Marine Ecosystem Analysis and Prediction

OceanPredict
Advancing the science of ocean prediction

Co-chairs: Stefano Ciavatta (PML, UK), Katja Fennel (Dalhousie University, CA)

MEAP TTs – activities

Activities of the past six months this year:

• Editing the special issue of Biogeosciences/Ocean Science issue on “Biogeochemistry in the BGC-Argo era: from process studies to ecosystem forecasts“

- Contributions to the the Eurosea-EuroArgo meeting, session "Synergies between BGC-Argo community and CMEMS BGC modelers/assimilators" on “An overview of bio-optical modelling applied within the marine physical-biogeochemical models).
- Contributions to CMEMS BioDAWG
- Steering committee meeting of ForeSea
- Finalized contribution to the “Guide to Operational Oceanography and Forecasting Systems” which is coordinated by the Expert Team on Operational Ocean Forecasting Systems (ETOOFS)
- Annual meeting of the H2020 SEAMLESS project on ensemble biogeochemical data assimilation for operational oceanography

Planned activities

- To co-host CMEMS session at the EGU 2022
- To hold 2 MEAP-TT video meetings (March, June)
- Engagement with ForeSea and other UN Decade Programme

MEAP TTs – activities

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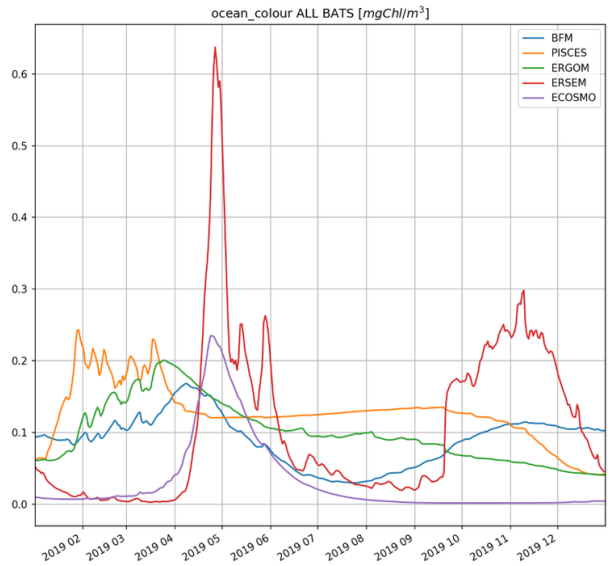
Programme: SPACE - Copernicus Evolution
Period: 2021-2023
Budget: €1.5M



Main objectives:

