

# 10<sup>th</sup> EuroGOOS International Conference

3-5 Oct 23  
Galway, Ireland

European Operational Oceanography for the Ocean we want – addressing  
the UN Ocean Decade Challenges



2021 United Nations Decade  
of Ocean Science  
2030 for Sustainable Development

## Tuesday 3 October (DRAFT 19 September 2023)

Room: Lettermore

09:00 - 10:20

### Operational Oceanography for EU and global societal needs

Welcome - Henning Wehde, Chair, European Global Ocean Observing System (EuroGOOS)

Welcome from Conference host - Michael Gillooly, Interim CEO, Marine Institute (Ireland)

UN Decade of Ocean Science for Sustainable Development - Vladimir Ryabinin, Executive Secretary, IOC-UNESCO

Ocean observation - sharing responsibility - Delilah Al Khudairy, Director, Maritime Policy & Blue Economy, European Commission DG MARE

Ocean knowledge for the EU Missions - Elisabetta Balzi, Head of Unit Healthy Seas and Ocean, European Commission DG Research and Innovation.

Key achievements since the last Conference - Inga Lips, Secretary General, EuroGOOS

10:20 - 11:00

Break

11:00 - 12:30

### Operational Oceanography in the Ocean Decade

Moderator: Holger Brix, Hereon (Germany)

11:00 - 11:20

Keynote: Co-designing marine science for the ocean we want - Emma Heslop, IOC-UNESCO

11:20 - 12:30

Panel discussion

Decade Collaborative Centre on Ocean Prediction - Enrique Álvarez, Mercator Ocean International

Decade Collaborative Centre on Coastal Resilience - Andrea Valentini, University of Bologna (Italy)

Decade Data Coordination Group - Katy Hill, NOC (UK)

Decade Programme SciNMeet - Lorenza Evangelista, CNR (Italy)

12:30 - 14:00

Lunch

14:00 - 15:30

### Digital Twin of the Ocean for Europe

Moderator: Henning Wehde, IMR (Norway)

14:00 - 14:20

Keynote: Data, science and evidence needs to deliver net gain for fisheries, marine eco-systems and offshore renewable energy - Colm Lordan, Marine Institute (Ireland)

14:20 - 15:30

Panel discussion

EuroGOOS Baltic Operational Oceanographic System (BOOS) - Jun She, DMI (Denmark)

EuroGOOS North West European Shelf Operational Oceanographic System (NOOS) - Sebastien Legrand, RBINS (Belgium)

EDITO-Infra - Conor Delaney, EMODnet

EDITO-Model Lab - Marina Tonani, Mercator Ocean International

15:30 - 16:00

Break

16:00 - 17:30

### EOOS - boosting in situ observing capacity

Moderator: Glenn Nolan, Marine Institute (Ireland)

16:00 - 16:20

Keynote: Vision for EOOS - George Petihakis, EOOS Steering Group / HCMR (Greece)

16:20 - 17:30

Panel discussion

Italian Integrated Environmental Research Infrastructure System - Rosalia Santoleri, CNR (Italy)

French Ocean Observing System (FrOOS) - Lucie Coquemot, Ifremer (France)

Future Marine Research Infrastructure - Leigh Storey, Natural Environment Research Council, NERC (UK)

Developing observing capacity for ocean biology - Luis Felipe Artigas, Jerico-RI

17:30 - 18:30

Poster session and group picture - Room: Ballyvaughan

19:00 - 21:00

Networking reception at Galway Atlantaquaria

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09:00 - 10:30

### Parallel sessions

**A: Towards digital twins of the ocean** - Chair: Manuel Ruiz, IEO-CSIC (Spain) - **Room: Lettermore**

**EDITO: two innovative projects for an operational European Digital Twin of the Ocean**

Yann Drillet, Mercator Ocean International

**Piloting the concept of an Information Management Framework for Environmental Digital Twins (IMFe) and connecting the results to the UN decade DITTO programme**

Justin Buck, National Oceanography Centre, British Oceanographic Data Centre (UK)

**Ireland's Digital Twin of the Ocean**

Michael Arrigan, Marine Institute (Ireland)

