
A SPACE–TIME IMMERSION
MEDITERRANEAN
2050
THE EXHIBITION
PRESS KIT
OCEANO
INSTITUT OCÉANOGRAPHIQUE
MONACO

"In the past,
the Mediterranean was a symbol of the
progress of civilisation.
Today it is a symbol of the planet's
dysfunctions and tensions.
Tomorrow it must be the symbol
of new solutions."

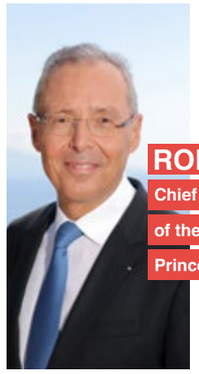
HSH Prince Albert II of Monaco
Speech delivered at COP27
Egypt, 2022

CONTENTS

"The Oceanographic Institute has chosen to be bold enough to tread a new path – that of utopia. This is what we hope to achieve with 'Mediterranean 2050' initiative: to open the doors wide to a world of possibilities, to build a new collective narrative, to allow ourselves to challenge what is said to be unattainable."

Long-finned pilot whale

© Greg Lecoeur



ROBERT CALCAGNO
Chief Executive Officer
of the Oceanographic Institute,
Prince Albert I of Monaco Foundation

FOREWORD

For over a century, Monaco and the Mediterranean have shared an inseparable history. A history that began with prince Albert I when he created the Oceanographic Institute at the turn of the 20th century and laid the foundation stone on the Rock of Monaco for the Oceanographic Museum, an 85-m-high sentinel overlooking the Mediterranean. The mission continued with prince Rainier III, a fervent defender of the Ocean, and continues today with HSH Prince Albert II, who resolutely pursues this commitment. A commitment driven by science and a desire to take action, leading us to ask a vital question today: what if we changed our vision of the future of the Mediterranean?

This sea, at the crossroads of past and present civilisations, is a vulnerable treasure. While it represents just 1% of the world's Ocean, it hosts exceptional biodiversity – almost twice that of the Great Barrier Reef. But it is in danger. It faces the cumulative and growing pressures of global warming, pollution, overexploitation of resources, maritime traffic and mass tourism. Forecasts for 2050 suggest that more than half a billion people will live in the countries that border it, the majority in coastal areas. To meet these challenges, the Oceanographic Institute has chosen not only to act, but to dare to dream.

To be bold enough to tread a new path – that of utopia. To be guided by what the scientist and humanist Théodore Monod summed up in a few words: "*Utopia is simply what has not yet been tried.*" This is what we hope to achieve with the "Mediterranean 2050" initiative: to open the doors wide to a world of possibilities, to build a new collective narrative, to allow ourselves to challenge what is said to be unattainable.

Refusing the 'inevitable', as Jacques Cousteau so resoundingly showed the way. When the 1989 Wellington Convention authorised mining in Antarctica, he joined forces with several NGOs to launch a vast international campaign against it. An effort that led to the agreement in 1991 of the Madrid Protocol, enshrining the protection of the White Continent.

In the tradition of this visionary who directed Monaco's Oceanographic Museum for 30 years, we too want to claim a share of utopia for the Mediterranean. To dream, but with a concrete ambition: the sustainable management of 100% of the Mediterranean. This is the vision behind 'Mediterranean 2050', a vision that seeks to reconcile human activities with the conservation of ecosystems.

Dare to imagine the Mediterranean in 2050: a sea where fishing is carried out without destroying the seabed, where whales swim without the risk of collision, where maritime transport is regulated to limit pollution and disturbance, where Marine Protected Areas (MPAs) have truly effective protection and are interconnected in a coherent network. Achieving the sustainable management of a sea requires more than piecemeal, fragmented or, worse, poorly defined solutions; more than measures that accumulate without taking into account or informing each other. The Mediterranean is a whole. Its sustainable management demands a systemic, coordinated approach. So let's dare to dream bigger. To envision a world where every concerned party agrees to adjust their economic and political objectives to optimise the system as a whole in order to ensure sustainable benefits for all in the long term. Let's dare to imagine the countries that border the Mediterranean united around this shared goal.

With an unswerving focus on the "30x30" objective of protecting 30% of the world's land and oceans by 2030, adopted at the UN Biodiversity Conference (COP15), the Oceanographic Institute is launching a new multiyear programme dedicated to the Mediterranean. To guide our actions, we have brought on board scientific, political and outreach experts from across the region in our Mediterranean Programme Steering Committee (COMed). With the Foundation for Biodiversity Research (FRB), we are assessing the current status of Marine Protected Areas (MPAs) and Other Effective Area-based Conservation Measures (OECMs) in the Mediterranean basin. MPAs will also be at the core of the "Missions Méditerranée" led by Monaco Explorations in collaboration with regional and international partners involved in the conservation and sustainable management of the Mediterranean environment.

In parallel, the Oceanographic Institute is planning initiatives to inspire the public. These include the exhibition "MEDITERRANEAN 2050", taking visitors on an odyssey through space and time, Immer(sea)ve virtual reality experiences, and a national awareness-raising campaign on the theme of "*What are we waiting for to be happy? Marine Protected Areas!*" Finally, the Mediterranean section of the Oceanographic Museum's aquarium is being revamped to offer state-of-the-art infrastructure. The museum is also committed to being a key player in the Aquariums and Museums of the Mediterranean Initiative to achieve Target 30x30 (IAMM 30x30), a network designed to raise the awareness of millions of visitors around the world about the benefits of MPAs.

With science as our compass, which must drive action at every stage, through this new programme the Oceanographic Institute seeks to spotlight the bounty of the Mediterranean and the challenges it is facing, to better understand and protect it. We are committed to turning into reality the hope expressed by HSH Prince Albert II of Monaco: "*... that the Mediterranean will inspire us, as it has inspired so many great minds throughout history, to promote sustainable solutions and practices that will better reconcile human development and the preservation of this Mare Nostrum that is so precious to us.*"*

In this, we intend to play our role to the full: as a rallying force, as an engaged stakeholder, as a platform for influence. Alongside scientists, the private sector and policymakers, we are working for an audacious but achievable vision: to make the Mediterranean a model of sustainable management for the world. We are not alone in this mission. Together, we can prove that utopia is not only possible, but the best solution.

So let's dream… and take action.

***Address by HSH Prince Albert II of Monaco,**
at the international meeting "Knowledge in action for co-development in the Mediterranean" held on the 350th anniversary of the Academy of Sciences at the Museum of European and Mediterranean Civilisations (MuCEM), Marseille, 29 September 2016

THE UNIQUE MEDITERRANEAN SEA

The Mediterranean evokes the extraordinary history of the great civilisations that have shaped its shores over the centuries. But looking to its future, it faces major challenges. It is experiencing a number of pressures: overexploitation, population growth, pollution and climate change threaten its unique biodiversity and the services provided by its ecosystems.

Rallying the public, as well as political and economic leaders, is imperative, with one compass in mind: what science tells us.

The stakes are high. They involve the environment, of course, but also economic development, energy, tourism, food security, politics, and more. Through the launch of its Mediterranean programme, the Oceanographic Institute aims to identify future challenges, define areas of work, and encourage action. The programme will be informed by the 'Missions Méditerranée' conducted by Monaco Explorations at the initiative of HSH Prince Albert II.

Come aboard with us!

Common stingray

© Greg Lecoeur

A HOTSPOT OF BIODIVERSITY

The Mediterranean Sea may represent less than 1% of the surface area of the world's oceans, but it is nonetheless considered one of the most remarkable hotspots of biodiversity.

It is home to:

17.000
marine species

7.5%
of the world's marine fauna

18%
of the world's marine flora[1]

Sources:

(1) State of the Environment and Development in the Mediterranean (SOED), Plan Bleu, 2020.

(2) Med-ESCWET project report, MedWet, 2017.

Endemic species

On average, 19%[1], of its species are endemic and unique to the Mediterranean. In addition to the seagrass *Posidonia oceanica*, these include the sponge *Calyx nicaeensis*, the basket star *Astrospartus mediterraneus*, the limpet *Patella ferruginea*, the deep-water crab *Geryon longipes*, the silver roughy *Hoplostethus mediterraneus*, the little bream *Symphodus mediterraneus*, etc.

Emblematic species

The Mediterranean is home to exceptional biodiversity, including emblematic species such as the Mediterranean monk seal *(Monachus monachus)*, one of the most threatened seal species in the world, as well as the bottlenose dolphin *(Tursiops truncatus)* and Mediterranean bluefin tuna *(Thunnus thynnus)*, whose populations are crucial to the ecological balance and the economy of the region.