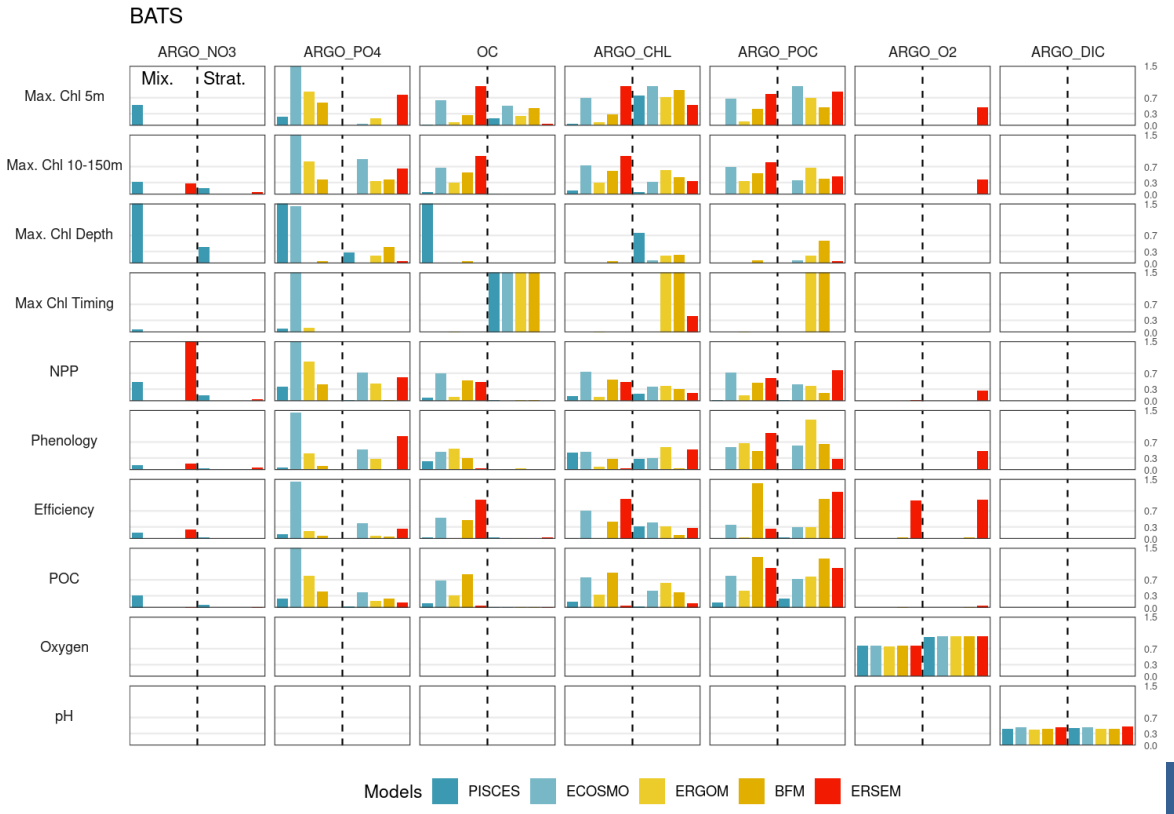
- To provide CMEMS with new capabilities to deliver indicators of climate-change impact and food security in marine ecosystems
- To unleash a seamless flow of information from novel observing networks to operational model predictions of ecosystem indicators
- To innovate current practices in biogeochemical ensemble DA

Coordinator and seven investigators of MEAP-TT

www.seamlessproject.org twitter @SEAMLESSproject

MEAP TTs – activities

What ecosystem indicators can you estimate by assimilating which operational observation?



