Connecting science and a sustainable future

Annual Report 2024

EMBRC
EUROPEAN
MARINE
BIOLOGICAL
RESOURCE
CENTRE

Contents

Messages

A message from our Executive Director

Fostering research innovation for a stronger Blue bioeconomy

EMBRC is dedicated to harnessing the ocean's potential to create a sustainable future. Our activities, which drive marine biodiversity research and innovation, are closely tied to the transition to a circular European Blue bioeconomy – a sector that is growing considerably as the ocean's natural resources diminish and scientists become increasingly concerned about the depletion of natural resources. Its focus on using biological resources for human utilisation and high value products (e.g. as pharmaceutics, cosmetics, nutraceuticals, novel compounds, and aquaculture) closely aligns with our work.

This year we released our industrial strategy, outlining how EMBRC will work with the private sector and emerging industries within the ocean economy; notably, aquaculture, bioprospecting and marine observation projects.

EMBRC's partners have many years of expertise in these areas. Our aquaculture experience spans from production and husbandry to novel feed and experimental facilities for fish, shellfish, micro and macroalgae. We've studied algae for many years and have developed significant competencies in the cultivation and use of kelp (macroalgae) – receiving increasing attention as a sustainable ingredient – improving on-land algae culture and, as part of our 2023 Joint Development Activities, growing kelp-associated microbiomes to perfect kelp production. We are now also working on how we can use bioinformatics in DNA-based biodiversity observations to find new genes and novel compounds directly from DNA sequencing information. This will help us speed up bioprospecting and make it much more targeted.

EMBRC marine stations and research organisations already engage with the private sector, so our challenge has been to identify where we can add further value for member countries. We will work with partners to professionalise our services, improve consistency across the network, and promote members' competencies to the private sector. By reinforcing our engagement with target industries, we can continue supporting excellent research while further strengthening European innovation in the marine biological resources sector.

Engaging with industry enables us to continue supporting excellent research while strengthening European innovation into marine biological resources.

Nicolas Pade,
Executive Director, European Marine Biological Resource Centre (EMBRC)

A message from our Chair of the General Assembly

Strengthening scientific excellence in 2024

Six years after being awarded ERIC* status by ESFRI*, EMBRC had its excellence acknowledged as this landmark label was renewed. This status was also strengthened when Finland was welcomed as a new member early in the year.

A common theme for EMBRC is the conservation and exploitation of marine resources. This stems from the ocean's role as the buffer for the Earth's climate and cradle of life. The ocean creates an extraordinary diversity of molecules, adaptations, and species that can potentially be exploited for the benefit of humankind. Conserving the oceans is an essential and complex global challenge, and sustained biological, chemical, and physical ocean observations are vital in informing policies, such as those promoted and supported by the UN's Sustainable Development Goals. The European Marine Omics Biodiversity Observation Network (EMO BON) is just one of EMBRC's projects that contributes to the UN Ocean Decade.

EMBRC was established to lead European contributions to increasing our knowledge of marine organisms and ecosystems, promoting the sustainable use of marine resources, and supporting the Blue bioeconomy. These aims are achieved by offering high-quality scientific platforms and services, cooperation with like-minded RIs, and dialogue with policy and societal stakeholder organisations. In a significant step towards more private sector engagement, this year EMBRC unveiled its three-year industrial engagement strategy supporting marine aquaculture, marine biotechnology, and ocean observations, and initiated industry webinars to reach out to potential stakeholders and users.

EMBRC's General Assembly ensures that EMBRC's mission is translated into strategy and activities implemented by its community under the leadership of the Executive Director. With a distributed infrastructure in 10 countries and around 100 institutes and marine station operators, communication and coordination among its members are paramount to its effectiveness. The regular meetings of the Committee of Nodes and our EMBRC days, such as the one this year in Gournes, Crete, have been instrumental in maintaining cohesion and cooperation among our members; a sign of vitality and confidence into the future.

Adelino Canario,
Chair of the General Assembly, European Marine Biological Resource Centre (EMBRC)

*European Research Infrastructure Consortium
**European Strategy Forum on Research Infrastructures

OUR PURPOSE

EMBRC: Advancing marine science

The European Marine Biological Resource Centre (EMBRC) is Europe's only research infrastructure for marine biology and ecology. Through our pan-European network of marine stations and research organisations, we help researchers from both academia and industry advance scientific knowledge and innovation, and promote the sustainable use of marine biological resources.

Our vision

To advance the understanding of marine life and harness its potential for a sustainable future for the billions of people who rely on our ocean.

Our mission is to...

- → Push the frontiers of science and deepen fundamental marine biological knowledge
- → Promote Open Science to support marine research globally
- → Support a sustainable blue bioeconomy

EMBRC is a pan-European research infrastructure (RI): a nationally-funded facility that provides services to help scientists foster innovation, produce knowledge, and make new discoveries.

As a participant of the UN Decade for ocean sciences, EMBRC's work is underpinned by our commitment to meet the UN's Sustainable Development Goals (SDGs) and contribute to global science.

Working Groups: sharing knowledge

In 2024, EMBRC launched several Working Groups, gathering its experts in specific scientific or technological themes from across our Nodes and Operators.

The Working Groups collaborate **to drive the development of standards, services, and training in and across services offered by the EMBRC network.** Each group brings together expertise from multiple EMBRC partners and the EMBRC Secretariat. These initiatives enable people working on the same topics to meet, share experiences, and work together on shared challenges.

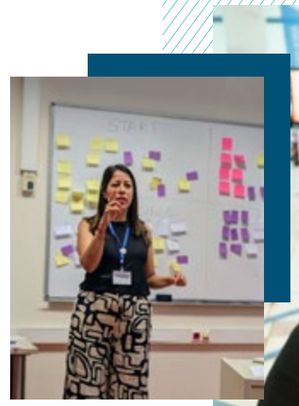
The members of the workshops facilitate discussions, share insights, and provide input into strategically important aspects of EMBRC's work. They aim to enhance collaboration and effectiveness within EMBRC, while ensuring that contributions support users' needs and are aligned with the strategic goals of EMBRC member states.

This will, in turn, lead to faster and more robust scientific discoveries, and further EMBRC's work to position Europe as a global leader in marine biodiversity.

EMBRC's Working Groups enhance collaboration and effectiveness within the infrastructure and lead to faster and more robust scientific discoveries

EMBRC's Working Groups are:

- → Data and e-Infrastructures
- → Imaging
- → Bioprospecting
- → Aquaculture
- → Traceability
- → Biological resource centres
- → In-situ test sites
- → Mesocosms
- → Marine Model Organisms



A year of achievements

In 2024, the EMBRC network celebrated several milestones, new developments and important events. Here are a few highlights from our activities this year.

In 2024, the EMBRC network continued its efforts to foster innovation and boost scientific discovery around our oceans.

January

Finland joins the EMBRC network

February

EMBRC organised and ran the MARCO-BOLO project's Joint General Assembly in Delft

March

EMBRC joins experts at the Hello Tomorrow Global Summit 2024 to discuss challenges and opportunities offered by biodiversity.

EMBRC contributes to the World Ocean Summit, joining discussions around restoring ocean health

EMBRC's AQUASERV project (coordinated by CCMAR) hosts its kick off meeting

April

EMBRC releases v2.0 of its EMO BON Handbook with updated Standard Operating Procedures (SOPs) for observatories

EMBRC attends the UN Ocean Decade conference in Barcelona and presents our EU project MARCO BOLO and the EMO BON observatory

EMBRC Italy launches its first Transnational Access call for proposals

EMBRC attends the 2nd UN Ocean Decade Regional Conference & 11th WESTPAC International Marine Science Conference in Thailand and presents EMO BON as part of the OBON delegation to the meeting

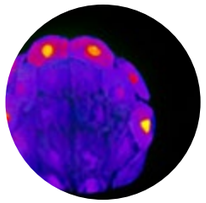
EMBRC joins the first Horizon 2020 DOORS Stakeholder Conference (Black Sea Futures: Science, Prosperity, and People)

May

Hosted our EMBRC Days in Crete, Greece

EMBRC hosts TREC at Stazione Zoologica Anton Dohrn, the expedition's only EMBRC Italian supersite

EMBRC launches its Advanced Training Course: Marine Invertebrate Live Imaging



July

EMBRC joins the European Aquaculture Technology & Innovation Platform (EATIP)

The TREC expedition ends at HCMR in Greece and moves onto its analysis phase

EMBRC hosts one of the G20 Ocean Dialogues, discussing how ocean observation data can be the cornerstone for sustaining and enhancing marine biodiversity

August

EMBRC attends AQUA 2024 in Copenhagen, Denmark, and presents how RIs add value for industry and boost innovation

September

EMBRC attends the UN Summit of the Future in New York and presents MARCO-BOLO and its contributions to the Kunming-Montreal Agreement

October

EMBRC attends the G7 Conference on Large Research Infrastructures and discusses how synergies between RIs help overcome global challenges

EMBRC unveils its three-year Industrial Engagement Strategy which aims to drive innovation in the Blue Bioeconomy

EMBRC launches a webinar series around how aquaculture, ocean observation and biotechnology can contribute to a sustainable Blue Economy

November

EMBRC opens the first Transnational Access call for the EU project AquaSERV

December

EMO BON released the first data collected from its sampling efforts around Europe as a data publication

Boosting ocean progress in 2024

1
new country joined EMBRC (Finland)

2
EU projects focused on advancing aquaculture

€ 633,815
awarded to EMBRC by the European Commission to advance research in aqua-culture, fisheries, blue growth, and ocean restoration through AquaSERV and AgroSERV

557
services available

19
ongoing Horizon Europe projects have EMBRC as a partner

185
papers in 132 journals published by researchers from the EMBRC network

2,077
users of EMBRC's research services over 6 years

2
EU projects coordinated by EMBRC: MARCO-BOLO and eDNAquaPlan

15
of TREC's 42 stops were at EMBRC marine sites

492
service requests granted

14
Conferences, events and webinars promoted on our channels

10
member countries involved in EMBRC

82
EMBRC marine stations and research organisations

Read more about our network

TREC: the value of research infrastructures for scientific discovery

Support from EMBRC was key for this success, as scientists from EMBL and Tara were able to benefit from the marine stations' regional expertise.