Algal reefs: oases of life

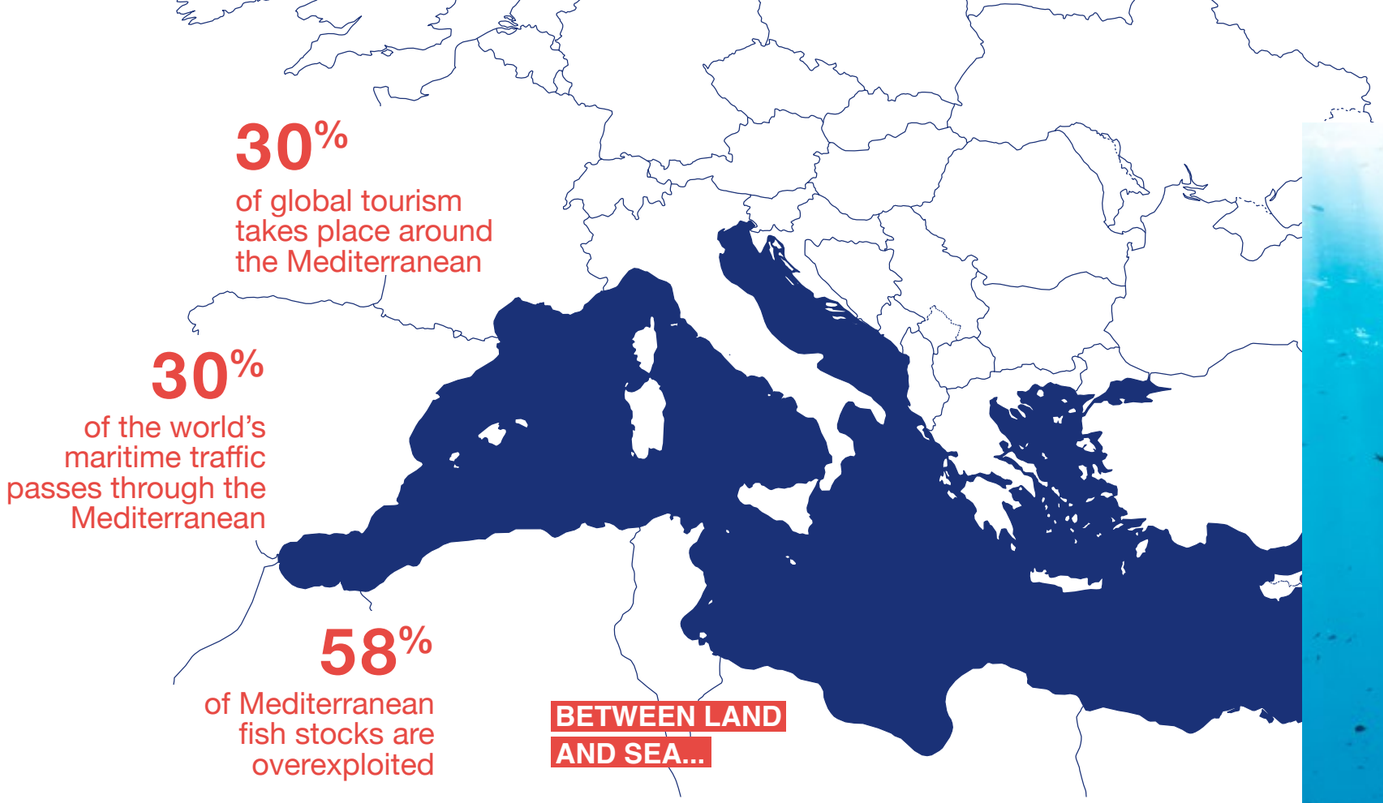
Coralligenous drop-offs in the Mediterranean are eco-diverse and complex underwater formations made up of limestone structures produced by red algae. Located at depths of between 30 and 120 m, these habitats are home to exceptional biodiversity, ranging from sea fans to sponges and numerous species of fish. They play an essential ecological role for marine fauna, yet are fragile and threatened by human activity.

Seagrass meadows: prairies of the sea

Posidonia (Neptune grass or Mediterranean tapeweed) meadows are amazing ecosystems that cover between 25,000 and 50,000 sq km[1] of the Mediterranean seabed. They are nurseries for fish and grow by capturing CO2. However, boat anchors are a mortal enemy for these ecosystems, which lose between 1.2% and 5%[2] of their surface area every year.

Cetaceans

Around 20 species of cetacean live in the Mediterranean, including various species of dolphins, beaked whales, and the fin whale, the second largest animal on the planet. They are often found in the Ligurian-Provence Basin, particularly in the Pelagos Sanctuary for Mediterranean Marine Mammals.



30%
of global tourism takes place around the Mediterranean

30%
of the world's maritime traffic passes through the Mediterranean

58%
of Mediterranean fish stocks are overexploited

BETWEEN LAND AND SEA...

DEMOGRAPHIC PRESSURE...

In the 1960s, the Mediterranean basin had a population of around 239 million.[1] Forecasts predict that this figure could rise to 580 million by 2050. One in three people live in a coastal area, which has led to the artificialisation of at least 40%[2] of the coastline. The risks of this for shoreline populations are well known, from flooding to erosion to soil instability. This demographic pressure and urban development also have direct consequences for coastal ecosystems: destruction of habitats, pollution (linked in particular to the lack of infrastructure to treat wastewater), etc.

...AND HIGH ECONOMIC STAKES

Major sectors with huge economic importance include:

Global tourism
30% takes place around the Mediterranean[2]

Global maritime traffic
30% passes through the Mediterranean[2]

Fishing
58% of Mediterranean fish stocks are overexploited[3]

DID YOU KNOW?

The name "Mediterranean" comes from the Latin *Medius terrae*, meaning "in the middle of the land".

Sources:

(1) Demographic trends and prospects in the Mediterranean, Plan Bleu Cahier no. 21, 2020.

(2) State of the Environment and Development in the Mediterranean (SoED), Plan Bleu, 2020.

(3) The State of Mediterranean and Black Sea Fisheries, FAO, 2023.

(4) Mediterranean Assessment Report (MAR1), MedECC, 2020.

DID YOU KNOW ?

The Mediterranean is particularly sensitive to the effects of climate change. Sea surface temperatures have risen by between 0.3°C and 0.45°C per decade since the 1980s. Increasingly frequent heatwaves – known as marine heatwaves – are having serious impacts: the bleaching of coral reefs, acidification, and major changes in precipitation patterns. The rise in sea level (2.8 mm/year) could reach 0.5 to 1 m by 2100,[4] accentuating the risks of flooding, erosion and loss of coastal habitats. Aside from climate change, these impacts are linked to political choices, such as land artificialisation, which increases vulnerability and creates a vicious circle. Responsible governance is essential to reverse this dynamic.

28.9°C

The highest daily sea temperature ever recorded in the Mediterranean, reached on 15 August 2024

Source: Copernicus Marine Environment Monitoring Service (CMEMS)

Posidonia seagrass
© Greg Lecoeur

Pilgrim hervia (a sea slug)

© Greg Lecoeur

A FRAGILE BALANCE

Protecting the Mediterranean is not just about conserving a unique natural and cultural heritage, but ensuring the economic and social resilience of its populations in the face of future challenges. Taking action for this incredible sea is to take action for our common future.

THE CHALLENGES OF OVERFISHING AND AQUACULTURE

The overexploitation of fish stocks has two main causes: the steady increase in industrial fishing in recent years (40% of total tonnage) and the rise in illegal fishing. In 2020, the General Fisheries Commission for the Mediterranean (under the aegis of the FAO) estimated that 73% of Mediterranean fish stocks were overexploited. By 2021, thanks to specific regional measures to regulate fishing, this figure had fallen to around 58%.[1] Although encouraging, these overall figures vary greatly from one species and region to another.

Science-based quotas have been adopted to combat overfishing, but their effectiveness depends on their formal adoption and implementation by the relevant political authorities. When translated into concrete measures and effectively applied, these quotas can produce convincing results, as in the case of bluefin tuna.

Aquaculture, while offering an alternative to fishing, also has a significant environmental impact. For example, the intensive farming of sea bass exacerbates pressures on ecosystems, in particular through the generation of aquatic waste and CO2 emissions.

THE NEED FOR EFFECTIVE GOVERNANCE

Target 30x30, officially adopted at the UN Biodiversity Conference (COP15) in December 2022 in Montreal, is an international commitment to protect 30% of land and oceans by 2030. The agreement sets ambitious targets for combating biodiversity loss and restoring natural ecosystems. While this is a promising step in protecting the Mediterranean and its unique biodiversity, its implementation remains a challenge. Governance in the Mediterranean basin is fragmented and hampered by overlapping regional agreements, which complicate the coordination of conservation measures. The Barcelona Convention, the principal agreement for the protection of the Mediterranean and the sustainable development of the basin, was adopted in 1976 and sets out ambitious commitments for its signatories. However, it is limited by a lack of resources to support implementation or to penalise non-compliance by the parties. Beyond this, the complex institutional framework given the diverse states across the Mediterranean basin, political and diplomatic challenges, disparities in resources, and the absence of strong legal constraints are holding back coherent and effective action.

Source :

(1) The State of the Mediterranean and Black Sea Fisheries, 2023.

TARGET 30x30

FROM A MARITIME ECONOMY TO A BLUE ECONOMY: A NEW IMPETUS

With its 46,000 km of coastline and exceptional marine and fishery resources, the total value of the Mediterranean's economic output is estimated at 450 billion euros. If its wealth were to be calculated in the same way as a country's national GDP, the Mediterranean's 'Gross Marine Product' would rank fifth among the basin's economies (2017 estimate[1]). Maritime transport, fishing and coastal tourism, which account for a significant share of the maritime economy, are key drivers of jobs, income and regional growth. However, these activities put severe pressure on marine ecosystems (through pollution, depletion of resources, degradation of biodiversity, etc.), contributing to their fragility. Mass tourism, in particular, exacerbates these pressures and makes coastal areas more vulnerable to environmental and social challenges.

While it is neither conceivable nor desirable to turn the Mediterranean into a vast sanctuary off-limits to humans, neither can it be abandoned to uncontrolled exploitation dictated solely by the logic of profit. Between these two scenarios lies a sounder middle course: the development of a strong and sustainable blue economy.

The blue economy, which focuses on more sustainable practices, seeks to reconcile economic needs with the conservation of ecosystems. According to European Union data, in 2019 the blue economy in the Mediterranean generated around €67 billion in gross value added (GVA) and supported over 2 million jobs.[2] On the scale of the Mediterranean basin – with its 522 million-strong population – these figures remain relatively modest, demonstrating significant untapped potential.

Yet it is important that this potential not be exploited exclusively by coastal tourism, which currently accounts for 61% of the GVA of the blue economy, while fishing and aquaculture contribute only 7.5%.[2] This raises a strategic issue: the need to diversify. The COVID-19 crisis revealed the vulnerability of a model overly dependent on tourism: if this collapses, more than half of the blue economy would follow. This calls for a rebalancing of responsible maritime activities by strengthening other sectors such as small-scale fishing, sustainable aquaculture and marine renewable energies.

Investing in a blue economy and blue finance is thus not only a necessity, but a strategic opportunity to ensure a prosperous and resilient future for the Mediterranean and its people. Blue economy sectors hold remarkable potential for innovation and wealth creation.

"We need to move forward in building a blue economy, to continue to drive the progress that people today are demanding."

