



eur@cean

The European Centre  
for Information on Marine  
Science and Technology

# ANNUAL REPORT 2020





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## **The European broker for Ocean Science and Technology**

EurOcean, the European Centre for Information on Marine Science and Technology, is an independent, non-profit, scientific organisation, established in 2002 by the Portuguese Foundation for Science and Technology (FCT) and the French Research Institute for Exploitation of the Sea (Ifremer). EurOcean aims to support European Marine Science and Technology advances, by fostering information exchange, cooperation and collaboration among its members, the ocean community and society.

EurOcean has two types of members. Full members are public or non-profit 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.





**CARLOS GARCÍA-SOTO**  
President

**“ The Decade of Ocean Science for Sustainable Development (2021 - 2030) is starting now, and EurOcean and all of us together as a network are called to play an important role to define the Ocean We Need for the Future We Want. ”**



4 It is a privilege and an honor having been elected President of EurOcean. I sincerely appreciate the trust that you as Eurocean members have deposited in me. EurOcean is a gold nugget in Europe’s science and technology landscape, and I pledge to nurture it.

With the support of vice-presidents Giuseppe Magnifico (CNR) and Ana Hilário (CESAM | Univ. Aveiro), this endeavor will surely be easier. I anticipate a mandate driven by innovation and ambition, which we, as Executive Committee, will support and steer, considering members, other ocean stakeholders and society as a whole.

To Slawomir Sagan (IO PAN) and Tina Mertens (VLIZ), former EurOcean’s president and vice-president, a word of gratitude. We shared the leadership of EurOcean over the past four years. It has been a pleasure to work together and this experience will be an added value to the new Executive Committee.

Special thanks also to our Executive Director, Sérgio, and to all his team that have deeply transformed EurOcean. They carried out over the last two years challenging and needed reforms without losing sight of its original mission, which has never been so relevant. This was a difficult year because of the pandemic, yet it was exactly when resilience was the most important that the outstanding results achieved by our network and by its secretariat speak for themselves.

The Decade of Ocean Science for Sustainable Development (2021 - 2030) is starting now, and EurOcean and all of us together as a network are called to play an important role to define the Ocean We Need for the Future We Want.



**SÉRGIO BRYTON**  
Executive Director

**“ EurOcean is increasingly a financially healthy organization, a must for our mission. ”**



We cannot speak about 2020 without mentioning COVID-19. This ruthless pandemic that takes away our loved ones, hampers our social nature and disrupts our economy.

We worked away from the office since Spring, due to public policies and the instinct of self-preservation. Digitalization and work-life balance measures implemented in 2019, and the team’s professionalism softened the impact.

Nonetheless, we focused on delivering value to our stakeholders. We created a number of research and development opportunities for our members, provided them with bespoke information, supported their activities and highlighted their achievements. We also contributed to initiatives related with the UN Decade of Ocean Science and supported Ocean policy makers.

A positive financial result was achieved, consolidating

the upwards trend. We were awarded new projects, a merit to the team, but also of those who trust in EurOcean as their partner. We optimized our financial management procedures. EurOcean is increasingly a financially healthy organization, a must for our mission.

We improved the governance of EurOcean by implementing a strategic monitoring mechanism. Based on the Balanced Scorecard, this tool will contribute to achieving the goals of the Strategic Plan 2025.

Our research infrastructures database also grew, most notably with information from POGO, the EUMarineRobots project, and the BONUS infrastructures. RID has also become a source of information to the European Atlas of the Seas.

This was a very positive year, despite the circumstances.





# AT A GLANCE

.....  
**The Centre**

.....  
**Membership**

.....  
**Full Members**

.....  
**Cooperating Members**



# THE CENTRE



3

Nationalities



2

Researchers<sup>(1)</sup>



9

Projects<sup>(2)</sup>

<sup>(1)</sup> Researchers involved in marine science and technology initiatives.  
<sup>(2)</sup> Marine science and technology research projects in 2020 as partner.



