

REPORT

INTRODUCTION TO EUROCEAN

The European broker for Ocean Science and Technology

EurOcean is an independent, non-profit, scientific organization with the mission to support advances in European marine science and technology, by fostering information exchange, interaction and innovation among its network members, the ocean community and broader society.

Founded in 2002, through the collaboration of the Portuguese Foundation for Science and Technology (FCT), and the French Research Institute for Exploitation of the Sea (IFREMER), EurOcean has a Europe-wide network of 19 organisations, accounting for 13 full members and 8 cooperating members. Full members are European marine research, innovation and entrepreneurship, funding and outreach organisations. Cooperating members are organisations with a regional or global reach involved in activities complementary to those of EurOcean.



In 2023, EurOcean made significant contributions to the UN Decade of Ocean Science, including the development and support of impactful political declarations. By expanding its network and ensuring sustainability, EurOcean remains the go-to network for those committed to making a difference in the European science and technology landscape. Contributing to the UN Decade of Ocean Science is essential for addressing critical global challenges such as climate change and biodiversity loss, while also supporting sustainable economic growth, food security, and fostering international cooperation. The Decade enhances scientific research. innovation, and global data sharing, which are crucial for informed decision-making. It also raises public awareness about the ocean's vital role, ensuring that future generations inherit a healthy and resilient marine environment. By aligning global efforts, the Decade helps create a sustainable future where the ocean continues to sustain life on Earth. Political declarations co-signed with relevant stakeholders are crucial for advancing the objectives of the Decade. These declarations demonstrate a unified commitment and consensus on key

CARLOS GARCIA-SOTO President

ocean issues, helping to align policies and actions across countries and sectors. By bringing together governmental bodies, international organizations, and scientific communities, the network declarations amplify individual efforts, promote global cooperation, and mobilize the resources needed for ocean sustainability. They also provide a strong political mandate to prioritize ocean science in decision-making processes, ensuring that the Decade's goals are effectively integrated into national and international agendas. For a non-profit network of research organizations dedicated to advancing European ocean science and technology, expanding the network and increasing sustainability are vital for enhancing collaboration, mobilizing resources, and broadening its reach and influence. A larger, more sustainable network can drive greater impact, foster international cooperation, and ensure resilience in achieving long-term ocean sustainability goals. Additionally, growth and sustainability will enable our network to build capacity, adapt to challenges, and maintain continuity in its mission.



In 2023, two distinguished organisations joined our Our Research Infrastructure Database (RID) has vibrant network: the Latvian Institute of Aquatic become more accessible to third parties, thanks to Ecology and the Association of European Fisheries the new API developed. This advancement promises and Aquaculture Research Organizations. to improve access to our unparalleled database of The addition of these outstanding members has research infrastructures, reducing duplication and significantly expanded EurOcean's geographic and inconsistencies within the scientific community. thematic influence, enhancing our relevance. Reflecting our commitment to FAIR and Open Data The inaugural Mário Ruivo Memorial Lecture, in ocean science and technology, EurOcean has organised in collaboration with the IOC/UNESCO also joined the Decade Coordination Office Ocean and the Government of Portugal, was a resounding Data Sharing group as a supporting member. success, attracting applications from around the Once again, we concluded the year with a positive globe. This initiative honors Mário Ruivo's lifelong net profit. EurOcean's financial sustainability dedication to ocean science and sustainability, continues to grow, and our investment in our mission while also encouraging and recognizing the efforts has exceeded previous years. We have surpassed of early career ocean professionals. our strategic objectives in this domain, achieving This year, EurOcean has also made a strong impact unprecedented levels of success. on the political landscape. Alongside our members, EurOcean remains a serious contributor to the we issued the Declaration of Intent on Climate United Nations' 2030 Agenda, particularly to Change and Ocean Science and Technology at Sustainable Development Goal 14. We are also actively supporting the goals of the UN Decade of COP 28. We co-organized, with the European Commission, the event celebrating the 10th Ocean Science for Sustainable Development, where anniversary of the Galway Declaration, and were EurOcean proudly stands as one of the European proud co-signatories of the Vigo Declaration. Decade Implementing Partners.