HSH Prince Albert II of Monaco
Speech at the World Economic Forum, Davos, 2024

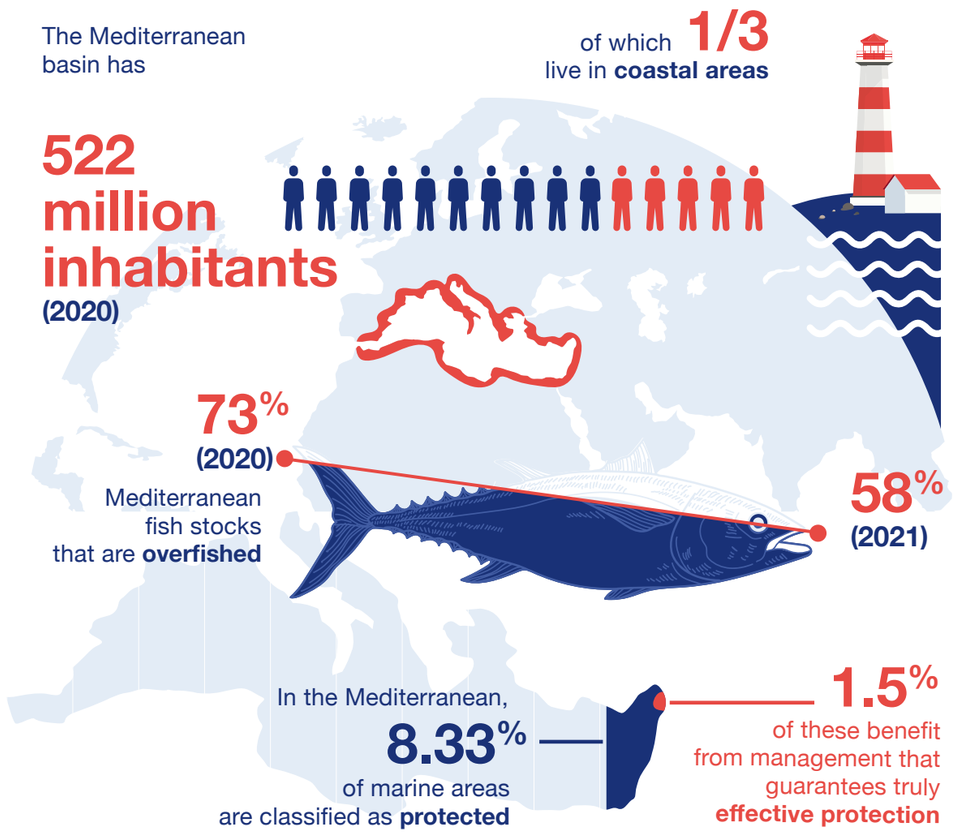
Sources:

(1) "Reviving the economy of the Mediterranean Sea" report by WWF and the Boston Consulting Group, 2017.

(2) 2019 figures from 'The EU Blue Economy Report', 2022.

A maritime economy vs a blue economy: **what's the difference?**

There is a significant contrast between a maritime economy, which includes all economic activities directly linked to oceans, seas and coastal areas, and a blue economy, which focuses on the sustainable management and exploitation of marine resources in order to limit environmental impacts and maximise social and economic benefits.



5th in GDP

If the wealth of the Mediterranean Sea were calculated in the same way as a country's national GDP, it would rank **5th among the basin's economies.**

450,000,000,000

The total value of economic production in the Mediterranean is estimated at 450 billion euros.

67,000,000,000

In 2019, the blue economy in the Mediterranean generated **gross value added (GVA)** of around 67 billion euros...

2,050,000

...and 2.05 million **jobs.**

THE POTENTIAL OF MARINE PROTECTED AREAS

DID YOU KNOW?

Cap Roux on the French Mediterranean coast is an area protected by fishermen, who have set up a 4.55-sq-km reserve to preserve fish stocks. Launched in 2015, this initiative is based on community management practices, such as reduced fishing periods and no-take zones. Managed by a local cooperative, the reserve has demonstrated notable success: an increase in the fish population, particularly threatened species, and strengthened links between fishermen and conservation.

WHAT'S A MARINE PROTECTED AREA (MPA)?

These maritime zones are specifically designated to protect biodiversity by restricting certain human activities in order to preserve ecosystems and encourage their regeneration. However, while MPAs are vital tools, they do not solve all the challenges associated with the degradation of marine ecosystems: they cannot compensate for the current accumulation of threats. In this context, the main challenge for MPAs is to reconcile conservation and economic development, particularly in areas with high human pressure. Their success depends to a large extent on management measures adapted to local contexts. Involving stakeholders in their creation and management is therefore essential. Of course, an MPA is limited to regulating activities within its borders; these areas remain vulnerable to external pressures, such as pollution, overfishing and the impacts of climate change. Consequently, their overall effectiveness depends on managing interactions with neighbouring areas and external dynamics. A holistic approach that integrates multiple factors is crucial to ensure that MPAs offer ecological, social and economic benefits, contributing to the resilience of ecosystems to natural disasters and supporting local economic activities.

In the Mediterranean, 8.33% of marine areas are classified as protected, but only 1.5% have a management plan ensuring truly effective protection.

WHAT'S AN OECM?

In the UN Convention on Biological Diversity, Other Effective Area-based Conservation Measures (OECMs) are defined as: "*a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and, where applicable, cultural, spiritual, socioeconomic, and other locally relevant values.*"

While OECMs have different practices and purposes than MPAs, they are key complementary tools that play an equally essential role in nature conservation. These initiatives, which are generally local, as are the people behind them, should be valued and recognised in national conservation schemes.

Source:
The 2020 status of Marine Protected Areas in the Mediterranean Sea, MedPAN.

IN FOCUS

VARYING LEVELS OF PROTECTION

Depending on the level of protection defined by the *MPA Guide*, economic activities in MPAs vary according to their conservation objectives.

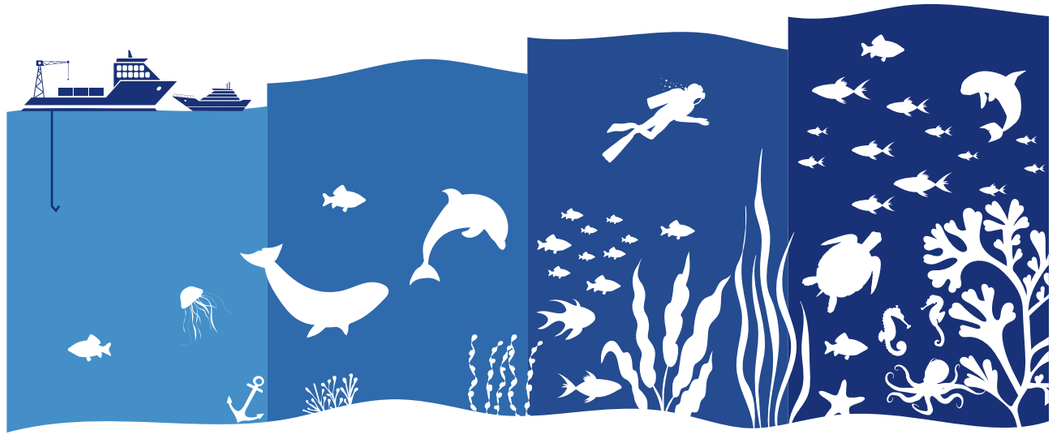
Activities such as sustainable fishing and aquaculture, responsible tourism and renewable energy production may be compatible with MPAs under certain conditions. However, highly destructive activities such as mining or oil and gas extraction are incompatible with their conservation objectives.

Obstacles to the effectiveness of MPAs:

✕ **Lack of a standardised universal framework**
Although the UN Convention on Biological Diversity recognises MPAs as an essential tool for conservation, it does not provide a universal definition specifying levels of protection or authorised activities. This leads to varying interpretations depending on the national or regional context. For example, MPAs with strict protection can coexist with areas where destructive activities are permitted, weakening their overall effectiveness.

✕ **Insufficient management plans**
To be effective, MPAs require financial, human and technical resources in order to draw up and implement appropriate management plans. Without these resources, they risk remaining "MPAs on paper", with little or no real impact on conservation.

MINIMUM PROTECTION	MODERATE PROTECTION	HIGH PROTECTION	COMPLETE PROTECTION
Major extractive activities such as industrial fishing and maritime transport are permitted, although the MPA retains some conservation measures.	Some economic activities, including large-scale fishing and aquaculture, are tolerated, but they can have significant impacts.	Limited activities such as sustainable artisanal fishing or responsible tourism are authorised under strict conditions to minimise impacts.	No extractive or destructive activities are permitted, preserving the ecosystem in its natural state.



Source: The MPA Guide, Defining MPAs and their Level of Protection (The MPA Guide is a scientific framework designed to assess and understand the effectiveness of Marine Protected Areas. It was developed by a group of international experts, including the IUCN, National Geographic and the UN Environment Programme.)

MONACO: WATCHING OVER THE **MEDITERRANEAN** FOR MORE THAN 100 YEARS

"I want to bear witness and share with you my concerns about the fate of a particularly threatened region of the globe, one of the cradles of humanity, [...] the Mediterranean."

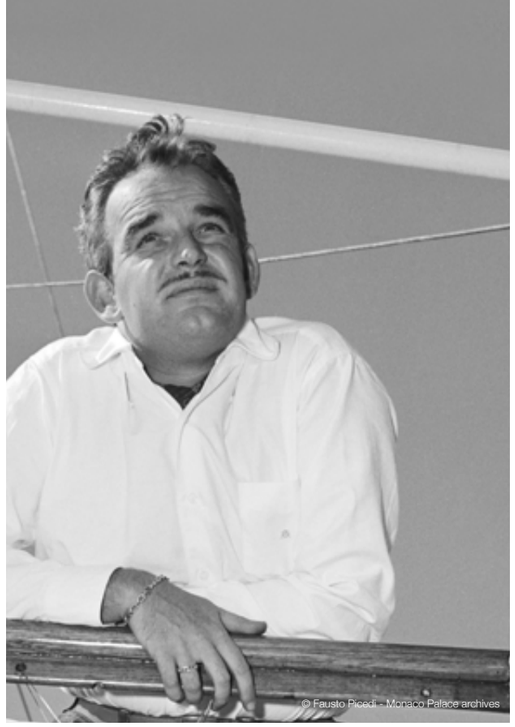
Prince Albert I

Fried egg jellyfish

© Greg Lecoeur

MONACO, A SHARED PASSION FOR THE SEA

© Oceanographic Institute of Monaco



© Fausto Picedi – Monaco Palace archives

PRINCE ALBERT I

Between 1885 and 1915, prince Albert I (1848–1922) personally led 28 scientific campaigns from Cape Verde to the Arctic regions, taking many French and foreign scientists on board his ships. Understanding and raising awareness about the essential role played by the Ocean was central to his preoccupations. He never hesitated to question what was ‘obvious’ during his era in his search for the truth. For example, he helped to prove the existence of life in the great depths. Prince Albert I continuously sought to advance oceanography, "*the new science that penetrates the secret of the abyss*"[1] as he put it.

