ICM ANNUAL REPORT 2024

ICM
ANNUAL REPORT
2024

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FROM THE **ICM** TO THE **WORLD**

Ocean science for a healthy planet.

FROM THE **ICM** TO THE **WORLD**

Ocean science for a healthy planet.

Carta del Director

2024 marked a turning point for the Institut de Ciències del Mar (ICM CSIC), specially with the establishment of a renewed institutional identity. Through a participatory internal process, we updated our mission, vision and values to better reflect our commitments, aspirations and shared responsibilities guiding both our scientific work and our role within the research community and society at large.

Under the motto *"Ocean science for a healthy planet"*, the ICM develops excellent, open, interdisciplinary research dedicated to addressing the major environmental, social and economic challenges of our time. Our work aims to generate significant, applicable, and inspiring knowledge to tackle the challenges raised by a changing ocean and its impacts on society. As part of this process, we actively transfer and exchange knowledge with regional stakeholders, contributing to more efficient and sustainable marine resource management while fostering greater public awareness of ocean's essential role in sustaining life on Earth.

The most significant update to our mission is the explicit recognition that the knowledge generated at a leading research centre like ours should not only advance scientific understanding, but also be transferable to the private sector to foster the development of blue economy products and services, and to policymakers to support science-based marine environmental management. Moreover, it must be inspiring, helping to drive the societal transformation needed to redefine our relationship with the environment through the ocean.

As a scientific community, we embrace science as a powerful agent of transformation, positioning ourselves as active contributors to the green transition and global sustainability. Our mission is to achieve a meaningful scientific, institutional and social impact aligned with a shared vision: a clean, healthy, biodiverse, productive and safe ocean, recognized as vital to human and planetary well-being. This resilient, living ocean must be preserved and managed through collective responsibility.

Underpinning this mission and vision are the core values that shape our institutional culture: a commitment to excellent and socially relevant science, equality of opportunities for all, respectful and efficient management of people and work environments; and cooperation as a catalyst for open, inclusive, diverse, transformative research.

Valentí Sallarès, Director of ICM-CSIC

Highlights of the year

Ocean Decade

Scan the QR code for more information

The ICM played a key role in organizing the International Ocean Decade Conference 2024, opening its doors to more than 1,000 people and bringing marine science closer to the public. Key topics addressed included citizen science, the blue economy, marine pollution, the sustainable development of coastal cities, and ocean monitoring. The local perspective was a focus of attention, with debates about science on Catalonia's maritime agenda and coastal management. In parallel, the ICM supported Barcelona City Council's bid to host a Collaborative Centre for the United Nations Ocean Decade, further strengthening the city's strategic position as a global hub for ocean research and governance.

Mar de **Ciència**

Scan the QR code for more information

"Mar de Ciència" is the ICM's institutional framework for strengthening our social commitment, promoting a paradigm change in how people relate to science and the sea. Conceived as a forum for critical reflection on marine research and planetary well-being, it aspires to become a living lab for dialogue and collaboration among researchers, citizenship, industry and public authorities.

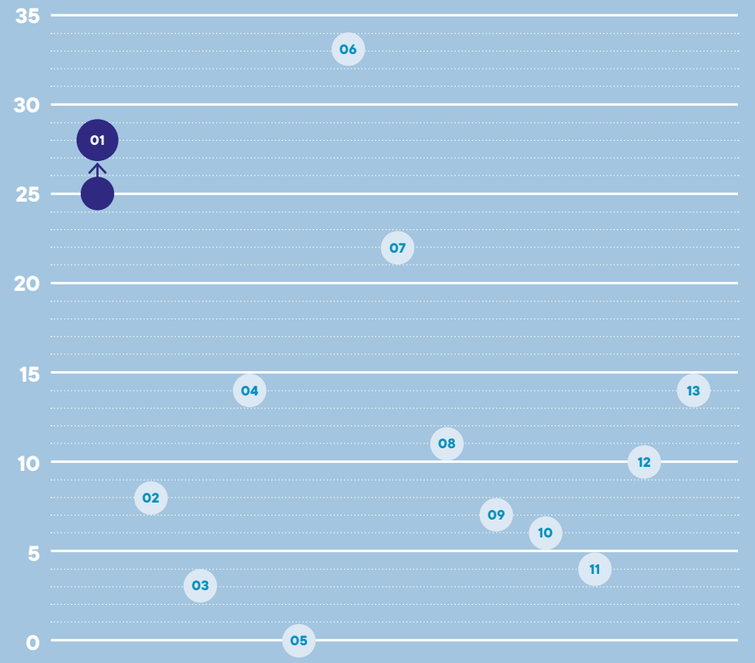
TREC Expedition

Scan the QR code for more information

The ICM participated in the TREC *(Traversing European Coastlines)* scientific expedition, seeking to characterise all the marine and coastal environments in Europe. The initiative brings together over 40 organisations from 21 European countries and, over two years, will collect samples from 120 locations. During March, the ICM hosted one of the expedition's European nodes – the one focused in the Mediterranean basin – with the goal of deepening our understanding of human impacts on marine ecosystems and promoting strategies for their conservation and restoration.