MEAP TTs – expected outcomes

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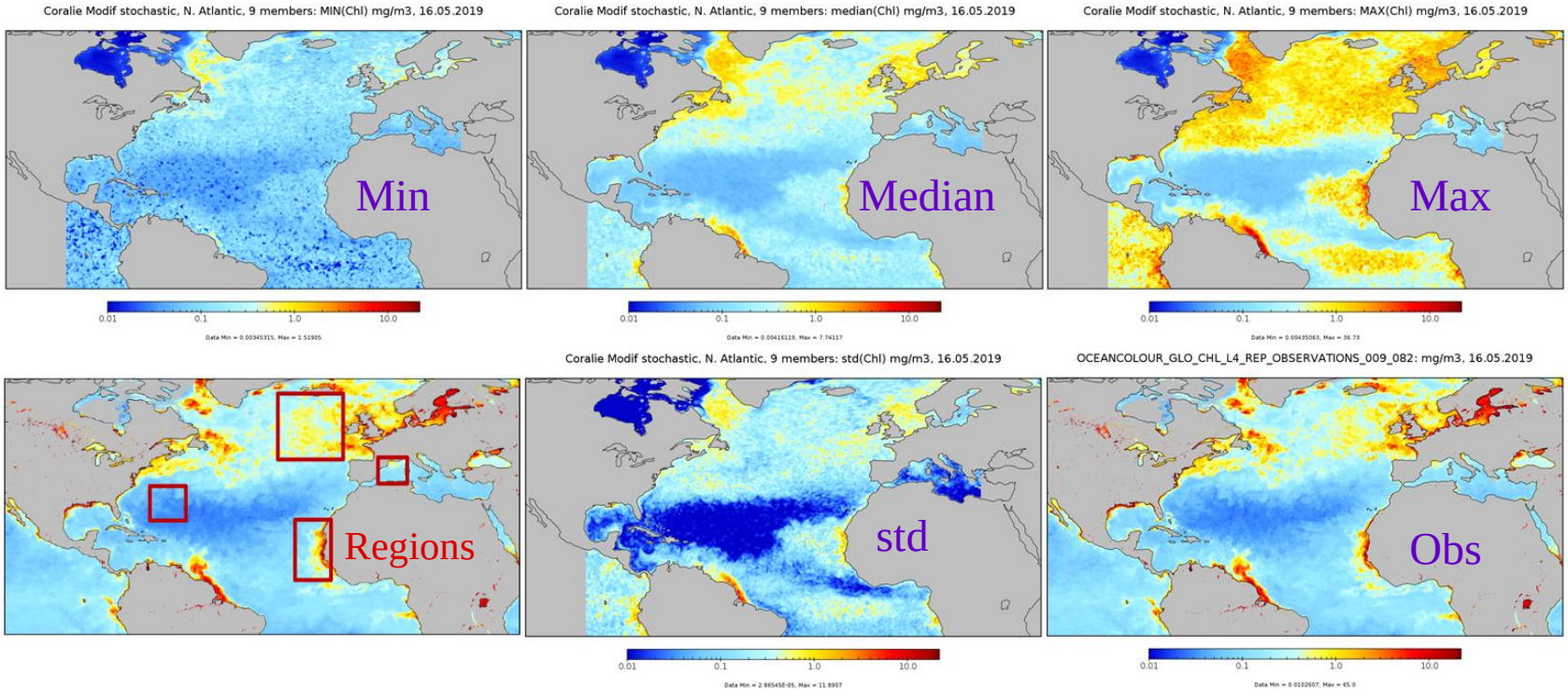
Which parameters to perturb to maximize the seamless flux of information