**Serverless QC for Ocean Gliders: A Sea Change**

Thomas Gardner, National Oceanography Centre (UK)

**In the shoes of a Marine Data Manager in an autonomous world**

Emma Gardner, National Oceanography Centre (UK)

**EOSC-FUTURE – ENVRI-FAIR Dashboard of the State of the Environment**

Dick Schaap, MARIS (Netherlands)

**B: Strategic developments in ocean observing - 1** - Chair: Vanessa Cardin, OGS (Italy) - **Room: Inishmaan**

**The Science We Need for the Mediterranean Sea We Want (SciNMeet) Programme: the Mediterranean Region's contribution to the UN Decade of Ocean Science for Sustainable Development (2021-2030)**

Lorenza Evangelista, National Research Council (Italy)

**EuroGOOS Scientific Strategy: Advancing a Seamless Earth System Approach for European Operational Oceanography**

Jun She, Danish Meteorological Institute (Denmark)

**Eurofleets: Long-term sustainable development of capacity sharing through multidisciplinary research cruise funding programmes**

Niamh Flavin, Marine Institute (Ireland)

**Future Marine Research Infrastructure – defining the scope, scale and pace to help identify and accelerate international partnership opportunities**

Leigh Storey, Natural Environment Research Council (UK)

**Advancing European Ocean Observing System: Fit-for-Purpose Monitoring Integration, Cost-Effectiveness, Shared Responsibility and network optimization**

Lucie Cocquemot, Ifremer (France)

**Towards a new phase for Argo at the European scale: Euro-Argo RISE contribution**

Estérine Evrard, Euro-Argo ERIC

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### C: Enhancing capacity in ocean observing and services - Chair: Henning Wehde, IMR (Norway) -

Room: **Inishturk**

#### Applications of ocean gliders for climate change monitoring of Essential Ocean Variables (EOVs) in the North East Atlantic

Céline Burin, Earth and Ocean Sciences, School of Natural Sciences and Ryan Institute, University of Galway (Ireland)

#### Copernicus Observations In Situ Networking and Sustainability (COINS) – Arctic Data

Ole Krarup Leth, Danish Meteorological Institute (Denmark)

#### EMSO ERIC progress in data harmonization and physical access for the benefit of marine science and technology

Juanjo Dañobeitia, EMSO ERIC

#### Capacity sharing: Provision of data to The Met Eireann integrated Coastal Flood Forecast Service (ICFFS)

Guy Westbrook, Marine Institute (Ireland) (Presenting: Rosemary Lawlor, Met. Eireann)

#### Demonstration of a transnational cooperation for harmonized chlorophyll a monitoring in the North East Atlantic Ocean

Tamara Rodríguez Ramos, Instituto Español de Oceanografía, CSIC (Spain)

10:30 - 11:00

Break

11:00 - 12:30

Parallel sessions

### D: Advances in ocean forecasting - Chair: Sebastien Legrand, RBINS (Belgium) - Room: **Lettermore**

#### The Copernicus Marine Service: recent achievements and future plans

Pierre-Yves Le Traon, Mercator Ocean International

#### Copernicus Marine forecasting systems: current configurations and future developments

Marina Tonani, Mercator Ocean International

#### Forecast uncertainty and ensemble spread in surface currents from a regional ocean model

Martina Idzanovic, MET Norway (Norway)

#### Forecasting the sea level in the Mediterranean Sea using the assimilation of coastal tide-gauge data

Marco Bajo, National Research Council, CNR-ISMAR (Italy)

#### The Baltic Sea model system and products delivered into the Copernicus Marine Service

Vibeke Huess, Danish Meteorological Institute (Denmark) (Presenting: Laura Tuomi, FMI (Finland))

#### Developing coupled wave-ocean model to improve Baltic Sea forecasts

Laura Tuomi, Finnish Meteorological Institute (Finland)

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**E: Strategic developments in ocean observing - 2** - Chair: Holger Brix, Hereon (Germany) - **Room: Inishmaan**

**ITINERIS - Italian Integrated Environmental Research Infrastructures System: Marine Domain**

Rosalia Santoleri, National Research Council (CNR) (Italy)

