

EuroGOOS Annual General Assembly Meeting 21-23 May 2024

Lisbon, Portugal

Open / Formal session

Agenda Item 8. Activity updates from EuroGOOS ROOS

Document O8.1 ROOS reports





Reporting period: May 2023-April 2024

EuroGOOS body:

Full title: EuroGOOS Arctic Regional Ocean Observing SYstem

Co-Chair 1 (Name and affiliation)Anna Nikolopoulos, Norwegian Polar Institute

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Co-Chair 2 (Name and affiliation) Vidar S. Lien, Institute of Marine Research

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Current members, affiliation and country

Vidar S. Lien (Co-chair), Institute of Marine Research, Norway

Anna Nikolopolous (Co-chair), Norwegian Polar Institute, Norway

Steffen M. Olsen (Steering Group), Danish Meteorological Institute, Denmark

Manuel Bensi (Steering Group), National Institute of Oceanography and Applied Geophysics, Italy Agnieszka Beszczynska-Möller (Steering Group), Institute of Oceanology Polish Academy of Sciences, Poland

Jari Haapala, Finnish Meteorological Institute, Finland

Stein Sandven, Nansen Environmental and Remote Sensing Centre, Norway

Nicholas Roden, Norwegian Institute for Water Research, Norway

Ilker Fer, University of Bergen, Norway

Johan Söderkvist, Danish Defence Centre for Operational Oceanography, Denmark

Fanny Ardhuin, Ifremer, France

Alfatih Ali, Norwegian Meteorological Institute, Norway

Gilles Garric, Mercator Océan international, France

Gunnar Spreen, University of Bremen, Germany

Sólveig Rósa Ólafsdóttir, Marine and Freshwater Research Institute, Iceland

Frank Nilsen, University Centre in Svalbard, Norway

Patrick Gorringe, Swedish Meteorological and Hydrological Institute, Sweden

Website https://arctic.eurogoos.eu/

Objectives:

Integrate European oceanographic and sea ice monitoring activities in the Arctic

Foster development of automatic real-time observations

Promote and facilitate dissemination of data via the FAIR principles

Enhance the development of open source community oceanographic, wave and sea-ice models

Develop European capacity for the ocean and sea-ice monitoring

Relevance to the EuroGOOS Strategy:

Stimulate communities of practice:

- Enhance real-time delivery of observations to EMODnet, Copernicus Marine Service and other relevant services
- Develop best practices to measure and share data in the polar environment
- Co-develop products with users

- Active engagement in the EU Polar Cluster

Advocate for coordinated and integrated European ocean observing and operational oceanography:

- Host workshops and seminars relevant for Arctic OOS
- Partnerships with large EU projects
- Facilitate building of joint R&D projects
- Be active on providing feedback on upcoming calls

Strengthen and expand partnerships:

- Active in developing the design of a pan-Arctic ocean observing alliance (Arctic GRA)
- Participation in developing international initiatives like Atlantic Distributed Biological Observatory (DBO), Synoptic Arctic Survey (SAS), Arctic Regional Team of the OceanPrediction DCC, among others
- Expand activities to observe and model ocean physics-biogeochemistry interactions in the Arctic

Promote sustainability across the value chain of operational oceanography and ocean observing:

- Active in the development and implementation of operational services through operational centres like DMI, FMI, Met Norway, among others
- Cooperation and promotion of the Copernicus Arctic thematic hub

Mobilise the public on the importance of the ocean and oceanographic services:

- Provide information to the EuroGOOS office on the Arctic specific topics
- Ongoing communication and dissemination of Arctic ROOS activities in cooperation with the EuroGOOS Office.

Key achievements in the reporting period (May 2023-April 2024):

- Arctic ROOS has been centrally involved in the ongoing international initiative to co-design and develop a pan-Arctic ocean observing alliance (Arctic GRA). The Task Team leading the process is co-chaired by Jari Haapala (FMI), and was formally endorsed by Sustaining Arctic Observing Networks (SAON) in March 2024 [and the GOOS Steering Committee in April 2024]
- Ongoing close collaboration with the OceanPrediction DCC Arctic Regional Team, including participation in Steering Group meetings
- Online workshop 'Ocean and sea ice forecasting in the Arctic' (co-organised with OceanPrediction DCC)
- Engagement with DG DEFIS in relation to development of the Copernicus Polar programme
- Sea Ice Task Team established, led by Jari Haapala (FMI) to coordinate in-situ sea ice measurements and data

Bottlenecks or obstacles during the reporting period (May 2023-April 2024):

- No access to Russian Arctic currently possible, nor participation of Russian institutes in Arctic ROOS activities.
- All Arctic ROOS activities are currently on an in-kind basis.