Information Management



Science Communication



Knowledge Transfer



Project Management



Costal Zone Management



Research Expeditions



Naval Military Sciences



Geology



Environmental Sciences



Marine and Naval Radioelectronics

## MAIN AREAS OF EXPERTISE



Proposal Writing



Ocean Governance



Funding Mechanisms



Strategy and Decision Support



Marine Biology



Ocean Literacy



Nautical Engineering



Information Technologies



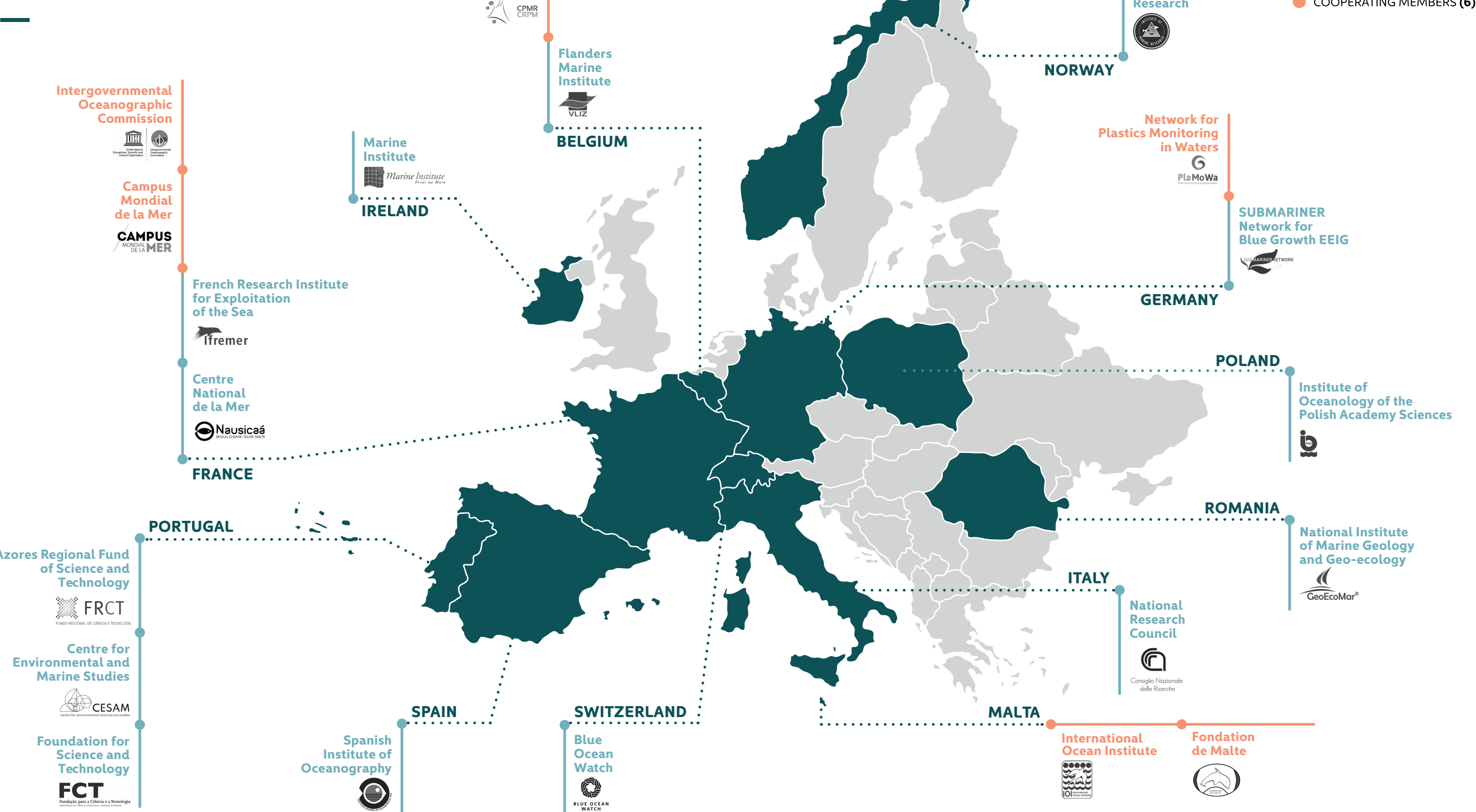
Research Funds



Organisational Management



# MEMBERSHIP





# FULL MEMBERS



**11**  
Countries



**+ 150**  
Infrastructures<sup>(1)</sup>




**+ 3,150**  
Researchers<sup>(2)</sup>




**+ 400**  
Projects<sup>(3)</sup>



Biodiversity and  
Environmental Stressors



Cumulative Effects and  
Impact Assessment



Aquaculture



Climate Change



Alternative  
Resources



Multi-uses  
of the Sea



Human and  
Ocean Health



History and Cultural Heritage in  
Coastal and Maritime Regions



Blue  
Economy



Citizen  
Science



Polar Research



Ocean  
Monitoring



Acoustic Telemetry  
and Animal Tracking



Marine Spatial  
Planning



Fisheries Sustainability and  
Seafood Value Chain



Marine Renewable  
Energy



Geo-archaeology












Research Vessels  
and Observatories



Underwater  
Munition

<sup>(1)</sup> Marine science and technology research infrastructures owned or supported.  
<sup>(2)</sup> Researchers employed or supported involved in marine science and technology initiatives.  
<sup>(3)</sup> Marine science and technology research projects in the last 5 years (2015 - 2020) as partner or funder.

