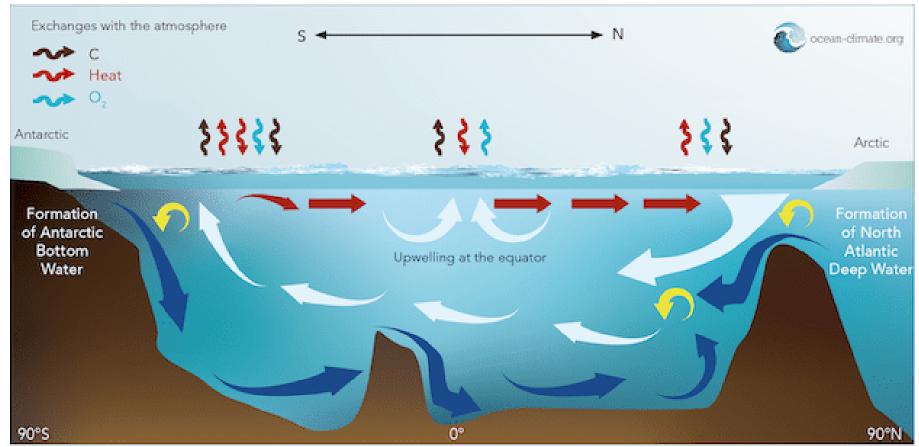








#### Atlantic circulation, crucial for climate and ecosystems, is known to vary in time



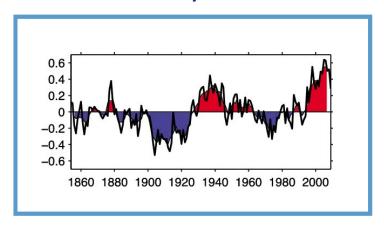
Zoom on the Atlantic (vertical cross-section)



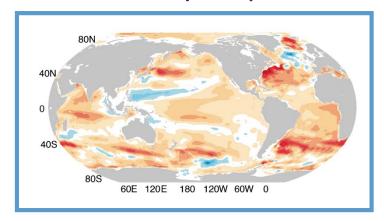




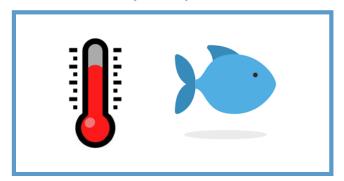
### Variability in time



### Variability in space



### Variability in parameters









#### **Global Climate Observing System Implementation Plan**

A multi-platform approach is needed to deliver to Essential Climate Variable at the required range of scales and accuracy.