Main priority areas (2024-2025):

- Continue ArcticGRA progress
- Continue OP DCC collaboration
- Sea Ice Task team
- Strengthen engagement and collaboration with other ocean observing systems and networks around the Arctic (e.g. US IOOS' Alaskan Ocean Observing System)

Other major activities (2024-2025):

- Proposal of session at EU Polar Science Week 2024, Copenhagen
- Contribution to COINS

Meetings during the reporting period (May 2023-April 2024):

- ArcticROOS General Assembly, 3-4. May 2023, Copenhagen, Denmark (hosted by DMI)
- Joint ArcticROOS OceanPrediction DCC Online Workshop: Ocean and sea-ice forecasting in the Arctic, 17-18. Jan, 2024-
- Arctic ROOS Community meeting at ASSW, 23 March 2024, Edinburgh, UK
- Co-designing a pan-Arctic ocean observing alliance, 28th March, Arctic Observing Summit, Edinburgh, UK

- Sea-Ice Task Team kick-off meeting
- Towards the integrated Ocean Science we need for the Arctic Ocean we want, satellite event at Ocean Decade Conference, Barcelona, 11th April
- Meeting between Copernicus Polar programme and Arctic ROOS Co-Chairs, January 2024
- Steering Group meetings, every 2nd month

Next planned meetings (2024-2025):

- ArcticROOS General Assembly, 6-8. May 2024, Bergen, Norway (hosted by IMR)
- Online workshop, autumn 2024?
- EU Polar Science Week session (proposed), Copenhagen

Links and synergies with other EuroGOOS ROOS/Working Groups/Task Teams:

- Arctic ROOS participation in the Science Advisory Working Group
- Participation in Fixed Platforms Task Team

Links and synergies with non-EuroGOOS initiatives:

- OP DCC, particularly the Arctic Regional Team
- Arctic GRA process
- Copernicus Polar
- pan-DBO and SAS programs



Reporting period: May 2023-April 2024

Full title: BOOS

Co-Chair 1 (Name and affiliation) Jun She, DMI

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Current members, affiliation and country

Thorger Brüning, BSH; Joanna Staneva, HEREON; Oliver Zielenski, IOW; Jun She, DMI; Marie Maar, AU; Carsten Hansen, GEOMETOC; Jaromir Jakacki, IOPAN; Tamara Zalewska, IMGW; Jordan Badur, UG; Inga Dailidiene, KLU; Viesturs Zandersons, LVGMC; Donatas Bagocius, AAA; Uldis Bethers, UL; Tiit Kutser, EMI; Taavi Liblik, TalTech; Laura Tuomi, FMI; Seppälä Jukka, SYKE; Patrick Gorringe, SMHI; Thomas Hammarklint, SMA; Tatjana Eramina, RSHU; Georgij Ivanov, NWAHEM (inactive); SPbSOI (inactive)

Website http://www.boos.org/

Objectives:

The objectives of BOOS are to:

- 1. Improve the safety and efficiency of maritime transport and marine operations.
- 2. Enable the sustainable exploitation and management of Baltic Sea resources (fisheries).
- 3. Support safe and efficient offshore energy activities.
- 4. Mitigate the effects of environmental hazards and pollution crisis.
- 5. Contribute to ocean climate variability studies and seasonal climate prediction.
- 6. Federate the resources and expertise of diverse institutes, agencies, and companies in the public and private sector.

Relevance to the EuroGOOS Strategy:

In the future years, BOOS members will continuously improve the quality and enlarge the scope of operational oceanographic service, ranging from operational monitoring and forecast service for the parblic safety and efficient sea-going operations, to operational marine services for climate change adaptation and ocean health services for a healthy and climate-resilient Blatic ecosystem. This is in consistency with EuroGOOS Strategy 2030.

