



# ANNUAL ACTIVITY & IMPACT REPORT 2023

**Oceanographic  
Institute**

Prince Albert I of Monaco Foundation



Once, there was a mere handful of passionate people defending the sea, and a few scattered initiatives here and there aimed at protecting exceptional ecosystems or threatened species. Today, there is a global movement. The fight to preserve the Ocean has not only changed in size, it has also changed in nature.

For over a century, the Oceanographic Institute, true to the ambitions of its founder, prince Albert I, has carried on his commitment and endeavoured to change our relationship with the Ocean... And over the last fifteen years, as global awareness has grown and new tools and legal instruments have emerged, its actions have expanded.

Once again this year, we have confirmation of this, with the Oceanographic Institute's commitment to the Southern Ocean. The "Polar Mission" exhibition at the Oceanographic Museum, which attracted more than a million visitors, is just the most visible part of a vast programme that follows on from the progress achieved, with the close involvement of my government, over the last few decades, such as the adoption of the so-called 30x30 target, which aims to protect at least 30% of land and marine areas by 2030. Similarly, the Adoption of the Agreement on the Conservation

and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, known by its acronym "BBNJ", which is central to the protection of marine biological diversity.

The polar programme supported by the Oceanographic Institute is in line with the commitments I am pursuing in the wake of prince Albert I's explorations and my Father prince Rainier III's fight for the seas in general and the Mediterranean in particular.

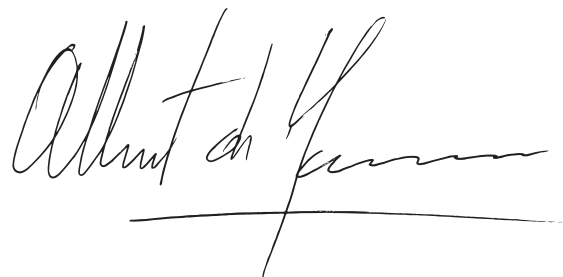
It epitomises the strength of the Principality of Monaco: its ability to bring together economic players, researchers, political leaders, artists and citizens in a collective drive to serve the Ocean, all of whom can and must act together to meet the great challenge of our century: protecting the environment, particularly the marine environment.

We must all rise to this challenge, and we can all do so, whatever our responsibilities, resources or geographical location. The maritime civilisation in which we live means that most of the decisions we make have an impact, however remote, on the Ocean.

This is the message that the Oceanographic Institute will continue to promote in 2024, from the polar regions to the shores of the Mediterranean.

"We must all rise  
to this challenge,  
and we can  
all do so,  
whatever  
our responsibilities,  
resources  
or geographical  
location."

**HSH Prince Albert II of Monaco**



## ■ Foreword



**Philippe Taquet,**  
Member of the Académie des Sciences and Chair  
of the Board of Directors of the Oceanographic Institute,  
Prince Albert I of Monaco Foundation

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**Robert Calcagno,**  
CEO  
of the Oceanographic Institute,  
Prince Albert I of Monaco Foundation

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What makes the Oceanographic Institute unique is our ability to engage with all kinds of different people, show them why Ocean issues are important, and rally them behind the Ocean cause. Giving everyone the chance to know, love, and protect the Ocean, in keeping with prince Albert I's express wishes.

With over 650,000 visitors in 2023, the Oceanographic Museum is proud its footfall has returned to pre-Covid level. They are a testament to our connection with the public, as can be seen in the success of the "Polar Mission" exhibition, which welcomed its one millionth visitor in 2023. Altogether, our polar programme is expected to reach more than one and a half million people, including around half a million young people.

In the same vein, our "Oceano pour Tous" (Oceano for All) educational competition has taught more than 600 middle school pupils from disadvantaged backgrounds about the Ocean, its treasures and its vulnerabilities, and what can be done to protect them. Though aimed exclusively at primary school classes in the Provence-Alpes-Côte d'Azur region, 2022-2023 marked a turning point. For the first time, the competition was open to pupils at middle schools in Monaco, mainland France and the French overseas territories, and around the world, with a special emphasis on rural schools and those in priority education areas. For over a century, the Oceanographic Institute has worked constantly on initiatives aimed at younger generations. Clearly not all will go on to become staunch defenders of the Ocean, but there is good reason to think that some of them will now be more

aware of what is happening to it, and perhaps more responsible in their everyday choices - those choices that we all make, which together determine the Ocean's fate.

Once again this year, we have scaled up our partnerships with private stakeholders capable of supporting us in our mission to bridge the gap between the world of science and the general public, and encouraging everyone to play their part in the change we need to bring about. While it remains vital to work with scientists and civil society, economic players and the world of finance must be included in the dialogue... The expedition to Antarctica undertaken in late 2023, a "journey into science and commitment" with HSH Prince Albert II of Monaco, was a particular highlight, in addition to being a central part of the Oceanographic Institute's plea for the creation of a network of Marine Protected Areas in the Southern Ocean. With polar scientists and around a hundred high-profile figures from the private sector aboard, the voyage provided a brief window in which to collect data about those remote lands. In addition to the scientific research, a whole onboard engagement programme was devoted to urging the private sector participants to become ambassadors, actively working for the cause of protecting the polar regions.

While the Oceanographic Institute continues to build relationships with all Ocean stakeholders, our work contributes to the great debates of our age.

Recent months have seen a series of major breakthroughs for Ocean protection, including the “BBNJ” or High Seas Treaty, currently being ratified by the signatory countries, and the 30x30 goal aimed at designating 30% of the Earth’s land and ocean as protected areas by 2030. We have supported that movement, by hosting and backing numerous Ocean conservation conferences and initiatives.

In 2023, more than 150 events were held at the Maison de l’Océan, and around a hundred at the Oceanographic Museum, many of them involving the Ocean conservation community, with landmark moments like the 14<sup>th</sup> Monaco Blue Initiative or the 1<sup>st</sup> EU Algae Awareness Summit.

The attractiveness of our establishments allows us to be more than ever a unique hub, not only do we provide the venue for those one-off events, but our buildings are also home to important institutions such as the Ocean & Climate Platform, the Foundation for Biodiversity Research (FRB), and the Island Research Centre and Environmental Observatory (CRIOBE). Those same qualities prompted the organising Committee of the UN Ocean Conference, due to be held in Nice in June 2025, to choose the Maison de l’Océan as a base of operations.

The Principality of Monaco will also be hosting the Blue Economy & Finance Forum (BEFF) to be held in the run-up to the UN Ocean Conference, building on our commitments to blue finance and our role in several working groups on biodiversity credits or investment funds dedicated to the Ocean.

In 2023, the Oceanographic Institute kept faith with the wishes of its founder, prince Albert I, who made knowledge the most valuable ally of Ocean conservation. That same philosophy drove prince Rainier III, whose centenary we celebrated this year with the permanent exhibition “The Prince and the Mediterranean”, highlighting the importance of his work and showing how far we have come in recent decades... and the long road that still lies ahead.

We will look to move further along that road in 2025 with the launch of our Mediterranean programme. It will contribute to efforts to achieve the 30x30 goal in the Mediterranean Sea, barely 8% of which is currently officially designated as protected, with just 0.05% under a management plan. The programme got under way in April 2024 with the official launch of the “Mediterranean Missions” by Monaco Explorations.

Through all of these actions, we can continue to loyally support the work of our Honorary President, HSH Prince Albert II of Monaco.

We will continue to follow the same course in 2024 with the same determination, and with the unflinching support of our public, our sponsors, and all of our partners.

“Through all of these actions,  
we can continue to loyally support  
the work of our Honorary President,  
HSH Prince Albert II of Monaco.”



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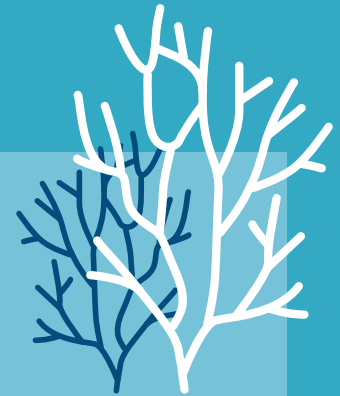
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## COLLECTIONS

Zoology  
**55,000**  
specimens

Botany  
**1,667**  
herbarium  
specimens

Pictorial art  
**320**  
paintings

Art  
**666**  
art and  
ethnographic objects

## AQUARIUM



**12,000**  
animals

**69**  
aquarium  
tanks

## VISITORS



**652,000**

visitors to the Oceanographic  
Museum

## EVENTS

**155**  
events hosted  
at the Maison de l'Océan



**90**  
events hosted  
at the Oceanographic  
Museum of Monaco

## SOCIAL MEDIA

An online community of over

**210,000**  
followers




## PRESS COVERAGE

**+ 200**  
press events  
and visits  
by journalists

**+ 70**  
interviews  
given

**1,700**  
press  
mentions



# PROMOTING POLAR WORLDS FOR THE SECOND CONSECUTIVE YEAR



As the cornerstone of the Oceanographic Institute's polar programme, the year 2023 marked a watershed in the Monegasque institution's commitment to the poles. These threatened areas of the planet are the focus of the Museum's programme of exhibitions and events for 2022-2024, which aim to explain the big issues facing the polar regions, and a variety of initiatives have been deployed to inform and educate our visitors. But the Institute has also doubled down on its historic commitment to promoting polar conservation in the international arena, lobbying every organisation and authority in a position to influence the creation of new Marine Protected Areas in the Southern Ocean. The Oceanographic Institute occupies a unique position and performs a distinct role, at the crossroads where the worlds of science and politics meet the private sector and the general public. And when it comes to the crucial fate of the polar regions, its commitment is stronger than ever.



# An extended immersion in the polar regions

## More than a million visitors given an insight into the fragility of our polar regions

On 31 October 2023, the polar exhibition at Monaco's Oceanographic Museum welcomed its one millionth visitor, confirming the strong impact it has generated since opening in June 2022. In line with the Monegasque institution's mission, the polar theme has proven to be a very relevant choice in the current environmental context, with the climate warming two to three times faster in those regions than anywhere else on the planet.

### The Museum acquires a new artwork

*Le cap Regnard*, a painting by Louis Tinayre, was unveiled to the public on 5 December 2023. A gift from HSH Prince Albert II of Monaco, restored by Franck Vigliani, the oil on canvas painted in 1910 is now part of the Oceanographic Museum's collection, and also ties in neatly with the polar theme. The work depicts Dr Regnard Point in Moller Bay on the west coast of Spitsbergen, in Norway's Svalbard archipelago. Dr Regnard (1850-1927) worked closely with prince Albert I and was the first Director of the Oceanographic Institute in Paris.

The Oceanographic Museum responded to the public's strong enthusiasm for the exhibition with a special PR campaign, and offered the one millionth visitor a special VIP experience, including a guided tour and a selection of gifts. The operation also marked the launch of a new initiative inviting members of the public to make a personal commitment to the cause by supporting the creation of Marine Protected Areas in the Southern Ocean. The year marked a turning point in terms of public engagement, with the museum experience designed to encourage visitors to take an environmental stand for the planet's most threatened ecosystems.

### Informing, educating, and raising public awareness of the polar cause

The exhibition uses a variety of media at each stage of the visitor journey, to present key information about the biggest challenges affecting the polar regions. Taking on the role of a reporter on a polar expedition, visitors effectively take control of their own museum experience, inspiring a sense of civic duty and a desire to act in the cause of these threatened ecosystems.

When surveyed, visitors said that the interactive experience not only left them with a very clear understanding of the environmental issues facing these regions on the front line of climate change, but also made them want to bring about change.

### Innovative scenography proves hugely popular

The highlight of the visitor journey through the Arctic and Antarctic worlds is the "Immersion" zone, a high-tech multisensory space covering some 650 m<sup>2</sup> and reaching a height of almost 10 metres high, designed as a virtual replica of the polar environments and the species found there. This innovative, interactive scenography puts the Oceanographic Museum firmly at the cutting-edge of science engagement and represents a bold new direction for museography. The "Immersion" 2.0 zone's strong impact was confirmed when visitors **voted it their favourite part of the exhibition**, taking them on a virtual journey between the poles from the Arctic and Antarctic.



## FOCUS ON IMPACT

In 2023, "Polar Mission" welcomed its **one millionth visitor since opening in June 2022**, and every one of those million people will have left the museum more aware of the beauty and fragility of the polar regions.

Over the duration of our polar programme (2022-2024), we expect to welcome some **1.5 million visitors**, including around **500,000 young people!**

A satisfaction survey carried out to gauge the impact of the "Polar Mission" exhibition found that it is every bit as popular as hoped, with **visitors** awarding it an **average score of 4.28 out of 5**.

The survey revealed that the exhibition **has achieved its main objectives** in terms of raising knowledge and awareness about the importance of polar conservation, and that the messages conveyed are well understood by visitors:

- Properly understood content
- Positive perception of the exhibition themes
- Visitor awareness of the everyday actions they can take
- Incentive to be an environmentally responsible citizen.

91 %

of visitors surveyed are aware that climate change is happening much faster at the North Pole than anywhere else on the planet

94 %

of visitors surveyed understand the importance of scientific research in ensuring these regions are better protected

97 %

of visitors surveyed understand the importance of preserving biodiversity in the polar regions

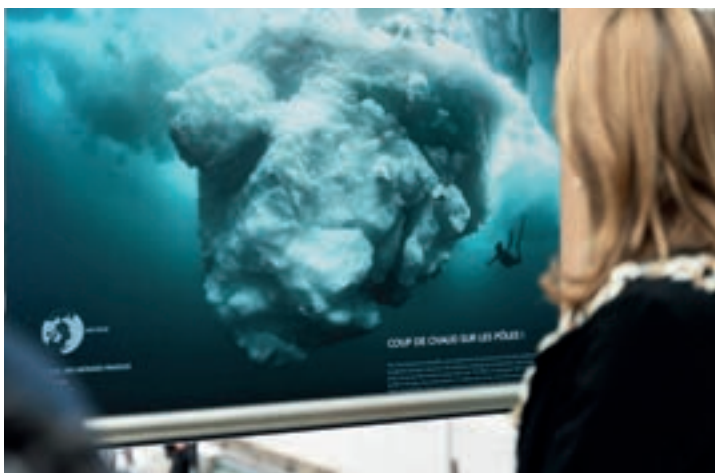
90 %

of visitors surveyed think we can still take action to protect the poles

## WHAT THE PRESS ARE SAYING

"By giving visitors all the historic and scientific keys they need to understand the big challenges facing these regions, and by extension the rest of the planet, [the exhibition] is an invitation to greater awareness."

(Geo Magazine)





## Greg Lecœur's exhibition travels around France

A hybrid blend of art and science, the “Poles, Fragile Worlds” touring exhibition by nature photographer Greg Lecœur and Oceano Monaco featured at **four major French railway stations** in summer 2023, before moving to the Oceanographic Museum of Monaco until March 2024. Starting in July 2023, the large-scale exhibition went on display at Cannes, Marseille Saint-Charles, Nice, and Paris Gare de Lyon stations, finishing its journey in the Principality, in the fabled Conference Hall at the Oceanographic Museum. From the ice floes and polar bears of the Arctic, to the seals and frozen deserts of the Antarctic, Greg Lecœur's iconic photographs showcased the landscapes and biodiversity of the endangered polar regions.

## Making art accessible to a wider audience

This large-scale art project highlighting the impact of climate change on the polar regions was made possible thanks to a partnership with French rail operator SNCF Gares & Connexions, which lent its support to the Oceanographic Institute's historic mission to raise environmental awareness. The exhibition reflected the Museum and the stations' shared commitment to combining culture and engagement, by helping passengers and visitors alike to better understand how those remote lands are connected to our urban lives. A way of encouraging a wider audience to adopt more environmentally-friendly habits.