NATURE INDEX* FROM 1 DECEMBER 2023 TO 30 NOVEMBER 2024

In 2024, we maintained our position as the top-ranked marine research centre in Spain and across the Mediterranean in the Nature Index, reflecting our continued research excellence and outstanding scientific output.



	INSTITUTION	TOTAL NUM OF PAPERS
01	**ICM**	**338**
02	CEAB	117
03	IIM	155
04	IMEDEA	156
05	ICMAN	85
06	CREAF	359
07	IDAEA	352
08	IRTA	396
09	IEO	344
10	Observatoire Villefranche	82
11	HCMR	240
12	Banyuls ARAGO	114
13	SZN	412

* The "Nature Index" is a classification based on the articles published in a group of 82 scientific journals from various areas of knowledge selected by an independent scientific committee in accordance with their prestige.

FROM INDIVIDUALS TO TEAMS

We are a committed community working thoroughly to achieve a more sustainable ocean.

FROM **INDIVIDUALS** TO **TEAMS**

We are a committed community working thoroughly to achieve a more sustainable ocean.

Staff

Over the past year, the ICM has experienced growth across most professional categories, further consolidating its operational and scientific capability. A large-scale stabilisation process is underway, including the consolidation of around 15 non-permanent positions – a key step toward ensuring the continuity and quality of our work. This reinforcement will have a positive impact across all areas of the Institute, including general services, scientific and technical services, and research.

The Research Support Office organised team-building event on the beach at Castelldefels where staff learned a traditional Māori haka from New Zealand —an expression of unity, teamwork, and collective resilience. The activity, which brought together around 200 participants, was part of the ongoing effort to promote the institutional values identified during the previous collective gathering. The event concluded with a shared lunch, reinforcing a sense of community across the ICM.

2024

366 TOTAL

201 WOMEN

165 MEN

Categories

Senior Research Staff	89 =	30 ♀	i 59 ♂
Postdoctoral Researchers	59 =	30 ♀	i 29 ♂
Predoctoral Students	70 =	47 ♀	i 23 ♂
Research Technicians	110 =	72 ♀	i 38 ♂
Administrative and Support Staff	38 =	22 ♀	i 16 ♂

Emerging Talent

The ICM's research is powered by the talent of young scientists, several of whom have earned recognition for their scientific excellence and ppotential in the field of marine research.

Scientific **Training**

Friday Talks

Scan the QR code to access the talks

In 2024, a total of 28 “Friday Talks” sessions were held, attracting a cumulative audience of over 1,500 participants. A total of 53 speakers (25 women and 28 men), with 75% coming from outside the ICM—fostering exchange and collaboration with other institutions. All the talks are available for viewing on **the ICM’s YouTube channel.**

28 seminars 49% ♀ 51% ♂

Theses

13 Theses

54% ♀

46% ♂

Scan the QR code for more information

In 2024, a total of 13 PhD theses supervised by ICM staff were defended, reflecting the Institute’s strong appeal to early-career researchers seeking to begin their professional careers in a multidisciplinary marine science environment —spanning biology, physics, chemistry, and geosciences. The year also saw the launch of the first **ICM science pitch day**, where a dozen predoctoral students delivered brief, innovative, and engaging presentations showcasing their research.

ERC Starting Grant

Scan the QR code for more information

Marta Umbert has been awarded a prestigious ERC Starting Grant to study Arctic ocean currents using cutting-edge remote detection and artificial intelligence technologies. This project will provide detailed insights into ocean dynamics of this critical region, which are key to understanding the impacts of climate change on polar ecosystems.

Scientific milestone of the year

Scan the QR code for more information

The work of researcher **Francisco Cornejo** was recognised as one of the great scientific achievements of 2024. The journal Nature Ecology and Evolution featured his research on symbiosis and cell evolution —published in Cell in March—in its “Year in Review” section, which highlights the most significant scientific advances of the year.

Awards for young voices

Student researcher **Ariadna Canari** has been recognised for her outstanding work on the morphology of the Alboran Sea faults, presented at the EGU2024 conference, where she received the award for Best Presentation by a Young Researcher at this international scientific forum.