For this navigator, the Mediterranean was his proving ground. It enabled him to carry out scientific tests and develop new devices and methods for his oceanographic explorations further afield. His work in the Mediterranean also brought to his attention the urgent need for a better understanding of the characteristics and resources of this inland sea. This vision gave rise to the International Commission for the Scientific Exploration of the Mediterranean Sea (CIESM), created in 1919 and today called the Mediterranean Science Commission. His many projects also made him aware of the fragility of nature. In his time, he advocated for the creation of national parks like those in the United States. There is no doubt he would have supported the calls for the creation of Marine Protected Areas today.

PRINCE RAINIER III

A scuba diver and marine enthusiast, prince Rainier III (1923–2005) prioritised the protection of the sea, and the Mediterranean in particular. Like his forefather, he was determined to give Monaco an international role. In response to the disposal of nuclear waste in the Mediterranean, at his initiative Monaco hosted the first scientific conference on the elimination of radioactive waste in 1959. Two years later, the International Atomic Energy Agency (IAEA) set up its International Laboratory of Marine Radioactivity in the principality to study impacts on the marine environment and techniques to protect it.

To boost the principality’s ability to carry out scientific research, prince Rainier III went on to create the Monaco Scientific Centre in 1960. And he did not stop there: in 1976, he signed the RAMOGE Agreement alongside France and Italy to combat pollution. He would continue this engagement over the decades. Speaking at the Rio Earth Summit in 1992, he stressed that there was still much to be done: "*The Mediterranean is a dumping ground. Life depends on the water cycle. Today, life is in danger.*" In 1996, Monaco signed the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), and in 1999, the Pelagos Agreement, creating a sanctuary for marine mammals.

[1] Quoted from his book *La Carrière d’un navigateur.*

THREE KEY DATES

1961

IAEA

Prince Rainier III campaigned strongly against the dumping of nuclear waste in the Mediterranean, and was influential in the creation in 1961 of the IAEA’s International Laboratory of Marine Radioactivity in Monaco.

1976

RAMOGE

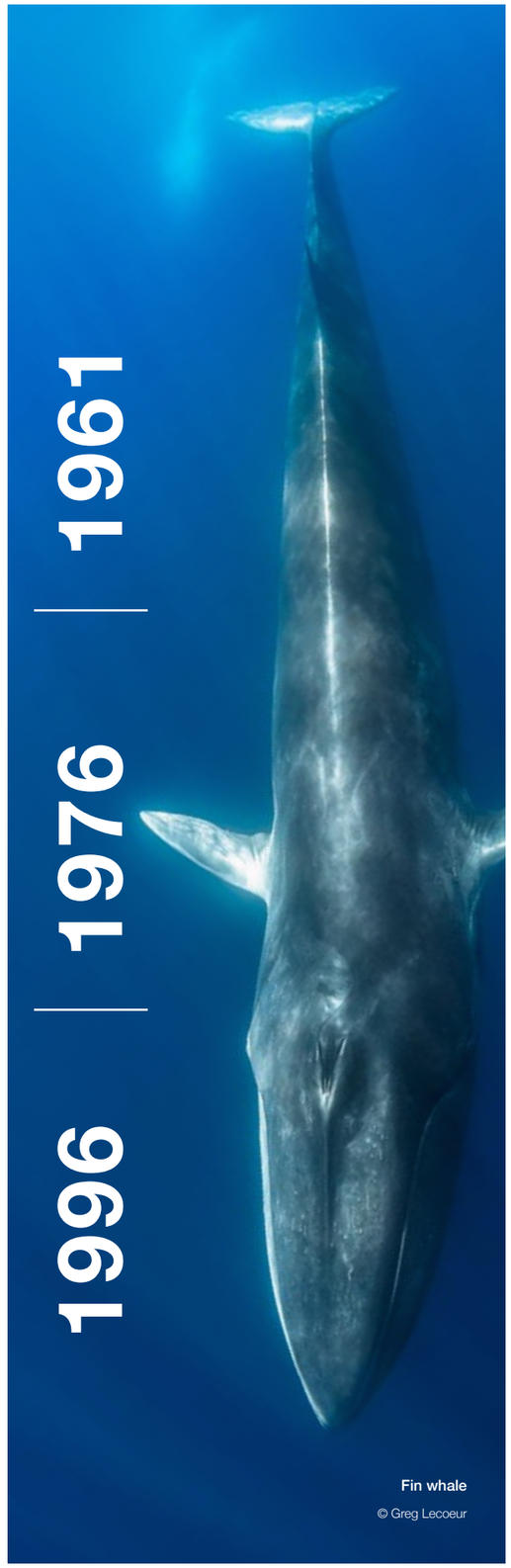
In 1976, Monaco, France and Italy signed the RAMOGE Agreement to protect the marine environment in an area extending from Saint Raphaël in France to Genoa in Italy and encompassing Monaco. Since then, the area has been enlarged, and today stretches from Marseille to La Spezia.

1996

ACCOBAMS

Another agreement was signed alongside France and Italy in 1996: the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area.

The secretariats of these three entities are based in Monaco.



Fin whale

© Greg Lecoeur

CONTENTS

FROM LOCAL ACTION TO INTERNATIONAL COOPERATION

For over 100 years, Monaco has been charting a committed course towards a sustainable Ocean, enlisting a wide range of engaged stakeholders within its territory.

MONACO'S MANIFOLD ACTIONS FOR THE MEDITERRANEAN...

Monaco Explorations

This platform exemplifies the engagement of HSH Prince Albert II of Monaco in promoting the understanding, sustainable management and protection of the Ocean. Created in 2017 on the initiative of the Government of Monaco, Monaco Explorations brings together the Prince Albert II of Monaco Foundation, the Oceanographic Institute, the Monaco Scientific Centre, and the Monaco Yacht Club. It coordinates international missions in partnership with key stakeholders from the principality and abroad, reinforcing Monaco's commitment to marine conservation.

Of the major scientific missions Monaco Explorations has organised and supported, the "*Gombessa 6: Cap Corse*" expedition, led by Laurent Ballesta and Andromède Océanologie, shed light on the importance of the French Mediterranean, and Corsica in particular, as the last known refuge for the angel shark, a critically endangered species (IUCN Red List). The expedition scientists carried out saturation dives and employed mapping tools and innovative sampling methods to gain a better understanding of the species' habitat and assess its population, data essential to its conservation.

Monaco Explorations' next mission will go to Greece in autumn 2025 as part of its "Missions Méditerranée".

Monaco Scientific Centre

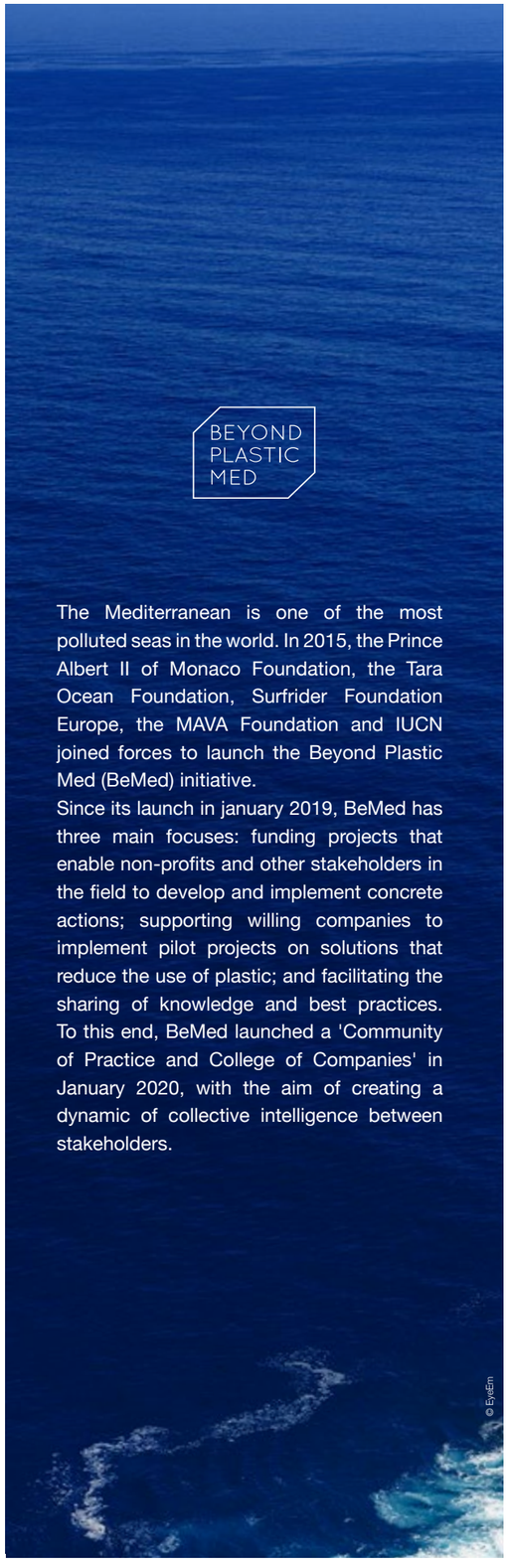
This multidisciplinary research institute is renowned worldwide for its work in marine biology (particularly its study of coral and coral reefs), polar biology (particularly its study of penguins) and medical biology. One of its flagship projects concerns Mediterranean red coral. This emblematic species, which contributes to forming unique ecosystems known as coralligenous drop-offs, is threatened by intensive exploitation and the harmful effects of climate change resulting in ocean warming and acidification. To protect this coral in its Mediterranean habitat, the Monaco Scientific Centre and the Banyuls-sur-Mer Oceanology Observatory in southwest France have joined forces to develop a conservation biology programme.

This programme is being carried out as part of a collaboration between the CSM-CHANEL Precious Coral Biology research unit, funded by the Chanel fashion house, and the Benthic Environment Eco-geochemistry Laboratory (LECOB) at the Banyuls-sur-Mer Observatory. The project is supported by the Prince Albert II of Monaco Foundation. To host colonies of red coral and study their reproduction, six 1-m^3 concrete coral caves were specially designed and immersed in Monaco waters at a depth of 40 m in July 2021. The results to date are promising, with 250 young corals born as a result of the experiment.

