Blue-Cloud

Zoo & Phytoplankton EOV products

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Zoo & Phytoplankton EOV products

Objective

Machine learning approach to derive zoo and phytoplankton biomass and diversity products

Methodology

Data compilation & processing

Big data & Machine learning

Ground truth modelling using NRT data

Tool

Catalogue

Software Importer

R Studio

Blue-Cloud Lab

Analytics Engine

JupyterHub

Importer Documentation

Phytoplankton EOV products

INPUT DATA

- T/S profiles
- BGC-Argo floats (Chla)
- Satellite-derived reflectance's
- Satellite-derived Photosynthetically Available Radiation (PAR)
- Sea Level Anomaly

NN model
Sauzède, et al. 2016

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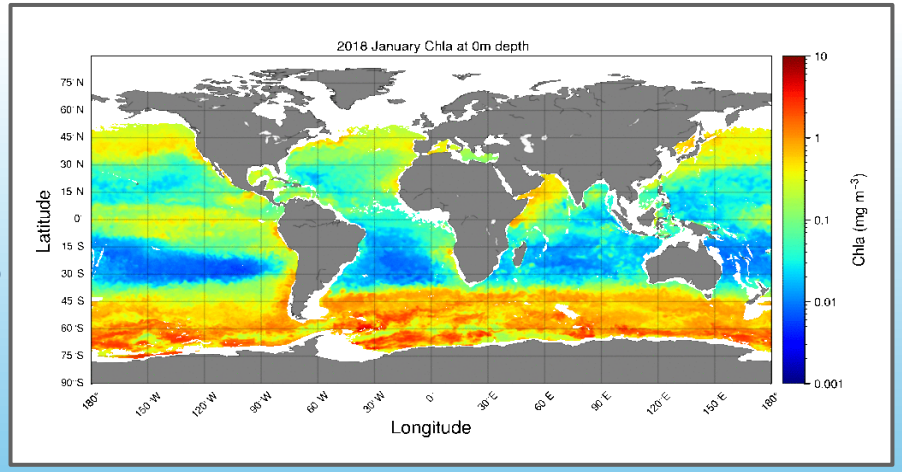
Global 3D maps
Phytoplankton biomass



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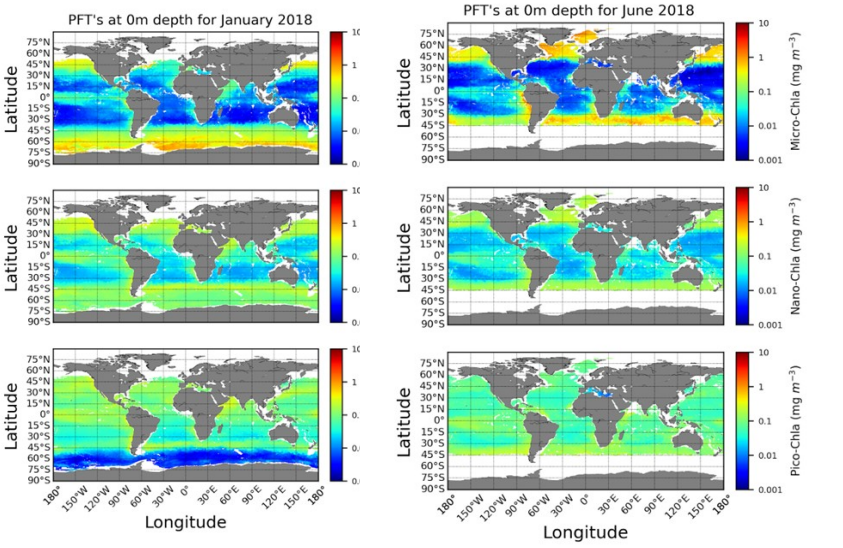
Global 3D maps
Phytoplankton diversity



Zooplankton EOV products

LIÈGE université GHER

INPUT DATA

- Zooplankton abundances
- T/S climatologlies
- Nutrients (World Ocean Atlas)
- Distance from coast
- Bathymetry