## MAIN AREAS OF EXPERTISE

 <p>Blue Biotechnology</p>	 <p>Noise and Plastics Pollution</p>	 <p>Sensors and Sensing</p>
 <p>Big Data</p>	 <p>Artificial Intelligence</p>	 <p>Circular Economy</p>
 <p>Autonomous Vehicles</p>	 <p>Youth Engagement</p>	 <p>Tsunami Prediction</p>
 <p>Vessel Energy Efficiency</p>	 <p>Ecological Risk Assessment</p>	 <p>Ecosystem Services</p>



# COOPERATING MEMBERS



**11**  
Countries



**+ 500**  
Infrastructures<sup>(1)</sup>



**+ 800**  
Researchers<sup>(2)</sup>



**+ 65**  
Projects<sup>(3)</sup>



**+ 80**  
Organisations<sup>(4)</sup>

## MAIN AREAS OF EXPERTISE



Outreach  
Monitoring



Maritime  
Affairs



Cohesion  
Policy



Transport and  
Accessibility



Tourism



Climate



Marine  
Energy



Deep-ocean  
Exploration



Migration



Submarine  
Warfare



Ocean  
Governance



Electronic  
Warfare



Maritime  
Security



Marine Applied  
Communication



Space Observation  
Technologies



Ship Repair, Shipbuilding  
and Naval Engineering



Fisheries and  
Aquaculture



Marine Biology, Ecology  
and Oceanography



Knowledge of  
Coastal Areas



Plastics in a  
Circular Economy



Education  
and Training

<sup>(1)</sup> Marine science and technology research infrastructures owned or supported.

<sup>(2)</sup> Researchers employed or supported involved in marine science and technology initiatives.

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

<sup>(4)</sup> Associated organisations (i.e. network members).





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# CENTRE ACHIEVEMENTS

.....  
**Membership and Collaboration**

.....  
**Information Management**

.....  
**Communication and Networking**

.....  
**Projects**

.....  
**Services**

.....  
**Finances**



# MEMBERSHIP AND COLLABORATION

## ACTIVITIES AND OPPORTUNITIES FOR MEMBERS

- | Provision of bespoke information
- | Up to 20 research and development opportunities
- | Development of the OCEAN TRIP H2020 proposal lead by EurOcean and involving several EurOcean Members (IO PAN; IMR; CNR; CESAM; VLIZ and IFREMER)
- | MyOceanGate workgroup creation
- | Organization of the first EurOcean Skills workshop on social media communication

18



## DISSEMINATION AND PROMOTION OF MEMBERS

- | Promotion of the 2020 Sea Tech Week, organised by cooperating member Campus Mondial de la Mer
- | Support for Members' activities through website, social media and monthly newsletter
- | Support for the participation of members IO PAN and Ifremer in Sea Tech Week

## PARTNERSHIPS AND COLLABORATIONS

- | Partnership with the Digital Training Institute
- | EurOcean became a founding member of EU4Ocean
- | Collaboration with DG MARE for the Ocean Hackathon
- | Renewed collaboration agreement with ERVO
- | RID became a data provider of the European Atlas of the Seas
- | Collaboration with POGO, EMBREC, BONUS and EUMarineRobots to update the RID

