# Navigating Success

# Eurofleets An alliance of European marine research infrastructure

WW.eurofleets.eu

An alliance of European marine research infrastructure to meet the evolving needs of the research and industrial communities

# **Exploring Oceans Together:** Unlocking European Research Vessels through Transnational Access Funding

### **Evolution of EUROFLEETS**

EUROFLEETS	2009-2013	18 European research vessels (5 global, 13 regional)	176 ship-time funded days
EUROFLEETS2	2013-2017	22 European research vessels (8 global, 14 regional)	233 ship-time funded days
EUROFLEETS+	2019-2023	27 European and international research vessels	268 ship-time funded day



The Eurofleets+ project facilitated open access to an integrated and advanced research vessel fleet, designed to meet the evolving and challenging needs of the user community:

## THREE ACCESS PROGRAMS WERE LAUNCHED IN EUROFLEETS+

- 1) Ship-time and Marine Equipment Application (SEA Programme) for access to vessels and marine equipment through a full competitive ship-time application process for which there was two calls, to access Ocean and Regional Vessels.
- 2) Co-PI programme specifically aimed at early career researchers to implement their own research together with experienced scientists during Eurofleets+ scheduled cruises.
- **3) R**emote **T**ransnational **A**ccess (**R**TA programme) to provide researchers with remote access to samples or data from a Eurofleets + fleet vessel.

#### STREAMLINING SUCCESS: The Proven Model of EUROFLEETS' Integrated Proposal Evaluation System



# **Nurturing the Future of Marine Science:** Successfully Training the Next Generation of Marine Scientists

The Eurofleets+ Education and Training program offered training activities to early career technicians, marine scientists and (future) Research Infrastructure managers and contributed towards the objective of Building a Career in Blue Growth.

- Six Floating Universities: A series of ship-based training initiatives in marine-related sciences areas such as scientific instrumentation, the collection, and processing of samples, data analysis, quality control, and processing.
- Seven Blue Skill LABS: dedicated training courses to enable the next generation of marine researchers to fully utilize the possibilities offered by scientific instrumentation onboard European research vessels
- Marine Internship Program: offered seagoing placements for students or technicians of marine related sciences and technologies on the Eurofleets+ partner research vessels, utilising spare berths.



The project's outstanding efforts have resulted in providing training opportunities to 86 individuals from 28 different nationalities, fostering a diverse and thriving community of marine scientists and researchers. Together, we strive to build a brighter and sustainable future in the realm of marine exploration and innovation.



# Unveiling the Eurofleets+ Ocean Classroom Portal

The Eurofleets+ Ocean Classroom Portal is an enriching online ocean literacy resource developed and launched in May 2020. This dynamic platform hosts a range of innovative multimedia and digital resources specially curated for training activities.

Experience the interactive and engaging content by visiting our integrated project website at:

https://www.eurofleets.eu/classroom

### **Enhancing Capacity through On–Board Collaboration:** Eurofleets+' Impact on Marine Science

Eurofleets+' Calls attracted great interest from the scientific community, resulting in 69 proposals involving 473 partners from 64 nationalities

THE 28 FUNDED SCIENTIFIC CAMPAIGNS GATHERED

- 3 to 4 nationalities per cruise, 33 nationalities in total
- 315 participants
- Embarked scientific parties included 144 early career scientists and included 9 early career PIs

#### MAIN SCIENTIFIC DISCIPLINES









### **Connecting with the World:** Live Ship-to-Shore Broadcasts

Eurofleets+ embraced the power of live ship-to-shore broadcasts to engage with a global audience and share the wonders of marine research. Our interactive sessions facilitated direct communication between scientists on board and viewers from around the world, fostering knowledge exchange and sparking curiosity.