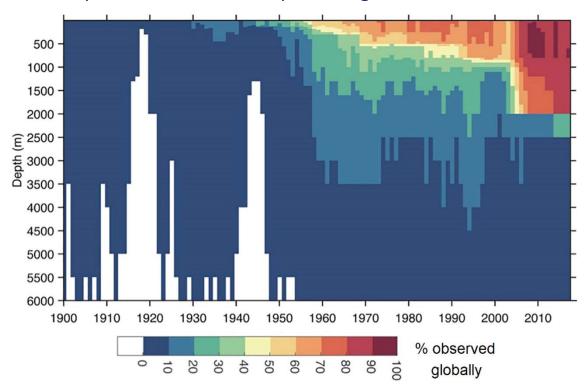






## Increase in systematic observations through time



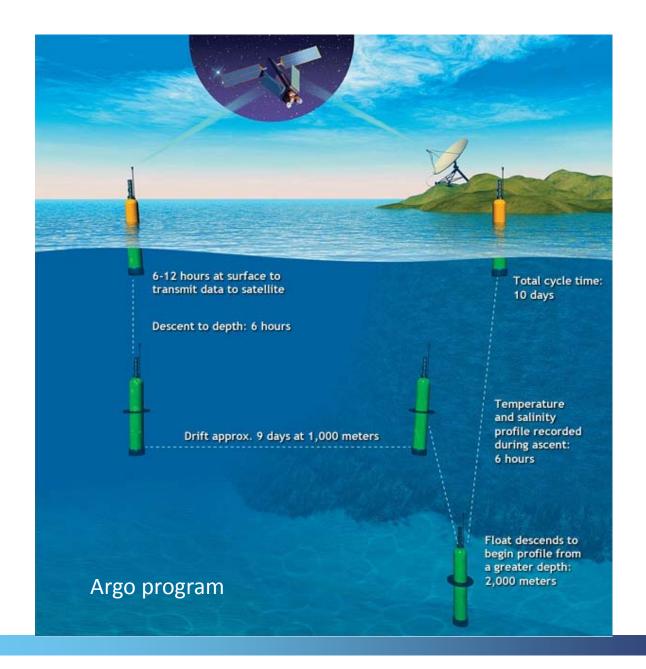


Meyssignac et al., 2019





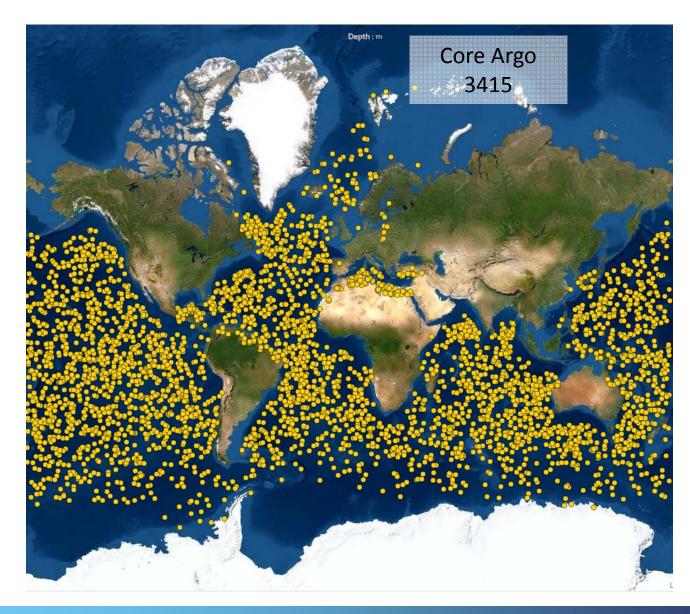










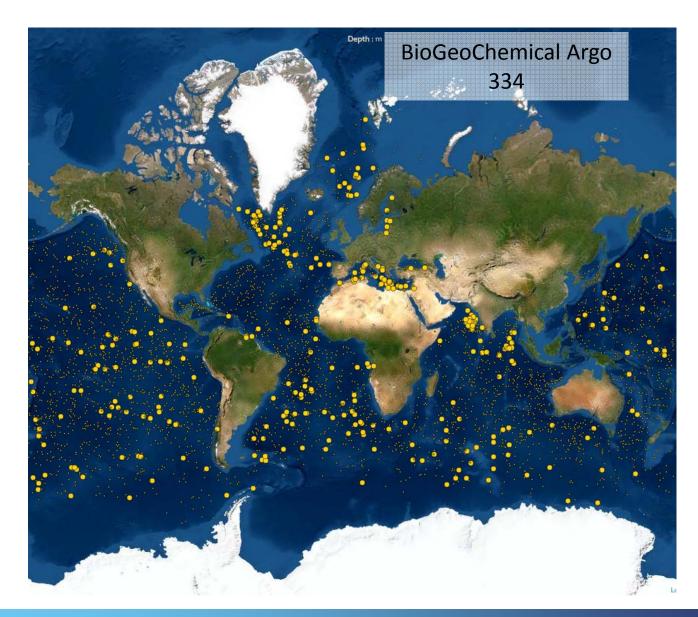


Temperature Salinity







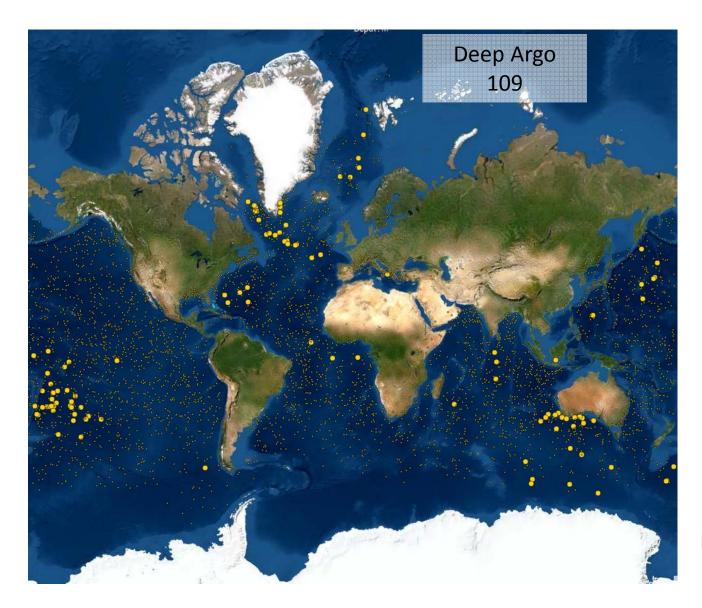


+ Oxygen Nitrate pH Chlorophyll









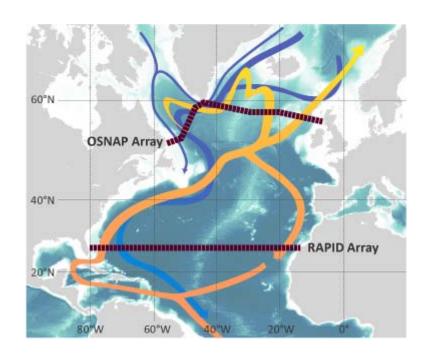
Below 2km

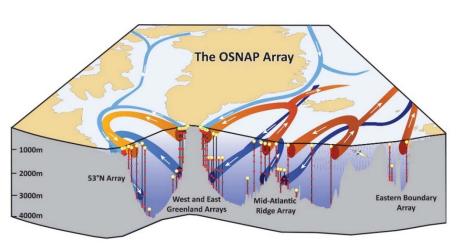






### Basin-wide, full-depth measurements of circulation





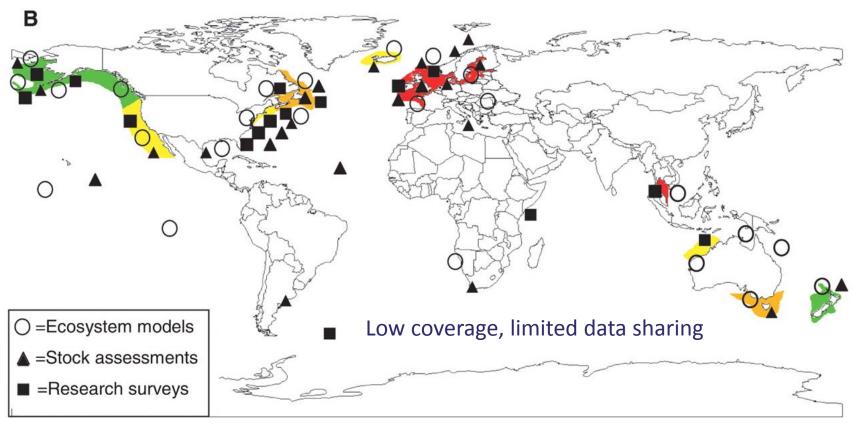
Crucial for understanding and monitoring Not real-time, not funded systematically







# Spatial coverage of stock assessments



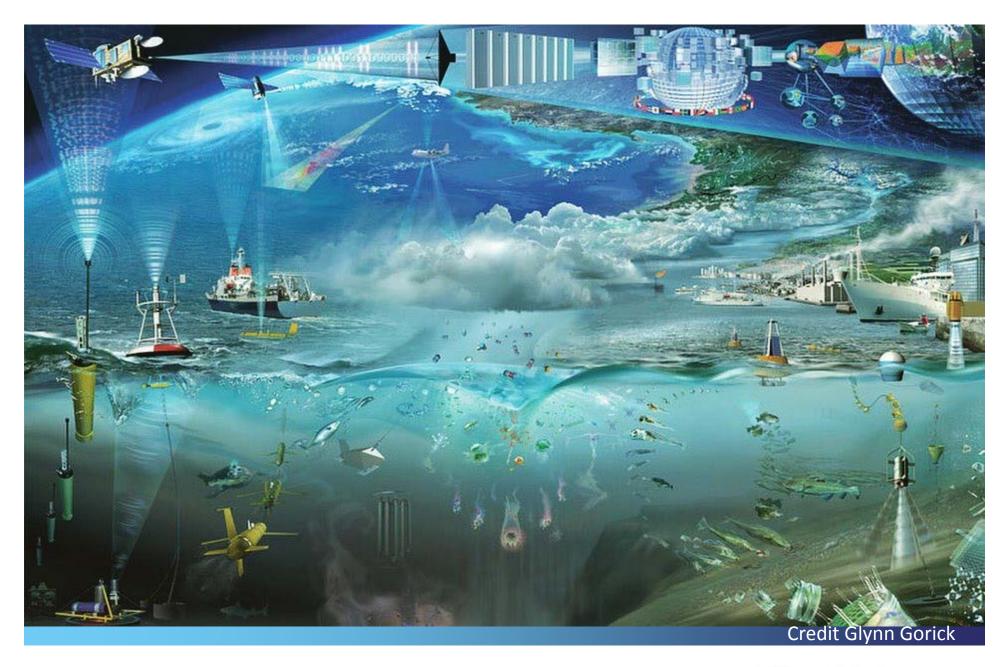
Color indicates fisheries intensity, from red (high exploitation rate) to green (not overfished)

Worm et al., 2009



















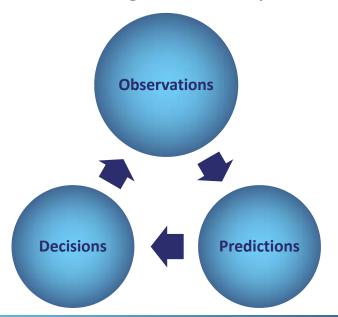




Long-term observations in the Atlantic Ocean are critical for understanding and accurate prediction of ocean and ecosystem changes

Existing, mostly physical, observations need to be maintained and expanded to include biogeochemical and ecosystem parameters

Observations needs to be harmonized and integrated into one systems accessible for the modelling community and decision makers











#### Science-Policy Discussion in collaboration with the European Parliament's Intergroup on Climate Change, Biodiversity and Sustainable Development

# Thank you







@TRIATLASproject

@BG10BlueAction

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www.triatlas.w.uib.no

www.blue-action.eu

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