Romain Troublé,
General Director
of Tara Ocean Foundation.

In July 2024, the 2-year Traversing European Coastlines expedition (TREC), led by the European Molecular Biology Laboratory (EMBL) in collaboration with Tara Ocean Foundation and EMBRC, concluded its fieldwork. Visiting 21 European countries, the expedition studies how marine & coastal ecosystems are responding to environmental changes.

"It is through collaborative and ambitious research programs like TREC that we will be able to provide a much more comprehensive and in-depth understanding of how these ecosystems respond to natural and anthropogenic changes," says Romain Troublé, Executive Director of Tara Ocean Foundation. "The programme has enabled scientists to address entirely new questions about fundamental biological processes in a way that has never been done before."

EMBRC's access to unique and varied marine ecosystems across the continent – from the Arctic to the Red Sea – was critical as was its knowledge and expertise. **Marine stations organised dedicated teams to offer visiting researchers the best possible support:** from choosing appropriate sampling sites, sorting permits, and setting budgets to providing research vessels and scientific divers, and organising workshops, and public engagement activities – not to mention media liaison. "Support from EMBRC was key for this success, as scientists from EMBL and Tara were able to benefit from the stations' regional expertise," says Troublé.

> **TREC's research is of the utmost importance. 40% of Europe's population live close to the coastline and these ecosystems are already negatively affected by human pressures. Finding out how is critical if we are to properly protect them.**

"We hope TREC was just the beginning of a great pan-European research dynamic," says Troublé. He hopes that Tara and EMBRC can continue to collaborate on similar projects that benefit scientific progress and ocean conservancy.

Thank you to all EMBRC members who supported TREC's researchers. We look forward to the results of the data analysis so we can learn more about the mitigating effects of human impacts on these precious ecosystems.

8

EMBRC member countries supported the TREC expedition: France, Belgium, Sweden, Norway, Spain, Portugal, Italy, Greece

15

of TREC's 42 stops were at EMBRC marine sites

6

of TREC's 8 super sites were hosted by EMBRC marine stations

"A source of immense pride": EMBRC's Access Unit Manager Davide Di Cioccio on supporting TREC

"EMBRC's established network of scientists and technicians, and their significant experience in large-scale transnational projects, was instrumental in supporting the TREC team. We provided access to unique ecosystems and facilities that could not be transferred easily, in-depth knowledge of the local marine environment and its organisms, and logistical support to achieve the expedition's objectives within its intense schedule. It's a source of immense pride to contribute to such a groundbreaking scientific endeavour."

Fuelling marine innovation

EMBRC's broad range of services and expertise help academic and industrial researchers push the frontiers of marine science and unlock the ocean's potential for a sustainable future

In 2024, EMBRC's services and expertise helped more researchers from academia and industry access marine organisms, facilities and expertise from institutions all around Europe.

We provide services across 6 categories:

- Ecosystem access
- Biological resources
- Experimental facilities
- Technology platforms
- E-services
- Supporting Facilities (including EMBRC Belgium's Marine Training Unit)

We help researchers of all career stages from diverse disciplines, including marine biology and ecology, aquaculture, physiology, and biogeochemistry — advance their research to support the development of solutions that address global environmental challenges and boost Blue Growth.

Find out more about our services

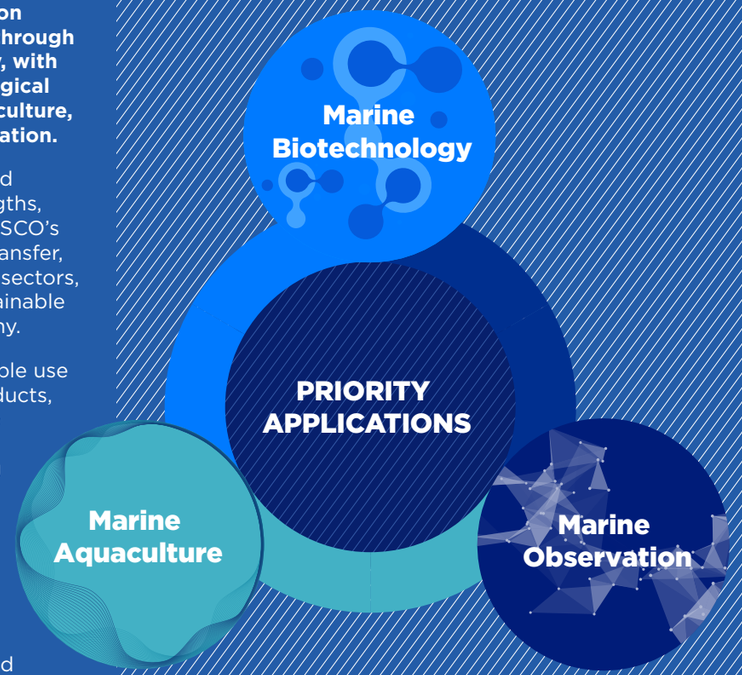
EMBRC's Technological Priority Areas

In 2024, EMBRC announced its vision to drive Blue Economy innovation through stronger engagement with industry, with a strategic focus on three Technological Priority Areas (TPAs): marine aquaculture, bioprospecting, and marine observation.

Each of these emerging ocean-based industries align with EMBRC's strengths, the Horizon Europe Pillars, and UNESCO's SDGs. By accelerating knowledge transfer, technology, and innovation in these sectors, EMBRC is helping to boost the sustainable development of the Blue bioeconomy.

EMBRC is dedicated to the sustainable use of marine bioresources for new products, inspiration, and innovation. We have capabilities to support and develop novel techniques for bioprospecting – the discovery of new bioactive compounds or natural products for pharmaceuticals, nutraceuticals, cosmetics, food additives or animal feeds – aquaculture, and marine observation. With our help, the industry can bring valuable new sustainability products to market and improve the circularity of existing offerings.

Through our services and resources, EMBRC is supporting the creation of an open innovation ecosystem where academia and industry collaborate closely, leading to new services, new technologies, and economic blue growth.



ACCESSING EMBRC SERVICES

In 2024

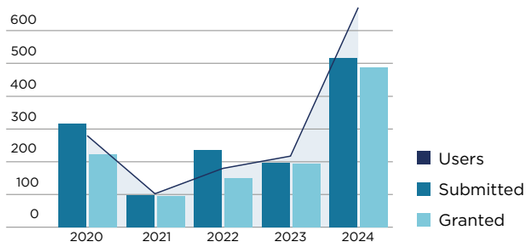
670 **users**
(+52% compared to 2023)

521 **access requests submitted**
(+37% compared to 2023)

492 **access requests granted**
(+26% compared to 2023)

From 2020 to 2024

Trends in the access requests over the years



The number of access requests and users increased this year as a result of: a steady use of our culture collections, most notably at EMBRC Norway; a successful access call organised by EMBRC Italy; training programmes hosted at EMBRC Greece; and the use of technological platforms at EMBRC France.

TYPE OF SERVICES

Services used in 2024

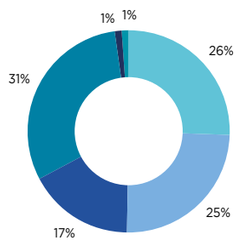
31%
Technology Platforms
e.g. imaging, molecular biology and omics laboratories, bioprospecting platforms, remote sensing, and telemetry

26%
Ecosystem Access
e.g. coastal research vessels, scientific diving teams

25%
Biological Resources
e.g. culture collections, taxonomic services

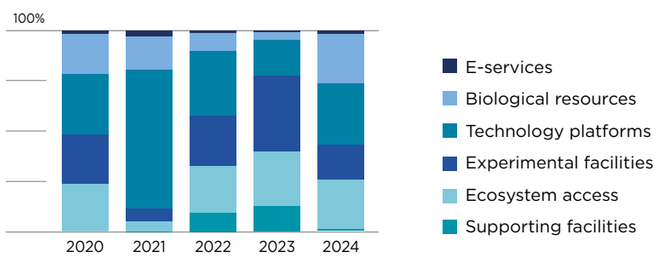
In 2024, our world-class technology platforms attracted around one third of our service users. Our ecosystem access also continued to be popular, with one quarter of users benefiting from our support in sampling and studying unique coastal ecosystems across Europe. Our biological resources, including our culture collections, also proved popular.

In 2024



From 2020 to 2024

Trends in the use of services over the years



GEOGRAPHIC DISTRIBUTION OF ACCESS REQUESTS

EU countries:

85%
of users
in particular:
France, Germany, Greece, Spain, Belgium

Non-EU countries:

15%
of users
In particular:
United States, United Kingdom, Canada, Argentina, Switzerland

FUNDING TO ACCESS EMBRC SERVICES

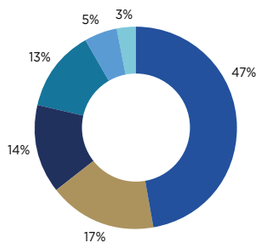
47%
of researchers were self-funded

14%
benefited from international funding (mostly from the TREC expedition and the EU-RISE project)

5%
accessed our services via a Transnational Access programme

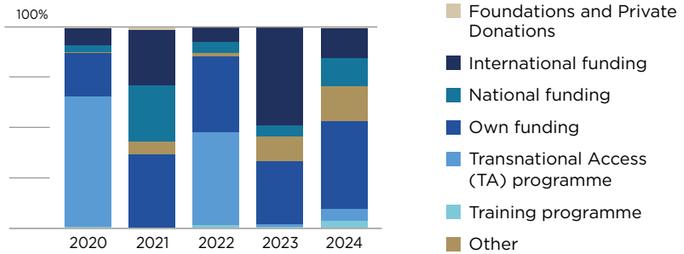
While most of the users were self-funded or used other types of funds, more than one in three benefited from international funding (TREC expedition), national funded calls (EMBRC Italy's first call) or transnational access programmes (AGROSERV, and EMBRC's joint call with AQUAEXCEL3.0).