Prince Albert II of Monaco Foundation

Created by HSH Prince Albert II of Monaco in 2006, the Foundation is an international non-profit organisation committed to improving the planet's health for present and future generations. To date, it has co-created or supported hundreds of initiatives: among these, a project for the conservation of the monk seal. In 2019, the Foundation spearheaded the creation of the Monk Seal Alliance (MSA) with four other donor organisations. Conservation measures such as the creation of Marine Protected Areas, collaboration with fishermen, and awareness-raising have borne fruit, with the current population now estimated at around 900 individuals.

Another conservation project is to safeguard the northern bluefin tuna and the Mediterranean bluefin tuna further south, whose populations collapsed with the rise of industrial fishing. Since its creation, the Prince Albert II of Monaco Foundation has worked to save this species, making Monaco the first state to call for its international protection. The principality's political action and the worldwide impact it has had have helped to ensure compliance with the quotas recommended by scientists and stocks have begun to recover.



The Mediterranean is one of the most polluted seas in the world. In 2015, the Prince Albert II of Monaco Foundation, the Tara Ocean Foundation, Surfrider Foundation Europe, the MAVA Foundation and IUCN joined forces to launch the Beyond Plastic Med (BeMed) initiative.
Since its launch in january 2019, BeMed has three main focuses: funding projects that enable non-profits and other stakeholders in the field to develop and implement concrete actions; supporting willing companies to implement pilot projects on solutions that reduce the use of plastic; and facilitating the sharing of knowledge and best practices. To this end, BeMed launched a 'Community of Practice and College of Companies' in January 2020, with the aim of creating a dynamic of collective intelligence between stakeholders.

CONTENTS

...TO SUPPORT AND ACTIVELY PARTICIPATE IN REGIONAL COOPERATION

Mediterranean Action Plan

The Mediterranean Action Plan (MAP) was established in 1975 as a multilateral environmental agreement under the Regional Seas Programme of the UN Environment Programme (UNEP). Mediterranean countries and the European Community approved the plan as an institutional framework for cooperation to meet the common challenges of marine environmental degradation. The action plan is guided by one objective: "to progress towards a healthy, clean, sustainable and climate-resilient Mediterranean Sea and coast with productive and biologically diverse marine and coastal ecosystems".

To date, the Contracting Parties have adopted ten regional plans covering persistent organic pollutants (POPs), wastewater, the food sector and marine litter. Three other regional plans are currently being drawn up and updated. They concern the reduction and prevention of pollution, the elimination of marine pollution from land-based sources, and the achievement of 'good ecological status' (GES). This refers to the proper functioning of ecosystems (in biological, physical, chemical and health terms) that allow the sustainable use of the marine environment.

Plan d'action pour la Méditerranée
Convention de Barcelone

Plan Bleu

SPA / RAC

Plan Bleu

In the framework of the UN Environment Programme, Plan Bleu has been producing studies and scenarios on the future of the Mediterranean for over 40 years. Its work has been vital in raising awareness among stakeholders and decision-makers about environmental and sustainable development issues in the region. It collaborates with the MedECC (Mediterranean Experts on Climate and Environmental Change) to propose adaptation solutions. The aim is to protect terrestrial and marine ecosystems, as well as the health of human populations in the Mediterranean basin, by improving food security, water management and agricultural practices. Plan Bleu advocates in particular for the creation and effective management of Marine Protected Areas in the Mediterranean.

Regional Activity Centre for Specially Protected Areas (SPA/RAC)

The SPA/RAC is an environmental organisation that was created in Tunis in 1985 in connection with the Barcelona Convention. It is one of the eight components of the UN Environment Programme Mediterranean Action Plan (UNEP/MAP). This marine biodiversity centre works closely with governmental and non-governmental organisations for the conservation and sustainable management of threatened species, ecosystems and areas of particular natural and cultural value in the Mediterranean.

MedPAN

THE MED FUND

MedPAN

The Mediterranean Protected Areas Network (MedPAN) was created in 2008 at the request of managers of the basin's Marine Protected Areas. Its aim is to promote the creation, continuity and operation of MPAs in the Mediterranean. One aspect of its work is conducting studies on sustainable tourism in MPAs. These show that by adopting an approach that integrates stakeholders, the regulation of the flow of tourists, visitor awareness and technological innovation, it is possible to reconcile the economic benefits of tourism with the need to protect fragile marine ecosystems.

MedFund

This environmental fund provides sustainable financing for the conservation of marine biodiversity and the creation and management of Marine Protected Areas in the Mediterranean. The Prince Albert II Foundation is behind the development of this fund, which brings together Tunisia, France and Monaco. A powerful instrument to make Target 30x30 a reality, the MedFund's priority is to revitalise small-scale fishing.

✱ DID YOU KNOW?

Part of the revenue generated by ticket sales at the Oceanographic Museum is donated to the MedFund.

Red coral
© Greg Lecoeur

SOME SUCCESS STORIES...

AN MPA IN MONACO

While the Principality of Monaco invests heavily in monitoring the Pelagos Sanctuary, which hosts eight resident cetacean species, in 1976 it decided to create an MPA in the city itself – the Larvotto reserve – which covers a quarter of its coastline. This 33.6-hectare MPA is home to a large number of dusky groupers.

PROTECTING GROUPERS SINCE 1993

The declining numbers of the dusky grouper, a victim of poaching and overfishing, led Monaco (in 1993) and France (in 1999) to introduce strong protection measures, including a moratorium banning hook and line fishing and underwater hunting. In Monaco, the Sovereign Order of 1993, reinforced in 2011, provides long-term protection for the dusky grouper and the brown meagre. Although this success is an example to follow to protect biodiversity in the Mediterranean, it remains fragile: the moratorium, which is reevaluated every 10 years, was renewed in France in December 2023 and will be reexamined in 2033.

BRINGING BACK BLUEFIN TUNA, COLLECTIVELY

Due to overfishing, bluefin tuna in the Eastern Atlantic and Mediterranean came close to collapse in just a decade. In response, in 2008, HSH Prince Albert II of Monaco introduced a moratorium on its consumption, in partnership with Monaco's restaurateurs and retailers. In 2009, Monaco argued for its inclusion on the list of species protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to ban its international trade. While this initiative was not adopted, it made a major contribution to raising awareness in the international community. These conservation efforts have helped the species bounce back from Endangered to Least Concern in the 2021 International Union for Conservation of Nature (IUCN) Red List.

MONACO EXPLORATIONS

MISSIONS MÉDITERRANÉE

Following its mission in the Indian Ocean in 2022, Monaco Explorations will begin a new chapter in autumn 2025 to explore the Mediterranean aboard the MODX 70-01. This ambitious programme, recognised by the UN Decade of Ocean Science for Sustainable Development (2021–2030), is part of the Target 30x30 biodiversity commitment made at COP15: to protect 30% of marine and coastal areas by 2030. This several-year mission under the initiative of HSH Prince Albert II of Monaco will promote cooperation between government, science and public outreach, reaffirming the principality's commitment to protecting the Mediterranean.

"Monaco Explorations aims to spotlight the urgency and importance of accelerating the creation of Marine Protected Areas in the Mediterranean and their effective management."

Xavier Prache,
Director, Monaco Explorations

COOPERATION BETWEEN GOVERNMENT, SCIENCE AND PUBLIC OUTREACH

Missions Méditerrannée aims to meet two objectives: to encourage the development of Marine Protected Areas where this is possible, and to contribute to improving the management of existing MPAs. Collecting key scientific data on biodiversity and the health of marine ecosystems is crucial both to improve the knowledge of MPA managers and to inform scientific programmes on a Mediterranean scale. This data is an essential element in decision-making to determine the right environmental policies. The role of outreach is also vital in enlisting support for MPAs by involving the public, including sea users, who are increasingly sensitive to conservation issues, as well as private sector stakeholders.

EN ROUTE FOR GREECE!

On its first Mediterranean mission, scheduled for autumn 2025, Monaco Explorations will be setting sail from Athens to Volos via Syros and Alonnisos. En route it will be conducting a number of scientific operations in collaboration with research institutes and MPA site managers.

Volos

In this environmentally sensitive area, which was hit in 2023 by severe storms and suffered massive freshwater fish die-offs in August 2024 due to hot weather, the mission will carry out scientific actions and awareness-raising campaigns for young people.

Alonnisos

This stop will include a visit from HSH Prince Albert II of Monaco and encounters with local stakeholders and schools to raise awareness. Initiatives for young people will include a plankton workshop and an interactive digital adaptation of the "*Time for Action*" exhibition. Alonnisos, home to one of Greece's first MPAs, hosts a large population of monk seals, an emblematic species of the Mediterranean. This will be an opportunity for Prince Albert II to take stock of the situation of this protected species and the actions being taken by Monaco's partners (Monk Seal Alliance, MedFund, Beyond Plastic Med).

Athens

In the country's capital, the travelling exhibition "*Time for Action: Marine Protected Areas of the Mediterranean*" will be presented. There will also be awareness-raising workshops for young people, masterclasses, encounters and initiatives to promote collaboration between the private sector and MPA managers in Greece.

Syros

Here, in the most recently established MPA in the Mediterranean, field studies in collaboration with managers and stakeholders will be carried out.

Measuring the microbiome

Seawater can contain between 10 and 100 billion organisms per litre. Identifying and understanding the biodiversity of this microscopic living universe is one of the major scientific challenges of our time. Monaco Explorations will be working with the 'Plankton Planet' programme, which promotes a new generation of accessible measuring instruments that are inexpensive, take up little space, and can be employed by all sea users (scientists, navigators, sailors, etc.). The ultimate aim is to create a universal measure of aquatic biodiversity.

Observing coastal fish

The missions will use camera systems such as Baited Remote Underwater Video (BRUV) that can be placed on the seabed or suspended under a boat, an excellent method to observe fish behaviour and survey populations without human disturbance. Among other things, such cameras will make it possible to compare what happens inside and outside a Marine Protected Area.

Collecting data near the shore

Surface drones, remotely controlled from a boat or programmed in advance, equipped with an echo sounder, will provide a bathymetric map of the seabed up to 50-m deep, allow an inventory of the species in a given area, and carry out seawater sampling for environmental DNA analysis. The vital information collected will be invaluable for MPA managers to help them understand the issues at stake in the areas they oversee.

Deploying profiling floats

Participating in the international BGC-Argo programme, the missions will deploy and retrieve floats with profiling robots to study the interaction between geochemical compounds and living organisms. These highly sophisticated and costly floats are equipped with sensors to measure numerous parameters (oxygen, temperature, salinity, etc.). New floats will be deployed throughout the ship's journey in the Mediterranean, and those that have reached the end of their life will be recovered and recycled so they can be put back into service.