MEAP TTs – outreach plan

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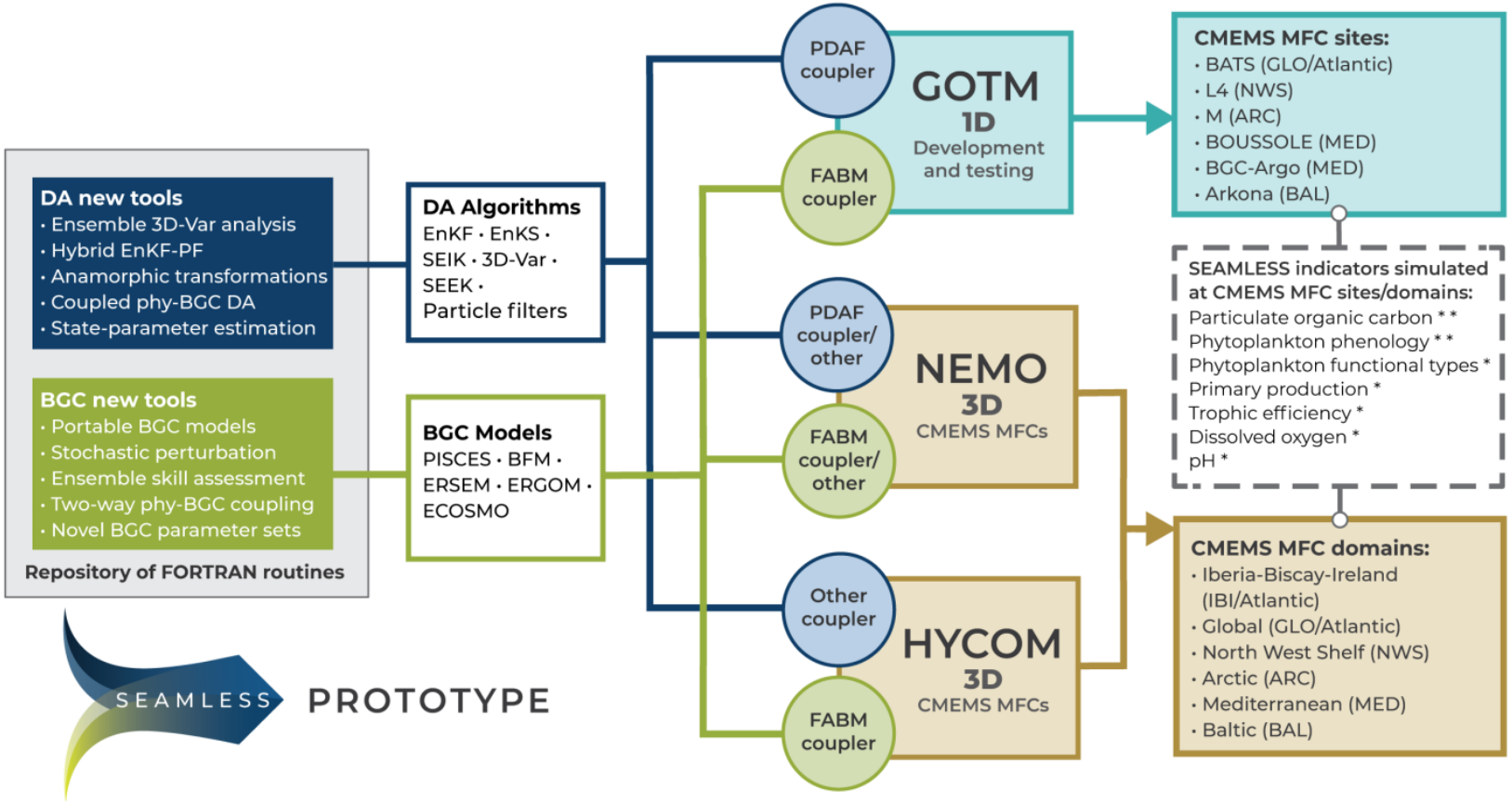
Software for BGC modelling and data assimilation for training and



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ForeSea activities

- Biogeochemical (BGC) nowcasts and ecological forecasting as area for transformative progress addressing from stakeholder needs ranging from carbon accounting to ecosystem health (Theme 1 and 2)
- We are part of the ForeSea steering committee

Marine Life 2030 - Frank Muller-Karger
Marine Life 2030 is a UN Ocean Decade Endorsed Programme that seeks to transform the observation and forecasting of marine life for the future for the benefit of all people

India participation in UN Ocean Decade. Focus: Early Warning Systems as adaptation tools for Indian Ocean rim countries. The forecasts include potential fisheries zones, waves, inundation, storm surge, tsunamis. Training provided for many countries and many courses are run under IOC umbrella.

MEAP TTs – Project plans within the Decade

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Synobs

- What is the optimal combination of satellite and in-situ observations? …The combination of satellite radiance (sea surface temperature and salinity), radar and laser altimetry and ocean colour data with in situ temperature, salinity and BGC observations will be explored.

- What combination between physical and BGC observations improve the ability of ocean prediction systems to represent biogeochemical properties of the ocean?

Evaluating linking existing and in-the-pipeline projects to Ocean Decade & ForeSea

MEAP TTs – Coordination support from OP/ForeSea

- **Ambitions you would like to see out of Decade Programs**

Ecosystem indicator predictions as vital components of the operational value chain to support food-security and healthy oceans

- **Plans for collaboration with ET-OOFS**

We contributed to the BGC chapter of the manual.

Participation to training sessions on BGC?

- **What are the TT needs for advice, communication, etc. from OP and/or ForeSea?**

  MEAP-TT Q&A meeting with the ForeSea chairs