In 2024



From 2020 to 2024

Funding type



ON-SITE VS. REMOTE ACCESS

In 2024

74%
of users accessed services on-site

26%
of users accessed services remotely

HOME INSTITUTION

In 2024

75%
of EMBRC users are based in academic institutions (universities and research organisations)

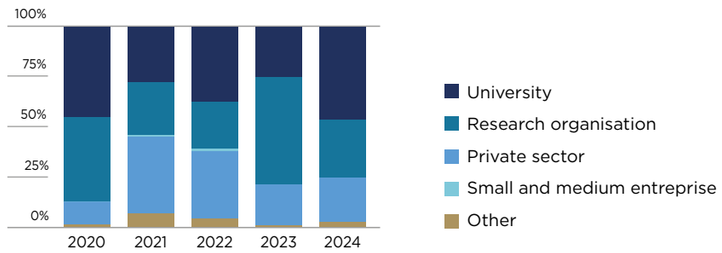
25%
of EMBRC users came from the industrial sector (private, SMEs) and other institutions

The proportion of academic users and the industrial sector has remained stable over the years but, in 2024, there have been more users from universities compared to those from research organisations.

In 2024

From 2020 to 2024

Type of home institution



SCIENTIFIC DOMAIN

In 2024

69%
of users came from the domain of biological sciences

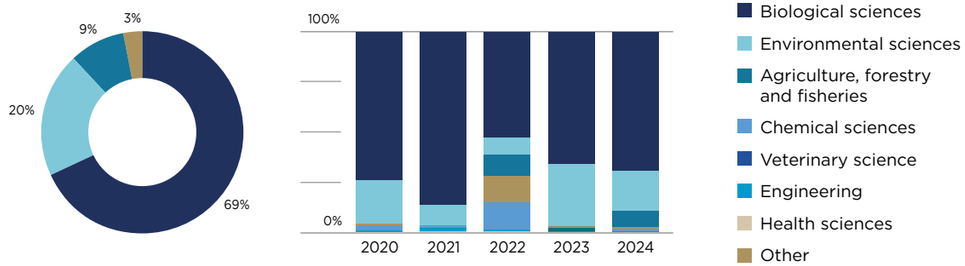
20%
of users came from an environmental science discipline

Also in 2024, the vast majority of users came from the field of biological and environmental sciences. This compares with previous years, where we saw a significant proportion of users working in agriculture and fisheries, as a result of AGROSERV's Transnational Access programme.

In 2024

From 2020 to 2024

Scientific domain



CAREER STAGE

EMBRC continues to offer its services, resources, and expertise in support of researchers at all career stages.

In 2024

46%
researchers

16%
master students

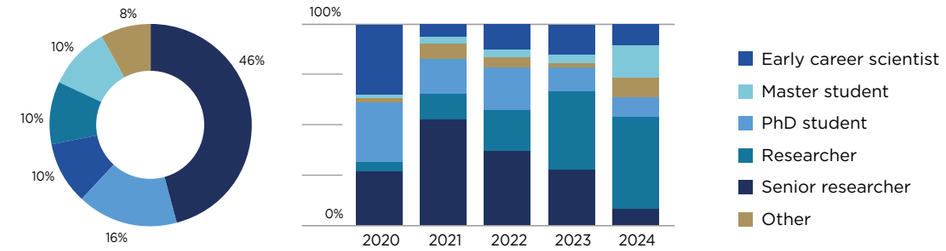
10%
early career researchers

This year, there has been an increase of early-stage researchers (Master and PhD students) compared to previous years, mainly as a result of the training programmes offered by EMBRC Greece.

In 2024

From 2020 to 2024

Users profiles



GENDER BALANCE

In 2024

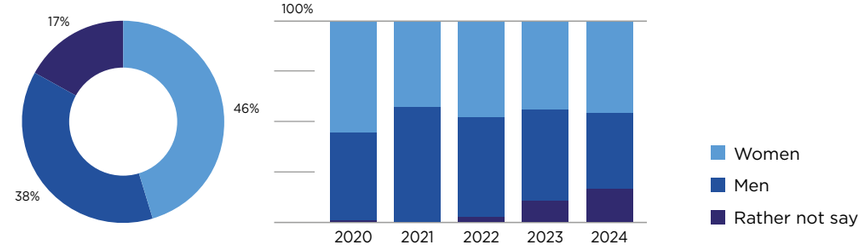
46%
women

38%
men

In 2024

From 2020 to 2024

Gender balance



Service spotlight: culture collections

EMBRC's Access Manager Davide Di Cioccio showcases our most accessed service in 2024

Why are EMBRC's culture collections important?

Culture collections can be considered "botanical gardens of the sea", preserving a diverse range of marine organisms, from the microscopic (e.g. bacteria & microalgae) to the macroscopic scale (e.g. macroalgae & seaweeds). They provide diverse biological material for comparative and evolutionary studies, and enable applied research in biotechnology for applications in areas like renewable energy, pharmaceuticals, and aquaculture.

Access to standardised biological material ensures scientific studies are reproducible and comparable. This is essential for gaining reliable insights into marine biological processes, ecological interactions, evolutionary patterns, and the impacts of climate change and pollution.

Many of our collections offer organisms that are difficult for individual researchers to access. Without our services, they would face huge obstacles to making discoveries.

Why were culture collections so popular in 2024?

In 2024, EMBRC's culture collections were used across a range of scientific applications. As well as providing organisms for marine observation, applied research, and training, they supported exploration into biotechnological applications. Research into sustainable aquaculture is a growing field that relies on culture collections, particularly in the critical study of bivalves.

EMBRC is known for its well-regarded culture collections, including:

- The Roscoff Culture Collection (RCC)'s microalgae, bacteria, and viruse, EMBRC France
- The Norwegian Culture Collection of Algae (NORCCA)'s, EMBRC Norway
- The Spanish Bank of Algae (BEA), EMBRC Spain

The "botanical gardens of the sea" can help researchers make progress in areas like renewable energy and aquaculture, and learn about the impacts of climate change and pollution.

AT A GLANCE

- The most accessed service in 2024:
  Culture Collections 110
  Service category:
  Biological Resources

Highlights

- The majority of users were from Norway (19), France (12), Denmark (10) and Germany (9), **mostly from research organisations and the private sector.**
- **Strains and organisms in culture** were provided mostly only through **remote access** (88%).

Training spotlight

Get the most out of your research data: FAIR data for marine biologists

Data is the foundation of science and, if the scientific work being produced is to be trusted, the data need to be Findable, Accessible, Interoperable, and Reusable (FAIR). EMBRC has developed a practical, hands-on blended course (2 days online, 3 days onsite) to teach marine biologists how to make their data FAIR. Its most recent cohort had around 20 participants online and around 10 onsite. Attendees came from 9 European countries.

The course – running again in 2025 – helps researchers make it possible for others to find, use, and cite their data, meeting European and national data requirements. This ensures that data collected once can be reused many times. It is particularly important in environmental biology where researchers often require global data. Managing data effectively and efficiently gives scientific work a stronger foundation, and knowing how to generate and manage FAIR data makes blue workers more employable.

Student testimonial

"In today's integrated modern world, FAIR data helps us leverage many challenges. This training showed me what FAIR data means in practice and gave me valuable insight into how marine biologists share data at an international level."

Alexandra Zakieva,
Biologist and data manager at EMBL

EMBRC Advanced Training Course: Marine Invertebrate Live Imaging Course

Organised, developed, and sponsored by EMBRC, this course provided training on advanced techniques for working with live marine invertebrates and gave students first-hand experience of performing imaging studies using live specimens. Of the 35 online participants, the top students were selected to attend the onsite sessions. 17 successfully completed the full course.

The sessions not only provided the theoretical background to imaging but also equipped students with the tools to use new instruments and new marine organisms as models. This hands-on experience is a vital part of upskilling the next generation of marine scientists, ensuring they are better equipped to address diverse research questions in their future careers.

Student testimonial

"I plan to use the knowledge learned on the lab days in the early life stage experiments as part of my PhD project. The microscopy sessions were also hugely beneficial and I hope to employ those skills in my project, and possibly collaborate with other institutes. The image analysis and first foray into using Python and Fiji are both skills I have been wanting to learn for a while."

Testimonial from a course alumni

Making Europe a scientific leader

In 2024, as part of its efforts to accelerate knowledge of marine biology and ecology EMBRC is a member of 18 European research projects funded by the Horizon Europe programme. By collaborating with other organisations through these projects, we are continuing to push the frontiers of marine science and position Europe as a global leader in scientific innovation and the Blue bioeconomy.

BIODIVERSITY & OCEAN OBSERVATION

COORDINATED BY EMBRC

MARCO-BOLO

December 2022–November 2026

Strengthening biodiversity observation in support of decision-making

Total budget: € 7,255,037.50

EMBRC budget: € 358,750.00

https://marcobolo-project.eu/

eDNAqua-Plan

NEXT GENERATION OF AQUATIC BIODIVERSITY MONITORING

September 2023–August 2026

Developing a digital ecosystem for eDNA reference libraries for marine and freshwater ecosystems

Total budget: € 1,978,282.50

EMBRC budget: € 240,625.00

https://ednaquaplan.com/

BIODIVERSITY & OCEAN OBSERVATION

AtlantECO

Atlantic ECOsystems Assessment, Forecasting & Sustainability

September 2020–August 2025

Developing a novel, unifying framework for a better understanding and management of the Atlantic Ocean and its ecosystem services

Total budget: € 10,932,573.75

EMBRC budget: € 222,625.00

https://www.atlanteco.eu/

DOORS

BLACK SEA

June 2021–May 2025

Streamlining research and providing the infrastructure to better understand the Black Sea

Total budget: € 9,795,350.00

EMBRC budget: € 100,000.00

https://www.doorsblacksea.eu/

AQUARIUS

March 2024–February 2028

Addressing challenges and exploring opportunities for the long-term sustainability of marine and freshwater ecosystems

Total budget: € 14,499,999.25

EMBRC budget: € 343,717.10

https://aquarius-ri.eu/

DTO-BioFlow

Integration of biodiversity monitoring data into the Digital Twin Ocean

September 2023–February 2027

Integrating biodiversity monitoring data into Digital Twins of the ocean

Total budget: € 9,747,516.25

EMBRC budget: € 358,750.00

https://dto-bioflow.eu/

BIOcean5D

December 2022–November 2026

Studying the impact of human activity on Europe's seas and coastlines

Total budget: € 15,449,903.00

EMBRC budget: € 189,550.00

https://www.biocean5d.org/

IRISCC

April 2024–September 2028

Empowering researchers and other stakeholders with integrated research and knowledge services, driving effective climate action