With three key aims (to inspire, document, and raise awareness of the importance of Ocean conservation), the project covered a large part of France during the summer season, enabling the Oceanographic Institute to reach a larger audience. Holding the exhibition in summer ensured that it was able to target the busy passenger traffic at this time of year, for maximum visibility. In addition, the summer and its heatwaves, in both hemispheres, have now become synonymous with severe damage to the polar regions.



### FOCUS ON IMPACT

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Five exhibition venues, including four French main-line railway stations

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Five months of visibility across the campaign

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### WHAT THE PRESS ARE SAYING

“Lifting the veil on the beauty and vulnerability of the Arctic and Antarctic, mysterious places instrumental to the health of our planet, that was the aim of this exhibition: Poles, Fragile Worlds.”

(Plongez ! magazine)

# ■ Hope of progress and calls for the creation of a network of Marine Protected Areas in the Southern Ocean

## The Oceanographic Institute joins the Antarctic and Southern Ocean Coalition (ASOC)

In May 2023, the Oceanographic Institute joined the Antarctic and Southern Ocean Coalition (ASOC), representing civil society with the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Membership of this international coalition signals the Institute's clear intention to support the creation of a network of Marine Protected Areas in the Southern Ocean.

Through its polar programme, beginning with the "Polar Mission" exhibition in June 2022, the Oceanographic Institute has highlighted the vulnerability of an ecosystem that is vital to the balance of our planet, and supports proposals to designate nearly 4 million km<sup>2</sup> of the Southern Ocean as protected areas. Shortly after joining the Antarctic and Southern Ocean Coalition (ASOC), the Institute addressed the CCAMLR's members at an extraordinary session held in Santiago, Chile, in June 2023, where it stated its intention to support the creation of an urgently needed network of Marine Protected Areas in the Southern Ocean. The Institute made clear to the 26 Member States and the European Union that the project is crucial to achieving the 30x30 target

set by the Global Biodiversity Framework, adopted by the Convention on Biological Diversity. A strong position in a deadlocked political climate where negotiations on some proposals to create three Marine Protected Areas in the Antarctic have been ongoing for 13 years. While the Southern Ocean already has two Marine Protected Areas, including one in the Ross Sea established in 2016 with strong support from HSH Prince Albert II of Monaco, negotiations for the three new proposed MPAs have stalled with nations unable to find a consensus. The project aims to limit the impact of human activities in three major areas of environmental interest:

- In the east, near Adélie Land,
- In the west, along the Antarctic Peninsula,
- In the Weddell Sea.

In some regulated areas, fishing for vulnerable species would be banned.

Led by its Honorary President, a Head of State who previously supported the creation of the Marine Protected Area in the Ross Sea, the Oceanographic Institute has continued working to reach a consensus on proposals for new MPAs in the Antarctic. With the ASOC's backing, the Institute has published a statement of intent and commitment to the CCAMLR, clearly signalling to the international community its support for the creation of these three Marine Protected Areas in Antarctica.

## A new engagement approach to rally public support

The Oceanographic Institute has now embarked on the next phase of its polar programme, designed to bridge the gap between environmental mediation and civic environmentalism. When they reach the end of the Museum's "Polar Mission", visitors are invited to sign a pledge supporting measures to protect the Antarctic. The scheme, which will remain in place until 2025, aims to rally a large number of people behind an international environmental cause, namely the creation of three major Marine Protected Areas in the Antarctic.

## Building public support for the polar cause

An interactive digital system has been installed on the Museum's ground floor and first floor, alongside a sign that informs visitors about the cause and lets them show their support by activating the system. After being "primed" by the museum experience, visitors are then invited to express their solidarity with the plan to restrict human activity across nearly 3.8 million km<sup>2</sup> of one of the planet's most wild and untouched regions.

At a time when this particular issue is gaining traction with the public, an initiative like this is a powerful way to harness their sense of duty to the planet.

### FOCUS ON IMPACT

A clarion call to protect 4 million km<sup>2</sup> across three Marine Protected Areas in the Antarctic.



## FOCUS ON IMPACT



“The polar regions occupy a crucial place in my commitment to preserving our planet’s environment and climate balance. As far as my responsibilities allow, I have fulfilled that commitment not only by sharing data with leading experts, but also through my own personal experience in the field.”



HSH Prince Albert II of Monaco

### A journey into commitment in the Weddell Sea, off the Antarctic Peninsula

Building on its programme of advocacy for the poles, launched in 2022, and with a view to promoting greater awareness and dialogue between policymakers, scientists, the corporate world and the general public, the Oceanographic Institute decided to take its initiatives to the next level with an expedition to the Antarctic, described as a “journey into commitment”. On 28 December 2023, the members of the expedition embarked on the Commandant Charcot, an environmentally sustainable polar exploration vessel operated by the shipping company Ponant, and set sail on their voyage into commitment.

#### A science-centric expedition

Under the high patronage of HSH Prince Albert II of Monaco, the 12-day voyage followed a course never taken before, heading to parts of the Antarctic Peninsula where scientific data are scarce. The distinguished scientists on board gave talks to the other passengers, while also

collecting samples and assessing the ecological condition of those little-known lands, including by studying some of the endemic species, including emperor and Adélie penguins.

The technologies they used and their findings will provide valuable input when a decision is made on precisely which sensitive areas should be protected.

This “journey into commitment” was also an opportunity to gather data on the Danger Islands, an area near the peninsula that is rarely visited by humans. We hope that those data will prove useful for establishing an Antarctic Specially Protected Area (ASPA) in the archipelago, underpinning the vital role that science has to play in guiding political decisions.

In the centuries-old tradition of the Princes of Monaco, this polar expedition was designed as a central part of the Oceanographic Institute’s programme of advocacy for polar conservation, and in particular the creation of Marine Protected Areas. The Southern Ocean could serve as a shining example of a collaborative effort aimed at protecting an area of the Ocean vital for achieving the 30x30 target.

#### Engaging with the private sector

In addition to the team of scientists, the expedition had a hundred or so high-level business and finance leaders on board to enable decision-makers to gain a deeper understanding of the current dual climatic and biological environmental crisis, which is particularly visible in Antarctica. The epic voyage included a bespoke programme of science presentations, workshops, and field trips, designed in collaboration with scientific polar experts specifically to stimulate the business leaders’ creativity and commitment. By taking them to see the remotest areas of the planet with their own eyes, we showed the participants why they must use their power and influence to develop new measures, break the deadlock, and generate a positive long term impact on the health of the Ocean and human communities. To do that, they will need a suitable regulatory framework and the help of scientists, which must provide the information and indicators needed to guide, influence, and measure public and private initiatives more effectively. This “journey into commitment” was a valuable opportunity to develop synergies, marshal resources, and build bridges between science and the private sector.



# HANDING THE HELM TO YOUTH



School workshops, museum exhibits designed for a younger audience, fun and festive events, programmes for disadvantaged youngsters, educational pathways and competitions, awards for university students... The Oceanographic Institute is stepping up its outreach initiatives with the younger generation, encouraging them to become ambassadors for the Ocean and safeguard the future of our planet.

# ■ New additions to the Museum's school workshops

The role of the Institute's educational team is to build awareness with the Museum's target audience. As part of that remit, the team has spent over twenty years developing a range of actions aimed at teaching pupils and students to know and love the Ocean from an early age. By working in lockstep with schools and universities, the Oceanographic Institute is helping to ensure the Ocean is a key learning area at every stage of education.

## 15,000 pupils and students taught about the importance of Ocean conservation

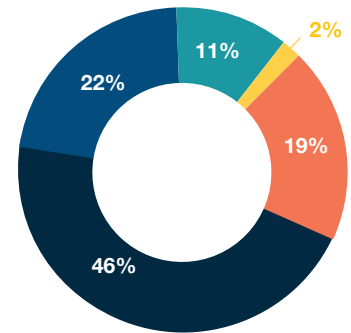
In 2023, the Education and Activities team organised over 1,500 educational workshops for students of all ages, from kindergarten all the way up to graduate level.

For younger children (from kindergarten to primary), the team created workshops introducing them to the biodiversity found in marine ecosystems. For older children and young adults (middle school to university), the team chose a selection of workshops designed to explain the major climate phenomena happening right now, and how human activities impact the Ocean.

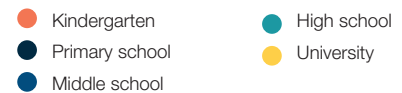
## Introducing young people to the polar worlds

In connection with its polar programme, the Oceanographic Institute developed a specific package of activities in 2023 designed to let school pupils discover the polar environments.

- The "Nino the Penguin" workshop was a big hit with the youngsters. Kindergarten and primary school children discovered the different species that inhabit the South Pole and the life cycle of penguin colonies, via an imaginary voyage to the Antarctic ice in the company of Nino, a baby penguin.
- The "Polar Treasure Hunt" saw middle school pupils analyse the physical characteristics that make the poles such extreme environments, and learned how the people and wildlife that live in the Arctic have adapted to the extreme cold. The fun and educational activity also helped the youngsters to understand how fragile the polar regions are in the face of the changes currently taking place.



15,000 pupils and students reached through school activities (percentage by school level)



## Helping teachers to adopt new classroom teaching methods

As every year, in collaboration with the French Ministry of Education and the Monegasque Department of Education, Youth and Sport, teachers keen to use the Oceanographic Museum as a teaching resource for their class project were invited to a series of special open days.

In 2023, **nearly one hundred teachers** attended these open days at the Museum, familiarising themselves with the teaching materials available along the visitor pathway, from the coral reefs in the aquarium to the polar worlds. The teachers also got to see the different subjects covered by the "Polar Mission" exhibition and how they fit in with their schools' curricula. Some activities were particularly popular for their ability to take complex subjects like sustainable development and biodiversity issues and make them more accessible.

The various subjects covered during these open days, and awareness about the importance of protecting marine ecosystems, gave the teachers a wealth of ideas to use in their lessons.



# ■ “Oceano pour Tous” transcends borders to engage with the widest possible audience

## An initiative expanded to include schools in Monaco, mainland France, and French overseas territories

### An international schools competition

First held in 2014 by the Oceanographic Institute in collaboration with the Princess Charlene of Monaco Foundation, the French Ministry of Education, and the Monegasque Department of Education, Youth and Sport, this landmark schools competition continues to support and educate the citizens of the future about Ocean conservation, through a collective, creative, and committed class project.

Previously open only to primary schools in the Provence-Alpes-Côte d’Azur region of France, the competition was expanded this year. It is now aimed at middle schools in mainland France and the French overseas territories, Monaco, the French-speaking world, and other countries (Italy, Senegal), with a special focus on entries from schools in rural or priority education areas.

The “Oceano pour Tous” (Oceano for All) programme is a great way of nurturing future marine conservationists, and once again this year helped 600 pupils and their teachers to discover the marine world and create a project to protect the Ocean. Online educational activities, talks with scientists and oceanographers, and a variety of educational resources were made available to the 25 classes taking part.



### A sponsor committed to young people!

“The Oceano pour Tous” (Oceano for All) project is wonderful! It engages with the generations who will play a vital role in preserving our planet. It’s crucial to get these kids looking after the Ocean from an early age. This competition helps them to understand their own impact and to adopt environmentally responsible behaviours, which they then share at home. The children believe in it. It’s up to us to support their initiative!”



**Estelle Lefébure**  
Oceano Youth Ambassador for the Oceanographic Institute of Monaco

### A response to the UN Sustainable Development Goals

This competition focused on uniting young people around the Ocean cause also addresses Sustainable Development Goals 4, 13 and 14 adopted by the UN Member States. It is part of the Oceanographic Institute’s contribution to putting Ocean issues centre stage in the drive to improve sustainability by 2030.

### Young ambassadors for the Ocean

On Tuesday 13 June, the seven winning classes in the “Oceano pour Tous” (Oceano for All) competition were invited to the Oceanographic Museum of Monaco to receive their awards from HSH Prince Albert II of Monaco, at a ceremony also attended by Estelle Lefébure, co-founder of the non-profit Spero Mare and sponsor of the 2022-2023 competition. In recognition of their projects’ strong environmental and human impact, the laureates received a two-day trip to the Principality, two €5000 prizes and three €1000 prizes.

This bold initiative was made possible with the steadfast support of the Association of Friends of the Oceanographic Museum of Monaco. It is also backed by the TotalEnergies Foundation and the R&Co4Generation Fund, hosted by the King Baudouin Foundation.



## FOCUS ON IMPACT

### Classes in Réunion rewarded for their commitment

On 5 July 2023, two classes of middle school pupils from the Indian Ocean island of Réunion were handed prizes for their entries in the “Océano pour Tous” (Océano for All) competition. Over the course of the year, the pupils - alongside their teachers and teams from the Oceanographic Institute - got closely acquainted with the marine environment, discovering the island’s coral reefs and learning about the threats to those ecosystems. After studying the ecological issues affecting their marine environment, the pupils undertook a number of conservation actions, including planting endemic plant species to protect the beaches from erosion and encourage sea turtles to lay their eggs. They also visited an audiovisual studio, where they made a short film informing tourists about the importance of protecting the reefs. At the prize ceremony, held at the offices of Réunion’s regional council, staff from the Oceanographic Institute also announced the launch of the next 2023-2024 edition, which will be open to pupils from other parts of the Indian Ocean, specifically the Seychelles and Mauritius.

Over 600 pupils involved in the projects

4 countries represented (France, Monaco, Italy, Senegal)

25 schools taking part, each with their own project

7 winning classes

10 judges from the world of science, politics, and education

Contributing to 3 sustainable development goals

Over 150 workshops run by staff from the Oceanographic Institute

10 projects put forward by classes from priority education areas, rural or “sensitive” districts

#### A pupil’s view

“Working with the Oceanographic Museum of Monaco and having lessons by video link was very new for me, and I loved it. We learned a lot and now we are more aware about ecology, climate change, and biodiversity.”

**Méline**

Year 11 pupil at Collège Galilée middle school, La Salvetat Saint Gilles

#### A teacher’s view

“Accompanying a class in a competition like this is a chance to teach in a less conventional way. The out-of-school activities, for example, let us take the pupils on a snorkelling trip with staff from Réunion’s Marine Reserve. They were able to discover the environment and its rich wildlife, and also see how fragile it is, which was frightening for some as they had no idea.

But there were also numerous videocalls arranged by the Oceanographic Institute, which provided the pupils with very detailed information about coral and the coral ecosystem.”

**Stéphane Delebarre**

Year 7 life sciences teacher at Chemin Morin middle school, Réunion



## ■ Bringing the Ocean within reach of young people from disadvantaged backgrounds

Through its Youth programme, the Oceanographic Institute has worked to ensure young people from disadvantaged backgrounds are able to learn about the Ocean. It does this in a variety of ways, such as giving young people the chance to visit the “Polar Mission” exhibition, take part in workshops on the effects of plastic pollution, and spend a day on the Lérins Islands learning about the Mediterranean’s biodiversity.

These activities are highly instructive and illuminating for the young people concerned, and an effective way to introduce a new audience to the importance of protecting ocean ecosystems. This is particularly vital, as despite living near the Mediterranean, these young people often have little access to it and are unfamiliar with the marine environment and related ecological issues.



### With Secours Populaire

In early June, the Alpes Maritimes branch of charity Secours Populaire kicked off its “Summer Holidays 2023” campaign with a “Happy Day” at the Oceanographic Museum of Monaco. The event was organised by the Oceanographic Institute and made possible thanks to the generosity of the Association of Friends of the Oceanographic Museum.