Meanwhile, student researcher **Xabier López-Alforja** won the best paper award at the 23rd Virology Conference of the Catalan Biology Society for his presentation on viruses in marine eukaryotic organisms. These two awards highlight the quality and impact of the predoctoral research being conducted at the ICM.

ICM Cares

The ICM Cares programme has continued to provide the centre's staff with professional development opportunities, focusing on both specialized knowledge and personal and social skills. Over the past year, courses have been offered in women's leadership, artificial intelligence, graphic design, and other key areas that support personal growth.

Training and mentoring

The training programme offered a total of 12 courses, reaching 189 participants. In parallel, the third edition of the *MARINA* mentoring programme brought together 13 mentor-mentee pairs —expert researchers and students—further strengthening personalised support for professional development at the Institute.

Conflict management

The well-being of our community is a top priority at the ICM. To uphold this, the Institute promotes a work culture with zero tolerance for any form of workplace harassment. In this context, ICM has established a **Workplace Conflict Management Protocol** designed to provide a flexible, confidential, and effective mechanism that allows any member of the centre to voice concerns and explore respectful, safe solutions for managing and resolving conflicts.

Equality

Implementation of the **Gender Equality Plan**

These advances, together with the promotion of a work line with the LGTBIQ+ community, lay the foundations for the development of a new, **more intersectional and inclusive GEP+, as well as for the center's first LGTBIQ+ Plan.**

In 2024, the ICM entered the final implemention phase of its Gender Equality Plan (GEP).

Since its launch in 2021, and thanks to the efforts of the Equality and Diversity Working Group (EDWG) — supported by various stakeholders across the Institute — women's leadership has been actively strengthened through training programmes and targeted initiatives. These efforts have also promoted greater gender balance within research groups. Currently, around 38% of research groups are led by women — a significant increase from the 21% recorded just four years ago.

Gender barriers and biases that hinder the professional advancement of women in STEM have been identified and progressively reduced. At the same time, initiatives have been implemented to raise the visibility of ICM's women scientists and technicians, showcasing their contributions to marine science and promoting them as role models for future generations. In parallel, specific methodological tools are being developed to integrate the gender dimension into research content.

Over the past year, the EDWG has deepened its involvement in specialist gender equality networks and international initiatives. Notable highlights include coordinating a gender equality event at the UN Ocean Decade Conference in Barcelona and leading a community of practice within the European INSPIRE project — efforts that have helped position the ICM as a reference centre in the field.

These measures have contributed to transforming the institutional culture and fostering an environment that increasingly supports the professional development of women at the ICM. Building on this progress — and alongside efforts to engage with the LGTBIQ+ community — the foundation is being laid for a more intersectional and inclusive Gender Equality Plan (GEP+), as well as the centre's first dedicated LGTBIQ+ Plan.

Scan the QR code to access the Gender Equality Plan

FROM CHALLENGES TO RESEARCH

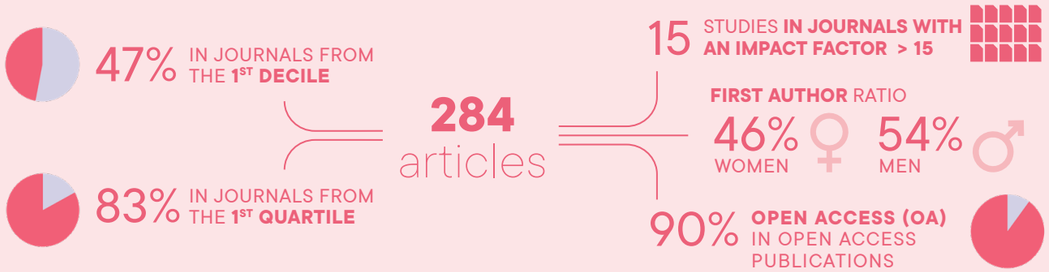
We firmly believe in the ability of research to address global social and environmental challenges.

FROM **CHALLENGES** TO **RESEARCH**

We firmly believe in the ability of research
to address global social and environmental challenges.

Publications

The ICM's 14 research groups generate cutting-edge scientific output, supported by 14 specialized scientific and technical services and a dedicated team of 38 professionals providing operational and administrative support. As a result of this collaborative effort, the Institute has published nearly 1,500 scientific articles over the past five years.



Outstanding publications

The interdisciplinary and multidisciplinary nature of the ICM has fostered ongoing collaboration with both Spanish and international research groups. These partnerships have facilitated the acquisition of projects and contracts, and led to numerous high-impact scientific publications. As a result, the ICM has solidified its position as the most scientifically productive marine research centre in southern Europe.