SÉRGIO BRYTON

Executive Director

ATAGLANCE

The Centre

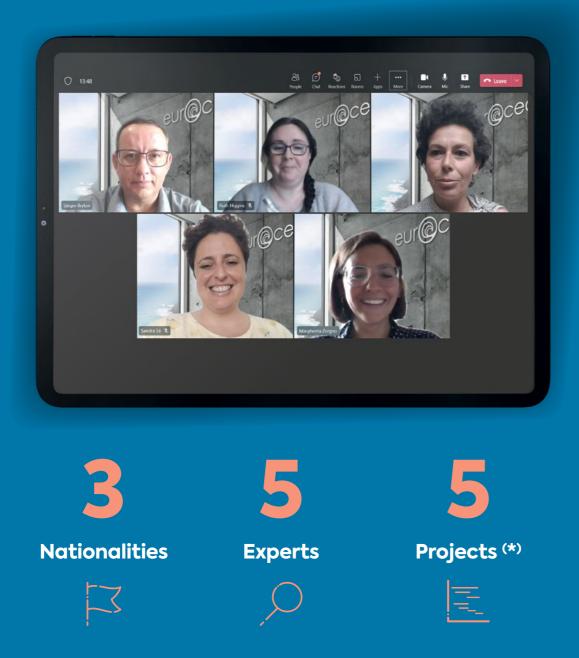
Membership

Full Members

Cooperating Members



THE CENTRE



(*) Marine science and technology research projects in 2023, as a partner

MAIN AREAS OF EXPERTISE



(), **f** Science

Communication



Costal Zone Management

Research Expeditions



Environmental Sciences

Marine and Naval Radioelectronics



Funding Mechanisms

Strategy and **Decision Support**







Nautical Engineering

Information **Technologies**





Project Management



Geology



Naval Military

Sciences

Proposal Writing



Marine Biology



Research Funds







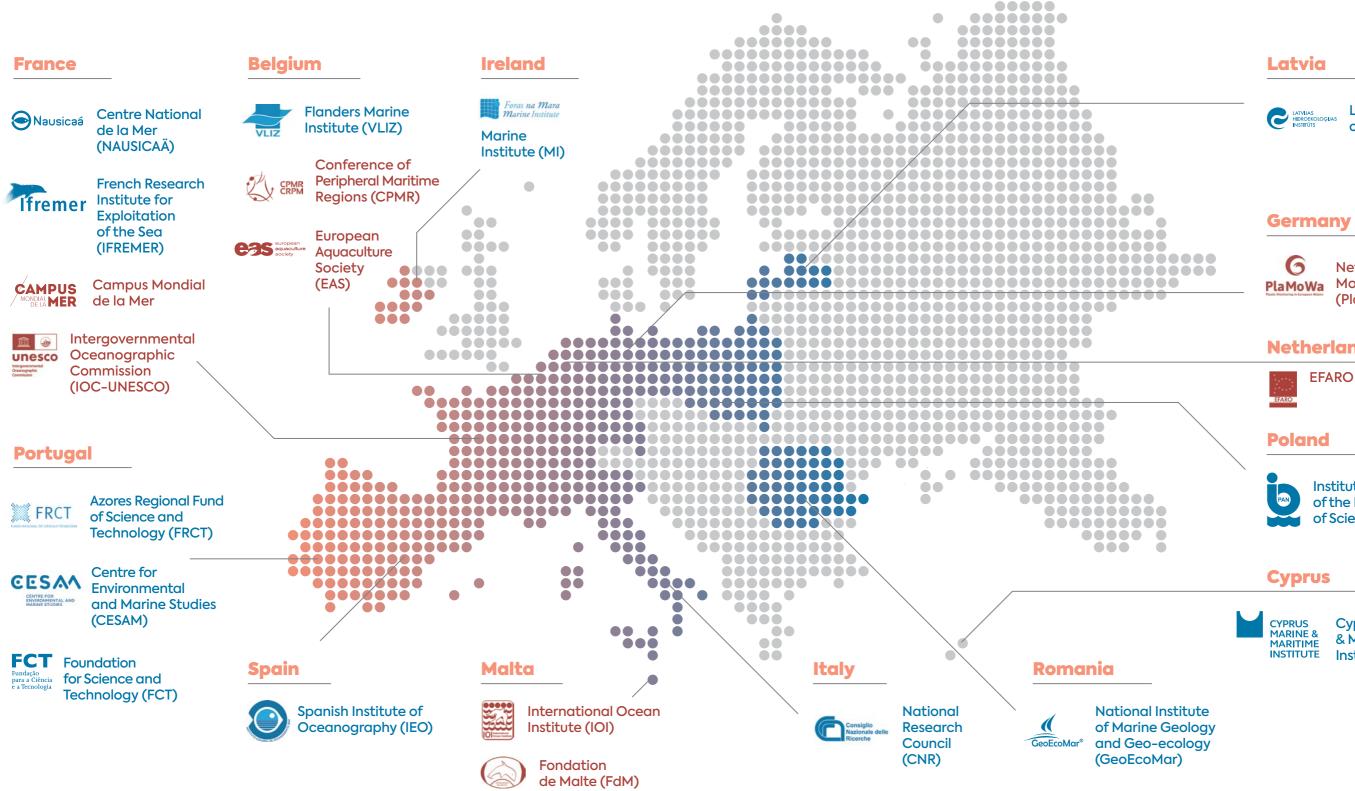
Ocean Literacy



Organisational Management

2023 Annual Report 9

MEMBERSHIP





ÖÖ







Latvian Institute of Aquatic Ecology

Germany



Network for Plastics Monitoring in Waters (PlaMoWa)

Netherlands





Institute of Oceanology of the Polish Academy of Sciences (IOPAN)

Cyprus

Cyprus Marine & Maritime Institute



(1) Marine science and technology research infrastructures owned or supported.

(2) Researchers employed or supported involved in marine science and technology initiatives.

(3) Marine science and technology research projects in the last 5 years (2015 - 2020) as partner or funder.