**Forty children from the region, from disadvantaged backgrounds,** were treated to a guided tour of the Oceanographic Museum, learning about the beauty and fragility of the marine world.

### With the World Association of Children’s Friends (AMADE)

As part of special awareness days organised by the World Association of Children’s Friends (AMADE), the Oceanographic Museum welcomed a number of vulnerable children accompanied by the Alpes-Maritimes child welfare department. Supported by the Association of Friends of the Oceanographic Museum, the events gave the youngsters the chance to discover the Museum and its aquarium, and also included a fun treasure hunt to immerse them fully in the polar worlds. On another occasion, the children were taken on an excursion to the Lérins Islands, where they spent the day with their “feet in the water” learning about the seaside ecosystems. Finally, they also took part in an awareness workshop on the theme of marine pollution, and examined some of the waste found on the beach. The idea behind the operation was similar to that of the “Océano pour Tous” (Océano for All) competition aimed at pupils from schools in priority education areas, for whom the sea is often something of an unknown quantity.

## ■ The 4th “Fête du Musée”

Organised by the Association of Friends of the Oceanographic Museum, this year’s “Fête du Musée” saw a whole day devoted to fun activities for visitors on the themes of marine science and ecology.

The packed programme included everything from awareness-raising workshops, treasure hunts, and environmentally responsible manual activities, to an escape game, a musical play, a VR diving experience, and a raffle. And of course, the opportunity to explore the “Polar Mission” exhibition.

The event was made possible thanks to the efforts of the association’s volunteers, the Institute’s staff, and our loyal partners. It was a great success, attracting many visitors - including lots of families - and a high level of attendance..



### Sponsor a fish

The 2,800 or so participants were invited to show their support for the association behind the event by sponsoring a fish. Everyone who signed up received a sponsorship certificate, along with their chosen fish’s “ID card”, and one year’s unlimited entry to the Museum for one adult and one child under 18. Species including the sandy dogfish, moon jellyfish, clownfish, Banggai cardinalfish, and the seahorse were all sponsored, with the proceeds raised going towards the development and maintenance of the Museum’s aquariums.

# Ongoing involvement by members of the Doctoral Prize Club

## New laureates

The Doctoral Prize Club welcomed two new laureates in 2023, who were presented with awards at the Albert I Grand Medals ceremony held in November of that year. The winning candidates received a prize sponsored by Biotherm, a long-standing partner of the Oceanographic Institute.

## A dynamic group

The two young scientists are the latest to be admitted to a club that now includes **12 members**. Together, they play an active role in the Oceanographic Institute's day-to-day operations and initiatives, working on projects designed to make science more accessible for younger people, arranging special events like the polar symposium, or laying the groundwork for the Institute's future programmes.

## Real impacts on the work of the Institute's Scientific Council

The winning candidate in 2020 was Dr Eva Maire. She earned the distinction for her work on the socio-ecological factors of fish biomass in coral reefs, and now sits on the Oceanographic Institute's Scientific Council. Her expertise is invaluable for guiding the management's decisions.

### THE 2023 DOCTORAL PRIZE


**Charly de Marez** received the award for his oceanography work on the physics of deep-sea currents. While preparing his thesis at the Laboratory of Physical and Spatial Oceanography in Brest, the doctoral candidate studied the dynamics of meso and submesoscale eddies in the Arabian Sea. His work successfully determined the mean three-dimensional structure of eddies in the region for the first time, allowing their life cycle to be studied in detail in different situations: in isolation, when reaching the coast, and when encountering other eddies. Dr Marez used a pioneering approach that combined in situ observations with digital models and theory. He is currently working on postdoctoral research at the University of Iceland in Reykjavik.

### THE DOCTORAL PRIZE, SPECIAL HONOUR, 2023

**Adrian Van Kan** was recognised for his work on critical transitions in turbulence. In his doctoral thesis, he employed a variety of computer-based and theoretical models to shed new light on transitions between different states of turbulence in geophysical fluids, highly useful for oceanographic and atmospheric applications. He is currently working on postdoctoral research in the Department of Physics at the University of California, Berkeley (United States).

As every year, the laureate was presented with a **cheque for 5,000 euros**, sponsored by Biotherm, a long-standing partner of the Oceanographic Institute.





# FORGING LINKS BETWEEN ALL STAKEHOLDERS FOR THE OCEAN



Sustainable synergies and collective, wide-ranging actions led by the Oceanographic Institute are increasingly front and centre on the international stage, bringing on board more and more partners committed to the Ocean cause.

# ■ The 14<sup>th</sup> Monaco Blue Initiative, a bold vision for Ocean conservation

The 14<sup>th</sup> edition of the Monaco Blue Initiative, a high-level think tank that brings together experts from a range of fields, took place under the high patronage of HSH Prince Albert II of Monaco. The mood was upbeat, following recent breakthroughs in international Ocean governance such as the BBNJ (also known as the High Seas Treaty) and the Kunming-Montreal Global Biodiversity Framework agreed at COP15, with its 30x30 target aimed at protecting and conserving a minimum of 30% of the Earth's land and seas by 2030. Organised jointly by the Oceanographic Institute and the Prince Albert II of Monaco Foundation, the MBI is now a fixture on the international calendar of events dedicated to Ocean issues.

It took place over the course of one day on 20 March 2023, in the plenary hall of Monaco's Oceanographic Museum, with a high-level panel of leading figures from the Ocean community and political figures, including His Excellency Mr Rodrigo Chaves Robles, President of the Republic of Costa Rica. **Four keynote themes** were discussed, focusing on: sustainable fisheries, Highly Protected Marine Areas, the role of marine ecosystem restoration in achieving the sustainable development goals, and ambitions for a sustainable Mediterranean Sea.

**The four topics of discussion covered issues that could raise the bar in terms of Ocean protection:**

1

Challenges and possibilities for achieving sustainable fisheries and striking the right balance between conservation and exploitation of marine resources

2

New Highly Protected Marine Areas, a vision for 2030

3

The role of marine ecosystem restoration in achieving the 17 sustainable development goals

4

Scaling up solutions to promote a more resilient and sustainable Mediterranean Sea

The Monaco Blue Initiative, which brings together leading stakeholders from the fields of Ocean conservation and governance, blue finance and the blue economy, science, politics, and civil society, once again proved to be an invaluable forum for collaborative thinking about what the priorities should be in terms of sustainability and our responsibility to the Ocean.

Thanks to its growing international influence, the event is helping to build shared momentum towards achieving the sustainable development goals, and in particular goal 14 on aquatic environments. In that respect, this latest edition served as a useful springboard for preparations leading up to the UN Ocean Conference, co-hosted by Costa Rica and France, which will convene in Nice in 2025.



## FOCUS ON IMPACT

“Significant strides have been made in recent months. First and foremost, of course, with the adoption [...] of the High Seas Treaty [...] It will finally give us the legal tools needed to improve protections for international waters, by enabling us to create high seas Marine Protected Areas, something I have been advocating for many years. While at the same time ensuring that income from biological resources is shared more fairly.”



**HSH Prince Albert II of Monaco**

“There is tremendous enthusiasm for the idea that we need to unite the twin agendas of climate change and biodiversity loss. By doing so, we become more effective. We must not let these opportunities pass us by. We must galvanise them and translate them into further action.”



**Her Excellency Razan Al Mubarak,**  
President of the International Union  
for Conservation of Nature (IUCN)

“The Monaco Blue Initiative is a priceless forum for encouraging the international community to shift its focus to the Ocean. There’s so much we can do to improve the state of the Ocean! We can’t just keep waiting and talking. We have to act. The challenges are so huge. Vision without action is hallucination.”



**His Excellency Rodrigo Chaves Robles**  
President of the Republic of Costa Rica



# Defending the blue economy and handing the private sector a bigger role

## The Oceanographic Institute joins the International Advisory Panel on Biodiversity Credits (IAPB)

With the world recognising that efforts to protect biodiversity are underfunded and action is urgently needed to build a nature-positive economy, the French and British governments recently moved to set up the International Advisory Panel on Biodiversity Credits (IAPB). The new body aims to support the development of high-integrity biodiversity credit markets, while promoting political and regulatory mechanisms designed to unlock significant, long term, fair investment in projects to conserve and restore the natural environment. The idea behind the scheme is to reward collective efforts and create an ambitious ecosystem to close the biodiversity funding gap. In the same way as political and regulatory mechanisms, high-integrity biodiversity credit markets will not only generate nature-oriented investments, but will also ensure the resulting profits are shared more fairly with local and indigenous peoples.

In 2023, the Oceanographic Institute's CEO, Robert Calcagno, joined the IAPB's high-level independent panel of **21 experts** from finance,

business, non-profits, institutions, NGOs, and Indigenous Peoples and local communities. The members are drawn from over a dozen countries worldwide, and meet regularly to map out a secure and socially just environmental framework for scaling up this pioneering new financial mechanism. Mr Calcagno also co-chairs a group of scientists who support the panel members by keeping up to speed with the latest developments and giving their expert opinion on emerging knowledge.

Each of the IAPB's **five working groups** focuses on a major design challenge, covering the way in which supply and demand for credits are structured, how they are measured and administered, and how to establish robust governance. The experts arrange their work around key dates on the international calendar, as dictated by the conventions on climate change and biodiversity. The IAPB aims to deliver a roadmap at the 2024 United Nations Biodiversity Conference in Colombia.

## FOCUS ON IMPACT

21 international figures working together

5 working groups

## FOCUS ON IMPACT

The group laid out its initial recommendations in a presentation to King Charles III and President Emmanuel Macron at the Climate and Nature Finance Mobilisation in 2023.

By helping to adopt a system of officially recognised, effective biodiversity credits, including for ocean ecosystems, the Oceanographic Institute is helping to leverage private funding for the cause of Ocean conservation.



## The 6th Monaco Ocean Protection Challenge

The Oceanographic Institute teamed up with the International University of Monaco, the non-profit Monaco Impact, and the Prince Albert II of Monaco Foundation to organise a competition aimed at university students and start-ups, for the sixth successive year. The Institute continues to support members of the younger generation looking to create new concepts and promote the development of business models with a positive, quantifiable impact on the Ocean.

It does this by offering advice and support to entrants in the international competition, giving them access to its knowledge base and contacts via its partner firms' professional networks, especially those involved in incubators, accelerators, and funding for start-ups.

The hundred or so participants, drawn from around twenty universities and international business schools and representing some 23 different nationalities (US, Mexico, Italy, France, Turkey, etc.), worked from mid-January to the end of April 2023 on a business plan laying out new concepts for a more sustainable Ocean. Altogether, 47 projects were submitted, and after two selection phases, six went through to the grand final held on 9 June 2023, in the presence of HSH Prince Albert II of Monaco and Hervé Berville, French Secretary of State for the Sea. The finalists were invited to pitch their ideas to a panel of five professionals, investors, and scientists, on the stage of the Conference Hall at the Oceanographic Museum.

The laureates, depending on which category they were competing in, were rewarded with either a cash prize or an offer of professional support and guidance, to help them develop their concept and turn it into a concrete entrepreneurial action to protect the Ocean.

CFM Indosuez Wealth generously supported this international competition, joining the select group of corporate partners associated with the Monaco Ocean Protection Challenge, alongside Nansen Polar Expeditions and White Castle Partners.

### Awards for three sustainable entrepreneurship projects in 2023

Following an afternoon of presentations in front of a public audience, the jury made its deliberations and announced the names of the three laureates, who received their prizes from HSH Prince Albert II of Monaco

## FOCUS ON IMPACT

Over 100 students and young entrepreneurs involved

20 universities and international business schools and 23 nationalities represented

47 projects submitted

3 projects rewarded

### “STUDENT” CATEGORY

#### *Bloom*

(Babson College, United States), an initiative for cleaning and converting algal blooms into biomass pellets.

### “START-UP” CATEGORY

#### *Pronoe*

(France), a start-up that produces and manages alkaline flows and issues high quality CO<sub>2</sub> removal certificates. Its customers buy the certifications to meet their net zero or CSR commitments.

### “SPECIAL PRIZE” CATEGORY

#### *Flexisea*

(MINES Paris - PSL, International University of Monaco and Universitatea Politehnica din Bucuresti), an underwater high-precision robotic arm designed to mitigate damage to marine species.



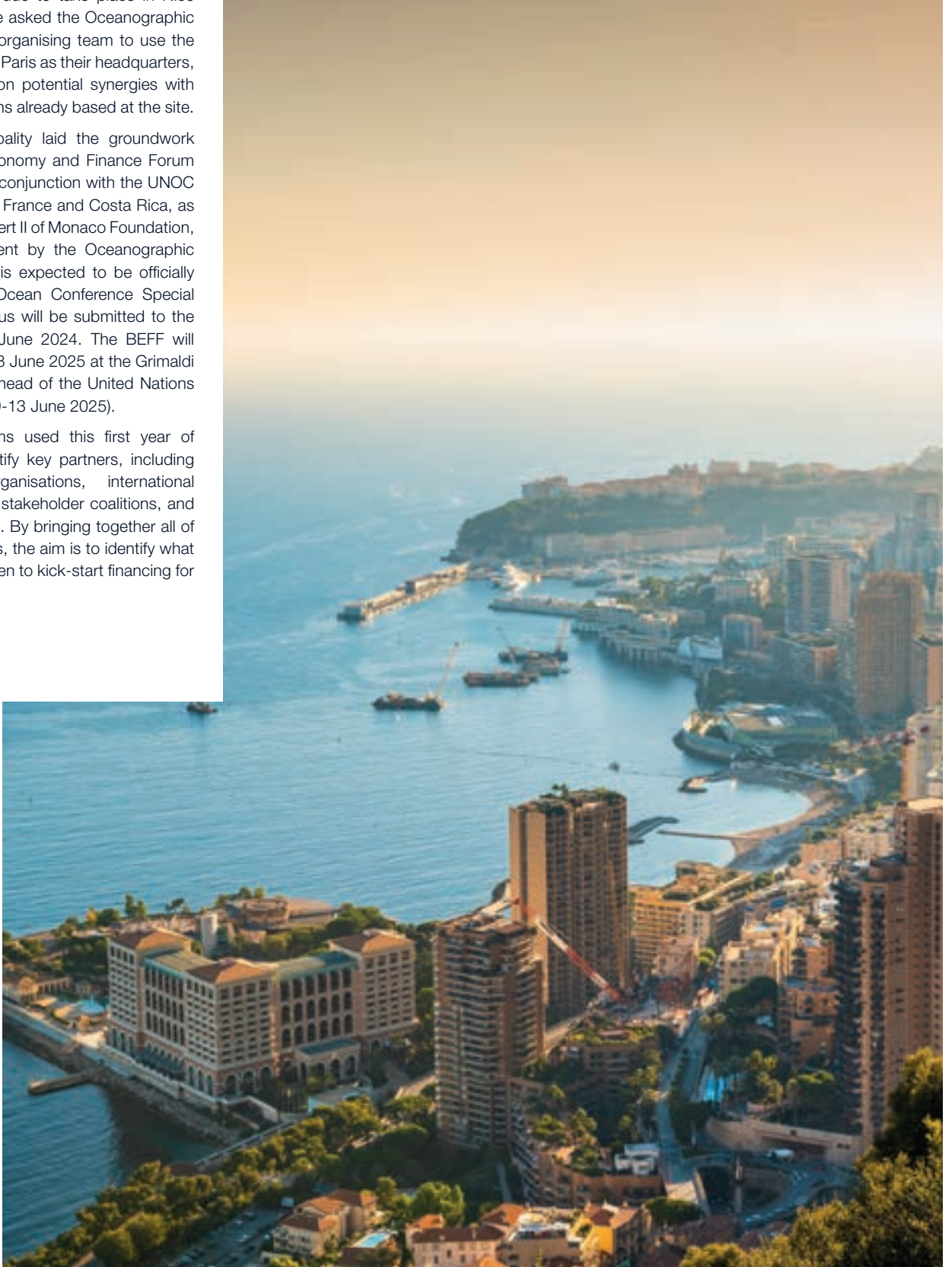


## Preparations for the UN Ocean Conference

In the lead-up to the United Nations Ocean Conference (UNOC) due to take place in Nice in June 2025, France asked the Oceanographic Institute to allow its organising team to use the Maison de l'Océan in Paris as their headquarters, thereby capitalising on potential synergies with the other organisations already based at the site.