Sharing knowledge with the public

A priority for all these Mediterranean missions will be outreach and education. During the mission in Greece, the exhibition 'Time for Action: Marine Protected Areas in the Mediterranean' will be presented, accompanied by an educational programme for schoolchildren. A digital adaptation will be available onboard the ship, allowing the public of all ages to experience the exhibition on its stops at Greek islands, raising awareness of the benefits and challenges of MPAs. An immersive workshop developed by the Oceanographic Institute of Monaco will invite participants to dive into a Marine Protected Area to admire its abundant but vulnerable biodiversity. Other workshops will shed light on the environmental issues impacting the Mediterranean, inviting participants to get engaged to better protect and manage the sea, as well as to discover the amazing diversity of plankton, the basis of all life in marine spaces.

- 100% powered by renewable energy to minimise carbon emissions
- Length: 21 m
- Can accommodate a crew of 6 to 8 passengers (scientists, technicians, artists, etc.)
- At each port of call, it will welcome schoolchildren, the media, business leaders, political decision-makers, etc.

THE OCEANOGRAPHIC INSTITUTE OF MONACO SETS THE COURSE FOR THE MEDITERRANEAN

30% COVERAGE OF MARINE PROTECTED AREAS BY 2030
100% OF THE OCEAN SUSTAINABLY MANAGED

The Oceanographic Institute of Monaco is fully committed to the creation and effective management of Marine Protected Areas on a global scale, with a particular focus on the Mediterranean, in line with Target 30x30.

To support the conservation of the unique Mediterranean ecosystem, the Oceanographic Institute is working to rally key players with one ambition: to bring together science, engagement and collective action.

- The public can act as ambassadors for the Ocean, influencing decision-makers through their choices, their vote and by making clear their expectations of companies and public authorities.
- The private sector can adopt business models that respect the Mediterranean.
- Policymakers can translate commitments into concrete action: for example, by identifying, creating and managing a coherent and effective network of MPAs.

The Oceanographic Institute aims to catalyse the energy from these different stakeholders, with the help of its partners such as Monaco Explorations, to shape a Mediterranean where conservation and economic development can coexist rather than come into conflict.

SCIENCE-BASED ACTION

To meet the challenges facing the Mediterranean, science must inform government action and influence economic stakeholders. The Oceanographic Institute advocates for a scientific approach at the service of robust public policy, a bridge that ensures a direct link between scientific knowledge and the decision-making process.

MEDITERRANEAN PROGRAMME STEERING COMMITTEE (COMed)

In order to develop and support its programme actions, the Oceanographic Institute works with experts from around the Mediterranean with the objective of speaking with one voice. The Mediterranean Programme Steering Committee (COMed) brings together scientific experts, political authorities and outreach specialists from all shores of the Mediterranean.

A PARTNERSHIP FOR BIODIVERSITY

As part of the programme, the Oceanographic Institute of Monaco is launching a study to assess the current status of Marine Protected Areas (MPAs) and Other Effective Area-based Conservation Measures (OECMs) in the Mediterranean basin. Benefiting from the expert advice of COMed, this study seeks to identify the obstacles to the effective implementation and management of MPAs, as well as potential ways to overcome these. Using mixed methodology and drawing on existing data, expert reports and case studies, the aim is to offer operational solutions to policymakers, the private sector and local stakeholders. This study is being carried out in partnership with the Foundation for Research on Biodiversity (FRB), WWF Mediterranean, and the IUCN Centre for Mediterranean Cooperation.

COMed members

Co-chairs: **Susana Salvador** (ACCOBAMS, Executive Secretary) and **Karmenu Vella** (former European Commissioner for Maritime Affairs and Fisheries, Advisor to Malta's Ministry for Foreign and European Affairs and Trade)

Secretary: **François Simard** (Mediterranean expert, former head of global marine programmes at the IUCN)

Elham Ali (Suez University, Professor of Oceanography and Aquatic Environments), **Maria Betti** (former Director at the European Commission, former President of the Scientific Council of the Oceanographic Institute of Monaco), **Mostapha Bousmina** (Hassan II Academy of Sciences and Technologies, Chancellor; Euro-Mediterranean Academy of Fez, President), **Purificacio Canals** (MedPAN, former President), **Giuseppe di Carlo** (Director of the Pew Bertarelli Ocean Legacy, former Director of the WWF Mediterranean Marine Initiative), **Roberto Danovaro** (Anton Dohrn Zoological Station, Naples, Chairman), **Maria Damanaki** (Paradise Foundation, Principal Advisor; SYSTEMIQ International Foundation, Principal Advisor), **Robin Degron** (Plan Bleu, Director), **Tatjana Hema** (Mediterranean Action Plan, Coordinator), **Mahmoud Elyes Hamza** (SPA/RAC, Director), **Nathalie Hilmi** (Monaco Scientific Centre, Head of Environmental Economics Research), **Maher Mahjoub** (IUCN Centre for Mediterranean Cooperation, Director), **Rimel Benmessaoud** (National Agronomic Institute of Tunisia, Researcher), **Alessio Satta** (WWF Mediterranean, Director), **Karljin Steinbusch** (Med Sea Alliance, Director), **Romain Renoux** (MedFund, Executive Director)

RAISING PUBLIC AWARENESS

To go beyond postcard images and preconceived ideas, to give a fuller understanding of the Mediterranean and the issues that affect it, the Oceanographic Institute plans a series of initiatives aimed at the public. These will offer explanations and raise awareness, while appealing to all the senses.

A MAJOR EXHIBITION: MEDITERRANEAN 2050

This immersive, interactive exhibition is designed to encourage the Oceanographic Museum's more than 650,000 annual visitors to view the Mediterranean with a new eye and to take an interest in protecting it, in a journey through space and time to 2050 (see pages 36–53).

A MARINE PROTECTED AREA IN VIRTUAL REALITY

The Immer(sea)ve 360° experience will give visitors the chance to dive into a Mediterranean MPA, where they will discover the benefits of conservation by entering this underwater world. Donning a virtual reality headset, they can move freely through three thriving marine ecosystems, a unique opportunity to experience the importance of preserving the bounty of the Ocean.

AN ENCOUNTER WITH COASTLINE CREATURES

In our educational room, visitors can get up close and personal with the animals of the Mediterranean coastline: crabs, starfish, sea cucumbers, and more, discovering their unique characteristics and their essential role in the ecosystem.

A MARINE DISCOVERY COURSE FOR AGES 6–12

Over the course of a week, led by an educational team, the "OCEANO CLUB" will allow children to take part in a wide range of games and activities centred on the Ocean and the animals that inhabit it. The activities focus on the Mediterranean Sea, with workshops on Posidonia seagrass meadows, large cetaceans, the Pelagos Sanctuary, and Marine Protected Areas.

EVENTS FOR STUDENTS

Various activities designed for students from pre-primary to secondary school will be organised around the aquariums presenting the ecosystems of the Mediterranean:

An interactive tour to find out more about Mediterranean species and their way of life.

A sensory workshop around a specially designed touch pool where visitors can interact with flora and fauna.

A treasure hunt in which participants are given descriptive cards and asked to find emblematic species of the Mediterranean Sea.

A discovery activity around the lifecycle of sea turtles and the conservation methods used to protect them.

A workshop on the impact of human activities on Mediterranean coastlines and existing solutions. Naturalist tours of the shore will also be held to observe and study coastal species. These walks by the sea will end with an awareness-raising discussion on plastic pollution and the alternatives to adopt in day-to-day life to protect the sea.

CONTENTS

THE AQUARIUM WILL BE MODERNISED...

The aquarium's Mediterranean zone will be getting a facelift to offer visitors a unique and immersive experience. This bold renovation will strengthen the aquarium's educational and scientific mission. With spaces redesigned for greater comfort and to spectacularly showcase Mediterranean biodiversity, this transformation will heighten public awareness of the challenges of protecting this fragile ecosystem. The revamp will make the aquarium more than just a place to observe, but a powerful tool for outreach and awareness-raising, delivering a strong message of the importance of everyone playing their part to protect the Mediterranean.

...TO BECOME A HUB FOR AQUARIUMS FROM AROUND THE MEDITERRANEAN

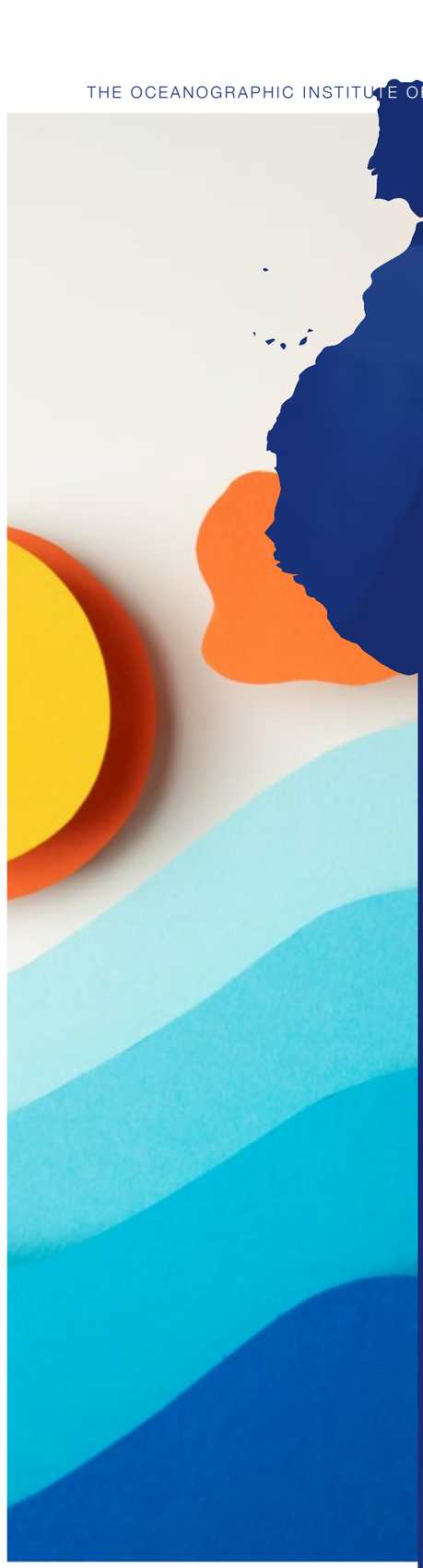
The Aquariums and Museums of the Mediterranean Initiative working for Target 30x30 (IAMM 30x30) is supported by the Oceanographic Institute. The initiative seeks to create a network of aquariums and museums working to promote Mediterranean MPAs and to preserve 30% of marine areas by 2030. By joining forces, the members aim to raise public awareness of marine conservation by sharing outreach and communication tools. This platform for information and resources will amplify the message and help to sensitise the many millions of people who visit these aquariums every year.