| Support to the organization of Sea Tech Week

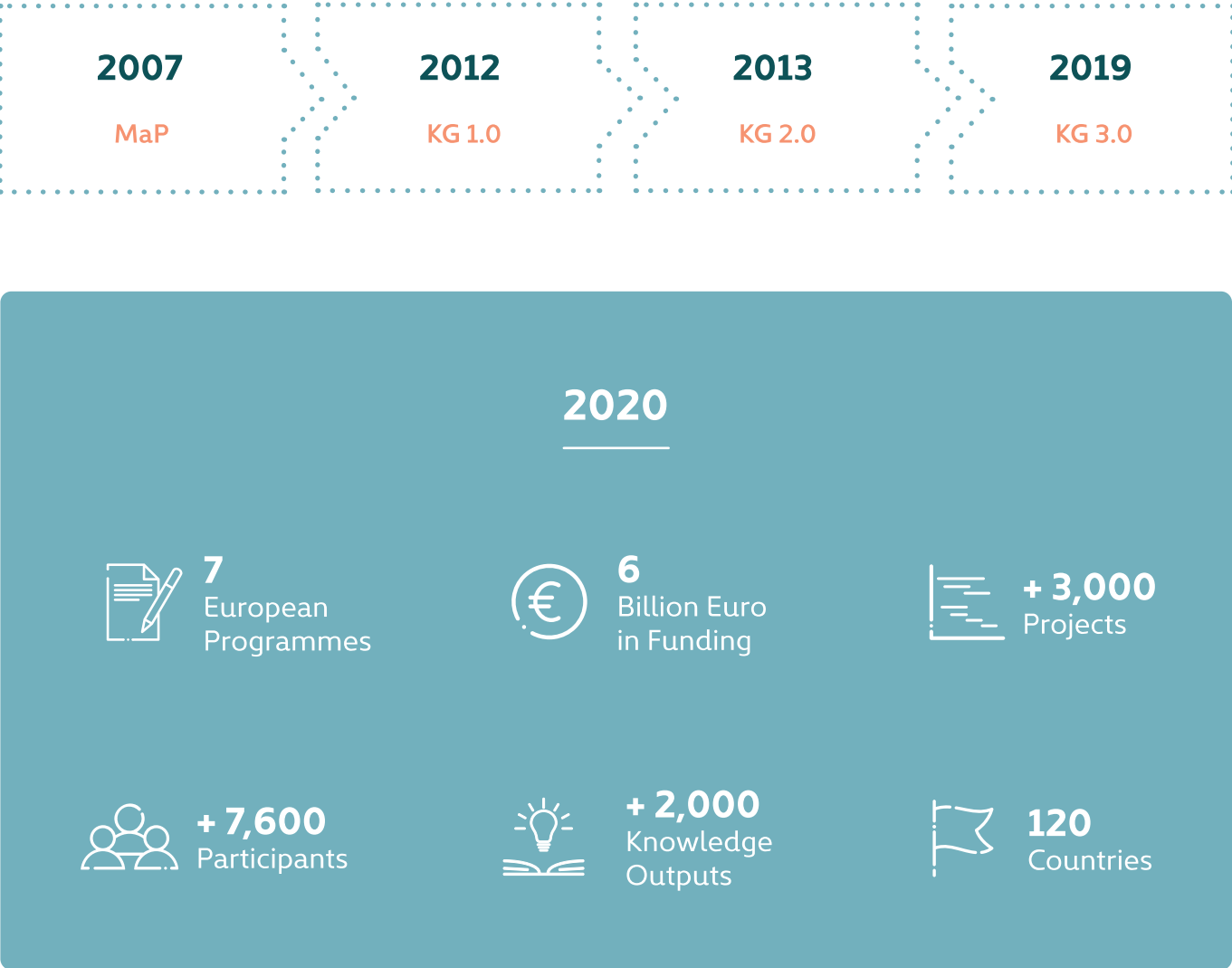




# INFORMATION MANAGEMENT

## KNOWLEDGE GATE

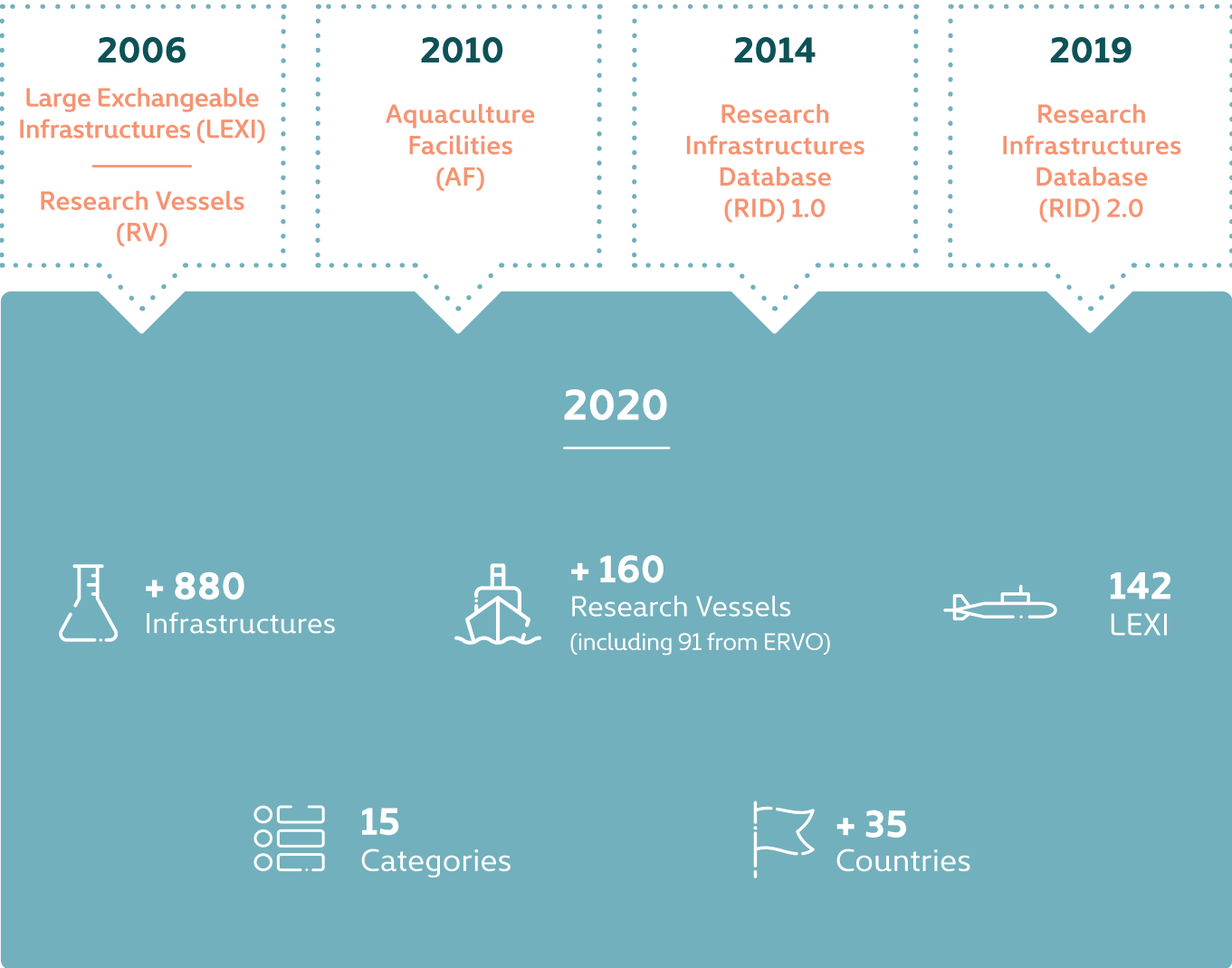
A repository of information about marine science and technology research and innovation projects that were funded by the European Union and the Member States programmes (FP7, H2020, INTERREG IV, INTERREG V, LIFE, FP6, INTERREG III).