Key achievements in the reporting period (May 2023-April 2024):

New modelling capacities:

- coupled NEMO(4.2)-FABM-ERGOM is functioning
- On-demand modelling: HBM (2way nested solution), SCHISM (FEM solution)
- Impact-modelling: OWF atmospheric wake effects, OWF marine wake effects, subgrid parameterization of large infrastructures (wind pile, seagrass) in ocean and wave models
- Seamless modelling: river-esturial-coastal-open sea models for synoptic-climate simulations have been developed

New assimilation capacities: sea ice-BGC profile-SSH assimilation using PDAF New products:

- 1n.m. resolution PHY-BGC reanalysis available

Digital Twin of Ocean: nature-based solution (seagrass), WiS, GUI.

New projects: FOCCUS (lead by HEREON), 4DBaltic (lead by IOPAN)....

New proposals: DTO40WE (SBEP), ...

Promote collaboration on key 0.0. themes

- Organize EuroSea side event on "Full value chain integeration for monitoring and assessment" by involving ROOSs, EuroGOOS, EMODnet, HELCOM, ICES WGs, EPAs etc.
- Initiating AI/ML ocean collaboration by establishing a BOOS AI/ML WG, organizing two joint workshops on AI/ML on oceanography between AI WG and CMWG
- Promoting NRT ship data delivery by organizing BOOS-EuroGO-SHIP joint workshop, sharing best practices
- Initiate a collaboration on investigating multi-dsciplinary impacts of Storm Babet via a special issue, to improve forecasting capacity, and understanding on impacts of storm on coastal erosion, flooding and socioeconomy.
- More BOOS river data are now available via EMODnet through BOOS-EMODnet cooperation
- Strenghened private-partnership (NGO, offshore energy) on observations, citizen observations

Bottlenecks or obstacles during the reporting period (May 2023-April 2024):

Some activities, e.g., transformation and implementation of BOOS new website and NRT ship data delivery have not been progreesed as expected. The active level of BOOS ambassadors has been rather low.

Main priority areas (2024-2025):

Develop on-demand modelling

Develop data-driven (AI/ML) models for downscaling, data-simulation fusion, forecasting technologies Develop impact-resolving modelling

Develop capacities on sediment transport, coastal erosion modelling

Assimilating more data to improve digital representation of Baltic Sea

Contribute to UN Ocean decade

Other major activities (2024-2025):

All BOOS WG activities

Meetings during the reporting period (May 2023-April 2024):

BOOS monthly STG meeting, every 2nd Friday per month

BOOS workshop on sea level forecast using AI/ML, 1 March 2024

Workshop on the Baltic Sea glider operations, with a link to the Black Sea, 29 Feb. 2024

EuroGOOS-BOOS collaboration meeting, 30 Jan. 2024

BOOS-EuroGOSHIP joint workshop on NRT ship data delivery, 12 Jan. 2024

BOOS AI WG - CM WG joint workshop on Machine Learning in coastal zone, 17 Nov. 2023.

EuroSea side event on "NRT ship data delivery and environment assessment - full value chain integration", Galway, 5 October 2023

EuroGOOS BOOS website design meeting, 26 May 2023

BOOS Working Group collaboration meeting, 9 May 2023

BOOS Scientific Workshop 2023, 10 May 2023

BOOS Annual Meeting 2023, 11 May 2023

Next planned meetings (2024-2025):

BOOS Working Group collaboration meeting 2024, 6 May 2024

BOOS Scientific Workshop 2024, 7 May 2024

BOOS Annual Meeting 2024, 8 May 2024

BOOS AI WG - RS WG joint workshop, date TBD

Links and synergies with other EuroGOOS ROOS/Working Groups/Task Teams:

BOOS-NOOS: Joint SBEP proposal DTO40WE was submitted.

BOOS-SAWG: best practice of BOOS coastal-estuarial modelling, on-demand modelling, impact-resolving modelling, end2end modelling and marine plastics have contributed to SAWG research priority identification.

BOOS NRT ship data delivery may contribute to DAMWG. BOOS partners are actively involved in Tide

Gauge TT, Glider TT, Argo TT, ferrybox TT, fixed platform TT.