In 2023, the Principality laid the groundwork for the new Blue Economy and Finance Forum (BEFF), organised in conjunction with the UNOC 2025 host countries, France and Costa Rica, as well as the Prince Albert II of Monaco Foundation, with close involvement by the Oceanographic Institute. The forum is expected to be officially classed as a "UN Ocean Conference Special Event", and this status will be submitted to the UN for approval in June 2024. The BEFF will take place on 7 and 8 June 2025 at the Grimaldi Forum in Monaco, ahead of the United Nations Ocean Conference (9-13 June 2025).

The organising teams used this first year of preparations to identify key partners, including private sector organisations, international development banks, stakeholder coalitions, and academic institutions. By bringing together all of these different parties, the aim is to identify what measures can be taken to kick-start financing for Ocean conservation.



# ■ Defending and supporting algaculture for a healthier diet, economy, and Ocean

With some 36 million tonnes produced every year, algae makes up nearly 17% of the world's "aquatic" produce. Most of it comes from the sea. That, however, is a mere drop in the Ocean compared with the almost 10 billion tonnes of food produced on land. If the industry is to develop, it will require concerted government backing and strong promotion to convince consumers and users of algae's benefits. In 2023, the Oceanographic Institute demonstrated its commitment to making both of those things happen by hosting a number of events dedicated to the industry which, while already growing quickly, nonetheless needs to be scaled up massively.

## 3rd Seaweed Day held during Monaco Ocean Week

Co-hosted by the Kelp Forest Foundation and the Oceanographic Institute as part of Monaco Ocean Week 2023, the third edition of this annual workshop brought together leading algae specialists from around the world to discuss the theme "Seaweed: reality or fad?"

On 23 March, the growing community of entrepreneurs, innovators, and scientists highlighted the important role of algae in the blue economy at an event also attended by Australian scientist Tim Flannery, one of the three main interviewees to whom HSH Prince Albert II of Monaco talks in his book, *L'Homme et l'Océan*. Participants unanimously acknowledged that the algae industry has a key role to play in ensuring global food security, mitigating climate change, and supporting marine ecosystems, while helping to create jobs and economic growth.

## The Maison de l'Océan hosts a workshop on algae as an alternative to plastic

In early June 2023, shortly after the second session of the UN's Intergovernmental Negotiating Committee on plastic pollution (INC-2), a workshop was held at the Maison de l'Océan in Paris.

Algae industry stakeholders and experts met to discuss the theme: "Algae, a sustainable and biodegradable alternative to plastic packaging." The event highlighted algae's potential as a natural alternative to plastic, and produced a number of practical recommendations ahead of the next stage of UN negotiations on plastic pollution (INC-3) due to take place in February 2024. The event was organised jointly by the United Nations Global Compact, the United Nations Environment Programme, and the Global Seaweed Coalition, and supported by the Oceanographic Institute.

## The Maison de l'Océan hosts the first ever EU Algae Awareness Summit

Can algae be a mainstay of Europe's environmental and economic transition? This was the key question that delegates sought to answer at the first ever EU Algae Awareness Summit, which took place at the Maison de l'Océan in Paris from 5 to 7 October 2023. Organised jointly by the European Commission (EC), the French Government, and the Global Seaweed Coalition with the support of the Oceanographic Institute, the meeting marked the start of a process aimed at raising awareness among European institutional stakeholders and the general public about the benefits of algaculture for the economy, people, and Ocean conservation.

On 5 and 6 October, representatives of EU governments, key industry stakeholders and the scientific community came together with delegates from the EU Commission and relevant French government departments, to discuss how to create the right technical conditions for the algae sector to flourish, both in the EU and beyond. The two days of discussions behind closed doors were followed by a third day open to the general public, which included inspiring talks, demonstrations by chefs, tasting sessions, and interactive workshops, to show visitors the vast potential of algaculture.

## Change begins on our plates: the Relais & Châteaux World Culinary Council

The Oceanographic Museum hosted this high-level event attended by HSH Prince Albert II of Monaco and 21 Michelin-starred chefs all committed to sustainable gastronomy. Intelligent management of the oceans could play a vital role in the world's food supply, paving the way for a healthy balance between food production and protection of marine ecosystems.

The event was a wonderful opportunity to promote the use of algae in cuisine and demonstrate that the vitamin and mineral-rich foodstuff can be used to create delicious dishes.



# ■ Grand Medals 2023

The Grand Medal is a highly prestigious award originally created in 1948. In 2023, for the 75<sup>th</sup> successive year, the exclusive circle of Grand Medal recipients grew once more, as the Oceanographic Institute of Monaco bestowed the honour on five new awardees.

At a ceremony at the Oceanographic Museum of Monaco on 22 November 2023, HSH Prince Albert II of Monaco presented the Albert I Great Medals to the laureates named in 2022 and 2023, paying tribute to their sterling work and commitment to the Ocean cause. The biennial ceremony recognised **five eminent international figures** from the worlds of Ocean science and engagement, placing them in elite company among the foremost names in the marine world.

The event also saw the Oceanographic Institute present the Doctoral Prize to young graduates from a French doctoral school, in recognition of their promising work in the Ocean field.



## Recipients of the 2022 Albert I Grand Medal



**Dona Bertarelli** (Switzerland), philanthropist, investor and sportsperson - **Engagement category, 2022**



**Henri Weimerskirch** (France), emeritus director of research at the CNRS - **Science category, 2022.**



## Recipients of the 2023 Albert I Grand Medal



**Jean-Louis Étienne** (France), doctor, explorer and author - **Engagement category, 2023**



**Nils Chr. Stenseth** (Norway), professor of ecology and evolution at the University of Oslo and professor of marine biology at the University of Agder - **Science category, 2023**



**Rashid Ussif Sumaila** (Canada), Canada research chair in interdisciplinary ocean and fisheries economics - **Science category, 2023.**

## FOCUS ON IMPACT

87 medallists since 1948

“The number-one priority for the Ocean today is courage and political leadership, because we already have the scientific knowledge and we know what needs to be done. We must succeed in protecting 30% of the Ocean by 2030.”

**Dona Bertarelli**

“A decade ago, I was Director of the Oceanographic Institute. So this medal means a great deal to me, especially coming in the engagement category. It confirms the fieldwork and knowledge synthesis I have been doing for a long time. It’s also an encouragement to swim against the tide of disrespect for the Ocean, which is an important climate regulator and a huge biodiversity resource that helps to feed humanity.”

**Jean-Louis Étienne**

“It’s a great honour to be in such distinguished company. This medal is also a reward for the interdisciplinary work and the efforts made towards Ocean sustainability. I believe we need to change our mindset and move away from the idea that we can just take anything, anywhere we like. There are some sea creatures we don’t need to touch, like the animals that live very long lives in the deep sea. We don’t need to fish everywhere and catch everything, or else all our grandchildren will be left with is jellyfish.”

**Rashid Ussif Sumaila**



# ■ The Oceanographic Institute's sponsors

As it works to promote the cause of Ocean conservation, the Oceanographic Institute continues to enjoy the support of its long-standing sponsors, and new partnerships are being forged too. The Institute actively encourages and applauds the efforts made by businesses and institutions as they increasingly look to focus on sustainability and respect for ocean ecosystems, adopting an environmentally-responsible positioning with a growing impact on society and nature.

## A steadfast partnership with Biotherm **BIOThERM**

Over the last three years, Biotherm's invaluable support has enabled the Oceanographic Institute to scale up its different programmes and engagement initiatives, including:

- Launching the polar programme, with the landmark "Polar Mission" exhibition opening to the public in June 2022;
- Hosting major international events devoted to Ocean issues;
- Developing the Institute's awards programme for young scientists via its Doctoral Prize, including the Albert I Great Medals ceremony.

In September 2023, the Museum once again welcomed the brand and its guests for the second Blue Beauty event, with private tours of the Blue Beauty Lab and the "Polar Mission" exhibition, plus a scientific round table debate.

"Biotherm and the Oceanographic Institute of Monaco share the same vision: There can be no future without the Ocean, and to protect it better, it's vital that we get to know our blue beating heart better. The Ocean and science have always been embedded in our brand's DNA and history. That's why Ocean conservation and marine biodiversity form the cornerstone of all our commitments and actions. And we're putting our faith in scientific research as the right ally to reveal all the extraordinary beauty and power of our Ocean. So it's an immense privilege for us to support the Oceanographic Institute's Doctoral Prize."

**Grégory Benoit**  
Global Brand President, Biotherm



## CFM Indosuez Wealth renews its commitment

**CFM INDOSUEZ**  
WEALTH MANAGEMENT

In 2023, the Oceanographic Institute and CFM Indosuez Wealth continued working together to promote and protect the Ocean. This partnership illustrates the dynamic synergies between the Institute and a key player in the Principality's financial sector, whose influence extends to France and around the world.

For the third successive year, CFM Indosuez Wealth offered its clients a carefully structured blue cycle investment product, with part of the commission donated to the Oceanographic Institute to help fund its work.

CFM Indosuez Wealth's support for the Oceanographic Institute is a pillar of our commitment to Ocean conservation, alongside the blue finance solutions that we are actively developing. Together with all our employees, who are involved in the Oceanographic Institute's projects via the Citizen Days, we are delighted to continue our partnership with this key player in environmental engagement, whose values and attachment to the Principality we share.

**Mathieu Ferragut**  
CEO of CFM Indosuez Wealth





## Building the future with Rolex **ROLEX**

The Oceanographic Institute has continued to enjoy the loyal support of Rolex, a valued partner more committed than ever to the cause of a sustainable Ocean. Rolex's involvement was instrumental in developing the Institute's philanthropic initiative, Ocean Pledge, aimed at fostering a multi-year programme to promote new Marine Protected Areas and raise public awareness about the UN's 30x30 target (30% of MPAs by 2030).

"It's vital we pool and share our knowledge about endangered marine ecosystems, so we can protect them. The Oceanographic Institute has led the way by regularly bringing together Ocean experts and stakeholders, at events like the Monaco Blue Initiative, to lay out the latest research and spur policymakers and the public into action. Our partnership perfectly encapsulates the goals of our Perpetual Planet Initiative: supporting the people who are using science to find solutions to the environmental challenges we face."

**Arnaud Boetsch**  
Director of Communication & Image, Rolex



### **AAMOM support for awareness-raising efforts**

The Oceanographic Institute is able to rely on the steadfast support of the Association of Friends of the Oceanographic Museum of Monaco (AAMOM), an organisation created to enable supporters to help develop and raise the Museum's profile. Every year, the AAMOM organises the "Fête du Musée", bringing together all of its members for a day of friendship and fun devoted to the theme of Ocean conservation.

In 2023, the AAMOM was instrumental in developing and deploying the Oceanographic Institute's educational programmes aimed at children from disadvantaged backgrounds, which were made possible by the association's successful fundraising drive the previous year.



### **Saint James: a new partnership and a new wardrobe!**

In 2023, the Oceanographic Institute proudly welcomed a brand new partner in the shape of French fashion brand Saint James, who will now provide the uniforms worn by staff at the Oceanographic Museum. Designed exclusively for the Museum, the elegant outfits take inspiration from the Institute's iconic colours and motifs, including the octopus featured on the Museum's mosaics, and are made with the traditional Saint James craftsmanship. Incidentally, the brand has been awarded Living Heritage Company certification.

### **Our other sponsors**

To continue fulfilling its public interest mission year after year, the Oceanographic Institute also relies on the invaluable patronage of private donors and numerous companies, including: Ferring, Paul Hamel Foundation, TotalEnergies Foundation, R&Co4Generations, Sanso Investment Solutions, Véolia Foundation, Monte-Carlo Société des Bains de Mer, Aqualung, Venturi, CACIB, Daxtachem, Groupe Axa, Kappa.



# ■ Unprecedented support for the Ocean from the football community

A partnership agreement was signed with AS Monaco FC on 17 April 2023, marking the start of an enthusiastic collaboration based around a series of joint initiatives aimed at engaging with the public on Ocean conservation issues. The arrangement reflects our shared environmental ambitions and harnesses the power of football to carry our message to a vast audience (players, fans, viewers, etc.).

## The Museum hosts young sportspeople

The young players from AS Monaco's Academy, athletes, future champions and leaders, joined a group of young amateur players for a guided tour of the Oceanographic Museum to learn about the marine world and its vulnerability.

## OCEANO football shirts

On 26 July, at a special event held at the Oceanographic Institute, AS Monaco and Kappa France unveiled the new third kit to be worn by the team's players for the 2023-2024 season. Made from 100% recycled polyester in Ocean-inspired colours, the shirt - dubbed OCEANO - symbolises the meeting of two worlds: sport, and marine conservation. For every shirt sold, five euros are donated to the Oceanographic Institute to support its conservation and environmental engagement work.



## ■ Focus on the Indian Ocean

### Monaco Explorations deliver the first results of their Indian Ocean mission

Drifters, smart boards, onboard sensors, temperature profiles, special nets to collect samples of plankton or microplastics, remote-controlled submarines, seafloor mapping, habitat sampling....

Monaco Explorations have unveiled the initial results of their landmark mission in the Indian Ocean in autumn 2022, exploring the areas between Mauritius, Réunion and the Seychelles. It represents the first phase of the "Monaco Explorations" project approved as part of the United Nations Decade of Ocean Science for Sustainable Development (Action 202).

**Lasting two months and covering 18,500 kilometres**, the mission is among the most ambitious ever undertaken by the Principality. Aboard one of the largest research vessels currently operating, the S.A. Agulhas II, kindly loaned by the South African government, the international team focused on two different maritime areas of the western Indian Ocean: the Saya de Malha submerged ocean bank in the Mascarene Plateau, often described as an "invisible island", and two visible islands, the Aldabra atoll and the St. Brandon archipelago.

The mission's goal was not only to gather and share new research on these little-known areas, but also to provide governments and policymakers with hard scientific data about the condition of this part of the Indian Ocean.

#### Initial findings

- on the Saya de Malha bank: **2,500 samples** revealed rich benthic biodiversity, including a high proportion of endemic species and likely **new species previously unknown to science**;
- **18 drifters** were used to monitor ocean currents active in the area, which influence regional biological connectivity;
- A study of Aldabra's sea turtles had three objectives, including comparing the genetic structure of individuals collected and tagged with Argo beacons;
- 29 autonomous BGC Argo floats have now been deployed across an area with little previous coverage, sending back ocean profiling data from depths ranging from 0 to 2,000 metres every ten days. These physical, chemical, and biological variables, crucial for understanding changes in the Ocean and how it is reacting to climate change, are made available to the entire scientific community in real time.



## FOCUS ON IMPACT

Eight international research programmes

150 participants from 20 countries

1,000 species collected

150 articles in the national and international press

500 visitors hosted on board during stopovers

### WHAT THE PRESS ARE SAYING

“Saya de Malha is one of the world’s largest seagrass meadows, a shallow invisible island in the middle of the Indian Ocean, 300 kilometres from the nearest land mass. Led by Monaco Explorations, a major scientific mission has been dispatched to investigate the area.”

