EuroGOOS

European Global Ocean Observing System

Scientists for Ocean Literacy – EuroGOOS Ocean Decade project

Dina Eparkhina and Andrew King

FerryBox Workshop, 29 September 2022

Are citizens aware of the state of the ocean and of its importance - environmental, economic, political, medical, cultural?

Is there enough data and information about the ocean?

Does scientific information have a power to change public policies for a sustainable development?

Are ocean research and observations sufficiently sustained financially?

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

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Scientists for Ocean Literacy

#Scientists4OceanLiteracy

Ocean Decade is a decade of change

Empower scientists

Connect & engage with society

Promote stakeholder engagement in sustainable development

Co-create solutions through partnerships

Above: *Walking (The) Trajectories: Venice as a model for the future?, CNR-ISMAR & Ocean Space, Venezia, 2020. Credit: Alice Ongaro Sartori.*

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Why Ocean Literacy?

- Helps understand the **interconnectedness** of science with society - our culture, economy, and everyday life.

- Promotes the **importance of ocean science** and the value of **oceanographic services**.

- Is a **prerequisite** for a sustainable blue economy and robust, effective, and trusted policies.

- Is becoming **integrated** in science institutions as a new strategic activity area.

Credit: OGS


Credit: IEO

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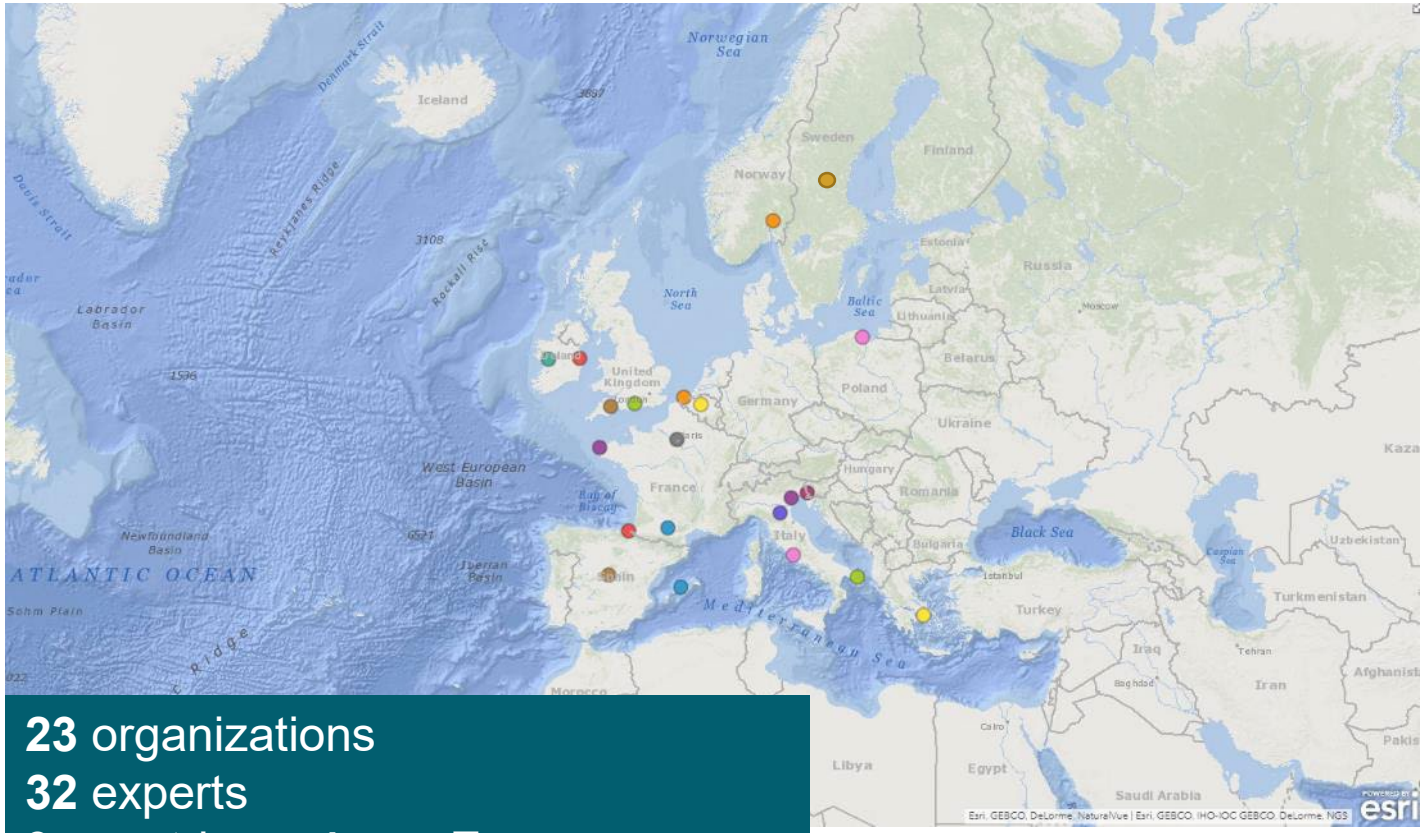
EuroGOOS ocean literacy network & working group