# **28 Funded Scientific Campaigns:** Unleashing Innovation During 268 Days at Sea with Eurofleets+





Principal Vessel/ Funded Investigator **Cruise Name Scientific Disciplines Geographical Area** Infrastructure Days Country **UGOT Hugin AUV** Focus-AUV 29 Geology, Marine Biology, Sedimentology Kaikōura Canyon, New Zealand New Zealand Climate dynamics, Geophysics, Sedimentology, NE Atlantic (S Rockall Plateau; Eriador Seamount; PORO-CLIM 13 United Kingdom Celtic Explorer Training Porcupine Basin & Ridge; East Thulean Rise) Biological Oceanography, Geology, New Mid-Atlantic Ridge inside the Portuguese EEZ of Pelagia iMAR 17 Portugal technologies the Azores Bredefjord, Greenland. Easily accessible (embark/ United States of DANA **GSHARK** Marine Biology 7 disembark) from Narsaq, Greenland America GO Sars\_ROV BENCHMARK 10 Marine Biology, Physical Oceanography Denmark Strait, between 64 and 68.5°N Iceland Aegir Tubitak Marmara PHYCOB **Biological Oceanography** Western Black Sea Germany 7 Eastern Mediterranean, SW Aegean Sea, Myrtoon Aegeo **MYRTOON** 10 **Climate dynamics** Germany Basin GRASSMAP SOCIB 7 New technologies, Marine Biology Mallorca and Cabrera islands United Kingdom United States of Pelagia CALYPSO 17 Physical Oceanography Alboran or Balearic sea America Aranda CABLE 8 **Biological Oceanography** Gulf of Finland, Baltic Proper Estonia DOMUSe (Co-PI **Gotland Deep Baltic Sea** Aranda 1 Biogeochemistry, biological oceanography Poland on CABLE) Belgica\_AUV Geology Geophysics Physical Oceanography Sedimentology Ceuta Canyon and adjacent areas (West Moroccan GRACE 11 Spain Mediterranean margin) Barabas Belgica\_AUV SEAQUAKE (Co-PI Geology, Geophysics, New Technologies, Ceuta Canyon and adjacent areas (West Moroccan 3 Spain Barabas on GRACE) Sedimentology Mediterranean margin) Algero-Provencal Basin, Sicily Channel, Tyrrhenian Sea, Ligurian Sea Belgica TAIPro2022 10 Physical Oceanography Italy IsoMed (RTA **Biological Oceanography** Belgica Tyrrhenian Sea RTA Italy TAIPro2022) Marine Biology Arni Friedrikson SENERGY North Western Iceland United Kingdom 8 Godhabfjord, Ameralik (fjord and the shelf area Biogeochemistry, Climate dynamics, New Sanna IOPD 12 Belgium technologies, Marine Biology Polar Biology, Training connecting these fjords in Nuuk, Greenland) Biological Oceanography, Biogeochemistry FIGURE Gulf Stream (NW Atlantic) Atlantic Explorer 8 France Microbiology, Physical Oceanography CARING (Co-PI on Biological Oceanography, Biogeochemistry, Atlantic Explorer Gulf Stream (NW Atlantic) 2 France Microbiology, Physical Oceanography FIGURE) Biogeochemistry, Marine Chemistry, Physical Ramon Margalef CARBO-ACID 10 Iberian margin Portugal Oceanography Biological Oceanography, Biogeochemistry, Disco Bay, West Greenland coastline Sanna **GLICE** ]4 Germany Physical Oceanography Sarmiento de SINES Biogeochemistry Northeast Atlantic, Western Iberian Margin Q Portugal Gamboa Geophysics Hikurangi Margin, North Island, New Zealand HYDEE-OBS **RV** Tangaroa 8 Germany Geophysics **RV** Tangaroa VISIT 12 East coast of North Island, New Zealand United Kingdom Geology New technologies, Marine Biology, Physical RV Pelagia\_ROV MAX Rover OASIS SE Alboran Sea (W Mediterranean) 12 Spain Oceanography Biological Oceanography, Pollutants or aerosols, **RV Pelagia\_ROV** UNSEEN (Co-PI on SE Alboran Sea (W Mediterranean) 1 Italy Sedimentology MAX Rover OASIS cruise) **RV Laura Bassi** POSEIDON Geophysics Ionian Islands 10 Spain RV Aegeo\_ROV Max ERODOTO Deep Sea Research, Geology, Geophysics 12 Squillace Canyon, Italy Italy Rover\_AUV Barabas

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## **Advancing Marine Research Through Eurofleets+ Joint Activities**

Eurofleets+ is at the forefront of advancing marine research through a series of dynamic joint activities, driving innovation and collaboration in the scientific community. Our key endeavors include:

#### 1) Advancing Data Management Processes:

Implementing an active open data management strategy and adopting SeaDataNet standards, we ensure seamless capture, transmission, and publication of crucial information about cruises, data collection, and involved researchers. The EVIOR portal, a vital part of the Eurofleets+ website, along with larger community SeaDataNet and EMODnet portals, facilitate comprehensive data dissemination. Enhancing shipboard data management systems, realtime data transfer, and the EVIOR portal's functionalities empower researchers with unique cloud computing and analytical technologies.