(Terre Sauvage)



### Protecting the Saya de Malha: from science to diplomacy

One of the world’s largest seagrass meadows covering some 40,000 km<sup>2</sup>, the Saya de Malha Bank is home to remote, hard-to-reach ecosystems about which we know relatively little, but which are under severe pressure from industrial fishing. The whole bank lies just below the surface of the water, hence its nickname, “invisible island”.

Located far out at sea, it is only partially protected by the United Nations Convention on the Law of the Sea under extended coastal

shelf provisions. The bank is managed jointly by the Republic of Mauritius and the Republic of Seychelles, although this arrangement only extends to resources on and below the seabed, not the water above.

Monaco Explorations’ mission helped to build a comprehensive inventory of species present in the area, while providing a clearer picture of the bank’s ecosystem sensitivity, and improving our understanding of how the different ecosystems in this part of the Indian Ocean work.

These initial results will be followed by the full final report and scientific findings, due to be delivered to the French, Mauritian, and Seychelles governments in December 2025. The final report will be a valuable guide for policymakers as they look to strengthen the Saya de Malha Bank’s protected status and identify suitable sustainable management and protection measures under the BBNJ or High Seas Treaty. With the BBNJ having already earmarked the Saya de Malha Bank as a potential high seas area of interest qualifying for high protection, it could be one of the first sites to see the future treaty applied in practice.



## How the mission was publicised in 2023

1

### Communication and engagement campaign continued

- Promoting the **onboard schools programme: *Adopt a Float*** (middle schools): involving 7 classes in Mauritius, 1 in the Seychelles, and 1 in Réunion;
- Filming a **90-minute documentary about the mission** (production TV Monaco and Authentic Prodmade):
  - The film was shown on TV channel Arte and watched by an audience of **1.2 million viewers**
  - It will soon be shown on TV Monaco and sold to other broadcasters;
- Building on the DiDEM project, **a week-long bootcamp** on coral reef resilience in the western Indian Ocean is planned for June 2024. It will include round table debates and multidisciplinary workshops aimed mainly at university science students and blue economy innovators from the region;
- **Organising the “Regards croisés” exhibition** held at the Oceanographic Museum from March to June 2023, moving outside to the fences of the Saint-Martin Gardens from 28 June to 31 August 2023.

2

### Preliminary mission report published in September 2023

- Sent to coastal states through diplomatic channels;
- Published for all partners and the public on Monaco Explorations' official website.

3

### Ongoing work by the steering committee

- Monitoring the use of scientific data: initial results delivered at a special event during *Monaco Ocean Week 2023*;
- Coordinating scientific publications: special issue produced and offered to various regional and international scientific for publication in 2025.

## Corals brought from Aldabra to the Oceanographic Museum

During Monaco Explorations' Indian Ocean mission, a team from the World Coral Conservatory collected 58 coral colonies from an area south-west of the Seychelles around the Aldabra atoll, one of fifty marine sites on the UNESCO World Heritage List. In collaboration with the Seychelles Islands Foundation, seven dives were carried out to collect a number of tiny colonies (measuring around fifteen centimetres).

The aim was to take specimens of corals thought to be most at threat, but also those most resistant to climate change, along with endemic and easy-to-grow species. A tripartite research agreement was also signed between the Oceanographic Institute, the Monaco Scientific Centre, and the Seychelles Islands Foundation.

All of the colonies collected were electronically chipped and kept in special tanks for ten days aboard the S.A Agulhas II while they were taken to Mahé, on the Seychelles' main island. The chips act like bar codes, allowing scientists to monitor the colonies and observe how they develop over time.

On reaching Mahé, the mission team was joined by Olivier Brunel, Aquarium Manager at the Oceanographic Museum, and Dominique Barthélémy, Living Environment Conservator at Océanopolis, and the colonies were handed over to the Seychelles Fishing Authority, before being flown to Paris and on to four European partner aquariums: Nausicaa in Boulogne-sur-Mer, Océanopolis in Brest, Burgers Zoo in the Netherlands, and the Aquarium at the Oceanographic Museum of Monaco.

## FOCUS ON IMPACT

**58 live coral colonies** representing **21 species** were collected and moved to **four European aquariums** for conservation.



## ■ Charting a new course: the Mediterranean

After three years devoted to the polar regions, the Oceanographic Institute will be shifting focus to the Mediterranean Sea in 2025, for several years. The Institute's teams began making preparations for the new programme in 2023. It will involve a range of actions and initiatives designed to engage with the widest possible audience, raising awareness and working towards the 30x30 target aimed at protecting 30% of the planet's Ocean, lands, and freshwaters by 2030, through new protected areas and other local conservation measures in the Mediterranean.

### New permanent exhibition at the Oceanographic Museum: "The Prince and the Mediterranean"

As part of the prince Rainier III (1923-2023) centenary commemorations, the Oceanographic Museum officially opened its new permanent exhibition at a ceremony held attended by HSH Prince Albert II of Monaco and Princess Stéphanie on 5 December 2023. The Princess herself oversaw the exhibition's design and recorded the accompanying audio guide.

In the "Monaco and the Ocean" room on the museum's first floor, visitors can see a reconstruction of the interior of the prince's yacht Deo Juvante II, with four areas each exploring a different, personal side of the Head of State, famous for his passion for the sea and visionary initiatives. Paintings, archive photographs, speeches and other historic documents are combined with next generation technology (projections, video mapping, etc.) to create an immersive experience.

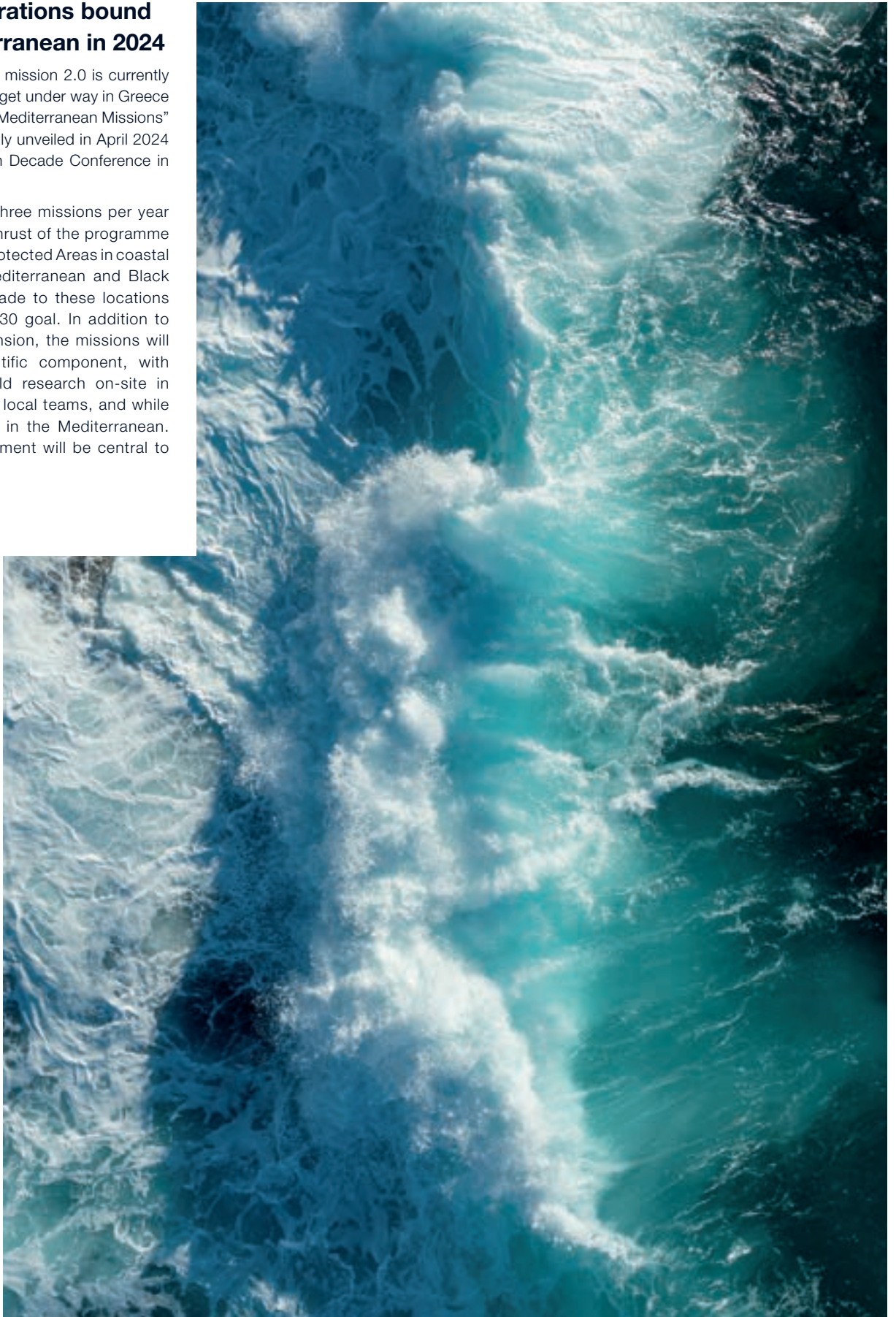
The exhibition is the Oceanographic Institute's tribute to the unbreakable bond between prince Rainier III and the sea, and the Mediterranean in particular. Following in the footsteps of his forebear prince Albert I, the famous navigator and explorer, Rainier III actively helped to forge the marine policy that remains so important to the Principality to this day. Under his leadership, a host of different initiatives were launched including the Ramoge Agreement to combat pollution, and the Pelagos Agreement creating a sanctuary for marine mammals in the Mediterranean.



## Monaco Explorations bound for the Mediterranean in 2024

“Monaco Explorations” mission 2.0 is currently in the pipeline, and will get under way in Greece in October 2024. The “Mediterranean Missions” programme was formally unveiled in April 2024 at the UN 2024 Ocean Decade Conference in Barcelona.

Consisting of two to three missions per year until 2030, the main thrust of the programme will focus on Marine Protected Areas in coastal states around the Mediterranean and Black Seas. Trips will be made to these locations in support of the 30x30 goal. In addition to their diplomatic dimension, the missions will also include a scientific component, with staff carrying out field research on-site in collaboration with the local teams, and while their vessel is at sea in the Mediterranean. Finally, public engagement will be central to the missions.



# WORKING FOR OCEAN BIODIVERSITY



From creating the World Coral Conservatory to supporting threatened species, the Oceanographic Institute's environmental policy translates into concrete initiatives combining science, grassroots actions, and awareness. In 2023, the Institute stepped up its partnerships to support Ocean biodiversity.

## ■ 46 African spurred tortoises arrive at Senegal's tortoise sanctuary

Beginning in 2022, the Oceanographic Institute of Monaco launched a project to reinforce the numbers of certain endangered species in the wild. One of those species is the African spurred tortoise (*Centrochelys sulcata*). Run in partnership with the African Chelonian Institute (ACI) and the non-profit Nature Tropicale Sénégal, the three-year programme aims to monitor and protect 46 juveniles born in Monaco, and also includes an awareness-raising component.

In December 2022, the tortoises were transferred from Monaco to the Tortoise Protection Centre in Senegal - specifically the Village des Tortues in Noflaye near Dakar, they spent the next year in quarantine, while preparations were made for them to be settled in a fenced-off area of the Koyli Alpha community nature reserve in the north-west of the country, in 2024. The tortoises will eventually be released to roam the reserve freely.

### **The importance of local community engagement**

A campaign was launched during the 2024 academic year to inform, educate, and engage with the local population, with a particular emphasis on schools. With strong support from the Oceanographic Institute, the initiative aims to raise awareness among pupils about this endangered species, which appears on the IUCN's Red List, helping to ensure its survival.

**Efforts by the Oceanographic Institute and its partners to reintroduce African spurred tortoises to Senegal are showing great promise.**



# ■ Monitoring long-snouted seahorses in Monegasque waters

After **seven juveniles were returned to the sea** in 2021, the programme shifted focus in 2023 to monitor long-snouted seahorses populations in the waters off Monaco. This latest phase of the study builds on the programme's initial objective of improving our knowledge of this species, classed as "near-threatened" by the International Union for Conservation of Nature (IUCN), so that solutions can be found to protect it.

Work to inventory and monitor the species in 2021 and 2022 focused on sites identified as "seahorse-friendly". In 2023, the Oceanographic Institute and its partner Biotope decided to continue studying the so-called historic sites, but this time with a community science-based approach. The professional component of the study concentrated on two sensitive sites, namely Monaco's two ports, Fontvieille and Port Hercule.

## A science campaign involving the local community

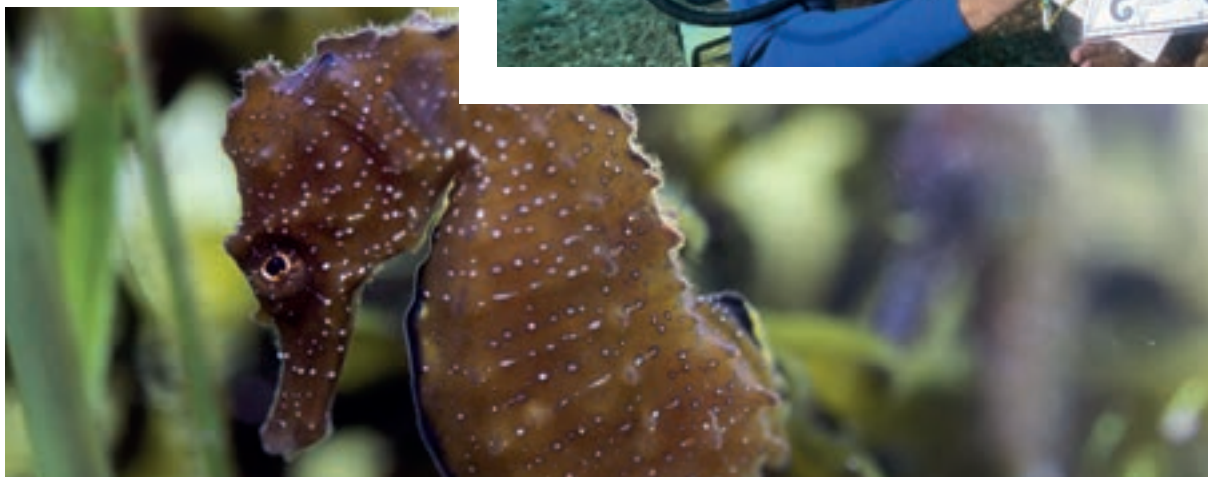
The historic sites campaign was undertaken in collaboration with divers from Club d'Exploration Sous-Marine de Monaco (C.E.S.M.M.). The initiative saw over **20 divers** make **two research dives** on 9 September 2023, exploring the Saint-Nicolas rocks and the waters below the Oceanographic Museum. Though the amateur divers showed great determination and are increasingly skilled at the task of inventorying seahorses, no individuals were spotted.

## ... And experts

In 2023, the professionals focused their efforts on Monaco's two ports, where biologists from the Oceanographic Museum and Biotope completed **four days of dives**. Altogether, they spent **over 40 hours** in the water looking for seahorses, in **eight separate locations**. While they saw no seahorses during their dives, the team was still able to accurately describe the different biotopes present in the port waters, confirming that some of them were ideal for seahorses. Their observations suggest that the creatures, experts at camouflage, could potentially be spotted when the next dives take place in the Principality's ports, in spring 2024.