Links and synergies with non-EuroGOOS initiatives:

BOOS-CMEMS: BOOS is benefited from CMEMS R&D in BAL MFC (DA, Cal/Val, MYP, MME and NEMO-WAM-ERGOM modelling), Sea ice TAC, SST TAC; BOOS partners contribute to 3 Service Evolution projects on coastal forecasting systems

BOOS-EMODnet: play a key role in EMODnet-Physics, cooperation on riverine data

BOOS-HELCOM: is HELCOM observer



Reporting period: May 2023-April 2024

EuroGOOS body:	ROOS

Full title: IBIROOS-EuroGOOS Iberia-Biscay-Ireland Operational

Oceanographic System

Co-Chair 1 (Name and affiliation) Manuel Ruiz Villarreal, IEO-CSIC

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Co-Chair 2 (Name and affiliation) Luisa Lamas, Instituto Hidrográfico, IH

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Current members, affiliation and country

Portugal

- Instituto Hidrográfico
- IPMA
- Instituto Superior Técnico, Ulisboa

Spain

- Instituto Español de Oceanografía, IEO-CSIC
- Puertos del Estado
- AZTI
- MeteoGalicia
- INTECMAR

France

- Ifremer
- SHOM
- Mercator-Ocean

Ireland

- Marine Institute

UK

- NOC
- MetOffice

Several observers not yet joined

Website https://ibiroos.eurogoos.eu/

Objectives:

The goal of IBIROOS is to set up an operational oceanography organisation operated by participating partners from the 5 countries bordering the Iberian-Biscay-Irish maritime area (France, Ireland, Portugal, Spain and UK), collaborating to develop and implement ocean observing systems for the IBIROOS area, with delivery of real time operational data products and services.

Relevance to the EuroGOOS Strategy:

IBIROOS showcases the impact of regional cooperation in maintenance and development of sustained observing systems and operational products in the European Atlantic Area

Key achievements in the reporting period (May 2023-April 2024):

Successful finalization in 2023 of INTERREG projects for regional cooperation in development and demonstration of marine services and enhancement of coastal observing systems and modelling systems.

IBIROOS activity focused on products: some of them consolidated or classical (HABs, oil spill, chemicals, search and rescue...), some of them emergent (marine litter, renewable energies, offshore aquaculture, marine spatial planning, support to MFSD implementation in offshore areas)

Bottlenecks or obstacles during the reporting period (May 2023-April 2024):

Concentration on the capitalisation of results of several INTERREG projects that ended in 2023. This has delayed the update of the webpage and the MoU.

IBIROOS consortium is seeking suitable projects for keeping momentum and for helping financing in person meeting.

Main priority areas (2024-2025):

- Updated MoU and distribution to potential new partners
- Improved contents in IBIROOS web site
- to keep IBIROOS as a central actor in different European initiatives where the regional focus is needed, respond to different calls in a coordinated way as a community, and create synergies and collaborations at the cross-boundary and regional levels, complementary to national level.

Meetings during the reporting period (May 2023-April 2024):

- 14-16 June 2023, Lisbon, IBIROOS Annual meeting together with MyCOAST meeting

Next planned meetings (2024-2025):

- Online meeting in May 2023 to catch up and discuss the opportunities of an in person IBIROOS meeting in autumn 2024

Links and synergies with other EuroGOOS ROOS/Working Groups/Task Teams:

- IBIROOS members active in several WGs and Tts. Still missing an efficient way to report activity of TT and WG to IBIROOS
- IBIROOS plans to present advances in the MONGOOS annual meeting in October 2024

Links and synergies with non-EuroGOOS initiatives:

Interreg transnational cooperation projects (Spain-Portugal, Spain-France, UK-Ireland, France-UK...)



Reporting period: May 2023-April 2024

EuroGOOS body:	ROOS
•	RUUS

Full title: Mediterranean Oceanographic Network for Ocean Observing

System - OGS

Co-Chair 1 (Name and affiliation) Vanessa Cardin - OGS

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Co-Chair 2 (Name and affiliation) Karim Hilmi

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Current members, affiliation and country

Members of MonGOOS are 37 from 12 countries:

Houssine Nibani, AGIR, Marocco

Andrea Valentini, Arpa Emilia-Romagna, Italy

Francisco Campuzano, +Atlantic CoLAB, Portugal

Daniela Turk, ARSO, Slovenia

Yannis N. Krestenitis, Aristotle University Thessaloniki - AUTH, Greece

Emanuela Clementi, Centro euro-Mediterraneo sui Cambiamenti Climatici - CMCC, Italy