## 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).

In 2020, became a data source of the European Atlas of the Sea. RID was updated with 34 new infrastructures from BONUS and 41 from EUMarineRobots.



# COMMUNICATION AND NETWORKING

## WEBSITE & SOCIAL MEDIA REACH

### WEBSITE



**0.4%**  
Decrease  
in Users



**6.7%**  
Decrease  
in Sessions



**7.4%**  
Decrease  
in Pageviews

### FACEBOOK



**18.6%**  
Increase  
in Followers



**49.8%**  
Increase  
in Posts



**18.3%**  
Increase  
in Likes



**8.5%**  
Decrease  
in Shares

### TWITTER



**102%**  
Increase  
in Followers



**155%**  
Increase  
in Posts



**99%**  
Increase  
in Likes



**52%**  
Increase  
in Shares

### LINKEDIN



**146%**  
Increase  
in Followers

PROMOTION OF THE EMSO  
CONFERENCE – PREPARING FOR  
UN DECADE OF OCEAN SCIENCE

PARTICIPATION IN ARCTIC  
FRONTIERS CONFERENCE, TOWARDS  
UN DECADE OF OCEAN SCIENCE



EUROCEAN FEATURED IN AN  
ARTICLE ON SONAR #2 | CAMPUS  
MONDIAL DE LA MER JOURNAL

PARTICIPATION IN DG MARE  
#EU4OCEAN OCEAN LITERACY  
WORKSHOPS

PARTICIPATION IN THE INTERNATIONAL  
DATA SHARING WORKSHOP ORGANISED  
BY IOC UNESCO

PARTICIPATION IN UN OCEAN  
LITERACY SUMMIT



PARTICIPATION IN SEA TECH WEEK  
“COOPERATION MODELS” SESSION



ENGAGEMENT WITH IWG-SODIS AND THE DEVELOPMENT  
OF THE GLOBAL STRATEGY FOR OCEAN DATA AND  
INFORMATION STEWARDSHIP

PARTICIPATION IN THE  
PUBLIC DISCUSSION ABOUT  
THE PORTUGUESE OCEAN  
STRATEGY 2021 - 2030

PARTICIPATION IN THE  
ATLANTIC CITIES PROJECT  
STAKEHOLDERS GROUP



SUPPORT TO PT DIRECTORATE-GENERAL  
FOR MARITIME POLICY EEA GRANTS BLUE  
GROWTH PROGRAMME



# PROJECTS

## AANChOR

All Atlantic  
Cooperation for  
Ocean Research  
and Innovation



[www.allatlanticocean.org](http://www.allatlanticocean.org)

**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.

**Role:** WP 9 leader - Communication and dissemination.

**Major Achievements:**

- Launch of a week-long social media campaign on Ocean & Human Health for 2020 World Ocean's Day.
- Participation in All-Atlantic Ocean Research Forum.
- Migration of AORA website contents to the AANChOR portal.

[www.aqua-lit.eu](http://www.aqua-lit.eu)

**Aim:** To provide a sustainable toolbox of innovative ideas and methodologies to prevent marine littering from aquaculture activities and remove and recycle litter from the aquaculture facilities both before litter enters the sea and for litter already existing at sea.

**Roles:**

- WP5 leader - Scaling up the tide.
- Task 3.3 leader: Monitoring and quantification of AQUA LITTER.
- Task 6.2 leader: Dissemination material.
- Task 6.3.1 leader: Target promotional campaigns, newsletter.
- Task 6.3.2 leader: Public outreach.
- Task 6.4 leader: AQUA-LIT website.

**Major Achievements:**

- Virtual Learning Lab co-organisation.
- Lead a collaboration between AQUA-LIT and Thermaikos Gulf protected area Management Authority (Greece).