Some of the **most important publications in 2024 were:**

A marine symbiosis opens the way to **better understanding the evolution of our cells**

The study explores the symbiotic relationship between certain marine microalgae and the cyanobacterium UCYN-A, which exhibits characteristics similar to those of cellular organelles. For example, the size ratio between the endosymbiont and its algal host closely resembles the size ratio between mitochondria or chloroplasts and the cells that contain them. This research provides valuable insights into the evolution of eukaryotic cell complexity through the development of organelles. The discovery paves the way for a deeper understanding of how eukaryotic cells have evolved their intricate structures.

Francisco M. Cornejo-Castillo et al. (2024),
Cell; DOI:10.1016/j.cell.2024.02.016

Revealing the complex network of microbial interactions from the ocean surface to the sea bed

The research analyzes how microbes—including archaea, bacteria, and small eukaryotes—interact across various tropical and subtropical ocean zones. By examining interaction networks, the study reveals that these relationships vary significantly depending on both depth and region. While some interactions are widespread, many are specific to particular depths and zones, especially in deeper waters. Interestingly, microbial connections observed at the surface rarely persist in deeper layers despite vertical microbial movement. These findings offer new insights into the ocean's ecological complexity and its vulnerability to climate change.

Ina M. Deutschmann et al. (2024),
Nature Communications; DOI: 10.1038/s41467-023-44550-y

Exposure to persistent organic pollutants affects the physiology of herring gulls in the city of Barcelona

The study investigates persistent organic pollutants (POPs)—including polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), and other organochlorines—within yellow-legged gulls inhabiting urban coastal areas. By analysing pollutant profiles in tissue and blood samples, researchers link contamination levels to physiological stress markers, such as altered immune function and oxidative stress. The work uncovers key pollutant sources and sheds light on their health impacts, emphasising the risks of urban-derived POP exposure for marine wildlife. These findings not only highlight the ecological consequences of urban pollution but also inform conservation strategies and policy aimed at mitigating POP release into marine ecosystems.

David Nos et al. (2024),
Journal of Hazardous Materials; DOI: 10.1016/j.jhazmat.2023.133129

River pollution and aquaculture are worsening the macroplastic crisis in the North Atlantic

This study explores the spatial and seasonal dynamics of macroplastic pollution on beaches across the North-East Atlantic over a multi-year period. Using advanced spatial modeling, the researchers identify clear seasonal peaks in litter accumulation, particularly during winter and spring.

The analysis reveals consistent hotspots of plastic pollution in several coastal regions, with strong links to river runoff and aquaculture activity, while the role of fishing appears limited. These findings highlight the importance of considering seasonal and regional patterns when designing targeted policies to reduce marine litter, especially from land-based and aquaculture sources.

Niclas Rieger et al. (2024),
Communications Earth & Environment; DOI: 10.1038/s43247-024-01913-7

Trawl fishing can cause delayed undersea sediment slides, amplifying its environmental impact over time

This study examines how bottom trawling in submarine canyons, such as the Blanes Canyon, triggers both immediate and delayed sediment gravity flows, leading to significant seafloor disturbance. The findings show that repeated trawling can destabilise sediment slopes, causing collapses even after fishing activity has ceased. This work expands previous evidence from the Palamós Canyon and highlights the broader impact of trawling on deep-sea sediment dynamics and benthic habitats.

Albert Palanques et al. (2024),
Science of the Total Environment; DOI: 10.1016/j.scitotenv.2024.174470

New study unveils the combined impacts of fishing and climate change in the Western Mediterranean

The research reveals that the combined effects of climate change and fishing pressure have significantly altered the Western Mediterranean pelagic system over the past two decades. Notable changes have occurred in the abundance, distribution, and body condition of key species such as sardines and anchovies. Using integrated ecosystem models, the scientific team warns that traditional fisheries management is inadequate and advocates for an ecosystem-based approach to address the ecological and socioeconomic consequences of these changes.

Marta Coll et al. (2024),
Science of the Total Environment; DOI: 10.1016/j.scitotenv.2023.167790

FROM LOCAL TO GLOBAL

We weave networks of collaboration at both local and international levels to safeguard ocean health.

FROM **LOCAL** TO **GLOBAL**

We weave networks of collaboration at both local and international levels to safeguard ocean health.