Total budget: € 14,499,857.75

EMBRC budget: € 113,187.50

https://www.iriscc.eu/

OUR ACTIVITIES

AQUACULTURE

AQUASERV

April 2024–March 2029

Providing researchers access to top European infrastructures, advancing studies in fisheries, aquaculture, and sustainability

Total budget: € 14,157,482.52

EMBRC budget: € 567,562.50

https://www.aquaserv-ri.eu/

AgroServ

September 2022–August 2027

Providing customised and integrated RI services to support a sustainable and resilient agriculture and agroecological transitions

Total budget: € 14,252,873.35

EMBRC budget: € 66,252.75

https://agroserv.eu/

DATA COLLECTION, MANAGEMENT & ANALYSIS

FAIR-EASE

Building Interoperable Earth Science & Environmental Services

September 2022–August 2025

Building interoperable earth science and environmental services

Total budget: € 4,738,125.00

EMBRC budget: € 46,250.00

https://www.fairease.eu/

EOSC Blue-Cloud2026

January 2023–June 2026

Providing a virtual environment with open and seamless access to services for storage, management, analysis, and re-use of marine research data

Total budget: € 8,845,420.00

EMBRC budget: € 110,437.50

https://blue-cloud.org/

THE USE OF BIORESOURCES IN HEALTH

canSERV

providing cutting edge cancer research services across europe

September 2022–August 2025

Providing cutting edge, interdisciplinary, and customised oncology services

Total budget: € 14,866,440.50

EMBRC budget: € 116,846.38

https://www.canserv.eu/

ISIDORe

January 2022–July 2025

Supporting the generation of new knowledge and intervention tools to help control epidemic-prone pathogens

Total budget: € 20,998,624.00

EMBRC budget: € 48,750.00

https://isidore-project.eu/

TECHNOLOGY: OMICS & IMAGING

AI4Life

September 2022–August 2025

Democratising access to FAIR data and open AI models by creating an accessible platform and offering training for life scientists

Total budget: € 4,141,167.50

EMBRC budget: € 34,500.00

https://ai4life.eurobioimaging.eu/

ANERIS

OPERATIONAL SENSING LIFE TECHNOLOGIES FOR MARINE ECOSYSTEMS

January 2023–December 2026

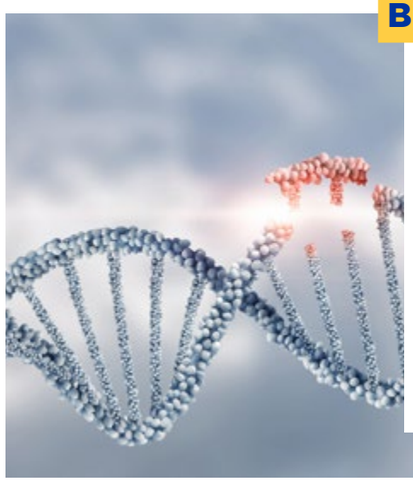
Developing the next generation of scientific tools and methods for sensing marine-life

Total budget: € 9,999,665.00

EMBRC budget: € 275,000.00

https://aneris.eu/

BIOPROSPECTING



BlueRemediomics

December 2022–November 2026

Harnessing marine microbiome data for for biotechnological applications and ecosystem services

Total budget: € 7,683,577.50

EMBRC budget: € 303,812.50

https://blueremediomics.eu/

STRENGTHENING THE COORDINATION OF RESEARCH INFRASTRUCTURES

ERIC FORUM

August 2023-August 2027

Facilitating the establishment and operations of ERICs

Total budget: € 1,495,281.25

EMBRC budget: € 12,089.19

https://www.eric-forum.eu/

iMagine

May 2023–April 2028

Addressing socio-economic challenges through imaging technology developments

Total budget: € 9,569,677.50

EMBRC budget: € 121,250.00

https://www.imagine-ai.eu/

European highlights

FINLAND BECOMES EMBRC'S 10TH MEMBER COUNTRY

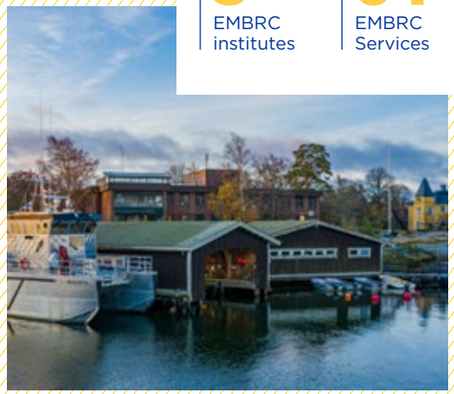
In January, Finland became the 10th country to join EMBRC. Building on previous collaborations, its membership enables Finnish partners to develop their marine biology research services. The wider network benefits from Finland's field sampling capabilities (vessels, boats, equipment and diving services, including for cold and icy conditions), experimental facilities, analytical services, and algal culture collections as well as long-term marine data time series.

The Finnish coastline is experiencing worrying levels of biodiversity loss and the Baltic Sea is warming faster than the global ocean. Gaining access to Finland's unique brackish-water habitats allows EMBRC researchers to find improved ways of protecting and restoring these important ecosystems, and predicting changes that may happen later in other aquatic habitats.

5 EMBRC institutes

64 EMBRC Services

1 EU project



EMBRC GREECE HOSTS A TREC WORKSHOP IN CRETE

In September 2024, EMBRC Greece maximised the opportunity of a second visit from the TREC expedition by hosting a workshop while the researchers were visiting Crete. The team presented HCMR and EMBRC Greece as well as learning about TREC's research projects, gaining insights from their expertise, standardised sampling and metadata collection and seeing experiments that can be conducted with EMBL's advanced technologies.

This is also an important step in building long-term relationships. Members of EMBRC Greece have now attended a three-day symposium in Heidelberg and were among very few people invited outside of the project consortium. They have expressed interest in continued cooperation through data analysis, project collaborations, and training. These new relationships hold exciting potential and EMBRC Greece is looking forward to developing them further.

1 EMBRC institute

18 EMBRC Services

13 EU projects

European highlights

EMBRC France

SIGNIFICANT FUNDING ENABLES VITAL EQUIPMENT UPDATES

EMBRC-France secured a 4M€ funding package from the French Ministry of Higher Education and Research to replace vital platform equipment over 3 years, starting in 2025.

This long-anticipated funding enables the marine stations operated by Sorbonne University and the French National Centre for Scientific Research (CNRS) to purchase a new electron microscope, confocal microscope, proteomics system, thermo-controlled rooms, and two new vessels.

The enhanced equipment allows Station Biologique de Roscoff, Observatoire Océanologique de Banyuls-sur-mer, and Institut de la Mer de Villefranche to further improve their ecosystem access, imaging and technology, and aquarium services. This means they can better support EMBRC scientists in their work to gain a holistic view of the marine environment and deepen fundamental knowledge of the ocean.

3 EMBRC institutes

22 EMBRC Services

8 EU projects

EMBRC Belgium

SYMPOSIUM ON NAVIGATING ECOLOGICAL CONSIDERATIONS AND SUSTAINABILITY IN MARICULTURE PRACTICES

EMBRC Belgium and the Flemish Aquaculture Platform organised an aquaculture symposium exploring the ecological sustainability of Belgian mariculture. With 120 participants attracted by this hot topic, the venue was at full capacity.

The symposium showcased case studies and discussed insights, challenges, and opportunities through international speakers and a panel discussion. Key issues included national and regional funding, gaps and uncertainties around legislation, and potential threats of mariculture for ecosystem function. Bringing together a wide range of stakeholders enabled EMBRC Belgium to benefit from the experience of farmers, scientists and environmentalists, as well as promoting EMBRC's services.

EMBRC Belgium also concluded its Joint Development Activity – exploring population genetics of whiteleg shrimp – encouraging Belgian operators to collaborate in the development of aquaculture services.

5 EMBRC institutes

58 EMBRC Services

22 EU projects

EMBRC Israel

EXPANDING THE ISRAEL NATIONAL CULTURE COLLECTION OF ALGAE AT IOLR

The Israel National Culture Collection of Algae (INCCA) is expanding its dedicated algae research centre to add more systems to enable the cultivation and preservation of macroalgae.

Macroalgae is a natural product utilised in several industries, including food, cosmetics, pharmaceuticals, and green energy. Expanding the national algae collection through this project facilitates the advancement of macroalgae research and development by providing scientists and cultivators with access to a broader variety of strains.

Unlocking the potential of macroalgae is key to a sustainable transition to the Blue bioeconomy. It also bolsters EMBRC's mission to explore how marine biodiversity can inspire innovative new products, and encourage the sustainable use of marine resources for the benefit of billions of people around the world.

5 EMBRC institutes

66 EMBRC Services

7 EU projects through IOLR

EMBRC Italy

FIRST TRANSNATIONAL CALL FOR PROPOSALS

To celebrate the launch of its new website and renewed service catalogue, EMBRC Italy launched its first transnational call for proposals.

16 projects were selected for their research excellence. These projects received funding to access the country's unique marine ecosystems, which range from the volcanic CO2 vents in the Gulf of Naples to the lagoon systems of Venice and Lesina, and the salt marshes in Sicily and Sardinia. The funds also allowed researchers to use marine biology and ecology services (such as biobanks and culture collections, experimental facilities and advanced technological platforms) offered by EMBRC Italy's research institutions. Travel, accommodation, and meals were also covered to remove the common barriers that often get in the way of research and ensured the scientists could focus on their important work.

16 EMBRC institutes

100 EMBRC Services

4 EU projects

European highlights

EMBRC Norway

COPEPOD ADAPTABILITY PROJECT WINS AWARD

In June, Norwegian University of Science and Technology (NTNU) PhD student Sidonie Rousseau won the "Best Student Oral Presentation Award" award at the International Conference on Copepoda in Japan. Her work explores how Calanus finmarchicus (the main zooplankton in the Atlantic Ocean and a key food source for economically important fishes) react to different stressors.

NTNU's SeaLab copepod culture gave her easy access to enough organisms and confidence that they were the right species, sex, and life stage, removing any unnecessary extra steps from her work, such as fishing for samples (copepods are not easy to catch in the wild). This shows how vital collections like the SeaLab copepod culture – which celebrates its 20th anniversary this year – benefit important marine research projects.