A CAMPAIGN TO PROMOTE BIODIVERSITY

In its commitment to promoting the creation of MPAs in the Mediterranean, the Oceanographic Institute of Monaco is launching an awareness-raising campaign. It poses a key question that elicits the emotions: "*What are we waiting for to be happy?*" and proposes a concrete answer: "*Marine Protected Areas!*" The campaign seeks to convey a message of hope, highlighting emblematic Mediterranean species and adopting a resolutely positive tone by presenting concrete solutions to environmental challenges. It resists despair by showcasing tangible solutions such as MPAs for conserving marine ecosystems, with the message that there is still time to take action to protect the Ocean. The campaign, which is being rolled out in France, will enable anyone to select an MPA by scanning a QR code that redirects them to the "MY OCEANO MED" web app (see pages 52–53), where they can complete a series of challenges to see how their actions can aid that MPA.

A PODCAST SERIES ON THE MEDITERRANEAN

A series of five podcasts dedicated to the Mediterranean will be aired in collaboration with the radio station Ici Azur. As well as being broadcast on air and on demand from Radio France's mobile app, extracts from these podcasts will also be played in the pergolas along the Promenade des Anglais in Nice throughout 2025, in particular to coincide with the UN Ocean Conference held there in June.



OCEANO POUR TOUS CONCOURS

THE "OCEANO POUR TOUS" EDUCATIONAL COMPETITION

Aimed primarily at schools in priority education zones, rural areas, and special needs classes, the **OCEANO** POUR TOUS ("the Ocean for all") educational competition aims to educate tomorrow's citizens about the essential protection of the Ocean through a collective, creative, committed school project. Throughout the year, the selected classes receive tailor-made support from the Oceanographic Museum's scientific and cultural outreach team. A range of online educational workshops on key issues are offered, providing more than 30 hours of exchanges and knowledge-sharing per class. For its 11th edition, the competition will bring together 620 students in mainland France, Monaco and the French overseas territories. In addition to the 31 classes taking part in the competition, **OCEANO** POUR TOUS will also involve five classes (almost 150 students) in several countries around the Mediterranean in a non-competitive section.

A SPACE–TIME IMMERSION

As soon as visitors cross the threshold of the "Temple of the Sea", they will be taken on a space-time exploration of the Mediterranean, symbolised by luminous portals that allow them to pass from one universe and one era to another.
They will discover Monaco's long commitment to the Ocean before being propelled into the year 2050 to visualise the benefits resulting from hitting Target 30x30. As there is still time to act, the public will be invited to get involved by taking individual action and by making their expectations known to public authorities and the private sector.

Along their journey, visitors will have exceptional guides: cetaceans. These large marine mammals are emblematic of the bounty, beauty and grandeur of the sea.

4 THE EXHIBITION'S MAIN THEMED AREAS

"The Mediterranean is a condensed version of our world. Imagining what the Mediterranean will be like in 2050 [...] is therefore of crucial importance. The way in which we succeed or fail in preserving its balance and protecting its resources will determine the future of our entire planet."

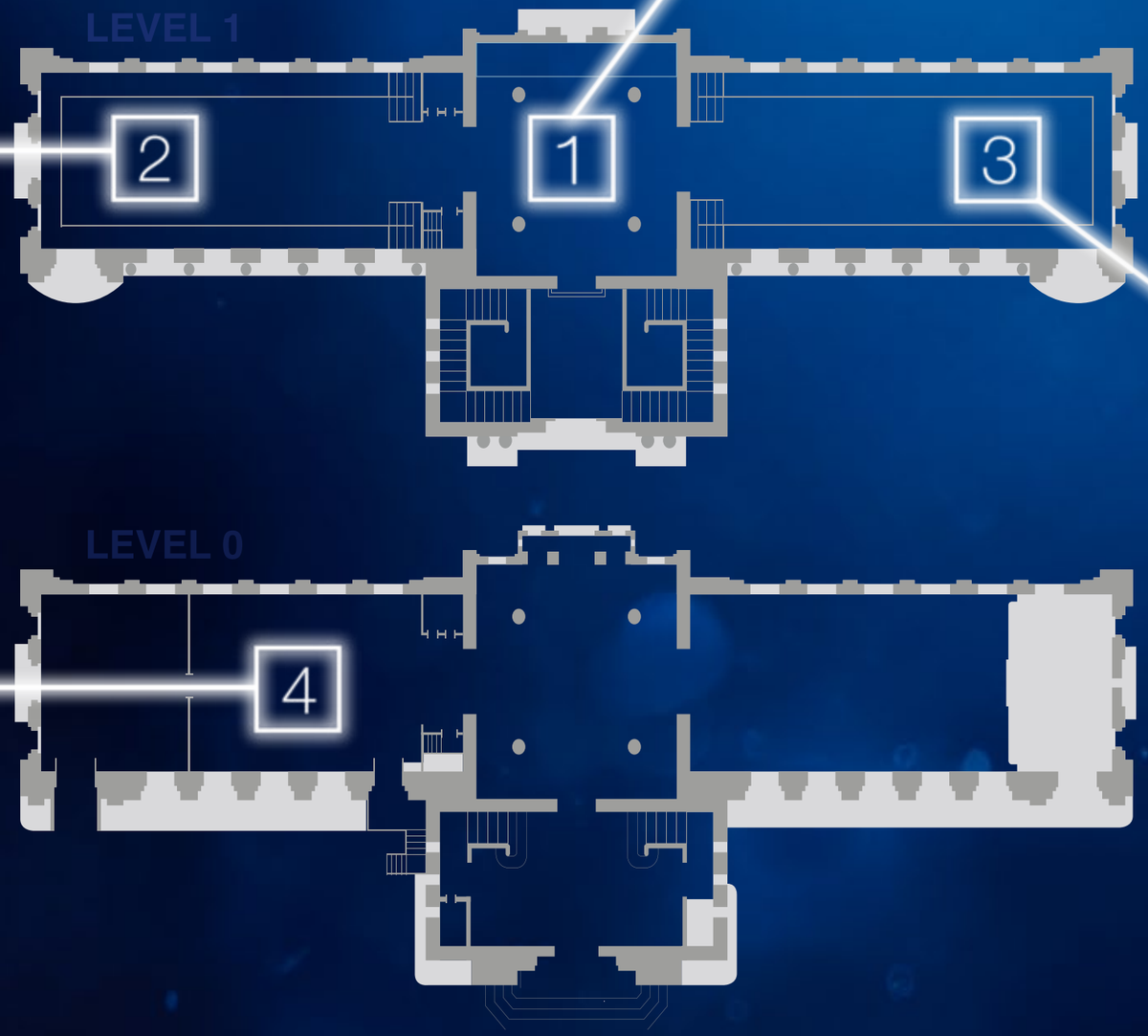
Address by **HSH Prince Albert II of Monaco**, "The Mediterranean in 2050: sustainability, biodiversity and resource management", Madrid, 22 April 2016

OCEANOMANIA

Discover the history of the Mediterranean.

OCEANO MONACO

Join the voyage with the princes of Monaco, committed to protecting the Mediterranean and the Ocean.



OCEANO ODYSSEY

Embark on "Mission Pelagos" to encounter cetaceans.

MY OCEANO MED

Take up the challenge to protect the Ocean!

© F. Pacoret

1

OCEANOMANIA

The odyssey begins on the first floor, in the OCEANOMANIA hall, home to one of the world's largest cabinets of marine curiosities.

*** An impressive 4-m sperm whale sculpture greets visitors.**

As visitors move around the whale, this activates the projection of short texts and key figures that appear directly on the sculpture. This innovative way to deliver information offers a captivating overview of the history of the Mediterranean, from its origins to contemporary challenges, right through to the solutions envisaged for its preservation.

On this first stage of the space–time journey, the Mediterranean is revealed from every angle through a variety of themes:

- *The origins*
- *The sperm whale, guardian of time*
- *The history of humans and the Mediterranean*
- *A record-breaking sea*
- *A treasure trove of biodiversity*
- *A sea under pressure*
- *Time for action*

Visitors will then be guided to the adjacent spaces, where they can continue their voyage through time. The aim of this immersive journey is to convey a vision of the different stages in the history of the Mediterranean, taking visitors from the past through the present to a deliberately idealised future.

CONTENTS

1885
TODAY

2

OCEANO MONACO

Visitors are invited to retrace the past and present actions of the princes of Monaco – as well as glimpse those of the future – aimed at discovering and protecting the marine world and their commitment to the Mediterranean.

The history begins at the end of the 19th century with prince Albert I, who understood well ahead of his time that the ocean is not an inexhaustible reserve. The story continues with prince Rainier III and his yacht, *Deo Juvante II*, and how his political action for the Mediterranean has left a lasting legacy. Today, at the beginning of the 21st century, visitors will discover the new chapter being written to protect the Mediterranean through the engagement of HSH Prince Albert II to face contemporary challenges.

The upper level of the "OCEANO MONACO" room and its new layout will offer a fresh look at the threats the Mediterranean is exposed to and the practical solutions being developed to deal with them.

This part of the exhibition will also highlight the many partners of the Principality of Monaco working alongside it to protect the Mediterranean at local, regional and international level, including the Marine Educational Area run by the Monaco Association for the Protection of Nature with the support of the Prince Albert II of Monaco Foundation; preserving Mediterranean coastal zones through the RAMOGE Agreement; a coral conservation and restoration programme developed by the Monaco Scientific Centre; and Monaco Explorations, whose "Missions Méditerranée" will start with a voyage in Greece.

LEARN THROUGH PLAY WITH A SERIOUS GAME

In the centre of this area, a serious game puts visitors in the shoes of managers of Marine Protected Areas who have to choose actions that will help to improve the overall health of the ecosystem and enable biodiversity to develop in a balanced way.

Texts aimed at children* will guide the youngest visitors through the adventures of Mona, a young monk seal.