- AZTI Tecnalia
- Balearic Islands Coastal Observing and Forecasting System
- Centro Euro-Mediterraneo sui Cambiamenti Climatici
- Euro Argo
- EuroGOOS Office
- Hellenic Centre for Marine Research
- Institute for Environmental Protection and Research
- Instituto Español de Oceanografía
- Irish Marine Institute
- Irish Ocean Literacy Network
- Istituto Nazionale di Geofisica e Vulcanologia
- Istituto Nazionale di Oceanografia e di Geofisica Sperimentale
- Joint Technical Commission for Oceanography and Marine Meteorology
- Mercator Ocean International
- National Oceanography Centre
- National Research Council of Italy
- Norwegian Institute for Water Research
- Royal Belgian Institute of Natural Science, Directorate Natural Enviroment
- The Institute of Oceanology of the Polish Academy of Sciences
- UK Met Office



23 organizations
32 experts
9 countries **+ 4** pan-European or global organizations

+Ifremer, SIME, Sailing Hirrondelle

https://eurogoos.eu/ocean-literacy/

EuroGOOS
European Global Ocean Observing System

Ocean Literacy

in European Oceanographic Agencies

EuroGOOS recommendations for the UN Decade of Ocean Science for Sustainable Development 2021-2030

EuroGOOS Policy Brief

www.eurogoos.eu

www.eurogoos.eu/oceanliteracy

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OCEAN LITERACY WITH ALL

Scientists for Ocean Literacy project

On-line resource library

Innovative data visualization

Events - from local to global

Impact on global ocean observing

Trainings on how to engage

Translate successful materials

Inclusiveness, diversity, equity

Blue careers and STEAM

FerryBox

Touchscreen consoles for ocean literacy

- Touchscreen consoles were developed as part of the H2020 ResponSEAble project with co-funding from H2020 INTAROS and H2020 JERICO-NEXT/S3 projects
- Ocean literacy key stories on eutrophication, invasive species, sustainable fisheries, pollution, etc.
- Data layers on maps for sea surface temperature, currents, chlorophyll a, etc.
- Quasi-real-time data from different FerryBox ships of opportunity observations of salinity, temperature, chlorophyll a, oxygen, etc.
- ~3000-6000 views/month, six languages

Andrew King, Kai Sørensen, Louise Valestrand, Therese Harvey, Trond Kristiansen, Elizaveta Protsenko, Kjetil Larsen