Fieldwork and **Sea Working Days**

Fieldwork

During 2024, the ICM's research staff, research students and technicians took part in various oceanographic campaigns to improve knowledge of the ocean and contribute to sustainable management of marine resources. In total, they spent **2,382 days working at sea,** including **1,401 days** in **17 oceanographic campaigns** aboard ships like the RV Sarmiento de Gamboa, as well as **981 days working on coastal campaigns** both on land and from inshore boats.

2,382 Days
working at sea

In 2024, the ICM led three major oceanographic campaigns that combined pioneering research, advanced technology, and public outreach. The **MICOLOR campaign** investigated the transport of carbon to the seabed and its interaction with microbial communities, uniquely integrating art and science aboard and beyond the vessel. **GUANCHE** focused on mapping the deep structure of the Earth's crust around the Canary Islands to better understand the archipelago's origin, incorporating cutting-edge technology and inclusive outreach efforts to engage the public. Meanwhile, **PROTEUS** documented biodiversity and human impacts on the deep coral reefs of the Alboran Sea, generating vital data to support their conservation. Together, these campaigns showcase the ICM's dedication to interdisciplinary research and the transfer of knowledge to society.

Scan the QR code to access the MICOLOR campaign diary

International scientific **cooperation**

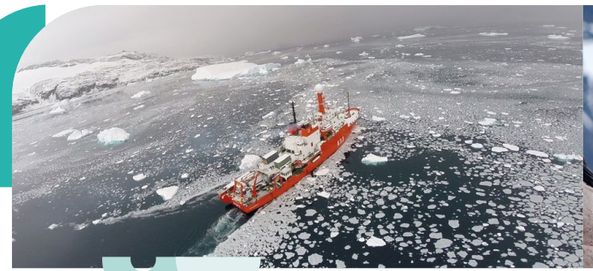
Featured
Projects

In 2024, the ICM reinforced its leadership in marine research through significant involvement in a range of European and international funding programmes, securing a total of 2 million euros.

The supported projects address key environmental challenges, including the sustainable management of coastal ecosystems, the exploration and protection of the deep ocean, and the use of emerging technologies—such as remote sensing, robotics, artificial intelligence and infrastructure for citizen science.

As part of the **Horizon Europe Ocean Mission**, the ICM participated in 2024 in 13 collaborative research projects, with a total budget of €4.5 million.
The Institute also coordinates three of these consortia, all focused on addressing key challenges related to the conservation and sustainability of marine ecosystems.

This year, the ICM has expanded its involvement in the **Climate Mission** by participating in two new initiatives. These projects will explore the interplay between climate change, marine biodiversity, and socioeconomic factors, supporting informed decision-making and the protection of coastal ecosystems.



FROM IDEAS TO FACTS

We carry out excellent research
with a special emphasis on social commitment.

FROM **IDEAS** TO **FACTS**

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Knowledge transfer

The ICM promotes the development and application of its research through ICM Transfer, the centre's knowledge transfer strategy. Aligned with the quadruple helix innovation model, the ICM is enhancing collaboration with industry, public authorities, and society to drive innovation in marine science.

In this respect, the ICM staff have actively contributed to the development of two reports for the **CSIC's Science for Policy** collection. The first, devoted to **living marine resources,** identifies challenges and proposes management changes to enhance ocean resilience and ensure the sustainability of marine-based food systems. The second addresses the **risks of extreme maritime events,** offering essential scientific insights into their impacts and underlying mechanisms. Both contributions underscore the ICM's commitment to support public policy through sound scientific evidence.

This year, two priority patent applications led by Silvia González Acinas have been filed in the field of blue biotechnology, focusing on CRISPR genes from marine microorganisms. In addition, R&D services have been delivered and contracts signed with a total value exceeding one million euros. The ICM Transfer website has also been launched, and a new working group dedicated to technology transfer has been established.

The ICM has also showcased its technologies and capabilities at international events such as the **BlueInvest Days** and **Tomorrow Blue Economy** at the Smart Cities Expo.

Scan the QR code for more information on CSIC's Science for Policy.

Scan the QR code for more information on the ICM's Technology Transfer website.

Important transfer projects:

Characterisation of the **sediments covering the coast**

To better understand the dynamics of the Catalan coast, the ICM has launched a detailed assessment of its recent sedimentary cover using high-resolution geophysics, sediment sampling, and video monitoring stations. The project began with the area between the mouth of the River Llobregat and Sitges and, during 2024, expanded to include the Barcelona–Blanes and Sitges–Cap Salou sectors. This initiative enables the quantification of sediment volume and distribution and the identification of accumulations linked to harbours, rivers, or breakwaters. Continuous monitoring of both submerged and emerged zones allows for the analysis of coastal morphological changes, storm impacts, and the dynamics of features such as submerged bars. This work enhances knowledge and supports improved coastal management in the face of human activities and climate change.