Laurent Coppola, Centre National de la Recherche Scientifique - CNRS, France

Yuri Cotroneo, CONISMA, Italy

Marco Guerrini, DHI – Italia Srl, Italia

Dijana Klaric, DHMZ, Croatia

Georgios Sylaios, DUTH, Greece

Ernesto Napolitano, ENEA, Italy

Antonio Novellino, ETT Solutions, Italy

Niko Kampanis & Katerina Spanoudaki, FORTH-IACM, Greece

Leonidas Perivoliotis, Helenic Center for Marine Research - HCMR, Greece

Rosa Balbin, IEO - CSIC, Spain

Pierre GARREAU, Institut Francais de Recherche pour l'Exploitation de la Mer - IFREMER, France

Claudia Fratianni, Istituto Nazione di Vulcanologia e Geofisica - INGV, Italy

Hrvoje Mihanovic, Institute of Oceanography and Fisheries - IOF, Croatia

Ron Goldman & Barak Herut, Israel Oceanographic & Limnological Research - IOLR, Israel

Ivica Vilibic, Institute Ruder Bošković, Croatia

Christian Ferrarini & Angela Pomaro, Istituto Di Scienze Marine - ISMAR - CNR, Italy

Sara Morucci, Istituto Superiore per la Protezione e la Ricerca - ISPRA, Italy

Roberto Sorgente, Istituto per lo studio degli impatti Antropici e Sostenibilità in ambiente marino – CNR - IAS. Italy

Carlo Brandini, LAMMA Consortium, Italy

Danijela Joksimovic, Institute of Marine Biology, Montenegro

Enrique Alvarez, MERCATOR International

Martin Vodopivec, National Institute of Biology - NIB, Slovenia

Vanessa Cardin, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS, Italy

George Zodiatis, ORION, Cyprus

Susana Perez & Begonia Perez, Puertos del Estado – PdE, Spain

Franck Dumas, SHOM - French Naval Hydrographic and Oceanographic Service, France

Joaquin Tintoré & Emma Reyes, SOCIB - Balearic Islands Coastal Observing and Forecasting System, Spain

Paolo Oddo, Università di Bologna - UNIBO, Italy

Agustin Sanchez Arcilla, Universitat Politècnica de Catalunya - UPC, Spain

Hinde Cherkaoui Dekkaki, Université Abdelmalek Essaadi, Tetouan - UAE, Morocco

Adam Gauci, University of Malta, Malta

Website mongoos.eu

Objectives:

MONGOOS shall engage in activities related to the production and use of operational oceanography services in furtherance of four principal objectives:

Improved Fitness for Purpose. Continuously advance the scientific understanding and technological development upon which the Services are based.

Greater Awareness. Promote the visibility and recognition of the Services with governmental agencies and private companies, encourage their integration at national, regional, European and global levels. Increased Downstreaming. Enhance the usability of the Services and their usefulness for policy implementation, societal needs, and science.

Improved Capacity. Support the planning and implementation of international initiatives involving operational oceanography and promote the participation of non-EU Mediterranean countries in producing the Services.

A detailed description of MONGOOS objectives and activities can be found on the MoA MonGOOS will elaborate a continuous working framework with EuroGOOS and GOOS Africa in order to define common roles and activities in the Mediterranean Sea, and foster collaboration with Black Sea GOOS and global ocean GOOS initiatives.

Relevance to the EuroGOOS Strategy:

MonGOOS represents the ROOS of EuroGOOS in the Mediterranean Sea by collaborating in the consolidation and further development of operational oceanography in the Mediterranean Sea and in the link between Europe and African countries.