MAIN AREAS OF EXPERTISE



Blue Biotechnology



Artificial Intelligence



Tsunami Prediction



Circular Economy



Vessel Energy Efficiency



Sensors and Sensing



Autonomous Vehicles



Ecological Risk Assessment



Big Data



Youth Engagement



Services





Biodiversity and History and Cultural Heritage in **Environmental Stressors Coastal and Maritime Regions**





Blue Economy

Fisheries Sustainability and Seafood Value Chain





Marine Renewable Energy





Alternative Resources



Acoustic Telemetry and Animal Tracking

Ocean

Monitoring



Underwater Munition



Marine Spatial Planning



Aquaculture













Research Vessels and Observatories

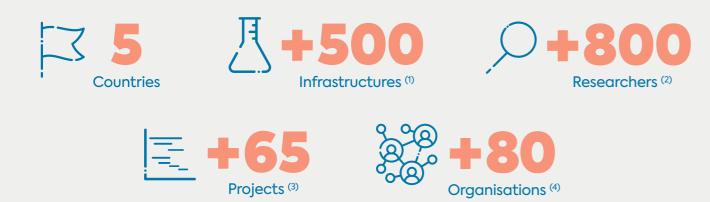


Human and **Ocean Health**



Multi-uses of the Sea

COOPERATING MEMBERS



Marine Energy

Submarine

Warfare

Maritime

Security



Deep-ocean Exploration



Ocean Governance



Marine Applied Communication



Fisheries and Aquaculture



Plastics in a **Circular Economy**



- (2) Researchers employed or supported involved in marine science and technology initiatives.
- (3) Marine science and technology research projects in the last 5 years (2015 2020) as partner or funder.
- (4) Associated organisations (i.e. network members).