## A targeted study of the Principality's port ecosystems

There were a number of reasons behind the decision to study Monaco's two ports, where human activities have a sizeable footprint. First, it is not unusual to find seahorses in these environments, as despite being largely man-made, they are generally well protected (with no fishing or diving, for example). In addition, ports are sheltered locations that often provide a suitable habitat for this vulnerable species, with seahorses able to find a safe refuge in and around the chains, lines, and anchors. The choice of site was also prompted by the Monegasque Government and its National Biodiversity Strategy, which calls for closer study of these specific ecosystems so that steps can be taken to nurture biodiversity.



## ■ The World Coral Conservatory took delivery of its first corals in 2022 - observations and outlook

The World Coral Conservatory, a Monegasque initiative run jointly by the Monaco Scientific Centre and the Oceanographic Institute to save the species most at risk from climate change, took delivery of the first coral colonies from the Aldabra atoll, in the Seychelles. Four European partner aquariums each received around fifteen colonies: Océanopolis and Nausicaa in France, the Oceanographic Museum of Monaco, and Burgers'Zoo in the Netherlands. The Aquarium teams at the Oceanographic Museum called on all their expertise to preserve the corals, ambassadors for the Ocean.

This first phase of the Conservatory project has proven a great success, as more than a year later, the vast majority of the colonies concerned - from 21 emblematic species from this particular region of the Indian Ocean - are thriving and have even grown significantly. Aquarium managers from the partner institutions meet regularly to discuss the techniques used to quarantine the corals, and ensure they are kept in optimum conditions.



The next phase for the World Coral Conservatory will involve growing the corals collected in its "Noah's Ark". Coral cuttings will be taken and encouraged to reproduce, a technique known as "fragging", before being sent to public aquariums.

"This first phase was a chance to confirm the feasibility of certain aspects of the project, such as the delicate handling operations involved. What's great about this project is that it relies on the skills of aquariums, who know how to handle and conserve corals. And that's vital, as the Coral Conservatory's goal is to save these colonies in case they should one day disappear from their natural environment."



**Olivier Brunel**  
Aquarium Manager  
at the Oceanographic Museum of Monaco

They will also be made available to scientists to study, enabling them to direct their research programmes towards supporting worldwide conservation and restoration efforts.

The Conservatory's ultimate goal is to save a thousand species of corals, nearly two-thirds of the species in existence. These live coral collections will be housed at a

network of public aquariums all over the world, including the Oceanographic Museum. The project is supported by the Véoïa Foundation.

## ■ Synergies with other stakeholders to raise public awareness: the new Posidonia interactive area



On 17 July 2023, the Oceanographic Institute sealed a partnership with the town of Antibes Juan-les-Pins, marking the start of a new collaboration aimed at raising public awareness about Ocean conservation issues. The agreement was signed at the official opening of a new interactive space called "Posidonia - Sea & Coast" on the Cap d'Antibes peninsula, attended by HSH Prince Albert II of Monaco and political figures from various levels of government, both regional and national. Installed on an iconic site known as the "Batterie du Graillon", the immersive exhibition space showcases the most common coastal habitats and species found in the Mediterranean at depths of between 30 and 50 metres.

The partnership is an opportunity for the Institute to provide the benefit of its expertise across the Côte d'Azur, on everything from aquarium management to awareness-raising, and gives the town of Antibes access to the in-depth knowledge and know-how developed by the Institute over more than a century. It also ties in seamlessly with the Institute's historic mission, to reach out to a wider audience and encourage people beyond Monaco to "know, cherish, and protect the Ocean". In broader terms, the arrangement will enable the partners to synergise their educational resources, while sharing technical knowledge and even commercial strategies, strengthening the friendship between France and Monaco.

# IMPROVING ENVIRONMENTAL IMPACTS



Always keen to minimise its energy and environmental footprint, and in some areas even generating a positive environmental impact, the Oceanographic Institute is constantly improving its buildings, facilities, and operations. From aquarium management to the energy transition, every decision we make and every action we take is focused on caring for the Ocean.



# An ethical Aquarium



Throughout 2023, the Oceanographic Institute and its partners worked on projects aimed at improving our knowledge of the aquatic world, how to protect it, and how to manage the challenges posed by sea water in aquarium environments, delivering results that were useful for the Aquarium's scientific team.



## What's new at the Aquarium?

### New residents

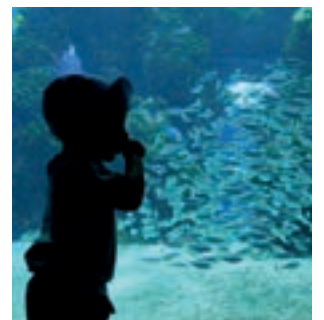
> In 2023, four juvenile nautilus and seven giant clams from a study and breeding programme led by the Aquarium des Lagons in Nouméa, New Caledonia, were brought to the Museum.

> The team from the Aquarium in Nouméa regularly breeds nautilus, endemic to New Caledonia, to develop our knowledge of the species and its biology. Nautilus live in deep waters, making them very difficult to study in their natural environment. By breeding them, scientists are able to observe their reproductive cycle and see their roe hatch, embryos develop, and so on, while also learning more about the relationship between their weight and age, for a better understanding of the wild nautilus population. The arrival of these new residents in the Principality is an example of the breeding programmes and exchanges adopted by public aquariums in an effort to limit impacts on the natural environment. Members of the public can now also learn about these ancient creatures and their unusual lives when they visit the Museum.



### Sardine reproduction

> In another example of its policy of limiting impacts on natural environments, the Oceanographic Institute brought in a breeding stock of sardines, obtained from eggs laid by wild fish collected by the Marineland aquarium. The sardines were then captive-bred in the Museum's aquariums, producing 700 juveniles which were then placed in the main tank. The aim is to gather more data on the species, whose reproductive cycles (particularly their roe) and various stages of metamorphosis are very difficult to observe in the wild, while giving visitors the chance to see a school (technically known as a "family") of sardines in the Aquarium.



### A successful transfer

> Born at Lyon Aquarium two and a half years ago as part of a breeding programme designed to limit the need to capture wild specimens, a young female zebra shark arrived at the Museum's Aquarium soon after. The species is classed as "endangered" on the IUCN's Red List. In December 2023, the animal was placed in the main aquarium along with the nurse shark, giant guitarfish, and blacktip reef sharks. The animals are getting along very well, in what is a fine example of sustainable wildlife management and inter-aquarium collaboration.

# ■ Our close partnership with Daxtachim goes from strength to strength

The Monaco-based scientific consulting company, specialising in chemistry and biotechnology applied to the environment, is heading up several projects at the Oceanographic Museum, all aimed at improving the living conditions of the fish in the aquariums.

## Two solutions to improve aquarium conditions

### ➤ Real-time monitoring of bacteria levels in the water

In 2022, a pioneering new system was introduced in the Oceanographic Museum's Aquarium. Called BactoSense, it is designed by bNovate, a start-up from the École Polytechnique Fédérale de Lausanne, and consists of a portable flow cytometer that can be used to monitor bacteria counts in water. In partnership with Monegasque firm Daxtachim and bNovate, the Aquarium teams at the Oceanographic Institute have begun research into the pathogens or mechanisms responsible for certain fish diseases, particular those affecting the eyes.

A veterinary course was organised in 2023 to examine previous cases, while the water entering the aquarium tanks was analysed in several places. In addition to optimising water treatment and remedial treatments, the knowledge gained will be shared with colleagues in France and other countries.

### ➤ Development and application of biocompatible patches

Research is currently being carried out to optimise the patches developed by the Oceanographic Museum, to make products that can be used to disinfect and promote rapid healing of lesions in fish and sharks.

Both of the projects concerned are supported by our partners, Daxtachim and bNovate. The Association of Friends of the Museum and Sanso Investment Solutions are also helping to fund this research.





# The Maison de l'Océan and its energy transition

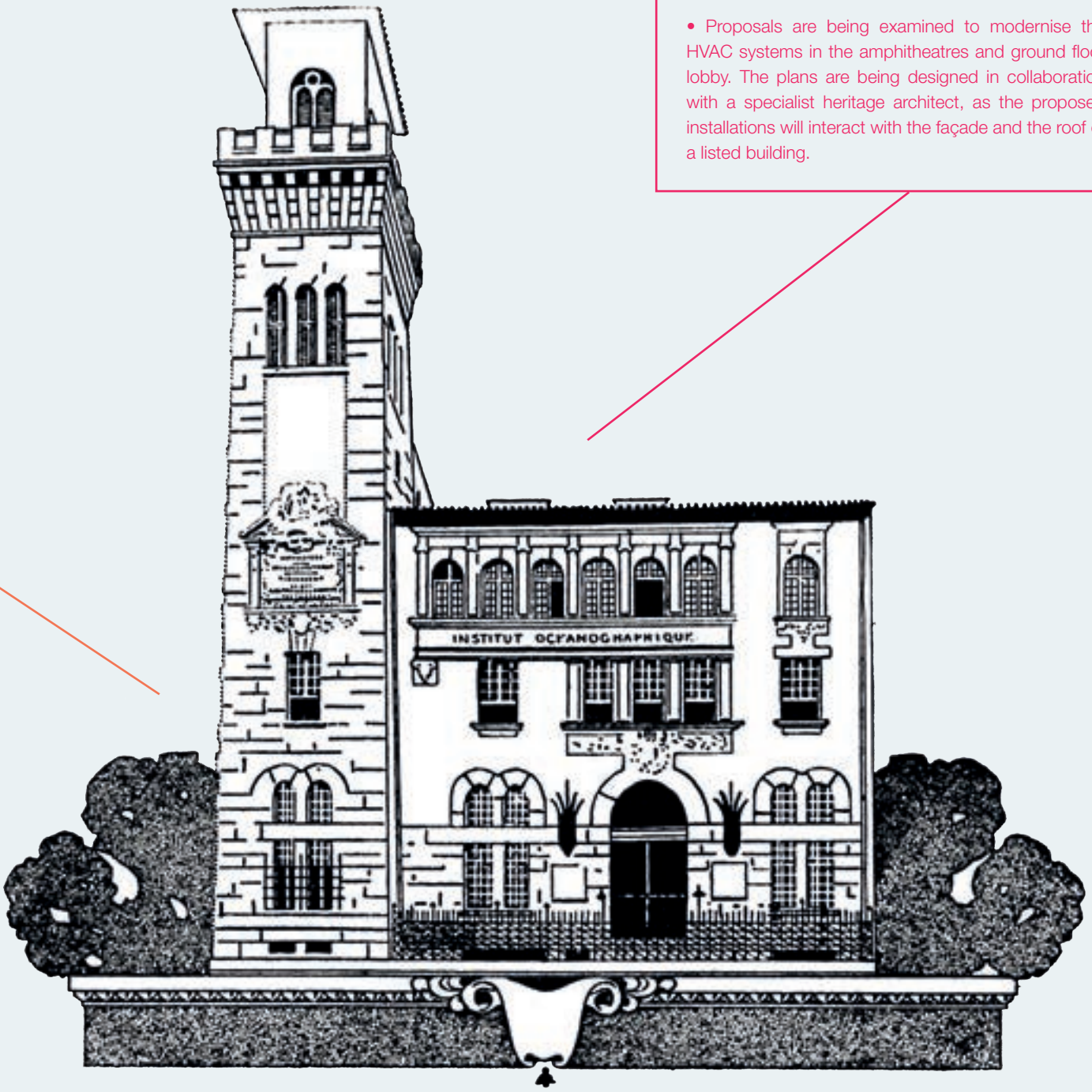
The task of caring for and showcasing this historic Parisian building - not to mention improving its energy and thermal performance - raises some big challenges. In line with the institution's energy efficiency strategy, a number of solutions have been explored, each designed to help the Maison de l'Océan successfully navigate the energy transition.

## ➤ Heritage and enhanced thermal performance

- Proposals to insulate the roof of the grand amphitheatre and its glass ceiling in 2025-2026 are under consideration.
- Feasibility studies are being carried out for a programme to renovate the building's historic exterior wood features, door and window frames, and other ornaments over a period of several years. The programme, which could start in 2025, is being developed with a specialist heritage architect and will be discussed and finalised in liaison with the Regional Department of Cultural Affairs (DRAC) and Architectes des Bâtiments de France (ABF).

## ➤ Accessibility and inclusion

- The public toilets below the grand amphitheatre are being re-purposed and renovated to meet standards for Persons with Reduced Mobility (PRM).



➤ **Improved comfort for guests, staff, and tenants**

- The steam heating plant will be modernised and upgraded to comply with applicable standards.
- Proposals are being examined to modernise the HVAC systems in the amphitheatres and ground floor lobby. The plans are being designed in collaboration with a specialist heritage architect, as the proposed installations will interact with the façade and the roof of a listed building.

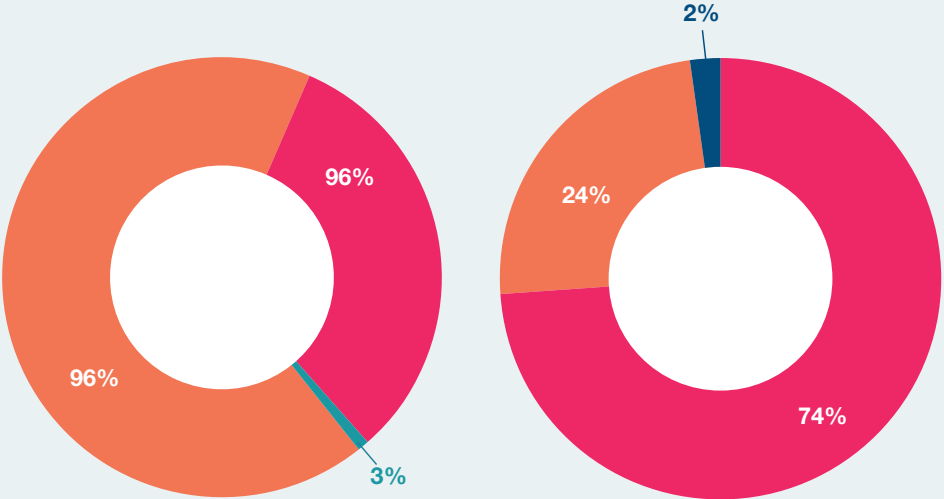
# Optimising energy use at the Oceanographic Museum

The Oceanographic Institute and Museum are stepping up their commitment to the energy transition, taking concrete measures in a variety of areas to optimise their use of energy and primary resources.

## Measuring our environmental footprint and cutting our greenhouse gas emissions

### A new emissions assessment

Building on the work done since 2021, the Oceanographic Museum has calculated the greenhouse gas emissions generated by its activities in 2023, using the dedicated tool created by the Principality's Mission for Energy Transition.