5 EMBRC institutes | **92** EMBRC Services | **9** EU projects

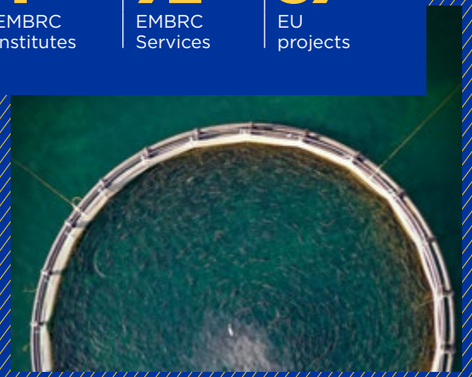
EMBRC Portugal

AQUASERV LAUNCHES TO PROVIDE AQUACULTURE SERVICES TO EUROPEAN INFRASTRUCTURES

CCMAR led European partners to launch AQUASERV. With a total budget of over 14 million euros, the project provides transnational and virtual access to 100+ customised services from top European infrastructures.

AQUASERV's extensive network provides scientists from various disciplines with fully funded access to some of Europe's most advanced research facilities: state-of-the-art technological platforms, unique organism collections, advanced aquaria, and more. The ambitious initiative supports projects in aquaculture, fisheries, food security, marine biotechnology, ecosystem health, pollution, habitat restoration, and areas related to aquatic conservation and the blue bioeconomy. Finding solutions to these societal problems also supports EU policies like the Common Fisheries Policy, Farm to Fork Strategy, European Green Deal, and Mission Restore our Ocean and Waters.

4 EMBRC institutes | **72** EMBRC Services | **57+** EU projects



EMBRC Spain

MARINNONET PROJECT LAUNCHES TO BOOST BLUE BIOTECHNOLOGY INNOVATION

EMBRC Spain launched MARINNONET along with EMBRC France and partners in Ireland and Portugal. This transnational Research, Development and Innovation (R&D&I) cooperation network – coordinated by CIM-UVigo – is focused on ensuring the Blue biotech sector in the Atlantic Area territory is competitive and sustainable. With a 2m budget, the project aims to foster transnational collaboration and leverage partners' different strengths as they explore climate change solutions, encourage the sustainable use of marine resources, and ensure Europe remains competitive in the global Blue bioeconomy.

To further strengthen and improve connections within its three operators, EMBRC Spain also launched its first national staff exchange programme through a Thematic Networks project funded by the Spanish Research Agency (EMBRedES+). This initiative will help Spanish EMBRC marine institutions – all involved in MARINNONET – to upskill staff, refine services, and exchange ideas.

3 EMBRC institutes | **79** EMBRC Services | **6** EU projects

EMBRC Sweden

NEW EMO BON ARMS PAPER REVEALS IMPORTANT MARINE BIODIVERSITY DISCOVERY

Researchers from University of Gothenburg (EMBRC Sweden) worked with partners on a new paper published in Nature Communications that utilised EMBRC's EMO BON network to make an important discovery about marine biodiversity richness.

Using Autonomous Reef Monitoring Systems (ARMS), they generated globally comparable data supporting the hypothesis that the amount of energy available in an ecosystem and how much it changes through the year is key to species richness. This knowledge could make it easier to protect biodiversity hotspots, engineer the right conditions for species rich communities, and identify which zones of the ocean should be prioritised for protection.

By providing a network of marine stations and diving services, EMBRC enabled these scientists to consistently monitor species diversity on a global level.

Scientific paper: Cecchetto M, Dettai A, Gallut C, Obst M, et al (2024) Seasonality of primary production explains the richness of pioneering benthic communities. Nature Communications 15, 8340.

7 EMBRC institutes | **51** EMBRC Services | **4** EU projects

Engagement for sustainable industry

Our three priority areas will help mitigate environmental issues, protect and restore ecosystems, boost economic growth, and help Europe position itself as a climate leader.

The private sector plays a vital role in speeding up the transition to a sustainable Blue bioeconomy. In 2024, EMBRC unveiled our industrial vision to accelerate ocean knowledge transfer, advance innovation, and encourage the sustainable use of marine resources. Our three-year strategy aims to drive progress in Blue bioeconomy sectors by:

- ➔ **Integrating our resources and expertise into the innovation ecosystem** to encourage regional collaboration and innovation across industries
- ➔ **Increasing industry use of our services, resources and expertise** for economic growth by improving the visibility of our service offer
- ➔ **Measuring and reporting on the impact of our innovations on the ocean economy** to inform decisions and support future growth.

The private sector has agility and innovative minds but faces challenges such as a lack of data, resources, or in-depth expertise on environmental issues; besides, potential spillover effects of suggested solutions are constrained by policy challenges. As a pan-European research infrastructure, EMBRC is perfectly placed to help overcome these common obstacles.

By collaborating with EMBRC, industry scientists can tap into our network of multidisciplinary experts, and benefit from our extensive catalogue of marine biological services, resources, tech platforms and datasets. We help private sector researchers accelerate innovation, co-develop cutting-edge technologies, test prototypes, access facilities for up-scaling production, and advance European blue growth. Importantly, we help ensure their innovations are science-based, and reduce the risk involved in developing new technologies and supporting sustainable and environmentally-friendly technologies.

We're focusing on three priority areas – **aquaculture, marine biotechnology, and ocean observation** – to help industry mitigate environmental issues, protect and restore ecosystems, predict environmental conditions, create new jobs, boost economic growth, support sustainable food production, and help Europe position itself as a climate leader.

Ocean observation

EMO BON's first data marks an important milestone in marine monitoring

In 2024, EMBRC released EMO BON's first data from sampling efforts around Europe. These data, collected in 2021, correspond to 13 sediment samples (total size ~80GB) and 67 water samples (~520GB). They will be integrated into the European Digital Twin of the Ocean and are openly available for meta-analysis.

Regular sampling, through projects like EMO BON, helps us monitor the health of the marine environment, improve projections and spot problems early so we have a better chance of addressing issues that negatively impact marine health. The Network is generating a substantial time series on the marine microbiome, which will give unprecedented insight into the lives of microorganisms in the sea. By generating biodiversity data that can be analysed by scientists around the world, EMO BON provides Europe with a means to monitor and understand its marine ecosystems, and creates evidence-based insights to inform policy decisions.

Once they have received samples, EMBRC works with the French national sequencing centre (Genoscope) to manage the entire process of DNA extraction, sequencing, and analysis. This removes financial and logistical obstacles as well as reducing the number of sources of error in the data.

> **EMO BON provides Europe with a means to monitor and understand its marine ecosystems, and creates evidence-based insights to inform policy decisions.**

Lots of work has gone into this data release from people across the EMO BON observatory so we're proud to see the publication of this data authored by all the participating scientists and technicians.

This is an exciting moment for EMBRC's flagship project EMO BON and we're looking forward to seeing how these data (and future releases) lead to tangible impacts for the ocean.

EMO BON ensures FAIR data through updated SOPs

The dynamic and variable nature of science means researchers must adapt to different situations, but following standardised procedures is essential for generating FAIR (Findable, Accessible, Interoperable, and Reusable) data.

In 2024, EMBRC updated its Standard Operating Procedures (SOPs) for observatories in the European Marine Omics Biodiversity Observation Network (EMO BON). These detailed protocols help researchers sample the water column and hard and soft substrate in the same way to ensure safety, consistency, and compliance with relevant standards. By respecting these procedures, EMO BON observatories can avoid biases and generate consistent, accurate, comparable, and reliable data. This helps them support top quality science and generate robust conclusions to inform evidence-based policy decisions affecting the marine environment.

> **These detailed protocols help EMO BON observatories develop robust conclusions to inform evidence-based policy decisions affecting the marine environment.**

EMO BON in numbers

10
participating countries

22
partner institutes

25+
Sampling campaigns per year

6 water column

11+ soft substrates (6+ microorganisms, 3+ meiobenthos, 2+ macrobenthos)

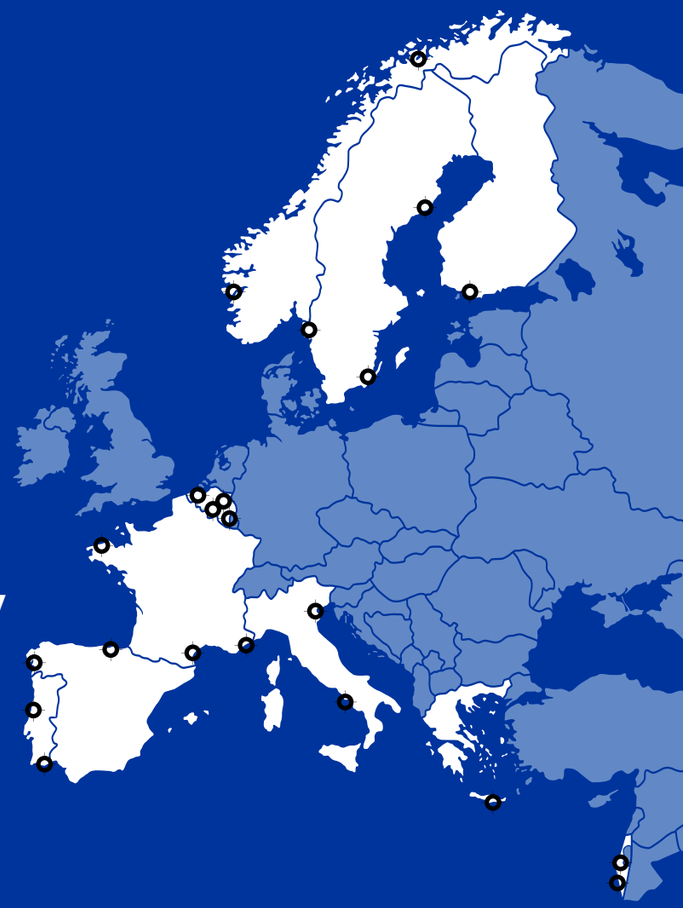
8+ hard substrates

736
samples total collected by EMO BON

336 water column

232 soft substrates

108 hard substrates



5
Horizon projects which EMO BON is part of (ANERIS, Blue-Cloud2026, BlueRemediomics, DTO-BioFlow, FAIR-EASE).

EMO BON
EUROPEAN MARINE OMICS BIODIVERSITY OBSERVATION NETWORK

ENDORSED BY THE UN DECADE · OBON PROGRAM

A flagship EMBRC project, EMO BON is an official project of the Ocean Biomolecular Observing Network (OBON) programme and an official contribution to the UN Decade of Ocean Science for Sustainable Development. Working with partners around the world, EMO BON aims to build European capacity to observe and monitor marine biodiversity, fill current gaps in biological observation, and offer important insights into the genetic composition of marine biodiversity.