Key achievements in the reporting period (May 2023-April 2024):

- Capacity building Promoting Marine Science
- o First meeting in Africa (Morocco November 14-16 '23) since the founding of MonGOOS
- o Training on data assimilation in marine biogeochemistry for early career students in close cooperation with the EU SEAMLESS project
- o Establishment of a Tuna observatory for the Mediterranean Sea
- Collaborate & Promote visibility
- o Joint MonGOOS & OceanPrediction-DCC Mediterranean and Black Sea Regional Team Workshop on Ocean forecasting and its applications
- o Overview of observation capabilities in the Med
- o Collaboration Agreement with OceanPrediction DCC for the Mediterranean and Black Sea Regional Team
- Increased Downstreaming Services
- o Support for a large-scale civil protection exercise to combat oil spills in the Apulia region (Italy)
- o In line with a maritime decarbonization strategy: release of a new version of VISIR-2
- o New operational numerical forecasting system for pollution risk management in the Strait of Bonifacio, the Gulf of Asinara and the port of Olbia
- New Modelling WG leader Christian Ferrarini (ISMAR) who will joint Emanuela -Clementi (CMCC)
- Contribution to the preparation of ATLAS together with MERCATOR
- Participation to the survey on historical in situ metadata information for the EEA-COINS-SC3 for the Mediterranean Sea

Bottlenecks or obstacles during the reporting period (May 2023-April 2024):

- More partners contribution is needed
- Communication between partners should increase

- Lack of projects that could finance Mediterranean activities
- link with neighbouring GOOS Regions: Black Sea GOOS and GOOS Africa, for sharing activities information is missing link with neighbouring GOOS Regions: Black Sea GOOS and GOOS Africa, for sharing activities information is missing

Main priority areas (2024-2025):

- Update the MonGOOS Strategy Plan
- Link MONGOOS strategies and objectives with Mediterranean Fisheries Management Organizations
- ICCAT and FAO connections for Climate change and fisheries (i.e. MedTunaHabitatObs)
- FAO connection: Participation in the GFCM network of experts on climate change
- Providing linkages to existing EU projects and programmes
- · Sustainable Observation: Existing networks mainly rely on national and short term funding
- Expanding BGC Measurements Dashboard update
- Improve best practices (data sharing, interoperability, etc.) which is essential for model purpose
- Finalize the ATLAS Survey on the forecasting modeling systems in the Mediterranean Sea
- Write a white paper on the forecasting modeling capabilities in the Mediterranean Sea
- Election of new chairs

Other major activities (2024-2025):

- Preparation of a joint paper describing the modeling capabilities of MonGOOS (Mediterranean)
- Continuously advance the scientific understanding and technological systems upon which the operational oceanographic Services are based
- Promote the visibility and recognition of the Services with governmental agencies and private companies, encourage their exploitation and integration at national, regional, European and global levels.
- Enhance the usability of the Services and their usefulness for policy implementation, societal needs, blue jobs and science.
- Support the planning and implementation of international initiatives involving operational oceanography and promote the participation of non-EU Mediterranean countries

Meetings during the reporting period (May 2023-April 2024):

- First Regional Team Meeting in the framework of the DCC, June 2023
- Update of the Copernicus Marine requirements for in-Situ Observing System- 14-15 September 2023
- EuroGOOS Conference, Galway 3-5 October 2023
- MonGOOS Workshop and GA, Tangier, 22 24 November 2023
- Green Transition in the Mediterranean: from decisions to actions 3 -5 December 2023
- MedTHObs (Mediterranean Thuna Observatory), KoM meeting 29 January 2024
- FAO-GFCM Fish Forum, Antalya Turkey, 3 5 February 2024
- Participation to dsifferent meeting in the the context of the OceanPrediction program as Mediterranean and Black Sea representative
- Different Chairs and Working Group leaders meetings

Next planned meetings (2024-2025):

- Blue Economy-The key towards Mediterranean regional Sustainability, Athens Greece, 7 June 2024
- 2nd EuroGO-SHIP Black Sea workshop, Venice Italy, 25 june 2024
- MonGOOS Annual meeting and Workshop workshop "Boost the understanding of the Mediterranean for adaptation to climate change and extreme events". Malaga, Spain, 1-3 October 2024

Links and synergies with other EuroGOOS ROOS/Working Groups/Task Teams:

- Participation to Science Working Group
- EuroGOOS Fixed Platform Task team
- EuroGOOS Coastal Working Group

Links and synergies with non-EuroGOOS initiatives:

- Ocean Predict DCC as part of the Mediterranean and Black Sea Regional Team
- ICCAT connections for Climate change and fisheries in the Med
- FAO connections for Climate change and fisheries in the Med