Design features of the consoles

EUTROPHICATION AND AGRICULTURE

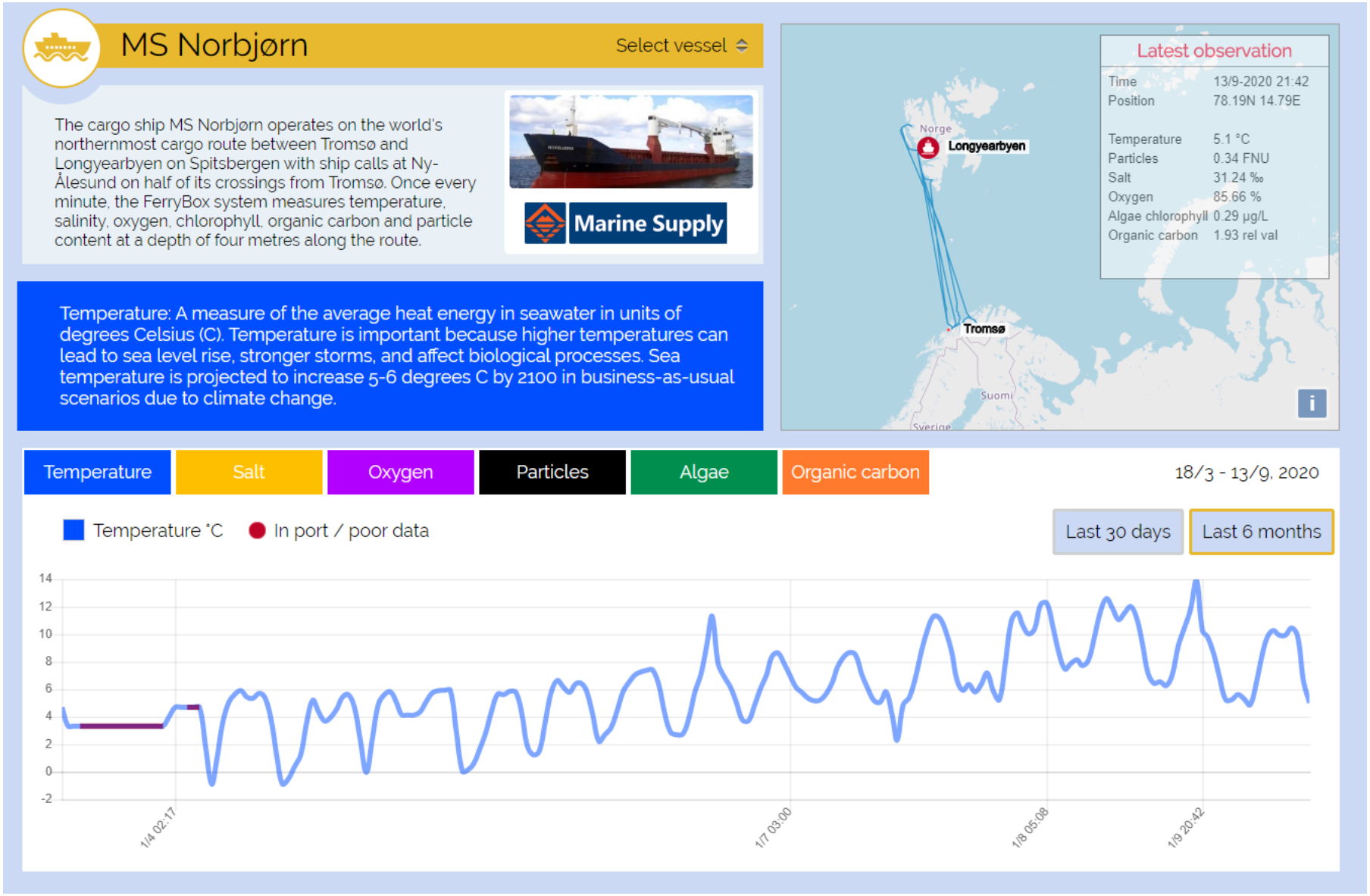
Eutrophication that results from the enrichment of water by nitrogen and phosphorus nutrients, causes a general degradation of the marine ecosystems, including changes in water quality, harmful algal blooms and reduced oxygen concentrations in bottom waters. It directly effects people living on coastal areas who depend on marine ecosystem services for their livelihood, health and recreational opportunities.

The entire Baltic Sea is affected by eutrophication with agriculture being identified as a key source of nutrient input. Farming in the Baltic Sea region has gone through structural changes to meet the needs of globalization, economic and population growth, conventional farm holdings being replaced by large-scale farm enterprises specialized in intensive: crop production with high needs for mineral fertilizers; livestock production with challenges in applying large quantities of manure on fields.

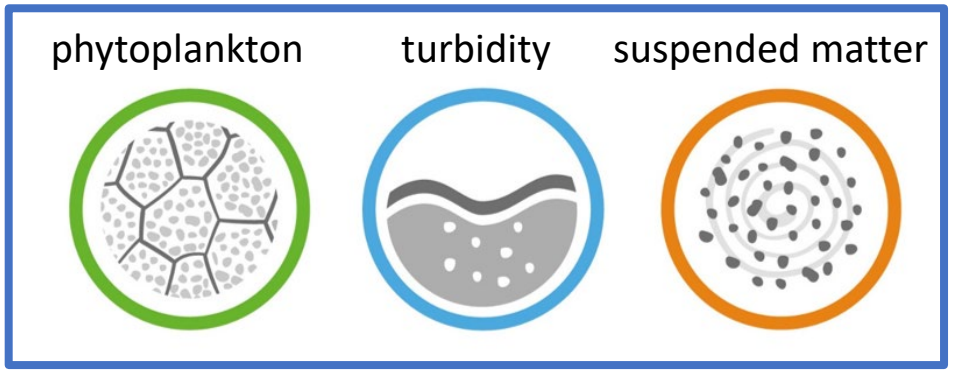
From the field to the plate, many business and mediating actors are involved in the agriculture value chain, many of them located well outside of the Baltic Sea region! Each building block of this chain contributes, directly or indirectly, to agriculture pressures on the environment.