#### 2) Investigating Deep Sea Operations Equipment and Rigs:

The exploration of the deep sea is an exciting frontier in marine research, and Eurofleets+ takes on the challenge by investigating and developing equipment and rigs for deep sea operations from vessels. Ensuring interoperability of rigs to deploy different equipment, facilitating sharing and installation of equipment across ships, and enabling installation of mobile equipment are all crucial components of our efforts.

#### 3) Developing Intelligent Exploration and Mapping Strategies:

Eurofleets+ delves into innovative methods and strategies for intelligent exploration, mapping, and control through cooperative navigation. We focus on the development of cutting-edge technologies for Autonomous Surface Vehicles (AUVs) and Autonomous Underwater Vehicles (ASVs). By validating these innovations before field testing during operational cruises, we ensure efficient and effective exploration and mapping efforts.

Through these joint activities, Eurofleets+ propels marine research to new heights, driving progress and discoveries that contribute to the sustainable development of our oceanic realm.



# **Explore the EVIOR Platform:** Your Gateway to Marine Research Insights



The EVIOR platform stands as a pioneering hub for marine research, continuously evolving to provide up-to-date and comprehensive information about research vessels (RV), cruise programs, completed expeditions, and cruise tracks. By granting e-access to underway and operational data from sailing research vessels, Eurofleets+ ensures transparency and real-time insights of Eurofleets+ funded cruises.

#### Key Features of the EVIOR Platform:

- Dynamic Information Repository: Discover a wealth of knowledge about research vessels, cruise programs, and completed expeditions, all conveniently accessible in one centralized platform.
- Real-time Operational Data: Gain a firsthand understanding of research vessels' underway operations and obtain valuable insights from sailing research expeditions, where possible.
- Public Access to Research Data Sets: As research teams collect and process data during Eurofleets+ funded cruises, the platform ensures later discovery and public access to these invaluable research datasets, fostering open collaboration and scientific advancements.

#### Visit the platform at: https://evior.eurofleets.eu/

### The Future of Eurofleets+: Navigating New Horizons

Eurofleets' remarkable impact in marine research continues to resonate, igniting a passion for exploration and discovery. Building upon the achievements of Eurofleets projects, the consortium envisions a new era of sustainable collaboration beyond the project's lifetime. The ambitious goal is to establish EUROFLEETS Research Infrastructure, an AISBL (Association Internationale Sans But Lucratif), to formalize and enhance the coordination and utilization of European–funded research vessel activities on a pan–European level.

**EUROFLEETS RI** will serve as the gateway to world-class marine infrastructures, facilitating excellent research for the benefit of healthy oceans and fostering cooperation in technical development and knowledge sharing in RV operations and management. A roadmap will guide the continued integration and advancement of the European RV fleet.

The exciting design phase of EUROFLEETS RI will continue after the EUROFLEETS+ project (October 2023), setting its sights on operational readiness and launching the first EUROFLEETS RI Transnational Access call program by January 2025.

**EUROFLEETS RI** is steadfast in its commitment to providing essential Transnational Access programs, extending access to its members' infrastructures for researchers and scientists into the future through funding initiatives like Horizon Europe. Collaborating with the European Commission, EUROFLEETS RI seeks to develop long-term sustainable funding support programs, ensuring planned access to our precious seas and oceans, encompassing access, training, and data provision. Together, we embark on a transformative journey, unlocking the potential of marine research and embracing the boundless opportunities that lie ahead in the pursuit of knowledge and a thriving Blue Planet.



PHOTO CREDITS: VLIZ - IODP campaign (1,6,8) | CABLE campaign (2,4) | M. Fontela - Sines campaign (3,5,11) | L. Matos - CARBO-ACID campaign (7,9) | S. Johnston - Calypso campaign (10)