## AQUA-LIT

Preventive Measures for  
Averting the Discarding  
of Litter in the Marine  
Environment from the  
Aquaculture Industry



## CatRIS

Catalogue of Research  
Infrastructure Services



[www.project.catris.eu](http://www.project.catris.eu)

**Aim:** To develop an open, trusted and user-friendly portal to a harmonised and aggregated catalogue of services and resources provided by Research Infrastructures (RI) and Core Facilities (CF) across Europe.

**Role:** WP 6 leader - Communication, dissemination and exploitation.

**Major Achievements:**

- Development of CatRis video presentation.
- Identification of RI networks and projects for the RI services.

[www.eurofleets.eu](http://www.eurofleets.eu)

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

**Role:** WP 9 leader - Dissemination and Communication.

**Major Achievements:**

- Communication Package Towards Other Infrastructures.
- Development of a project video.

## EUROFLEETS PLUS

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



## NAUILOS

New approach  
to underwater  
technologies for  
innovative, low-cost  
ocean observation



[www.nautilus-h2020.eu](http://www.nautilus-h2020.eu)

**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:**

- Project Kick-off.
- Signed grant agreement
- Development of content to the website.

[www.intaros.eu](http://www.intaros.eu)

**Aim:** To develop an efficient integrated Arctic Observation System by extending, improving and unifying existing and evolving systems in the different regions of the Arctic.

**Roles:**

- WP 7 co-leader - Communication and dissemination.
- Task 1.3 leader: Collaboration development and establishment of Pan-Arctic Observing Forum.

**Major Achievements:**

- Participation in Special Session on Communication at European Geophysical Union Conference.
- Participation in the Communications Task Group of the European Polar Cluster.
- Participation in the INTAROS Stakeholder Task Group.

## INTAROS

Integrated Arctic  
Observation  
System



## MaRINET2

Marine Renewable  
Infrastructure Network  
for Enhancing  
Technologies 2



[www.marinet2.eu](http://www.marinet2.eu)

**Aim:** This project builds upon the achievements of the advanced community created in MaRINET FP7. MaRINET 2 will ensure the continued integration and enhancement of all leading European research infrastructure and facilities specialising in research, development and testing of offshore renewable energy systems including electrical sub systems and grid integration through a range of TRLs (1 - 7).