MAIN AREAS OF EXPERTISE





Maritime Affairs





Tourism



Cohesion Policy





and Naval Engineering

Ship Repair, Shipbulding

Knowledge of

Coastal Areas



Transport and

Accessibility

14 2023 Annual Report

















Space Observation Technologies



Marine Biology, Ecology and Oceanography



and Training

ACHIEVEMENTS

Membership and Collaboration

Information Management

Communication and Networking

Projects

Services

Finances



MEMBERSHIP **AND COLLABORATION**

New **Memberships**

Activities and opportunities for members

Full Member: Latvian Institute of Aquatic Ecology

Cooperating Member: Association of European Fisheries and Aquaculture **Research Organizations**

Up to 10 research and development opportunities

Provision of bespoke

information

Development of ARCFISH project proposal for the Sustainable Blue Economy Partnership call, including Marine Institute

Development of Choose Your Fish proposal, including Nausicaá

Dissemination and promotion of Members

Promotion of Member's activities through website. social media and newsletter

Promotion of the "I live by the Sea" contest in direct collaboration with IO PAN

Partnerships and Collaborations

Partnership with IOC-UNESCO to launch the 2nd edition of the Mário Ruivo Memorial Lecture

Collaboration with Ocean InfoHub. with IOC-UNESCO

Partner in the organization of the EUROCEAN Conference Session dedicated to Ocean Literacy together with European Marine Board, JPI Oceans, the European Marine Research Network (EuroMarine) and the European Global Ocean Observing System (EuroGOOS)

Collaboration in the development of the Vigo declaration "Speaking with One Voice to achieve the One Ocean we want", together with European Marine Board, JPI Oceans, the European Marine Research Network (EuroMarine) and the European Global Ocean Observing System (EuroGOOS)

2nd year as an Ocean Decade Implementing Partner

INFORMATION MANAGEMENT

Knowledge Gate

A repository of information about marine science and technology research and innovation projects funded by the European Union and the Member States programmes (FP7, H2020, INTEREG IV, INTEREG V, LIFE, FP6, INTERREG III).

Research Infrastructures Database

A repository of information (technical, scientific and operational) about European marine science and technology research infrastructures (research vessels, underwater vehicles and large equipment, mobile ocean observatories, satellites for sea and ocean observation, flumes and test labs for ocean engineering, marine biology stations, fixed point open ocean observatories, aquaculture research facilities, marine neocosms facilities, in situ tests for ocean renewable energy, deep ocean drilling research facilities, marine data providers, basins, coastal observatories).





Research Infrastructures Database (RID) 1.0

2019

Research Infrastructures Database (RID) 2.0



2023 Annual Report 21

COMMUNICATION **AND NETWORING**

Website & Social Media reach



SESSIONS



R +15% **FOLLOWERS**

[A] +34%

IN REACH



+3%

IMPRESSIONS







Organisation of the first Mário Ruivo Memorial Lecture at IOC/UNESCO Assembly, 22nd June, 2023 24 applications | 15 countries | 4 continents | Winner Project: Kelp Forest Alliance | Australia

Launch of a tribute video to Mário Ruivo at the Mário Ruivo Memorial Lecture event

Article published in Sea Technology Magazine on EurOcean's 20 Years - January Issue

Launch of the Declaration of Intent (Dol) by EurOcean Foundation on Climate Change and Ocean Science and Technology in the scope of the COP28 outcomes

EurOcean as a signatory of the Vigo declaration "Speaking with One Voice to achieve the One Ocean we want", together with European Marine Board, JPI Oceans, the European Marine Research Network (EuroMarine) and the European Global Ocean Observing System (EuroGOOS)

Organisation of an animation activity during the EUROCEAN Conference 2023 in support of EU4OCEAN

EurOcean participation in DCO Ocean Data Sharing group as a supporting member

Organisation of the event "2013 – 2023: 10 years of the Galway Statement" together with the European Comission and the Marine Institute, under the AANChOR project scope

PROJECTS



AANCHOR

ALL-ATLANTIC COOPERATION FOR OCEAN RESEARCH AND INNOVATION

Aim: To support the implementation of the Belém Statement by building the All-Atlantic Ocean Research Community and to identify concrete collaborative research and innovation activities across the whole Atlantic basin, from pole to pole.