Shaping the G20 agenda

for sustainable marine management

ALICE SOCCODATO,
Science Unit Manager,
EMBRC Headquarters

KAMILA SFUGIER TOLLIK,
Technical and Coordination Officer,
EMBRC Headquarters

EMBRC promotes international collaboration to position ocean research and sustainable marine resource management within a broad policy agenda.

The Ocean Dialogues are a series of events, convened by Oceans20 where marine experts share insights, exchange knowledge, explore opportunities and solutions for sustainable marine management. EMBRC took it upon itself to organise an Ocean Dialogues roundtable with ocean leaders on marine observation: Organisation for Economic Co-Operation and Development (OECD), The European Commission (DG MARE), FUGRO, London School of Economics and Political Science, and 4Climate S.à.r.l.).

*EMBRC joins Oceans 20

A total of 131 participants from 93 countries followed the 1.5 hour roundtable exploring the integral role of ocean observation data (OOD) in overcoming environmental challenges and shaping a sustainable Blue economy. Attendees also had the opportunity to ask questions and interact with the speakers. The discussions offered an opportunity to shape G20 nations' policy directions for marine biodiversity health and conservation. The panel stressed the need for **global standards for marine biodiversity data, effective monitoring technologies, and equitable capacity building.** The discussion also touched on how to communicate the value of biodiversity observation to stakeholders in a clear and engaging way, without complex jargon. The event's conclusions shaped the Oceans20 Communiqué* and informed policy recommendations for the G20's agenda.

The G20 gathers the main world economies, represents 2/3 of the world's population and the equivalent of 80% of global GDP and carbon emissions – making it a key platform to discuss global issues. Previous G20 presidencies made significant contributions to awareness of sustainable marine management but this year went even further.

Biodiversity ocean observation is typically overlooked so this type of engagement with high-level panellists is vital. **These discussions help policymakers understand the importance of evidence-based decisions, and teach us how to improve scientific outputs for them.** They also raise awareness of the importance of OOD and cement the need for investment into research and innovation from diverse stakeholders.

Everyone depends on the ocean. Something that happens in one place can impact people thousands of miles away. We were pleased to see this recognised in the 2024 G20, which centred the ocean more than ever, and we look forward to the next presidency building on these important steps.

The future of aquaculture

MERY PIÑA,
Industrial Liaison Officer,
EMBRC Headquarters

EMBRC's industrial vision – unveiled in 2024 – highlighted aquaculture as a priority area, alongside bioprospecting and marine observation. But why do we see such promise in this industry?

A thriving aquaculture sector holds the potential to support the European Blue bioeconomy while contributing to the UN's Sustainable Development Goals and benefiting society. **Sustainable aquaculture reduces pressure on wild fish stocks while creating jobs, boosting economies, and ensuring food security.**

The EU currently imports 70% of its seafood and is responsible for just 2% of global aquaculture products, but the sector is growing. Between 2010 and 2022, the value of the EU's aquaculture production grew by about 75%. According to the EU Blue Economy report 2024, the marine aquaculture sector contributed €4.3 million in gross value added (GVA) through the creation of 1.2 million tonnes of products.

EMBRC is perfectly placed to further accelerate the research, technological development, and innovation needed to help the aquaculture sector flourish.

EMBRC provides a wide range of services for aquaculture research and has many partners working in this sector. The RI can help **aquaculture development through services including access to facilities for feed trial studies, up-scaling, selective breeding, genetic studies, and testing innovative disease-control approaches.**

A key project that we co-lead in this space with the Centre of Marine Sciences (CCMAR, EMBRC Portugal) – AquaSERV – is advancing aquaculture studies and supporting the sustainable transition to a resilient sector. We believe EMBRC is perfectly placed to further accelerate the research, technological development, and innovation needed to help this sector flourish.

Communications: for science and society

Communication is a vital part of creating tangible outputs from the scientific process. Through our comms work, EMBRC is showing how we're boosting marine research for the benefit of society and economies while educating and influencing citizens, industry, and policymakers. This year, an article from our Communications Manager, Anabelle Chaumun, was published by the French Ministry of Higher Education, Research and Innovation. We hope you enjoy these snippets of her writing on how communication helps create an important dialogue between science and society:

Read the full article:

"If we want to accelerate the development of knowledge for sustainability, we must redouble our efforts to establish symbiosis between science and society. For a dialogue to exist between the two, we must change; starting with rethinking traditional organisational strategies and roles in light of societal realities."

"We must reconnect technical progress with the idea of public good. But this change cannot be made without education, transparency and access to knowledge and innovations – by sharing alternative fact-based narratives, comms plays a key role in bringing everyone together and avoiding polarisation. There is a growing awareness of this but now society must be ready to engage in this paradigm shift."

EMBRC's communications in 2024

This year, EMBRC's communications team continued to boost the impact of our scientific research through awareness raising campaigns and activities, including:

EMBRC hosted an Ocean Dialogues roundtable

Brought together ocean leaders from **5 other prestigious institutions**

Attracted **131 participants** from **93 countries**

Helped to shape the **Oceans20 Communiqué's** recommendations for the G20 agenda.

EMBRC organised its first Technology Webinar

- Spotlighting sustainable aquaculture
- Discussing the critical role aquaculture plays in the sustainable Blue Economy and how RIs can help this sector advance
- Attracted more than 110 attendees
- This was the most viewed page on EMBRC's website in October 2024 with 1,339 visits
- It also generated **1,291 clicks via X and LinkedIn**
- In total, the tech webinar had **650,361 total impressions on X and LinkedIn**

EMBRC hosted its Community Days

The EMBRC network brought together **80+ participants** from **10 countries** at its Community Days in Crete, Greece.

EMBRC's work was highlighted in the press

- Our Executive Director was interviewed by the French magazine **Décisions Durables** discussing EMBRC's contribution to marine science and the urgent need for industries to change for the benefit of ocean health
- EMBRC's Access Officer Davide Di Cioccio was spotlighted in **AgroServEU Chronicles** talking about EMBRC's work in agroecology, improving the health of water systems and threats from modern farming

EMBRC attended or promoted 10+ events & conferences, including:

- MARCO-BOLO's Joint General Assembly
- Hello Tomorrow Global Summit 2024
- The World Ocean Summit
- The kick off meeting for EMBRC's AQUASERV project
- The UN Ocean Decade conference
- The 2nd UN Ocean Decade Regional Conference & 11th WESTPAC International Marine Science Conference in Thailand
- The first Horizon 2020 DOORS Stakeholder Conference (Black Sea Futures: Science, Prosperity, and People)
- EMBRC Days in Crete
- EMBRC's Ocean Dialogues roundtable
- AQUA 2024
- The UN Summit of the Future
- he G7 Conference on Large Research Infrastructures
- The Ocean B2B roundtable
- La Mer en Débat
- The VLIZ Marine Science Day 2024
- The MARIPOLDATA Ocean Seminar

EMBRC continued to support the TREC expedition

- TREC ended after two years of fieldwork. Throughout the expedition, EMBRC raised awareness across our channels and through active participation with partners, members of the public, and the media. We're now looking forward to the results of the data analysis.
- **8 of EMBRC's 10 member countries** supported the expedition
- **15 of TREC's 42 stops** were at EMBRC marine sites
- **6 of TREC's 8 super sites** were hosted by EMBRC marine stations

Our publications in 2024

In 2024, researchers from across the EMBRC network continued to boost our understanding of marine ecosystems and biodiversity.

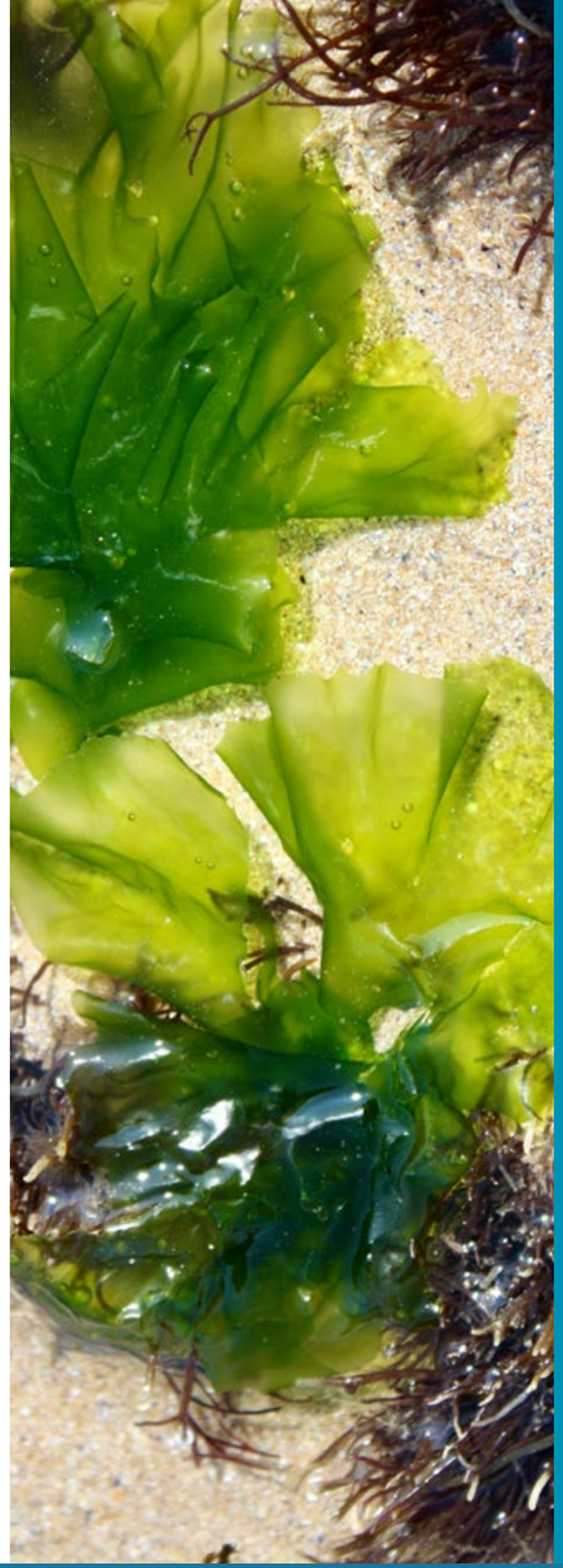
Journal - TOP 6	Number of papers published
FRONTIERS IN MARINE SCIENCE	6
SCIENCE OF THE TOTAL ENVIRONMENT	5
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B	5
NATURE COMMUNICATIONS	4
SCIENTIFIC REPORTS	4
LIMNOLOGY AND OCEANOGRAPHY	4