Taxonomic determination of the harmful and toxic phytoplankton species in swimming areas

The proliferation of microalgae can pose risks to public health, marine ecosystems, and the local economy. For 25 years, the ICM, in collaboration with the **Catalan Water Agency (ACA)**, has been monitoring harmful and toxic phytoplankton in Catalonia's swimming areas to provide timely risk information when necessary. Additionally, for the past seven years, it has monitored the summer blooms of the microalga *Ostreopsis*, which can reach high abundances and cause respiratory irritation in beachgoers.

Development and validation of algorithms for the **CIMR mission**

The ICM is actively involved in a project supporting the CIMR (Copernicus Imaging Microwave Radiometer) space mission, an initiative led by the **European Space Agency** and the European Commission to observe the Earth and oceans using microwave technology. The ICM plays a key role in reviewing and validating algorithms that transform raw mission data into valuable information, such as sea surface salinity, temperature, and wind strength. Additionally, the Institute leads a team of experts responsible for ensuring these programs operate correctly. This work aims to enhance ocean monitoring capabilities, particularly in the face of climate change.

Genetic selection programmes in aquaculture

The sustainability and efficiency of aquaculture production largely depend on selecting individuals with desirable traits. At the ICM, research is focused on developing heritable epigenetic markers associated with key traits such as survival, growth, and resistance to temperature-induced masculinisation. By analysing the epigenomes of fish from multiple families and applying machine learning models, the team aims to identify effective selection patterns. The goal is to develop advanced diagnostic tools that integrate epigenetic selection with classical genetics, enhancing the performance and resilience of farmed species.

International outstanding projects

In 2024, we took a further step towards making our research more transformative engaging in major international collaborative projects:

MORIAI

The project aims to enhance regional and global understanding of ocean dynamics and biochemical cycles, advancing efforts to address climate-related challenges through sophisticated models that integrate historical data, current observations, and future projections.

LIFE-OASIS

This initiative focuses on the conservation of *Caretta caretta*, an iconic yet threatened Mediterranean sea turtle species severely impacted by marine debris and abandoned fishing gear, known as ghost fishing. Key data on the effects of this waste on marine biodiversity are gathered through the marine citizen science platform *"Observadors del Mar"*, with particular emphasis on the interactions and risks faced by *Caretta caretta*.

ENHANCE

This project applies the "One Health" approach to evaluate impacts on biodiversity, public health and the environment, integrating observational data, including those generated throughcitizen science. It also aims to develop a data infrastructure leveraging advanced artificial intelligence techniques to analyze urban, agricultural, and climate pressures across various coastal environments.

MERLIN

This initiative focuses on developing autonomous hydrogen-powered surface vehicles and autonomous underwater vessels for seabed mapping and infrastructure inspection. Equipped with artificial intelligence, these vehicles will operate independently to perform tasks such as ecological habitat monitoring and port inspections.

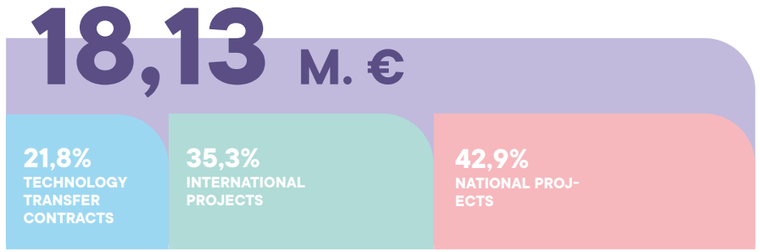
Strategic **Networks** and **Financial** Capacity

Participating **in strategic networks**

The ICM plays an important role in two of the new strategic networks of the CSIC: the POLARCSIC Connection, devoted to polar science, and the MICROBIOMA Connection, focusing on the study of microorganisms. The ICM has also been a leading partner in the GEOCIENCIAS Connection, aimed at dealing with planetary challenges based on Earth sciences.

Thanks to a multidisciplinary approach, the ICM is positioning itself as a key driving force for these initiatives, designed to tackle the global challenges facing the ocean through these cooperative structures.

Financial capacity



In 2024, the ICM generated €21.5 million in income—an increase compared to previous years. In addition, the Institute secured €18.1 million through competitive projects and contracts set to begin in the coming months. These funds will be progressively reflected in the centre's accounts as the projects advance.

Of the €18.1 million secured, 42.9% originates from Spanish projects, 35.3% from international initiatives, and 21.8% from knowledge transfer agreements and other sources.