	Emissions (tCO <sub>2</sub> eq)*	%
Mobility	156.95	32
Waste	5.75	1
Energy	332.12	67
<b>Total</b>	<b>494.82</b>	<b>100</b>

Breakdown of all greenhouse gas emissions generated over one year by your company's activity

**TOTAL**

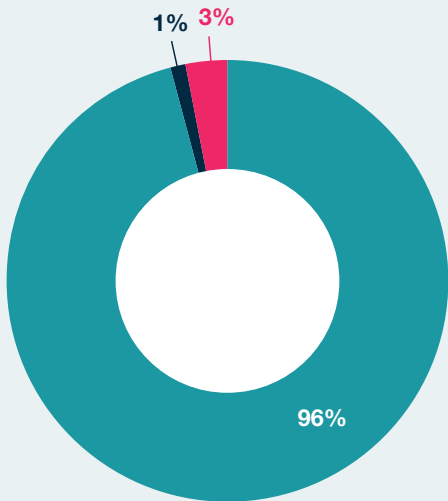
	Emissions (tCO <sub>2</sub> eq)*	%
Daily commute	115.55	74
Staff transport	38.17	24
Staff vehicles	3.24	2
<b>Total</b>	<b>156.95</b>	<b>100</b>

Breakdown of annual greenhouse gas emissions from mobility

**MOBILITY**

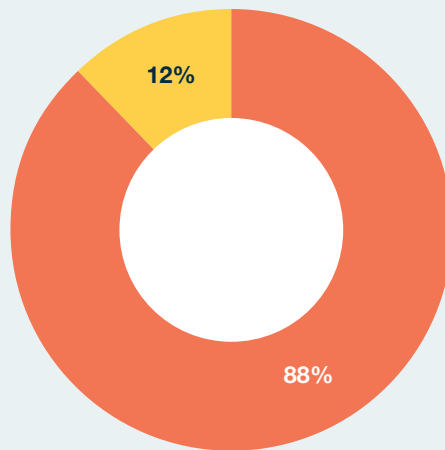
Results of the GHG assessment for 2023 (Figures up to date as of 2 January 2024)

(\*) tonnes of CO<sub>2</sub> equivalent



**Breakdown of annual greenhouse gas emissions from waste management and treatment**

**WASTE**



**Breakdown of annual greenhouse gas emissions from energy consumption**

**ENERGY**

**Based on these annual findings and feedback from staff, action plans have been adopted in a number of areas:**

- Measures to optimise the use of energy and natural resources led to a 7% reduction in electricity use in 2023.
- Continuous improvements in mobility and fleet management saw the Institute adopt an all-electric fleet of service vehicles in 2023.
- The 3Rs waste management strategy (Reduce, Recycle, Re-use) was adopted, allowing the waste collection point to be monitored constantly. As a result, the Oceanographic Museum was given a clean waste sorting bill of health by Monaco's sanitation company SMA in 2023.

## Optimising building energy use

### > Door and window renovations

The Oceanographic Museum has forged ahead with work begun in 2021 to renovate the historic building's exterior doors and windows. The programme, which will see 185 m<sup>2</sup> of existing door and window frames and other wooden features gradually replaced over five years, marked a new milestone in 2023 with 95% of the woodwork replaced. High quality solid oak was chosen for its acoustic and thermal performance.

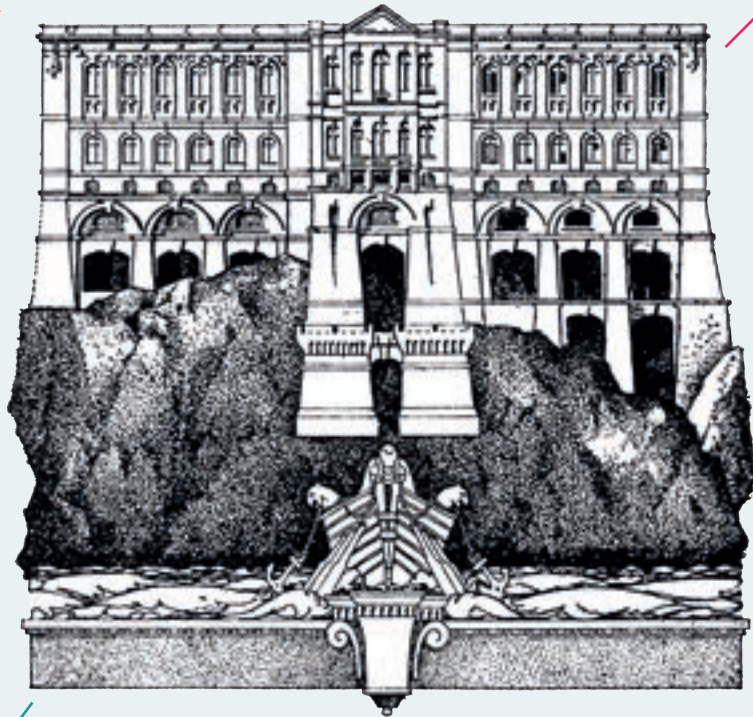
The project has been a success, meeting the requirements laid down by the Monegasque Government's Mission for Energy Transition, while preserving the building's original design and historic architecture.

### > The ground-breaking benefits of marine thermal energy

Based on a masterplan put together in 2021, a series of operations were planned to meet two objectives:

- End the use of fuel-oil as a source of heating energy in compliance with regulations.
- Limit the amount of electricity used for air-conditioning.

Using a sea water exchanger installed at the foot of the museum, the marine thermal energy system optimises both heating and air-conditioning inside the museum.



### > Fresh water

The Oceanographic Institute successfully **reduced the amount of fresh water it uses by 10%** from 7,721 m<sup>3</sup> in 2022 down to a total of 6,942 m<sup>3</sup> in 2023.

The concerted efforts made by everyone at the Institute over the last three years are bearing fruit, thanks to more careful management of our facilities and the way we use water, and the installation of more water-efficient equipment.

These efforts have not translated into financial savings, as sharp rises in water rates have more or less wiped out any reductions in consumption, and annual bills remain unchanged. They have, though, enabled the Institute to limit its overheads.

### > Electricity

The Institute used a total of 3,363,352 kWh of electricity in 2023, down from 3,643,140 kWh in 2022, a substantial reduction of **-7,6%**, equivalent to **30 days of operations**.



## Promoting softer, more sustainable mobility at our organisation

Car-sharing, cycling, electric vehicles... The Oceanographic Institute continues to encourage its staff to opt for green mobility solutions, the hallmark of a healthy working environment.

### Car-sharing increasingly popular with Museum staff

There was a sharp rise in the number of Museum staff car-sharing in 2023, with 41% regularly using the car-sharing app "Klaxit" for their daily commute. This has a whole host of benefits, for:

- > **the planet:** over 2.6 tonnes of avoided CO<sub>2</sub> emissions;
- > **employees' budgets:** 2,057 euros paid to drivers to help cover fuel costs;
- > **team bonding:** 500 hours spent by staff in conversation on their 1,000 shared journeys.

### Cycling encouraged

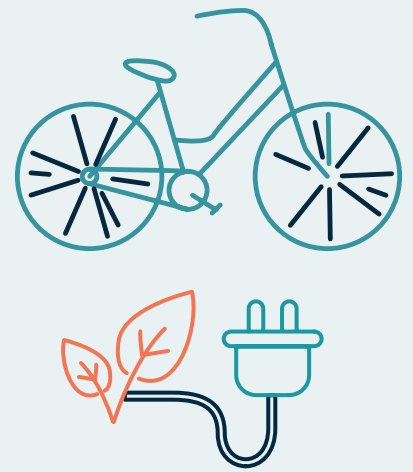
In 2023, the Museum more than doubled the number of subscriptions to the "Monabike" public bike sharing scheme, from 10 to 25. Staff are free to use the passes for their daily or weekly journeys.

The initiative, which promotes both green mobility and workplace well-being, proved a great success with staff making 2,153 journeys by bicycle over the year.

### An all-electric fleet of service vehicles

Continuing the strategy adopted in 2021 to phase out the oldest and most polluting service vehicles, the Oceanographic Institute completely overhauled its fleet in 2023 and now uses only EVs. The three old diesel vehicles have been replaced.

The move will reduce both fuel and maintenance costs.



## Sharing our values with everyone

### Installations promoting waste collection and recycling

Ten "TchaoMégot" ashtrays have been installed in strategic locations (concourse and terraces). Designed to encourage users to dispose of their cigarette butts appropriately, the ashtrays collected some 32,000 butts in the space of six months. Better yet, the butts are cleaned up using an innovative process, then recycled to make insulation for the textile and constructions industries.

### An environmentally responsible treasure hunt

From 19 to 25 November 2023, the staff of the Oceanographic Museum took part in European Week for Waste Reduction 2023 (EWWR), on the theme of "packaging". A life-sized, eco-treasure hunt through the city was organised, called "Appel d'R" ("Breath of Fresh Air"), with the Oceanographic Museum one of the locations.

The contest saw five teams of students from the Principality race to solve riddles on the "5Rs" (Reduce, Re-use, Recycle, Repair, Return to the Earth) in various iconic locations around the Principality, echoing the commitment of prince Rainier III in this, his centenary year.



A large, jagged iceberg floats in the dark blue ocean. The sky is a pale, hazy blue with a bright sun in the upper right corner, creating a lens flare. The iceberg's surface is uneven and textured, with some parts appearing white and others a deep blue. The water around the iceberg is dark and choppy, with some light reflecting off the surface.

# THE FOUNDATION

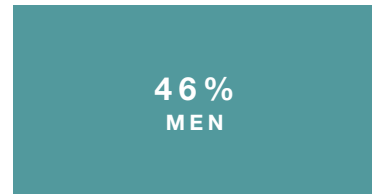
# ■ The Oceanographic Institute's staff

The commitment and dedication of our staff are the rock upon which the Oceanographic Institute is built. Our employees have been with us **for twelve years on average**, reflecting their deep attachment to the values of the Prince Albert I of Monaco Foundation.

Under its policy to combat social inequalities, the Oceanographic Institute is careful to ensure that managerial roles are shared evenly between men and women, in line with **gender parity criteria**.

In response to demographic challenges and the need to attract new talents, the Institute also embarked on a **recruitment drive**, taking on around fifty new staff in 2023 (including 30 on seasonal and temporary contracts), whilst maintaining its commitment to gender equality.

This proactive approach will ensure our hundred-year-old institution has the human resources needed to **continue its historic missions**, while **adapting to meet the challenges of tomorrow**.



## Our two sites

3,800 m<sup>2</sup> of buildings with **nine spaces** available for private use

### IN 2023

**Seven tenants for Ocean conservation (up from five in 2022), all major players in environmental and Ocean protection:**

- The Prince Albert II of Monaco Foundation (FPA2);
- The Foundation for Biodiversity Research (FRB);
- The Ocean & Climate Platform (POC);
- The Mediterranean Science Commission (CIESM);
- The Island Research Centre and Environmental Observatory (CRIOBE);
- The International Panel for Ocean Sustainability (IPOS);
- The French organising Committee of the UN Ocean Conference (UNOC) 2025.

### The Maison de l'Océan in Paris

An historic monument dating back over a century, the Maison de l'Océan is today a nerve centre of Ocean and environmental conservation in Paris. The building in the heart of the city's Latin Quarter houses the Foundation's headquarters, along with a number of other leading environmental and Ocean protection organisations.

The Maison de l'Océan regularly hosts professional events, ranging from business seminars and awards ceremonies, to online events, filming, press conferences, scientific symposiums, and public-facing events on key environmental themes, such as climate change, sustainable development, the circular and blue economies, biodiversity, and the energy transition.

The number of private events held at the Maison de l'Océan **increased significantly (+35%) to 155**, and included business events, awards and graduation ceremonies, international summits, the Sorbonne University's "Inter-Âges" classes, film shoots (Académie des César, DIOR Haute Couture Show), and major public events like the Candlelight concerts, and La Grande Tribune, a debate forum involving students from Paris' top universities.

#### Five events in particular stood out in 2023:

- The first ever EU Algae Awareness Summit;
- The "Paris des Récifs" symposium on coral reefs;
- Mines Paris - PSL university and its TTI.5 (The Transition Institute 1.5) Forum;
- The UN Global Compact workshop; "Seaweed as a Sustainable and Biodegradable Alternative to Plastic Packaging";
- The CRIOBE conference on Marine Protected Areas.



12,000 m<sup>2</sup> of buildings

2,500 m<sup>2</sup> of exhibition space

600 m<sup>2</sup> of aquariums

450 m<sup>2</sup> rescue and treatment unit

550 m<sup>2</sup> dedicated to sea turtles

## IN 2023

652,000 visitors, almost as many as in 2019 (+27,952 visitors, a 4.47% increase on 2022).

We are back to our pre-Covid numbers!

## The Oceanographic Museum of Monaco

The Oceanographic Museum occupies a central place in the history of modern oceanography. Founded by prince Albert I in 1910, the imposing building is set into the very cliffside of the Rock of Monaco itself, towering above the Mediterranean Sea. In addition to its magnificent architecture, the Museum houses vast exhibition spaces and conference rooms devoted to the Ocean, priceless collections of historical treasures and works of art, and of course the aquarium, with around sixty tanks containing thousands of marine species on public display.

The Oceanographic Museum regularly hosts professional events, ranging from business seminars and awards ceremonies, to online events, filming, press conferences, scientific symposiums, and public-facing events on key environmental themes, such as climate change, sustainable development, the circular and blue economies, biodiversity, and the energy transition.

It also hosted some 90 private events in 2023, an increase of 7.7% compared with 2022.

### Five events in particular stood out in 2023:

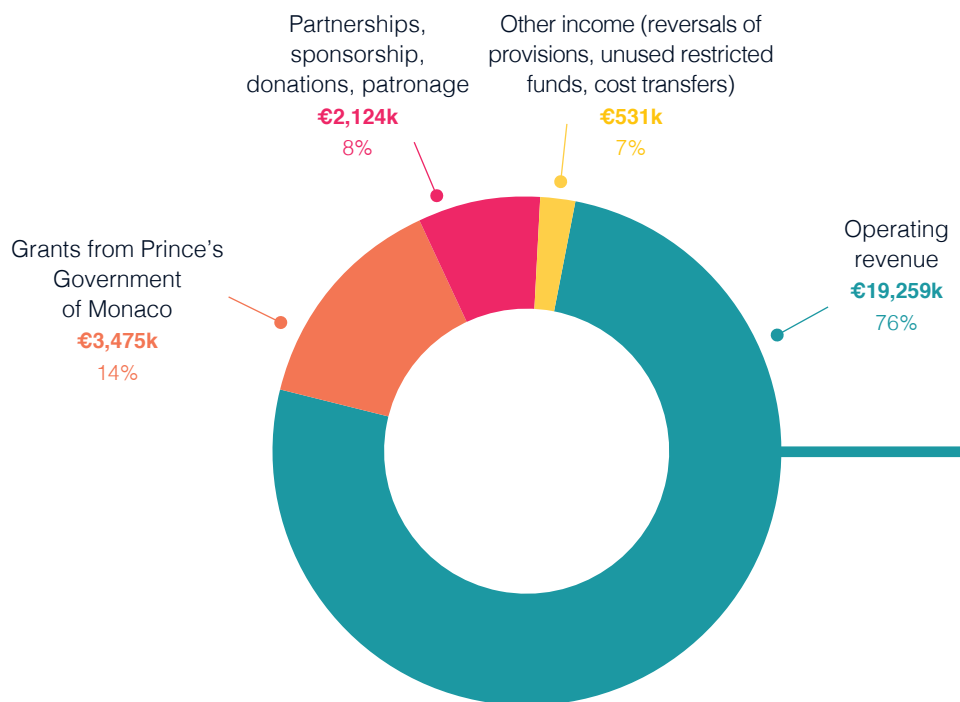
- > A total of 13 Monaco Ocean Week events, including the 14<sup>th</sup> Monaco Blue Initiative.
- > The UArctic Rectors' Meeting;
- > Events organised by the Mediterranean Foundation for Strategic Studies (FMES);
- > "Map the Gaps Symposium" - 120th anniversary of the General Bathymetric Chart of the Oceans (GEBCO);
- > Villefranche-sur-Mer Oceanography Lab seminar.