Roles: WP 9 leader – Communication and dissemination

Major Achievements: Development of the communication strategy and implementation of the 10 Years of the Galway Statement event

Organisation and logistics support of the 10 years Years of the Galway Statement event

Communication of the Alliance and Joint Pilot Actions outcomes

allatlanticocean.org



EUROFLEETS PLUS

AN ALLIANCE OF EUROPEAN MARINE RESEARCH INFRASTRUCTURE TO MEET THE EVOLVING NEEDS OF THE RESEARCH AND INDUSTRIAL COMMUNITIES

Aim: At facilitating open access to an integrated and advanced research vessel fleet, designed to meet the evolving and challenging needs of the user community.

Roles: WP 9 leader – Communication and dissemination

Major Achievements: Development of the project's final brochure with the major highlights of the project

Development of the project final communication campaign highlighting all the project results and outputs

Participation of the Final General Assembly (November 2023)

eurofleets.eu



HIAOOS

HIGH ARCTIC OCEAN OBSERVATION SYSTEM

Aim: To advance the uptake of new ocean observing capabilities and capacity in the high Arctic to strengthen European and national infrastructures in their effort to support new and ambitions research within climate, environment and geohazards. HiAOOS will develop, implement, and validate several ocean observing technologies to improve data collection in the ice-covered Arctic Ocean.

Roles: WP 5 leader - Communication and dissemination

WP4 co-leader - Use cases and training

Major Achievements: Development of Dissemination, Exploitation and Communication Plan

Creation of HiAOOS brand

Development and implementation of HiAOOS website and social media

Organisation and launch of two training courses

hiaoos.eu



NAUTILOS

NEW APPROACH TO UNDERWATER TECHNOLOGIES FOR INNOVATIVE, LOW-COST OCEAN OBSERVATION

Aim: To unlock the critical knowledge contained in the ocean over the coming decades, and to realize the mutual benefits of marine observation for all elements of a sustainable ocean.

Role: WP 10 leader – Outreach, communication and dissemination.

Major Achievements: Organisation and implementation of the Nautilos Policy round table during the Grand Finale of the Ocean Race (Genova, Italy, June 2023)

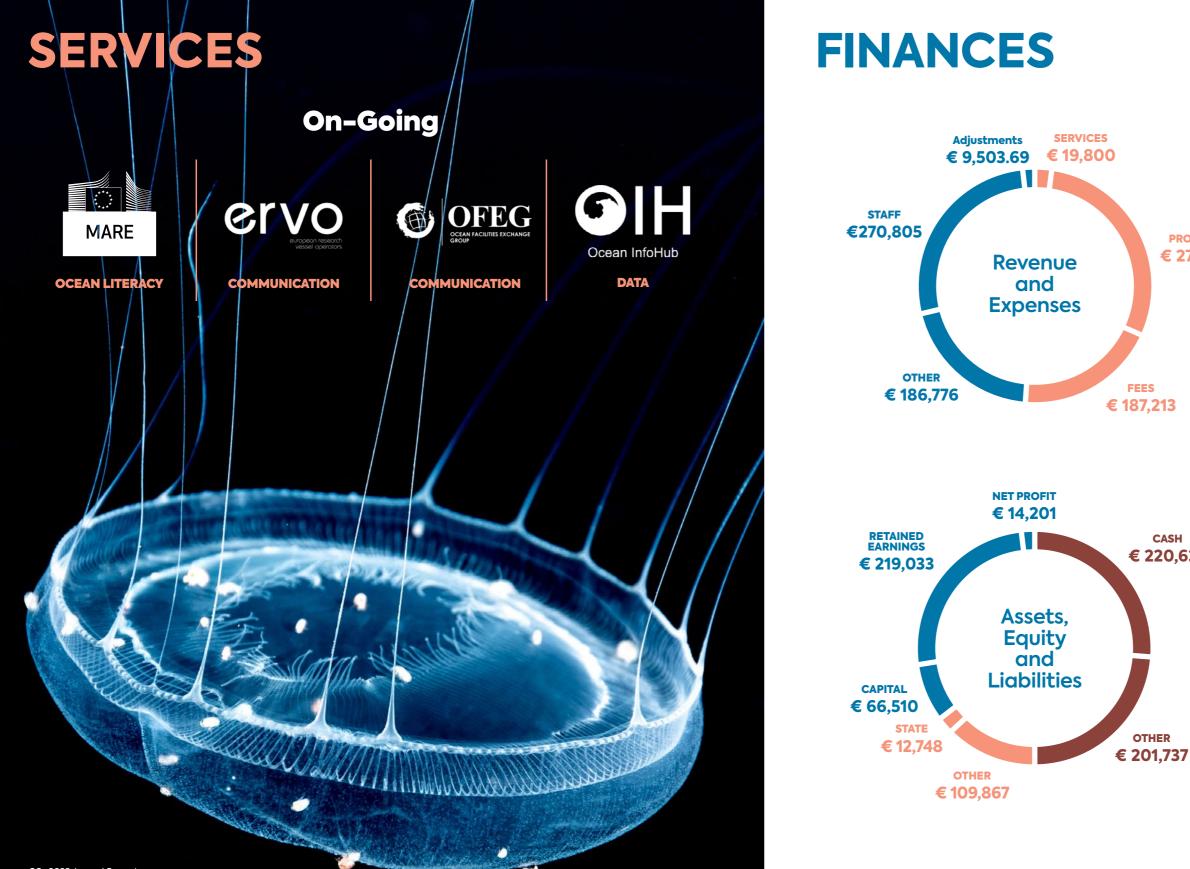
Delivery of the 3 Policy Briefs of Nautilos