**New Croatian National Met-ocean Data Buoy Network**

Dijana Klaric, Croatian Meteorological and Hydrological Service (Croatia)

**The iFADO PAAnoramic mission: the first European Atlantic area international multi-platform ocean monitoring mission**

Francisco Campuzano, +ATLANTIC CoLAB (Portugal)

**Implementation of the oceanographic platform “ZIPIHUS” at the AI Hoceima Marine Observatory: towards operational oceanography in Morocco for a sustainable management of marine resources**

Asma Damghi, Research Laboratory in Applied and Marine Geosciences, Geotechnics and Geohazards, University Abdelmalek Essaadi (Morocco)

**F: Strengthening Europe’s oceanographic fleet** - Chair: Carlos Fernandes, Hydrographic Institute (Portugal)- **Room: Inishturk**

**Mediterranean Sea Ship-based Hydrography Programme (Med-SHIP)**

Vanessa Cardin, National Institute of Oceanography and Applied Geophysics (OGS) (Italy)

**EuroGOSHIP: A potential new research Infrastructure supporting European hydrography**

Richard Sanders, NORCE (Norway)

**The contribution of Eurofleets RI to respond to the European societal needs**

Lorenza Evangelista, National Research Council (CNR) (Italy)

**Digital Infrastructure for FerryBox platforms (NorSOOP -Norwegian Ships of Opportunity Program)**

Elizaveta Protsenko, Norwegian Institute for Water Research (Norway)

**Eurofleets+ Joint Research Activities Advanced Innovative Integrated Services**

Arturo Castellón Masalles, National Research Council (CSIC) (Spain)

**Norwegian Ships of Opportunity Program for marine and atmospheric research**

Helene Frigstad, Norwegian Institute for Water Research (NIVA) (Norway)

**G: Scientists for ocean literacy** - Chair: Dina Eparkhina (EuroGOOS) - **Room: Inisheer**

**Ocean of changes. Modern approach to ocean knowledge transfer**

Paulina Pakszys, Institute of Oceanology Polish Academy of Sciences (IO PAN) (Poland)

**Ocean Literacy and EU Blue Schools Network as tools for integration of ocean issues into schools curricula**

Panayota Koulouri, Hellenic Centre for Marine Research (HCMR) (Greece)

**Galway Atlantaquaria & the Irish Ocean Literacy Network – The role aquariums can play in fostering global Ocean Literacy (OL)**

Maria Vittoria Marra, Galway Atlantaquaria (Ireland) (Presenting: Noirin Burke)



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12:30 - 14:00

Lunch

14:00 - 15:30

Parallel sessions

**H: Ocean data assimilation trends and challenges** - Chair: Pierre-Yves Le Traon, Mercator Ocean International - **Room: Lettermore**

**Use and impact of in situ observations in global and regional ocean monitoring and forecasting systems**  
Elisabeth Remy, Mercator Ocean International

**The Met Office Forecast Ocean Assimilation Model (FOAM) using a 1/12 degree grid for global forecasts**  
Ana Aguiar, Met Office (UK)

**Recent data assimilation developments in the Mediterranean Sea Analysis and Forecasting System (MedFS)**  
Jenny Pistoia, CMCC (Italy)

**Integrating data assimilation and deep learning to maximize the impact of BGC-Argo observations in the Mediterranean Sea biogeochemical forecasting system**  
Gianpiero Cossarini, National Institute of Oceanography and Applied Geophysics (OGS) (Italy) (Presenting: Anna Teruzzi)

**Direct Assimilation of Sentinel-1 C-SAR Backscatter Data to Update a Baltic Sea Ice Forecasting Model using 4D EnVar Data Assimilation**  
Lars Axell, Swedish Meteorological and Hydrological Institute (Sweden)

**European Sea marine forecast for maritime service by aggregating multi-forecasts and observations**  
Jun She, Danish Meteorological Institute (Denmark)

**I: Ocean observing co-design and stakeholder engagement** - Chair: Enrique Alvarez, Mercator Ocean International - **Room: Inishmaan**

**Co-development of an Ocean Observatory with the Aquaculture Industry**  
Martha Bonnet Dunbar, Institute of Marine Sciences of Andalusia (ICMAN-CSIC) (Spain)