The accompanying graph shows the evolution of income sources since 2019. Competitive funding includes project grants, industry contracts, and private contributions, while base funding refers to non-competitive support provided by the CSIC.

FROM US TO SOCIETY

We promote ocean literacy
to engage society in caring for the ocean.

FROM **US** TO **SOCIETY**

We promote ocean literacy
to engage society in caring for the ocean.

Commitment to scientific culture

The ICM is deepening its social commitment by promoting the dissemination of scientific knowledge and encouraging public engagement in marine research through initiatives that foster dialogue between science and society.

In 2024, the Institute hosted Barcelona's first CSIC de Cine event and supported the opening of the Josefina Castellví Library in the Bon Pastor district. It also launched the **Mar de Ciència** programme with the New Narratives for Social Transformation season, featuring activities such as *The Blue and Us* exhibition, the theatre-forum play *No t'emboliquis!*, and a collaborative performance with the Èpica La Fura foundation at **The GATE Festival 2024**.

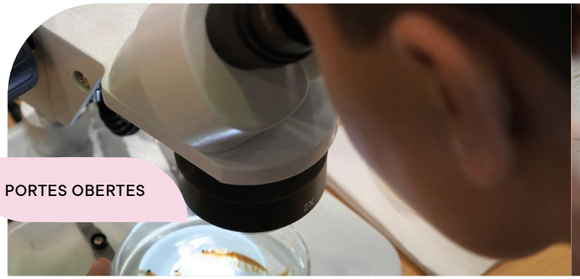
Two new art-and-science pieces —*Thalastasi and Cuerpos Errantes*— were also produced and presented at the *Eufònic Festival* and *LOOP City Screen*, respectively. In parallel, the ICM strengthened its partnership with **BAU** through joint projects showcased at the **S+T+Arts Symposium** and the **Open Forum on Arts, Science and Technology.**

Awards and recognition

The documentary *Relats del canvi global: el Delta de l'Ebre (Stories of Global Change: the Ebro Delta)*, under the scientific direction of Esther Garcés and Jordi Camp, received an award at the CSIC's 2nd Scientific Outreach and Citizen Science Awards, further reinforcing the ICM's role as a leading voice in communicating the impacts of global change on the marine environment.

Education and training

Driven by a commitment to educating future generations, the eighth edition of the *Young Oceanographers project* brought oceanography into classrooms, engaging 150 students. The ICM also helped strengthen the **European Blue School Network** through its participation in the ProBleu and BlueLightS projects, supporting over 200 schools. As part of this initiative, two parallel events on marine education were organised, including the flagship event *Blue Education and Action: Join & Enjoy the Conversation!*



PORTES OBERTES

Citizen science

The ICM's citizen science initiatives have continued to evolve and meet new challenges. The MINKA platform has engaged over 1,000 participants in monitoring biodiversity on metropolitan beaches through projects such as *BioMARató, BioDiverCiutat,* and *BioPlatgesMet.* In parallel, *Sea Watchers* (OdM) launched the "OdM Climate" initiative, which mobilised more than 500 people and around 30 diving centres to conduct over 400 censuses, contributing valuable data on the impacts of climate change in the Mediterranean.
Meanwhile, *CoastSnap* has fostered public involvement in tracking beach morphology through user-submitted photographs from fixed stations.

Through these initiatives, the ICM has solidified its role as a key player in promoting marine scientific culture and reinforcing its commitment to social impact.

Media presence and international **profile**

For another year, the ICM has maintained an important presence in the media, especially during spring, coinciding with the United Nations' Ocean Decade Conference in Barcelona, which the OCM co-organised by the in cooperation with the ICM and other.
During this period, the Institute hosted around 20 events linked to the conference, attracting over 1,000 participants.

"El mar, en suspens" (Failing Seas)

30 MINUTS (TV3)

Scan the QR code to view the video

Having well-managed, properly monitored marine reserves is crucial for encouraging the recovery of vulnerable ecosystems, strongly affected by human activity and global warming. On the Catalan coast, however, complete marine reserves – those with the highest level of protection – represent only 0.01% of the area. Most of these spaces are seriously affected by tourist overcrowding, too many boats, overfishing and poaching activities.

"Los mares desde el espacio" (The Sea from Space)

OBJETIVO PLANETA (RTVE)

Scan the QR code to view the video

The report highlights the importance of the seas and oceans, covering 70% of the Earth's surface, absorbing almost 90% of the heat and about 30% of the excess CO2 generated by human activity. The use of satellite remote detection makes it possible to obtain a global view of these essential ecosystems.

Social Media

It also now has more than 23,000 followers on social media – 17% more than in 2023 – and almost 2,000 media impacts were recorded, 15% more than the previous year.