DIVAnd +
NN model

Barth, et al. 2014

jupyter julia

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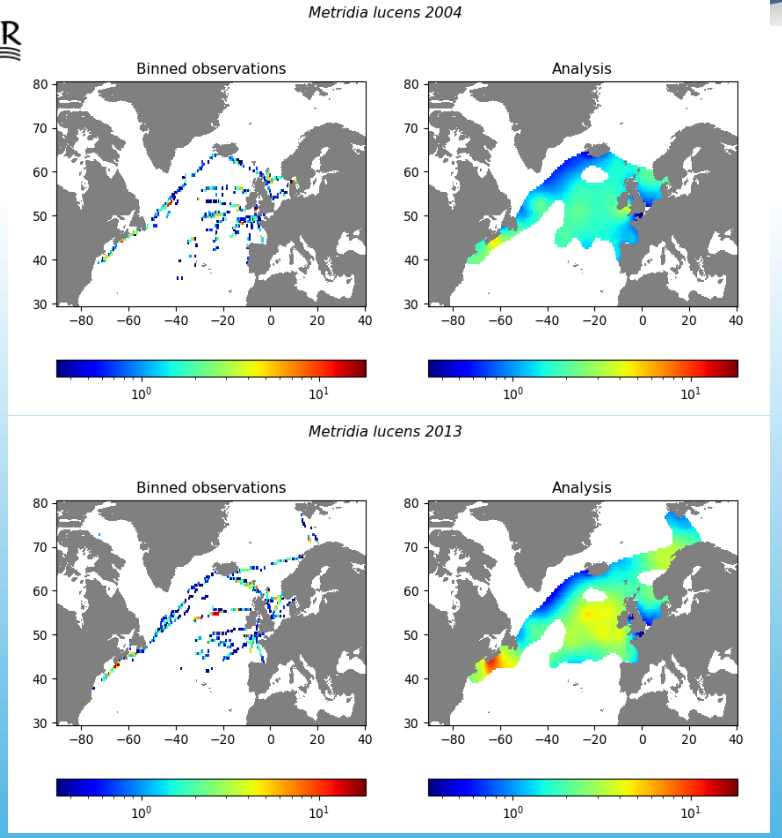

Modelling phyto- and zooplankton interactions

VLIZ

INPUT DATA

- Zooplankton abundances
- Phytoplankton abundances
- Nutrient, temperature and light data

LifeWatch BELGIUM

EMODnet BIOLOGY

Dive in to data on Europe's marine life

NPZ model →

Everaert, et al. 2015
Soetaert & Herman, 2009

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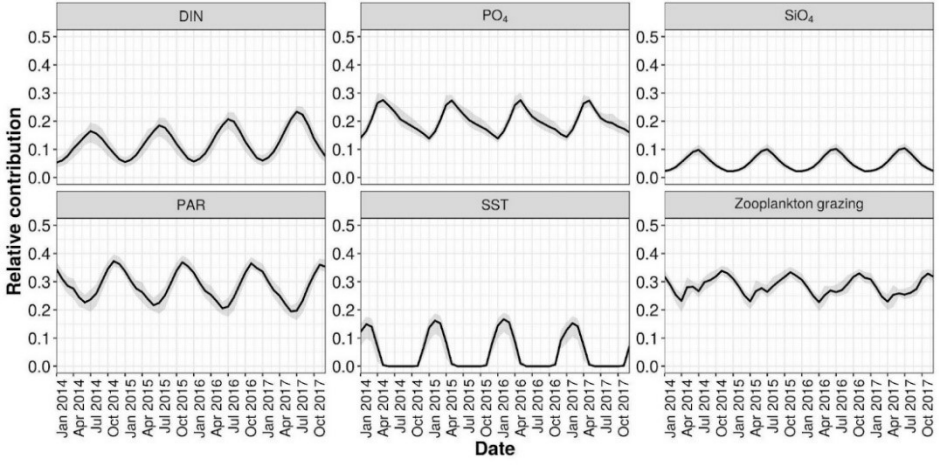

Blue Cloud Added value

- Open science framework such as Blue-Cloud enables non programming experts to reuse and reproduce the methods.

- The integration of different **data sources and technologies**, allows to see data-driven trends & to understand **EOVs**.

- **Collaborative VRE** have a large potential to boost scientific productivity. We invite everyone to explore the data, methodologies and technologies available in the **Blue-Cloud VRE**. .

Thank you!

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To learn more about the demonstrator visit:
https://www.blue-cloud.org/demonstrators/zoo-and-phytoplankton-eov-products

2022

Unlocking Open Science in support of the EU Green Deal

Blue-Cloud

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Final Conference