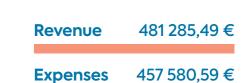
Organisation of the first summer school helded on September 2023, development of a curriculum, open registration, and logistical support.

Development of e-modules based on the technical presentations and demos developed during the summer school

nautilos-h2020.eu









PROJECTS

€ 274,272

CASH € 220,622

422 359,00 €
122 614,89 €
299 744,11 €

MEMBERS ACHIEVENENTS

Full Members





CESAM

CESAM's mission is to promote transdisciplinary and transformative research and knowledge exchange to address societal needs, namely environmental and marine challenges, driving sustainable solutions for the management and conservation of natural resources and the well-being of ecosystems and humanity. CESAM members are involved in several projects and initiatives from catchment to deep-sea.

CESAM coordinates the Cost Action "EpiLipidNET - Pan-European Network in Lipidomics and EpiLipidomics", an international consortium of 450 lipid scientists, clinicians, scientific societies, and enterprises from 47 countries, that is achieving extraordinary accomplishments in the field of lipid research, education, and public awareness. With a strong EU-based presence, this collaborative effort has resulted in significant scientific impact (more than 50 scientific publications). It has also been committed to disseminating knowledge within and beyond academic circles. EpiLipidNET network has grown into the EU hub for the research on natural lipidome diversity including marine organisms, thus contributing to the EU Mission in the protection and restoration of ocean health.

Recognizing the importance of marine challenges, a CESAM member acts as the national coordinator for the UN Decade of Ocean Science for Sustainable Development. CESAM's has made

several contributions to this global initiative. CESAM leads the EU project A-AAgora framed on EU Mission Ocean. The project focuses on restoring vital marine and coastal ecosystems (e.g., kelp forests, seagrass meadows, and sand dunes) to increase climate resilience, protect biodiversity, and enhance coastal protection. Activities are implemented in 3 demonstrators (Portugal Center Region; Cork, IE; Troms, NO), promoting innovative nature-based solutions. Moreover, CESAM cocoordinates "Challenger 150", a global scientific cooperative and a vehicle for the coordination of deep-sea research globally. CESAM's leadership in this area extends to the production of policy briefs for COP conferences, national & EU policy strategies & roadmaps in the blue economy space, and the establishment of the African Deep-Sea Researchers Network.

CESAM's strategic involvement in the Portuguese Recovery & Resilience Plan enlarges its commitment to address key national priorities across multiple sectors. As such, CESAM is playing a pivotal role in 20 agendas/projects focusing on mobility, tourism, energy, forestry, and blue economy, including the Portuguese Pact for the Blue Bioeconomy (e.g. focusing on the production and valorization of marine resources). CESAM/UA is also the single promoter of one of the 8 research facilities in the Portuguese BlueHub initiative.