**Role:** EurOcean is deploying its Marine Research Infrastructures Database (RID) as part of this Infrastructure.

**Major Achievement:** Ongoing update and maintenance of the RID in support of Marinet2.

# SERVICES

## ONGOING

Ocean Literacy



Communication

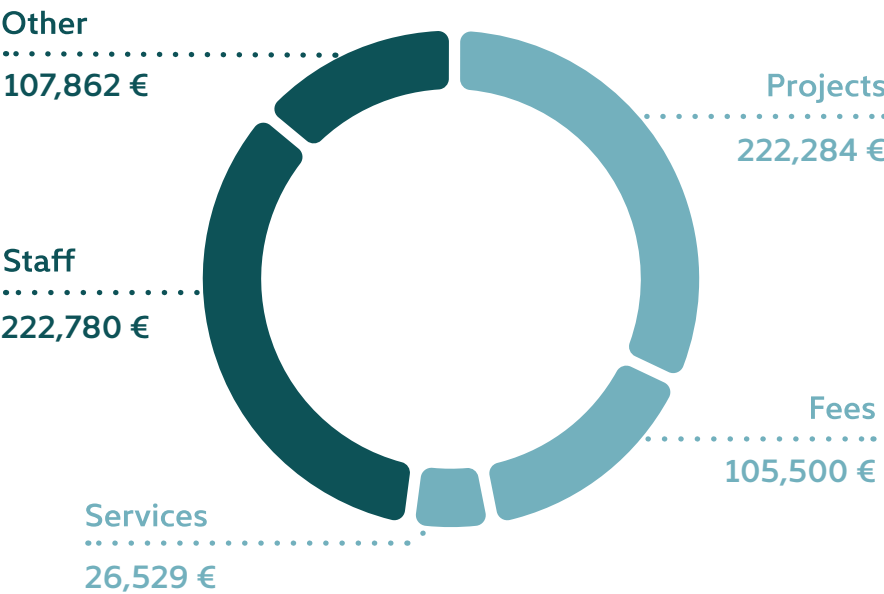


Communication



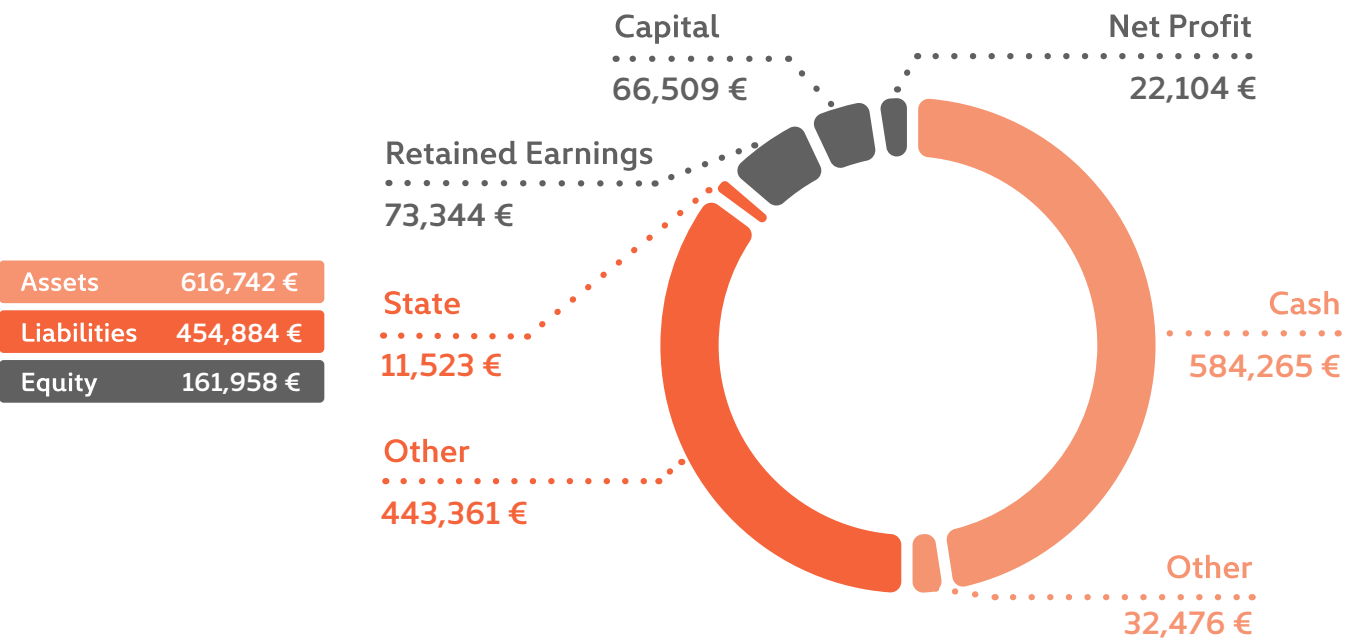
# FINANCES

## REVENUE AND EXPENSES



Revenue	354,313 €
Expenses	330,642 €
Profit	23,671 €

## ASSETS, EQUITY AND LIABILITIES



Assets	616,742 €
Liabilities	454,884 €
Equity	161,958 €





# MEMBERS ACHIEVEMENTS

.....  
Full Members  
.....



# FULL MEMBERS



FCT has the mission to establish Portugal as a global reference in science, technology, and innovation in all scientific domains. In 2020, FCT supported the creation of the Blue Bioeconomy Collaborative Laboratory (B2E CoLAB), which is a private, non-profit association, operating at full capacity since 2020. It aims to shape a new blue bioeconomy R&I agenda, committed to creating economic and social value. FCT contributed to the co-design of All-Atlantic Joint Activities in the six thematic Belém Statement priorities, through the coordination of the CSA-AANChOR project; provided expertise to international working groups (e.g. JPI Oceans Action WG on “Underwater noise in the marine environment”); and participated in the European Marine Board Working Group on “Geohazards in the marine environment.”

CESAM | UAVEIRO

PORTUGAL



CESAM members contributed to the study “The environmental impacts of plastics and micro-plastics use, waste and pollution: EU and national measures” for the European Union, commissioned by the Policy department for Citizens’ Rights and Constitutional Affairs of the European Parliament. The members also acted as experts in the Group of Scientific Advisors that presented a report on “Environmental and Health Risks of Microplastic Pollution” to the European Commission DG R&I. CESAM has also actively contributed to the ocean policy process by co-authoring several chapters of the second UN World Ocean Assessment (WOA 2), and co-leading two international working groups (funded by SCOR-Scientific Committee on Oceanic Research, and DOSI-Deep-Ocean Stewardship Initiative) tasked with the design of a 10-year programme of deep-sea biological science under the UN Decade of Ocean Science for Sustainable Development.

GeoEcoMar successfully secured funding for the proposal “Developing Optimal and Open Research Support for the Black Sea”. The programme aims to bring the four pillars of the SRIA into reality, turning the challenges into opportunities for a highly valued Black Sea. Further success was achieved for the proposal “Advancing Black Sea Research and Innovation to Co-Develop Blue Growth within Resilient Ecosystems” (BRIDGE-BS), under the same topic and to whose development GeoEcoMar contributed as an important partner. The project will develop predictive tools and capabilities necessary to understand and predict the impacts of climate-driven and anthropogenic multi-stressors on the services stemming from Black Sea ecosystems.