Ocean literacy can help raising awareness on everybody's responsibility, be it farmers, retailers, decision-makers or consumers–as basis for a profound change of practices and behavior throughout the agriculture value chain.

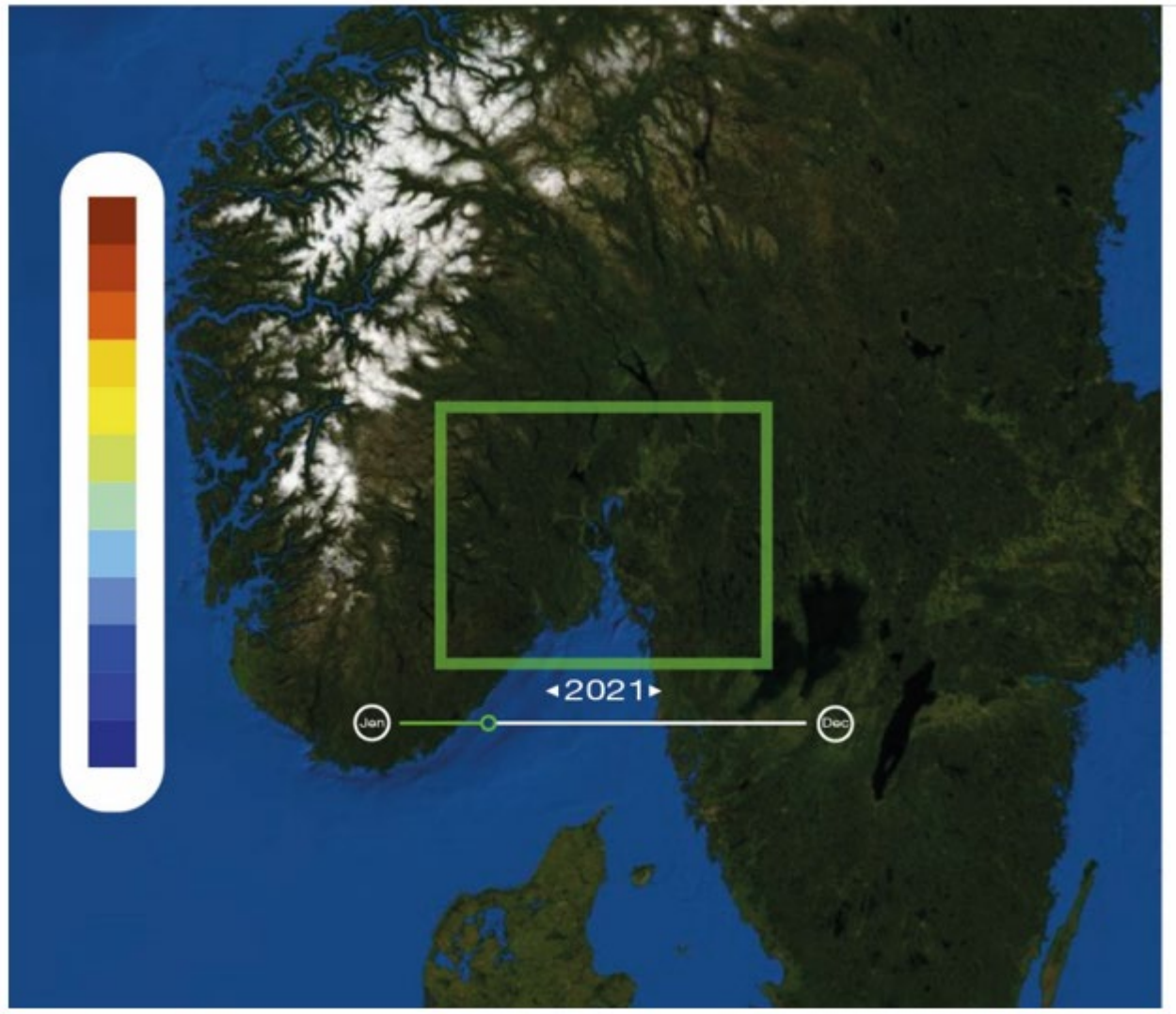
Quasi-real-time FerryBox ocean observing data



New satellite remote sensing data browser being developed



- Information about how satellites are used for ocean observations and focus on three variables
- Navigation to different regions of interest – mostly Norwegian/Arctic regions in v1
- Timeseries of remote sensing data will be played as a timelapse video and by manual control



Credit: NIVA


Credit: 'LA MAR DE CIENCIA' (SOCIB/CSIC)

Credit: CNR-ISMAR

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