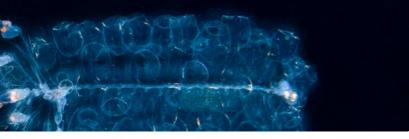
CMMI

2023 has been an industrious and active year for the Cyprus Marine and Maritime Institute, which played a pivotal role in several significant activities.

Apart from initiating the infrastructure development for the Cyprus Marine Observation Network (CyMON), CMMI organised the 1st CyMON Workshop in March. The event was attended by 21 local and European organisations, introducing the CyMON project to potential stakeholders in the field of marine observation and oceanography.

In May, CMMI became a member of EuroGOOS, the European Global Ocean Observing System, following a vote that took place during its annual General Assembly. On the same day, EuroGOOS announced that CMMI would host the 11th EuroGOOS Conference in Cyprus in 2026. CMMI looks forward to organising such an event which enhances cooperation and promotes the benefits of operational oceanography to ensure that sustained observations are made in Europe's seas.

In June, CMMI officially launched its Marine Biotechnology and Aquaculture Centre (MBAC), following CMMI's new strategic research direction, as well as opportunities stemming from the EU Mission on Oceans. MBAC aims to explore the most recent advances in the diverse fields of the "Blue" Biotechnology and Aquaculture. MBAC takes full advantage of Cyprus' unique



geographic location in the eastern part of the Mediterranean, an area characterised by many endemic marine and coastal biota with promising and untapped biotechnological value.

In October, CMMI participated as an exhibitor and a bronze sponsor at Maritime Cyprus 2023 conference, the biennial shipping conference to discuss the main challenges and opportunities for the industry. CMMI embraced this year's theme "Shipping in Action: An Agenda for Change" with CMMI's CEO, Mr Zacharias Siokouros, featuring among the event's esteemed panelists.

In December, the Regional Forum for Blue Skills 2023 brought all relevant European stakeholders on Blue Careers and Skills who share the aim of developing and promoting blue skills at the European level. Participants discussed the main challenges in vocational education and training, current gaps and shortages in blue skills.

With regards to projects, CMMI had a particularly active year with the start of 7 EU funded projects (EFFECTIVE, GreenMarine, GreenMED, iMERMAID, NextBlueGeneration, SeaTecHub and THETIDA) and participation in 5 new national projects (ADAPTATION, bioCNG-to-CI, CHARISMA, PATRIOT and ZEST). In addition, CMMI launched the METAVASEA project funded by the Lloyd's Register Foundation and the Cyprus Regional Development Project funded by the Honor Frost Foundation.



FCT

FCT has the mission to establish Portugal as a global reference in science, technology, and innovation in all scientific domains including Ocean Sciences. In 2023, FCT has continued to support the Oceans Science national community through the funding of Marine R&I institutions, projects, scholarships, and Infrastructures.

At international level, FCT maintains its collaboration with many European and international institutions such as COI-UNESCO, OCDE, ECORD, EMB, JPI Oceans, among others.

In 2023, FCT's coordination of the AANChOR project came to an end, but the All-Atlantic Cooperation efforts have continued through a major support to the Atlantic International Research (AIR) Centre which intends to evolve into a prominent organization dedicated to promote the R&I collaboration of institutions in many countries towards the Atlantic Basin. FCT is also a member of the European Sustainable Blue Economy Partnership (SBEP) Partnership and has funded 5 projects involving 8 Portuguese teams that will start they activities in the early Summer 2024.



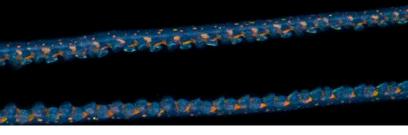
FRCT

The FRCT has achieved significant milestones in sustainable blue economy initiatives, biodiversity and climate resilience through its innovative EU projects and Partnerships.

FRCT made a significant contribution to the Sustainable Blue Economy Partnership (SBEP) by leading, for the first time, the development of the call text for two transnational joint calls, each involving over 20 countries and 30 organisations. The first call, 'The way forward: a thriving sustainable blue economy for a brighter future', successfully funded 19 projects. The second call, "'Unified Paths to a Climate-Neutral, Sustainable, and Resilient Blue Economy: Engaging Civil Society, Academia, Policy, and Industry," is currently under evaluation.