**Talking with the potential end-users of the Observatorio Costeiro da Xunta de Galicia as a starting point of their engagement: perceptions and necessities**  
Clara Almécija Pereda, CETMAR (Spain) (Presenting: Pedro Montero, INTECMAR)

**Copernicus Marine and EU Member States: towards new services and co-designed solutions**  
Tina Silovic, Mercator Ocean International

**An open source user-focused technology to process, visualise and automate publication of quality controlled CTD data**  
Denise O'Sullivan, Marine Institute (Ireland)

**MARine Biodiversity and Ecosystem Functioning leading to Ecosystem Services (MARBEFES): Stakeholder Engagement in Heraklion Gulf, Crete, Greece**  
Panayota Koulouri, Hellenic Centre for Marine Research (Greece)

**SAMOA 2: Recent advances on the development of downstream services for the Spanish ports system**  
Susana Pérez Rubio, Puertos del Estado (Spain)

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**J: Operational oceanography in the coastal zone** - Chair: Ghada El Serafy, Deltares (Netherlands) -

**Room: Inishturk**

**Assessment of impacts of shoreline change on the nearshore marine environment at Gazi bay, Kenya**

Pauline Mwangi, Chuka University / Kenya Marine and Fisheries Research Institute (Kenya)

**Synthesis of JERICO-RI coastal Pilot Supersite implementation: towards integrated pan-European multiplatform coastal observations**

Jukka Seppälä, Finnish Environment Institute (SYKE) (Finland)

**Integrating Coastal and Riverine Research – A Case Study for the German Bight and the Elbe River**

Holger Brix, Helmholtz-Zentrum Hereon (Germany)

**Climate-Proofing Coastal Cities: The SCORE Project's Triple-Win Approach**

Salem Gharbia, Atlantic Technological University

**High resolution coastal ocean model of Galway Bay, Ireland, supporting oyster aquaculture and native oyster restoration**

Diego Pereiro, Marine Institute (Ireland)

**New initiatives for multidisciplinary and integrated oceanography in the SE Bay of Biscay**

Anna Rubio, AZTI (Spain)

15:30 - 16:00 **Break**

16:00 - 17:30 **Parallel sessions**

**K: Evolution of ocean modelling** - Chair: Jun She, DMI (Denmark) - **Room: Lettermore**

**Automatized generation of user oriented ocean model configuration with varying resolution in Baltic Sea – North Sea**

Vilnis Frishfelds, Danish Meteorological Institute (Denmark)

**Ocean Model products for efficient monitoring of undersea cables**

Jens Murawski, Danish Meteorological Institut (Denmark)

**Evolution of the Copernicus Marine Service global ocean analysis and forecasting high-resolution system: potential benefit for a wide range of users**

Jean-Michel Lellouche, Mercator Ocean International

**The Syrian oil spill predictions in the Eastern Mediterranean using SAR images, CMEMS and CYCOFOS forecasts**

George Zodiatis, ORION Research (Cyprus)

**The MANIF TS project or how to assess acute risk by volatile, gaseous, and explosive Harmful Noxious Substances?**

Sebastien Legrand, Royal Belgian Institute of Natural Sciences (Belgium)

**Can biophysical models of small pelagic fish be used for fish stock management? An example of the European Iberian sardine**

Manuel Ruiz Villarreal, Instituto Español de Oceanografía, IEO-CSIC (Spain)

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**L: Ocean observing meeting societal challenges** - Chair: Lucie Cocquempot, Ifremer (France) - **Room: Inishmaan**

**The Northwest European Ocean Climatology Product (NEOClimate)**

Eoghan Daly, Marine Institute (Ireland)

**A biophysical model of the Celtic Sea for hindcasting and climate services**

Joe McGovern, Marine Institute (Ireland)

**Development of a storm surge forecasting model for the NW of Ireland and its validation and calibration using low-cost sensors**

Tasneem Ahmed, Atlantic Technological University (Ireland)

**Organic carbon dynamics and darkening of Norwegian coastal waters assessed from Ferrybox continuous measurements and earth observation satellites**