Researchers from the EMBRC network published:

185 papers

in **132** different journals

(source: GoogleScholar)



Spotlight on aquaculture paper

Paper: *The cultivated sea lettuce (Ulva) microbiome: Successional and seasonal dynamics*

Journal: Aquaculture

Published: May 2024

Cited: 7+ times

Seaweed aquaculture is growing rapidly around the world. A fast-growing and resilient type of green seaweed called Ulva is becoming recognised as an excellent sustainable feedstock. It works well in multi-trophic aquaculture and has the potential to mitigate environmental pollutants. In this study, researchers discovered that Ulva's microbiome is highly dynamic, young plants have a different microbiome from outplanted Ulva and can pick up new microbes during the nursery phase, and controlling the nursery conditions can influence microbiome composition more than host specificity.

EMBRC supporting sustainable aquaculture

These findings could help researchers improve the health of Ulva plants and boost the success of aquaculture production in Europe and globally. **The research was facilitated thanks to support from EMBRC Belgium.**

Aquaculture is one of the priority areas highlighted in EMBRC's Industrial Vision. By supporting a sustainable aquaculture sector, our work contributes to the European Blue bioeconomy and the UN's Sustainable Development Goals.

Governance and funding

As a distributed research infrastructure, EMBRC has 10 member countries and over 80 marine research sites across Europe. Our headquarters in Paris, France, is responsible for the infrastructure's coordination and centralised management.

EMBRC General Assembly (GA)

EMBRC is governed by a General Assembly, which is composed of two representatives from each EMBRC member country and is responsible for making decisions about the organisation's strategy, governance and scientific development.

BELGIUM

Koen Lefever (Vice-Chair), Belgian Science Policy Office (BELSPO)

Gert Verreet, Department of work, economy, science, innovation & social economy

FRANCE

Catherine Leblanc, Sorbonne Université (SU)

Catherine Le Chalony, Ministry of Higher Education, Research and Innovation (MERI)

GREECE

Antonis Magoulas, Hellenic Centre for Marine Research (HCMR)

ISRAEL

Moshe Ben-Sasson, Ministry of Science, Technology and Space (MOST)

Simon Berkowicz (Vice-Chair of GA until November 2024), Interuniversity Institute for Marine Sciences (IUI)

ITALY

Marco Borra, (Vice-Chair since November 2024), Stazione Zoologica Anton Dohrn (SZN)

Mauro Bertelletti, Ministry of Scientific Research and Education (MIUR)

NORWAY

Inger Oline Røsvik, Research Council of Norway (RCN)

Henrik Glenner on behalf of **Amund Maage,** University of Bergen (UiB)

PORTUGAL

Marta Abrantes, Foundation for Science and Technology (FCT)

Adelino Canário (Chair), Centre of Marine Sciences (CCMAR)

SPAIN

Ignacio Baanante on behalf of **Inmaculada Figueroa Rojas,** Ministry of Economy and Competitiveness (MINECO)

Estefania Paredes on behalf of **José Manuel García Estevez,** University of Vigo (UVIGO)

SWEDEN

Ulf Jonsell, Swedish Research Council

Gunilla Rosenqvist, Uppsala University

EMBRC Secretariat

Nicolas Pade, Executive Director, is EMBRC's executive and legal representative. He leads EMBRC's Secretariat, which is responsible for the organisation's general management and administration.

Nicolas Pade, Executive Director

Alexandra Vasic, Chief Financial and Administrative Officer

Guillaume Duspara, Project Administrative and Financial Officer

Nathalie Mellot, Financial and Administrative Officer

Mery Piña, Industry Liaison Officer

Davide Di Cioccio, Access Unit Manager

Stella Alexandroff, Access Officer

Arnaud Laroquette, Access and Benefit Sharing (ABS) Compliance Officer

Alice Soccodato, Scientific Officer and Project Manager

Ioulia Santi, Observation Data and Service Development Officer

Christina Pavloudi, Data Scientist

Giulia Vecchi, Project Manager (MARCO-BOLO)

Paulina Ramirez Quevedo, Project Manager (eDNAquaPlan)

Kamila Sfugier Tollik, EU Projects Coordination Officer

Anabelle Chaumun, Communications Manager

Gwenaëlle Walter, Communications Officer

Lucie Salvaudon, General Assembly Secretary (until november 2024)

Inès Amami, General Assembly Secretary (from november 2024)

Governance

The Committee of Nodes

Serving as a link between EMBRC HQ and its national partners, this committee provides advice on development and technical issues and ensures decisions made by the GA are implemented at national level.

Jan Vanaverbeke, Royal Belgian Institute of Natural Sciences (RBINS)(Vice-Chair)

Joanna Norkko, University of Helsinki (UH)

Mery Piña, European Marine Biological Resource Centre (EMBRC HQ) (Secretary)

Alice Soccodato, European Marine Biological Resource Centre (EMBRC HQ)

Nicolas Pade, European Marine Biological Resource Centre (EMBRC)(Chair)

Alex McDougall, Institut de la Mer de Villefranche (IMEV)

Georgios Kotoulas, Institue of Marine Biology, Biotechnology and Aquaculture (HCMR-IMBBC)

Raz Tamir, Israel Oceanic and Limnological Research (IOLR)

Donatella De Pascale, Stazione Zoologica Anton Dohrn (SZN)

Tatiana Tsagaraki, The Arctic University of Norway (UiT)

Deborah Power, Centro de Ciências do Mar (CCMAR)

Ibon Cancio, Plentzia Marine Station (PiE)

Matthias Obst, Kristineberg Marine Research Station (KMRS), University of Gothenburg (UGOT)

The Science & Innovation Advisory Board

The Science & Innovation Advisory board is made up of industry and academic experts who have been elected by the GA to advise EMBRC on strategic matters.

Claire Jolly, OECD

Katherine Richardson, University of Copenhagen (stepped down in spring 2024)

Erik Steinfelder, eMolecules

Antonio Villanueva, BioMar

Emma Heslop, IOC/UNESCO (GOOS)

The EMO BON Operational Committee

As EMO BON's governing body, the Operational Committee (OpCo) oversees the project's function and makes operational and developmental decisions. The OpCo is made up of one representative from each EMBRC member country, representatives from EMBRC's Headquarters, the e-infrastructure and traceability working groups and the General Assembly.

Nicolas Pade, EMBRC-ERIC

Ioulia Santi, EMBRC-ERIC

Kim Praebel, The Arctic University of Norway – Tromsø Aquaculture Research Station (UiT)

Fabrice Not, Station biologique de Roscoff (SBR)

Bruno Louro, Centre of Marine Sciences (CCMAR)

Oihane Diaz de Cerio, Plentzia Marine Station (PiE)

Raffaella Casotti, Stazione Zoologica Anton Dohrn (SZN)

Klaas Deneudt, Flanders Marine Institute (VLIZ)

Melanthia (Melina) Stavroulaki, Hellenic Centre for Marine Research (HCMR)

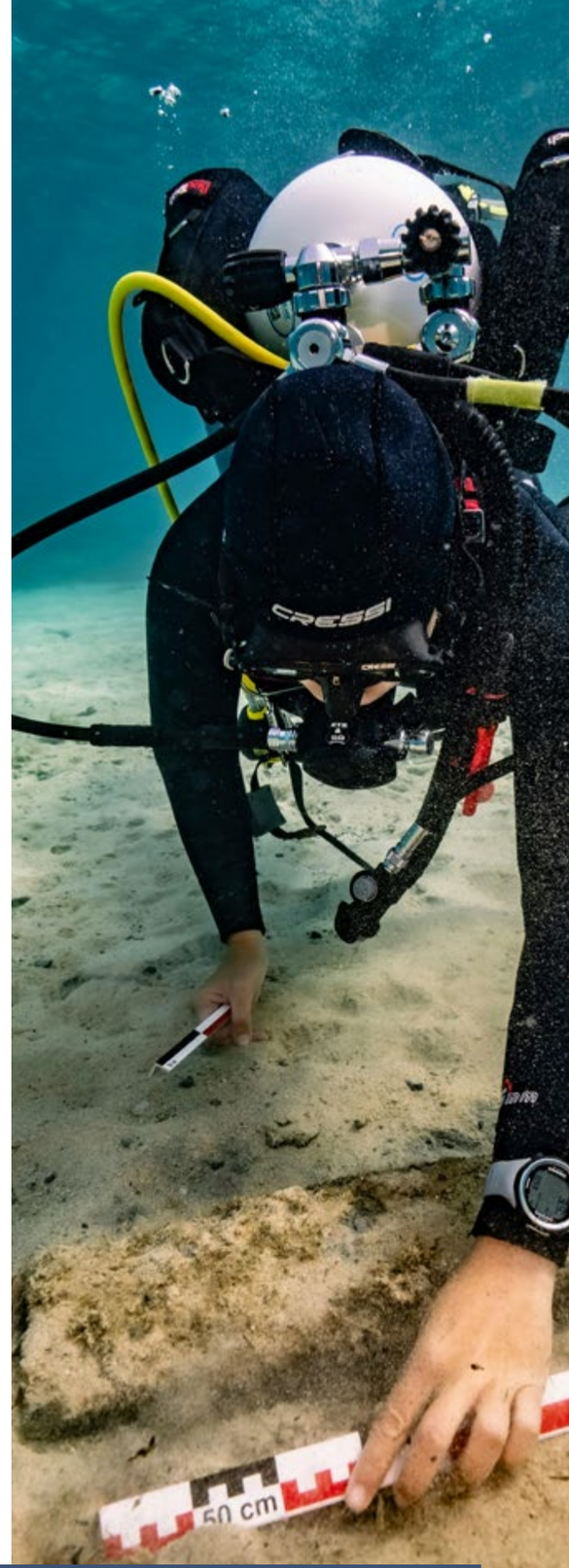
Matthias Obst, University of Gothenburg (UGOTH)