In advancing Maritime Spatial Planning in Outermost Regions, the MSP-OR project, coordinated by FRCT, consolidated the online platform OR's Ocean Governance Hub as an effective tool for MSP stakeholders of the EU's OR's - Azores, Madeira, the Canary Islands and French Guiana – to share their knowledge and experiences on sustainable use of the Ocean.

Furthermore, under the EEA Grants, the project PDP2 Atlantic Observatory Data infrastructure, FRCT acquired a glider, an important instrumentation to monitor the Atlantic and strengthen the research corporation.



Additionally, the SmartBlueF Project, under the INTERREG MAC Programme, established, in 2023, the Central Atlantic Alliance for the Competitiveness of Blue Economy in the Macaronesia, "A3M"

The MOVE-ON, concluded in 2023 and coordinated by FRCT, recently published a scientific publication on Habitat mapping of the Vila Franca do Campo marine reserve (Azores) and recommendations for its improvement.

Regions4Climate project, promoted by Horizon Europe, has significantly advanced efforts in climate resilience. The Azores, along with other EU regions, have begun designing innovative adaptive tools and developing a Roadmap to Regional Carbon Neutrality. It's in progress the creation of local app tools for marine monitoring, carbon footprint analysis, and coastal vulnerability maps, aimed at engaging citizens, tourists, and local decision-makers.



In 2023, the Spanish Minister of Science and Innovation, Diana Morant, and the President of the CSIC, Eloísa del Pino, have announced the creation of a new centre of the Spanish Institute of Oceanography (IEO-CSIC) that will take advantage of the entire successful track record of the Marine Technology Unit between the Spanish Institute of Oceanography and the Polytechnic University of Valencia.

Both institutions have been developing their important work in Gandía for 13 years and represent the oldest Joint Unit of the IEO-CSIC in Spain. IEO-CSIC currently has 9 centres throughout Spain, which work in a network. This would be the first centre in the Autonomous Community of Valencia and the third in the Spanish Levant, together with the centre in Murcia and the Balearic Islands. The new IEO-CSIC centre will have an estimated cost of 16 million euros and will involve the incorporation of 50 new people among research, technical and administrative staff. Construction of the centre is expected to begin in 2024, and it will be operational in 2025.

Taking advantage of this important milestone, the Minister and the President of the CSIC have highlighted the great work carried out by the IEO-CSIC to reinforce scientific advice to the fishing sector in the face of challenges such as the effects derived from climate change. "Science is the great ally of productive sectors such as fishing," they stressed.

Nausicaá

NAUSICAÁ

In 2023, Nausicaá – the National Sea Centre, received its 20 millionth visitor since its opening in 1991, and over 900.000 people visited its exhibitions. Throughout the year, the centre continued to raise awareness of the importance of the sustainable management of the ocean in the exhibitions, educational activities and communication campaigns.

The immersive educational experience in augmented reality "The Giants of the High Seas" in front of the high sea aquarium continued to showcase its emblematic but endangered species symbolising a major challenge for the preservation of marine biodiversity.

The highlight of the year was the opening of the Blue Academy, an 800m2 area for experimentation and scientific discovery dedicated to families, tourists and schools.



The Blue Living Lab of Nausicaá, a business incubator and accelerator dedicated to open innovation in blue economy supported 15 projects in various fields up till 2023: coral reef restoration, fish larvae breeding, maritime transport, tourism, pollution control, biotechnologies, AI & modelling of marine ecosystems and other.

Moreover, Nausicaá continued to involve in the EU4Ocean Coalition for ocean literacy by coordinating the Youth4Ocean Forum in collaboration with the Youth Environment Europe and coordinated the Mr.Goodfish sustainable seafood consumption programme reaching out to consumers and the entire seafood value chain.

In 2023 Nausicaa engaged in the Treasure project co-funded by the Interreg North Sea programme of the European Union. The project aims at reducing plastic pollution in the North Sea basin and the rivers flowing into it. Nausicaá coordinates one of the 5 Living Labs in the sea basin and the cross sectoral group working on prevention and behaviour change.

EurOcean

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