GeoEcoMar

Romania



In 2020, the French Oceanographic Fleet, operated by Ifremer, acquired a new robot capable of diving to a depth of 6,000 m, a truly “tailor-made” machine at the service of ocean sciences, “Ulyx”, a real technological breakthrough in the exploration of the abyss. Frédérique Le Roux, an Ifremer researcher in molecular microbiology won an Advanced Grant from the European Research Council for DYNAMIC, a project that studies phages in marine environments. The ICES Outstanding Achievement Award 2020 was given to Clara Ulrich, Ifremer Deputy Scientific Director. Finally, Ifremer joined forces with the German Marine Research Alliance to strengthen the sustainable use of the coasts, seas and oceans through research, data management and digitalization, infrastructure, and transfer.

IFREMER

FRANCE



NAUSICAA

FRANCE



In 2020, Nausicaá opened its new exhibition “In the Eye of the Climate” to raise awareness on climate change. Under the Mr. Goodfish programme, a partnership with Auchan Retail France was established to empower the consumers in identifying seafood products from responsible and sustainable aquaculture. 2020 saw the SUMARIS project end and the Blue Living Lab kick-off. Nausicaá kept working on the development of Ocean Literacy at European level as a member of the EU4Ocean coalition and its three communities, the EU4Ocean platform, the Youth4Ocean Forum coordinated by Nausicaá and the EU Network of Blue Schools.

IEO

SPAIN



The Spanish Institute of Oceanography (IEO) participated through its scientists in the Group of Experts (18 lead scientists) and the Pool of Experts (780 scientists) that have finalized during 2020 the 2nd World Ocean Assessment (WOA2) the United Nations. One of the key objectives of WOA is to support through Technical Abstracts the major UN ocean initiatives such as the future international agreement on Conservation and Sustainable Use of Marine Biodiversity in Areas Beyond National Jurisdiction (ABNJ), the Sustainable Development Goals (SDGs) of the UN 2030 Agenda, SDG14, and the UN Decade of Ocean Science for Sustainable Development. A Summary of WOA2 approved by the UN General Assembly and elaborated by the 18 leading researchers (including IEO) is available [here](#).

The Italian Oceanographic Commission (COI), hosted by CNR, organized two regional consultations, conducted between January and November 2020, as part of the preparatory activities of United Nations Decade of Ocean Science for Sustainable Development (2021–2030), targeting specific priorities and co-design and capacity building needs for the Mediterranean Region. CNR had a leading role as coordinator of the H2020 project BlueMed, a Coordination and Support Action to support the development of the BlueMed R&I Initiative for blue jobs and growth in the Mediterranean area, launched in 2014.

**CNR**  
**ITALY**



**MI**  
**IRELAND**



2020 saw the deployment and commissioning of several infrastructure platforms. It also saw a range of oceanographic and climate change missions and research activities in coastal and deep waters of Ireland to increase national and global data collection coverage efforts to improve modelling of ocean and climate change. During 2020 the research vessels RV Celtic Explorer and RV Celtic Voyager completed a full survey schedule of 525 days. The amount of new research investments awarded under the Marine Institute's Marine Research Programme, included €3 million for ship time and €2.3 million for research and innovation actions.

Highlights for 2020 at IO PAN included the ARctic EXperiment (AREX) expedition that was devoted to oceanographic, meteorological, aerosol, chemical and ocean ecosystem observations in the open ocean regions, including the eastern Norwegian and Greenland seas, Fram Strait and the southern Nansen Basin of the Arctic Ocean, and in the selected West Spitsbergen fjords. Another highlight was the CommOcean 2020 conference dedicated to communicators working in marine institutes, governmental bodies and NGO's, and marine scientists looking to develop skills in modern ocean science communication, wherever in the world they are working.

**IO PAN**  
**POLAND**



**IMR**  
**NORWAY**



In 2020, IMR celebrated the formal opening of Lofoten-Vesterålen Ocean Observatory (LoVe Ocean), located in a highly productive coastal shelf-slope area, and in an environment sensitive to external stressors. It is equipped with a range of chemical, physical, and biological sensors streaming continuously to the onshore infrastructure through fiber optic sub-sea cables and made publicly available. IMR also saw the creation of a new department, IMR Digital, that will strengthen the existing IT development, support and data management infrastructure and services for IMR staff and external users.

**VLIZ**  
**BELGIUM**



Under the name "Ocean Innovation Space", in 2020 VLIZ initiated the expansion of the laboratory facilities of its Marine Station Ostend. The new, energy-efficient building will enable VLIZ to expand its research capacity and cater to the institute's steady and fast growth. At the end of 2020, USV Adhemar became the first Belgian uncrewed surface vehicle remotely controlled by pilots to leave and enter Ostend's seaport. The voyage was part of a sea research mission set up by VLIZ. The year was marked by swiftly adopting a new *modus operandi* and by reorganizing VLIZ's activities, resulting in a varied package of innovative research projects, new publications and revamped (digital) communication formats related to the COVID-19 pandemic.



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