## ■ Our resources

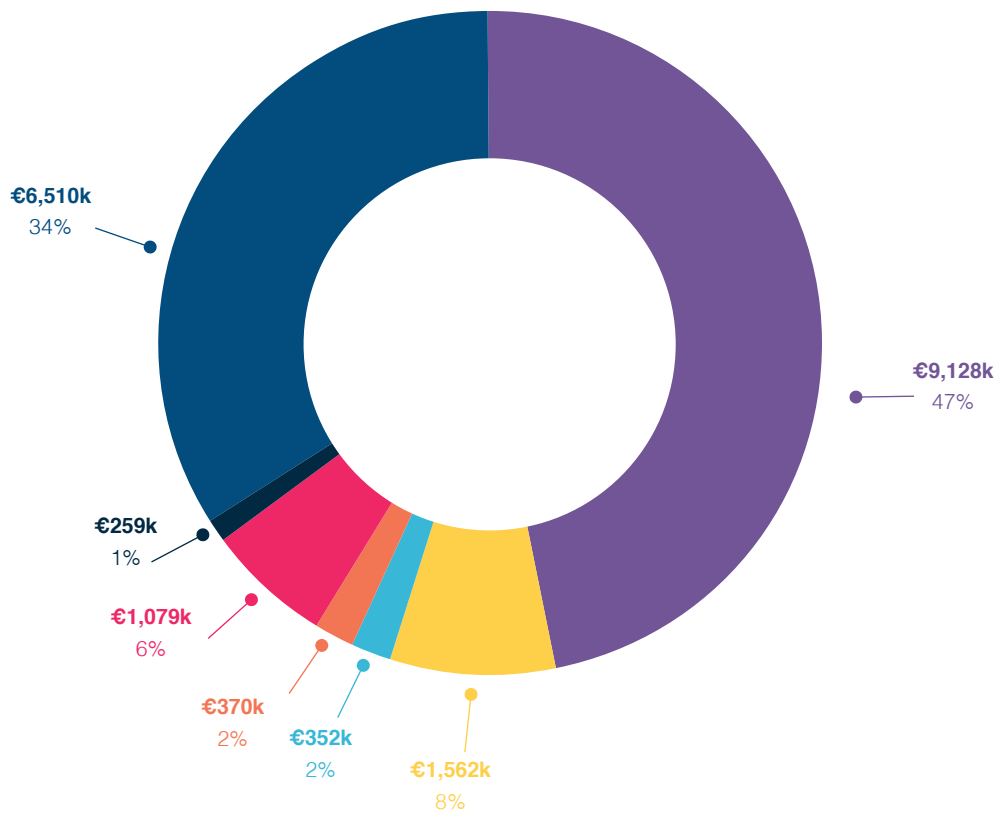
### Breakdown of operating income in 2023

**TOTAL INCOME IN 2023: €25,389k**



- Operating revenue
- Grants from Prince's Government Monaco
- Partnerships, sponsorship, donations, patronage
- Other income (reversals of provisions, unused restricted funds, cost transfers)

## OPERATING REVENUE IN 2022: €19,259k

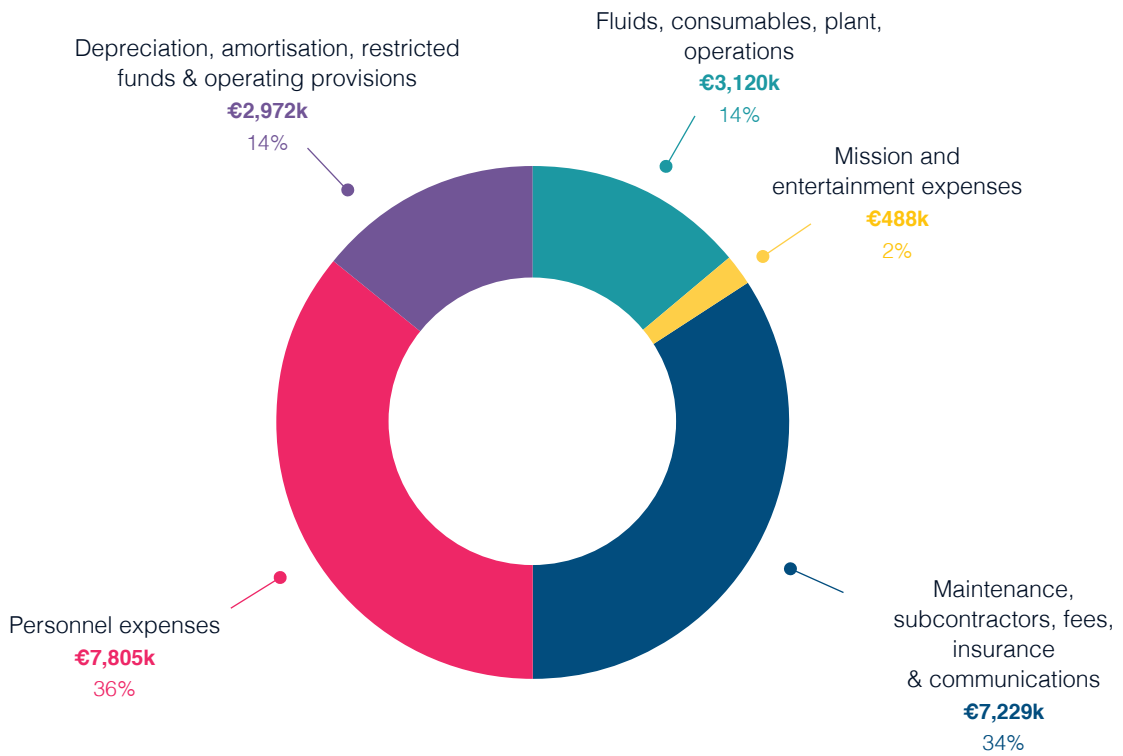


- Oceanographic Museum Monaco - ticket sales
- Oceanographic Museum Monaco - gift shop sales
- Oceanographic Museum Monaco - educational activities
- Oceanographic Museum Monaco - private hire
- Maison de l'Océan Paris - private hire
- Maison de l'Océan Paris - partner hosting
- Sundry income (journey into commitment, royalties, re invoicing)

# Our expenditure

## Breakdown of operating costs in 2023

TOTAL OPERATING COSTS IN 2022: €21,614k



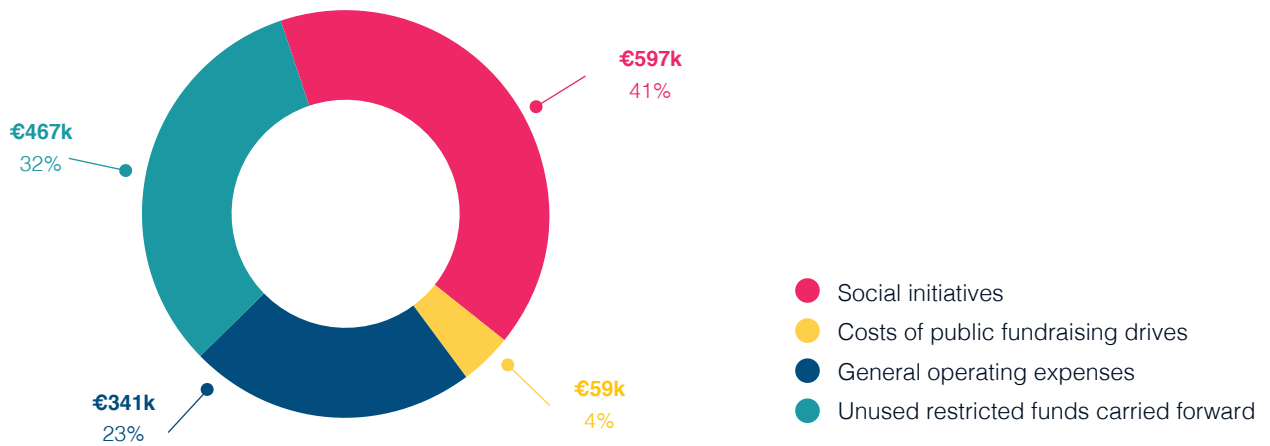
- Fluids, consumables, plant, operations
- Mission and entertainment expenses
- Maintenance, subcontractors, fees, insurance & communications
- Personnel expenses
- Depreciation, amortisation, restricted funds & operating provisions



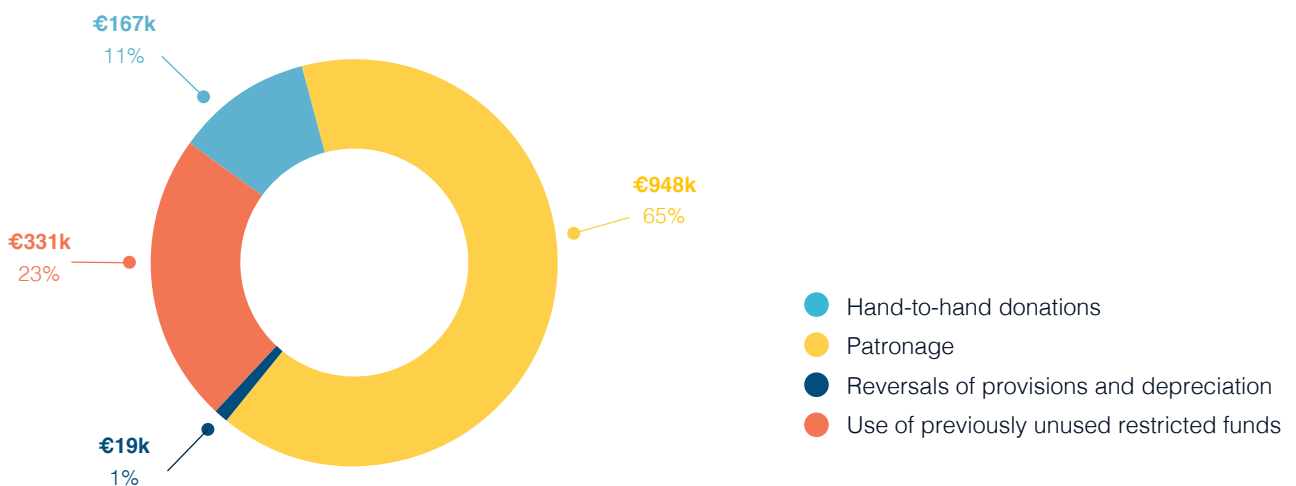
# Public fundraising

## Expenditure account for 2023

### HOW PUBLIC DONATIONS WERE USED IN 2023: €1,465k



### PUBLIC DONATIONS RECEIVED IN 2023: €1,465k







# ■ Governance

Honorary President of the Oceanographic Institute: HSH Prince Albert II of Monaco

## The Board of Directors

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### Chair of the Board:

**Prof. Philippe Taquet**

Member of the Académie des Sciences and Emeritus Professor at the French National Museum of Natural History

### Vice-Chair:

**Ms Marie-Pierre Gramaglia**

Former Minister of Public Works, the Environment and Urban Development, Prince's Government of Monaco

### Secretary & Treasurer:

**Mr Henri Peretti**

Honorary Inspector-General

### Members:

**Ms Maria Damanaki**

Chief Advisor, Paradise International Foundation, SYSTEMIQ Ltd., Rockefeller Brothers Foundation

**Dr Jean-Claude Duplessy**

Emeritus Director of Research, CNRS Member of the Académie des Sciences

**H.E. Bernard Fautrier**

Minister Plenipotentiary, Special Advisor on Environmental Issues to HSH Prince Albert II of Monaco

**Ms Julia Marton-Lefèvre**

Member of the Steering Committee, Yale University School of Forestry and Environmental Studies, United States

**Dr Valérie Masson-Delmotte**

Director of Research, French Alternative Energies and Atomic Energy Commission

**Mr Anthony Torriani**

Founder and CEO of a Monaco-based independent asset management firm

**Mr Dominique Vian**

Honorary Prefect, French Ministry of the Interior, Overseas Territories, Communities, and Immigration

### Honorary Vice-Chair:

**Mr Pierre Bordry**

Former President of the French Anti-Doping Agency

## The Scientific Committee

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The Oceanographic Institute has always had a special relationship with the scientific community. The Board of Directors is able to rely on the guidance of a Scientific Council of leading experts covering almost every field of oceanography. The Council's recommendations help the Board select the recipients of the various awards and medals bestowed by the Oceanographic Institute every year.

### President:

#### **Dr Maria Betti**

Former Director of Nuclear Safety and Security at the EU Commission's Joint Research Centre, Germany

### Vice-President:

#### **Dr Shubha Sathyendranath**

Merit Scientist at Plymouth Marine Laboratory, United Kingdom

### Secretary:

#### **Dr Valérie Davenet**

Director, Department of the Environment, Principality of Monaco

### Members:

#### **Ms Sandra Bessudo**

Founder and Director of the Fundación Malpelo y otros Ecosistemas Marinos, Bogota, Colombia

#### **Mr François Houllier**

Chief Executive Officer of Ifremer

#### **Ms Hélène Lafont-Couturier**

Heritage Conservator, Director of the Musée des Confluences, Lyon

#### **Dr Eva Maire**

Research Fellow at Lancaster Environment Centre, United Kingdom

#### **Mr Cyrille Poirier Coutansais**

Director of Research at the Centre d'études stratégiques de la Marine

#### **Prof. Patrick Rampal**

President of the Centre Scientifique de Monaco

#### **Dr Yunne-Jai Shin**

Director of Research at IRD and Honorary Research Associate at the University of Cape Town, South Africa

## The Executive Committee

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The Executive Committee oversees the Oceanographic Institute's day to day operations, in line with the general policy and strategy determined by the Board of Directors.

#### **Mr Robert Calcagno**

Chief Executive Officer

#### **Mr Cyril Gomez**

Deputy CEO

#### **Mr Olivier Cléné**

Technical Director

#### **Mr Julien Guinhut**

Director of Fundraising & Partnerships

#### **Mr Clément Lavigne**

Director of Ocean Policy

#### **Mr Jérémy Mendel**

Secretary-General

#### **Mr Xavier Prache**

Director of Monaco Explorations

#### **Mr Bernard Reilhac**

Director of Development

#### **Ms Émilie Vitale**

Director of Communications



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## A century of history

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**1885** Prince Albert I embarks on his first scientific expeditions

**1906** The Oceanographic Institute and the Prince Albert I of Monaco Foundation are founded

**1910** The Oceanographic Museum of Monaco is officially opened on 29 March

**1911** The Oceanographic Institute of Paris is officially opened on 23 January. It is later renamed the Maison de l'Océan, in 2011

**1921** Prince Albert I gives his Speech on the Ocean in Washington

**1957** At the request of prince Rainier III, Jacques-Yves Cousteau becomes the Director of the Oceanographic Museum. The Captain would go on to hold the position for 31 years, teaching the world about the beauty and fragility of the marine environment from his base in the Principality

**1970** The Ramoge Commission is created, on the wishes of prince Rainier III. Signed in 1976, the agreement between Monaco, France, and Italy aims to protect the Mediterranean Sea

**1976** A Marine Protected Area is created in the Larvotto area of Monaco

**1996** The Accobams Agreement is signed, to mitigate threats to cetaceans in the Black Sea, Mediterranean, and contiguous Atlantic Area

**2005** Following His accession to the throne, HSH Prince Albert II devotes His influence to the cause of environmental protection

**2010** Monaco Explorations celebrates its centenary. The Monaco Blue Initiative is founded

**2010** Les Explorations de Monaco is founded on the wishes of HSH Prince Albert II

**2018** The permanent exhibition "Monaco and the Ocean" opens

**2019** The Oceanographic Museum expands with the opening of the Monaco Centre for Treatment of Marine Species (CMSEM)

**2020** The Oceanographic Institute launches its long-term "Coral" programme

**2020** The Oceanographic Museum opens its new "Immersion" attraction, using technology to further the cause of ocean conservation

**2022** The Oceanographic Institute launches its long-term "Polar Mission" programme



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