Therese Harvey, Norwegian Institute for Water Research (Norway)

**OLAMUR: offshore low-trophic aquaculture in multi-use scenario realisation**

Beatrice Maddalena Scotti, ETT S.p.A. / University of Genoa (Italy)

**Subsurface temperature anomaly observed by Argo floats during the 2022 Mediterranean Marine heatwave**

Annunziata Pirro, National Institute of Oceanography and Applied Geophysics (OGS) (Italy)

**M: Oceanographic services for ocean health** - Chair: Urmas Lips, TelTech (Estonia) - **Room: Inishturk**

**Improving ocean ecosystem predictions by coupled data assimilation of physical and biogeochemical observations**

Lars Nerger, Alfred Wegener Institute (Germany)

**MARBEFES – comprehensive approach to understanding reasons and sharing knowledge on biodiversity changes in European seas**

Tymon Zielinski, Institute of Oceanology Polish Academy of Sciences (IO PAN) (Poland)

**Resolving the bloom dynamics and ecological role of *Noctiluca scintillans* in the southern North Sea**

Katharina Kordubel, Helmholtz-Zentrum Hereon (Germany)

**Potential of CMEMS products for assessing eutrophication status of the Baltic Sea sub-basins**

Oliver Samlas, Tallinn University of Technology (Estonia)

**Multiscale harmonised automated observations of phytoplankton biomass, diversity and productivity dynamics in the English Channel and North Sea as part of the coastal Pilot Super Site approach (JERICO-RI)**

Luis Felipe Artigas, CNRS - ULCO LOG (France)

**Session chairs meeting** - **Room: Inishmaan**

**Conference reception and dinner**

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## Thursday 5 October (DRAFT 19 September 2023)

Room: Lettermore

09:00 - 10:50

### The future of operational oceanography

**Moderator:** Ghada El Serafy, Deltares (Netherlands)

09:00 - 09:20

**Keynote:** What's next for the operational oceanography - perspectives of the global and European communities - Toste Tahnua, EuroSea / GOOS / GEOMAR (Germany)

09:20 - 09:35

The future of cloud services to deliver FAIR & Open data and analytical services, instrumental for the Digital Twins of the Oceans - Dick Schaap, MARIS (Netherlands)

09:35 - 09:50

European contribution to the OneArgo array - Yann-Hervé DeRoeck, Euro-Argo ERIC

09:50 - 10:05

Towards a network of Operational Marine Biology - Jaume Piera, ICM-CSIC (Spain)

10:05 - 10:20

European maritime regions - knowledge transfer and international dimension - Julien Mader, EuroGOOS IBI ROOS / AZTI (Spain)

10:20 - 10:35

FAIR data - New European data policy - Thierry Carval, Ifremer (France)

10:35 - 10:50

European ocean science 2030 - ocean observing supporting future marine science needs - Fiona Grant, Marine Institute (Ireland)

10:50 - 11:10

Break

**Reports from parallel session chairs** - Moderator: Glenn Nolan, Marine Institute (Ireland)

11:10 - 11:45

Panel 1: Strategic developments and priorities - Vanessa Cardin (OGS, Italy), Holger Brix (Hereon, Germany), Carlos Fernandes (HI, Portugal), Urmas Lips (TelTech, Estonia)

11:45 - 12:20

Panel 2: Digital Twins, modelling and forecasting - Manuel Ruiz (IEO-CSIC, Spain), Sebastien Legrand (RBINS, Belgium), Pierre-Yves Le Traon (MOi), Jun She (DMI, Denmark), Ghada El Serafy (Deltares, Netherlands)

12:20 - 12:55

Panel 3: Enhancing capacity and co-design - Enrique Alvarez (MOi), Lucie Cocquempot (Ifremer, France), Henning Wehde (IMR, Norway), Dina Eparkhina (EuroGOOS)

13:00 - 14:00

Lunch

14:00 - 14:20

**Conference statement** - Inga Lips, Secretary General, EuroGOOS

14:20 - 14:40

**Early career presentation prizes** - Caroline Cusack, Marine Institute, (Ireland)

14:40 - 15:00

**Closing** - Henning Wehde, Chair, EuroGOOS

Side events