Laura Kauppi, University of Helsinki (UH)

Christina Pavloudi, EMBRC-ERIC

Katrina Exter, Flanders Marine Institute (VLIZ)

Arnaud Laroquette, EMBRC-ERIC



Our Funding & Finances

YEAR 2024 - **REVENUES**

Belgium	€ 61,939
Finland	€ 61,094
France	€ 84,773
France Host Premium	€ 150,000
Greece	€ 47,532
Israel	€ 55,371
Italy	€ 73,107
Norway	€ 69,117
Portugal	€ 49,760
Spain	€ 64,127
Sweden	€ 65,323

OPERATIONAL REVENUES	
Total Membership Contributions	€ 782,143
Overheads on Finished Projects	€ 1,547
Other	€ 12,303
VAT Refunds	-
Total Operational	**€ 795,993**

AgroServ	€ 20,412
AI4LIFE	€ 7,321
ANERIS	€ 52,907
AQUARIUS	€ 37,045
AQUASERV	€ 41,905
AtlantECO	€ 10,370
BIOcean5D	€ 40,892
Blue-Cloud 2	€ 40,374
BlueRemediomics	€ 64,130
canSERV	€ 17,633
DOORS	€ 62,270
DTO-BioFlow	€ 49,114
eDNAqua-plan	€ 104,366
EOSC Future	€ 80
EOSC-Life	€ 258
ERIC Forum 2	€ 3,132
FAIR-EASE	€ 16,616
IMAGINE	€ 29,571
IRISCC	€ 9,216
ISIDORe	€ 6,989
MARCO-BOLO	€ 135,270
TRICUSO	€ 847

EUROPEAN PROJECTS REVENUES	
EU project revenues	€ 750,718
Total EU projects	**€ 750,718**

IN-KIND CONTRIBUTIONS	
Host premium In-kind HR	€ 25,000
Host premium In-kind offices	€ 122,000
Host premium In-kind back office	€ 18,000
Total In-kind	**€ 165,000**

TOTAL **€ 1,711,711**

YEAR 2024 - **EXPENDITURES**

OPERATIONAL EXPENDITURES	
Salaries & staff expenses	€ 589,633
Office supplies	€ 26,763
Subcontracting	€ 6,000
Outsourcing	€ 88,500
Travels & Meetings	€ 27,613
Communication	€ 87,145
Others	€ 830
Total Operational	**€ 826,484**

EUROPEAN PROJECTS EXPENDITURES	
Direct Personnel costs	€ 705,901
Other goods, works & Services	€ 16,412
Travels & Meetings	€ 28,405
Total EU projects	**€ 750,718**

IN-KIND EXPENDITURES	
Host premium In-kind HR	€ 25,000
Host premium In-kind offices	€ 122,000
Host premium In-kind back office	€ 18,000
Total In-kind	**€ 165,000**

ACTIVITIES EXPENDITURES	
Personnel costs (Industry)	€ 91,571
EMO BON	€ 449,923
International Travel	€ 2,297
EMBRC Days	€ 53,847
Industry	€ 9,930
Advanced Training Courses	€ 28,275
Services/Support of externals funding (EuroM. ...)	€ - 14,810
Total Activities	**€ 621,033**

TOTAL **€ 2,363,235**

General conclusion :

As of December 31, EMBRC's financial position reflects a deliberate strategy to utilise its available cash reserves over the 2023–2027 budget cycle, with the explicit goal of fully depleting them by 2027. These reserves originated from savings during the previous five-year period.

As a non-profit organisation, EMBRC operates without the objective of generating profit. The planned use of these funds supports the organisation's mission and growth.

The EMBRC secretariat has proposed a detailed plan to allocate the cash reserves toward increased operational costs and a range of activities - specified in the "Activities Expenditures" section - including joint development projects and community support initiatives.

Consequently, EMBRC's available cash decreased by approximately 50% from €2,695,339 on December 31, 2022, to €1,333,683 on December 31, 2024. Further reductions are expected through the end of 2027, in line with the organisation's financial strategy.

NET RESULT **€ - 651,524**

Thank you

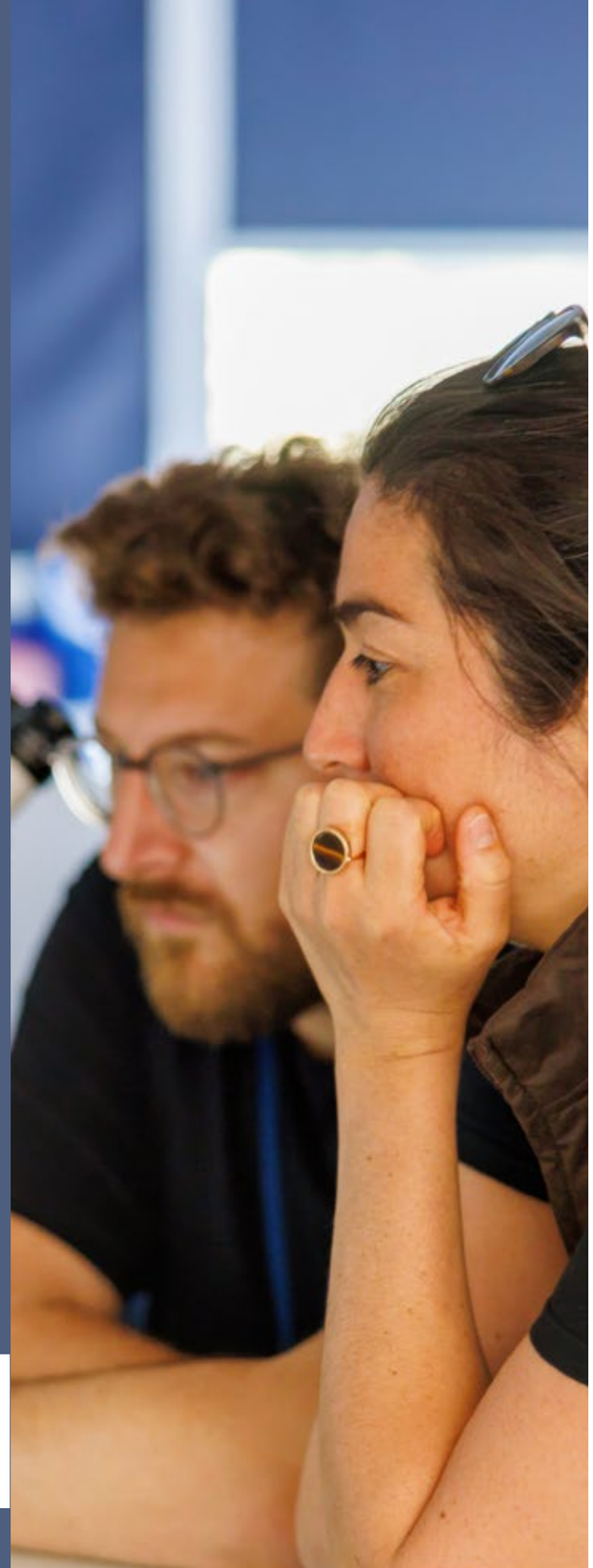
2024 was another exciting year at EMBRC. Our network has continued to grow with the addition of Finland, bringing us to 10 country members across Europe. We unveiled our industrial strategy, hosted the TREC expedition at 15 EMBRC marine sites, kicked off promising new projects, and took part in several important conferences and events.

We'd like to thank all our partners, funders, and collaborators around the world for your support this year. We're looking forward to working with you in 2025 and beyond as we continue to push the frontiers of marine science and harness the ocean's potential to create a sustainable future for billions of people around the world.

In 2024, EMBRC's work was made possible through funding from:

- The European Commission through Horizon Europe and ESFRI
- Member contributions:
  - Belgian Science Policy Office (BELSPO), Belgium
  - The Algarve Centre of Marine Sciences (CCMAR), Portugal
  - The Hellenic Centre for Marine Research (HCMR), Greece
  - The Hebrew University of Jerusalem (HUJ), Israel
  - The Stazione Zoologica Anton Dohrn (SZN), Italy
  - University of Gothenburg (UG), Sweden
  - University of Bergen (UiB), Norway
  - University of Las Palmas de Gran Canaria (ULPGC), Spain
  - Sorbonne University (SU), France
  - The Technical University of Valencia (UPV), Spain
  - The University of Vigo (UVIGO), Spain

We'd like to say a particular thank you to our member countries, the European Commission, Horizon Europe, and ESFRI. Your funding and support makes scientific innovation and discovery possible across our Europe and beyond.



Photos:
Annie Gozard
EMBL: Flora Vincent, Kinga Lubwiecka
EMBRC Finland: Tvärminne Zoological Station, Alf Norkko
EMBRC France: Roscoff Station
EMBRC Greece: HCMR
EMBRC Portugal: F. Martinho
Pexels: Abdurrahman Tepe
The Ocean Agency: Stefan Andrews
Unsplash: Lucut Razvan, Krystian Tambur, Nicholas Doherty, Lance Anderson
Tara Ocean Foundation, TREC

EMBRC is grateful to all the individuals who contributed to this report, including at HQ and country level.

Project coordinated by Anabelle Chaumun, Communications Manager, EMBRC Headquarters

Editorial managers: Melissa Hobson, The Ocean Writer Ltd; Anabelle Chaumun, Communications Manager, EMBRC Headquarters &; Gwenaëlle Walter, Communications Officer, EMBRC Headquarters

Designed by Morgane Goavec, Casimirdesign

Find out more :
embrc.eu
EMBRC (European Marine Biological Resource Centre)
@EMBRC-EU
@EMBRC_EU

EMBRC
EUROPEAN MARINE BIOLOGICAL RESOURCE CENTRE

EMBRC
EUROPEAN
MARINE
BIOLOGICAL
RESOURCE
CENTRE