"Marta Estrada, oceanògrafa" (Marta Estrada, oceanographer)

NOMS PROPIS (TVE)

Scan the QR code to view the video

Marta Estrada, an ICM oceanographer and marine biologist, is an internationally renowned and highly respected scientist. Her research focuses on the physiological characterisation and ecological impact of phytoplankton, key organisms in marine ecosystems. In the Noms Propis programme, she spoke with journalist Anna Cler about her career, her work and the passion that has driven her throuhout the years.

"Dones a Mart" (Women on Mars)

SOM DOCUMENTALS (RTVE)

Scan the QR code to view the video

What would it be like to live on the red planet for two weeks? Dones a Mart (Women on Mars) is a documentary that follows the adventures of the Hypatia I crew, a team of Catalan women, including an ICM scientist, simulating Martian life at a desert base in Utah, USA.

FROM THE **PRESENT**

We envision a more sustainable future for the ocean, conducting research and taking action to achieve it.

TO THE **FUTURE**

FROM THE **PRESENT** TO THE **FUTURE**

We envision a more sustainable future for the ocean, conducting research and taking action to achieve it.

Redefining our institutional mission throughout 2024 has been a decisive step in shaping the future of the Institute of Marine Sciences (ICM). This renewed mission—focused on generating meaningful, actionable, and inspiring knowledge—lays the foundation for the 2025–2028 Strategic Plan, which will guide the ICM's collective efforts over the next four years.

The plan aspires to position the ICM as a leading marine research centre capable of delivering impactful scientific, social, and institutional outcomes. It is structured around three key pillars and two cross-cutting priorities.

The first pillar, **scientific leadership,** encompasses attracting and training talent, fostering strategic alliances, and developing new infrastructures: It is organised around four cooperative hubs, designed to tackle major scientific and environmental challenges: adapting to climate change; mitigating cumulative impacts on coastal and marine environments; ensuring the sustainability of seafood resources; and conserving marine biodiversity.

The second pillar, **social impact**, includes both the transfer of knowledge to businesses and policymakers and the promotion of social transformation. A cornerstone of this pillar is the Mar de Ciència programme—a living laboratory for co-creation with social actors that strengthens the connection between science, society, and the territory.

The third pillar, **institutional empowerment,** focuses on improving working conditions, equipping staff with effective tools, and strengthening both our organisational culture and corporate identity.

The plan also identifies two cross-disciplinary priorities, namely **Intersectional equality**, integrating the most relevant dimensions of equity within our institutional context, and **Functional and environmental sustainability**, promoting initiatives to reduce environmental impact, enhance energy efficiency, and optimise resource use. To ensure accountability and transparency, the plan includes a system of specific indicators for continuous monitoring and evaluation.

The ICM's management—and the institution as a whole—is firmly committed to its effective implementation, working collectively to advance transformative and impactful science in service of society and the planet.

Science and Art in Dialogue: The Graphic Work create for the Report

This collection of collages, conceived and created by Ruth Martin – LaRulotte Graphic Design, is based on the concept of duality: the micro sustains the macro, the past underpins the present, knowledge supports research, art engages in dialogue with ocean science, and the report projects into the future.

Created using images from the Institut de Ciències del Mar image bank, the collection explores eight universes that evoke the multiple layers sustaining marine life. The result is a work that not only accompanies the Institut Report but also serves as an artistic research exercise: a sensitive space where knowledge takes on poetic and symbolic form, a collection of visual metaphors in the service of ocean science.

The opening collage presents an enlarged Asterolampra, which serves as a support for all the areas, people, history, and research that the ICM offers to the world.

The microscopic world that sustains marine ecosystems shapes the ICM planet. The octopus's embrace symbolizes the interdisciplinarity of the ICM's fields.

An enlarged species conveys the idea that research grows where the individual merges with the team. The collage intertwines the collaborations that make any scientific advance possible.

The microscopic form emerges as an alert: it is threatened by pollution and fishing. Present researching —rooted in the past and projected into the future— rises to the challenge.

The white continent merges with the microscopic, giving rise to a new and imaginary territory that connects the campaigns and marine life, with the ICM as the base camp.

Profiles, maps, and documents take the form of studies that move from hypothesis to result. The piece highlights the idea of analysis and data observation.

The enlarged form serves as the medium for disseminating news: research is shared with the public. This collage explores the transmission of knowledge and the public meaning of marine science.

Microstructure and projection overlap: Cyclotella styligera serves as a compass, presenting a vision for the future along with an expansive and hopeful outlook.

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