© F. Pacoret

2050

3

OCEANO ODYSSEY

EMBARK ON "MISSION PELAGOS" TO ENCOUNTER CETACEANS

In this area, visitors step aboard the *Oceano Odyssey*, a futuristic submersible bound for the Mediterranean seabed at the heart of the Pelagos Sanctuary. Welcome to 2050!

© F. Piazzoni

*

Immersive and inspired scenography

plunges visitors into different Mediterranean ecosystems through ultra-realistic virtual simulations of the environments, made possible by a monumental projection system. This stunning visual and sensory experience allows visitors to come face to face with species that would be found in a well-managed Marine Protected Area in 2050.

16
minute
virtual reality presentation

310
sq m of
projection surface

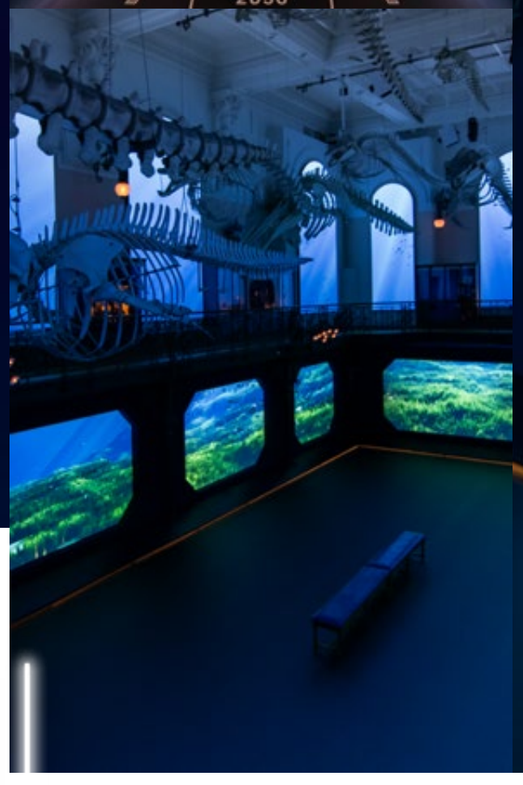
27
projectors

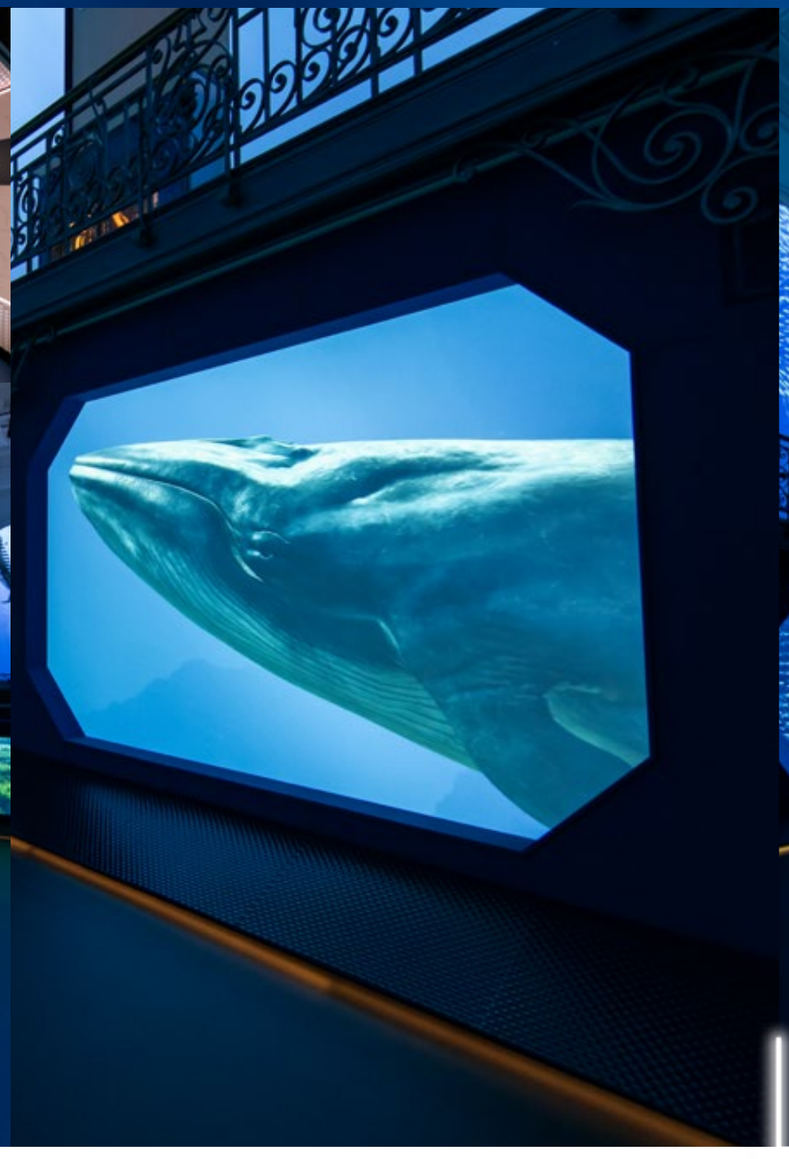
30
species to discover

CONTENTS

Before descending into this underwater world, visitors enter the ship's control room, where Captain Anita explains the itinerary and key stops of Mission Pelagos.

Ready to climb aboard?





© F. Piscitel

***We are in 2050, the target to protect 30% of global marine areas has been met, and the result lies before our eyes: a regenerated Mediterranean teeming with life.**

AN ENCOUNTER WITH EMBLEMATIC SPECIES:

On the surface
Gulls, striped dolphins, bottlenose dolphins, barrel jellyfish, loggerhead turtles, and fin whales passing in the distance

In the seagrass meadows
Striped dolphins, loggerhead turtles, fan mussels, octopus and small fish such as damselfish, dreamfish, white seabream and juvenile European barracuda

Near coralligenous drop-offs
Risso's dolphins, fin whales, groupers, scorpion fish, moray eels, damselfish and common eagle rays

In open water
Swordfish, tuna, shoals of sardines, fin whales and common dolphins in the distance

In the canyons
Pilot whales, Cuvier's beaked whales, sperm whales, scorpion fish, dusky groupers, gorgonian sea fans, coral, sunfish, cuttlefish, moray eels and tuna

Loss of signal
Blue sharks, Mediterranean mantis shrimp, swordfish and sperm whales

Around the shipwreck
Blue sharks, groupers, coral, gorgonian sea fans and sperm whales

Back to the surface
Adult and juvenile sperm whales

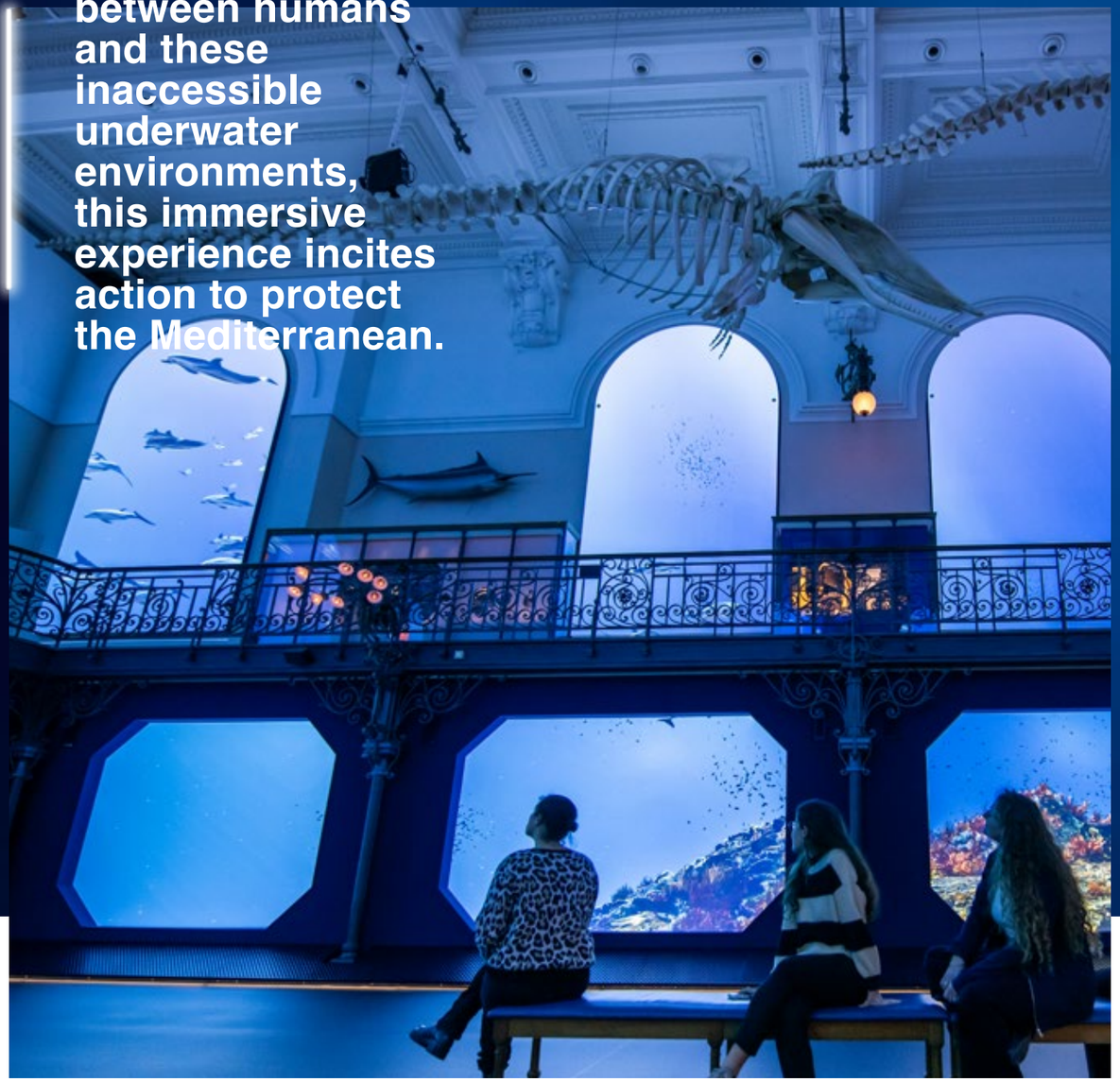
The journey begins at the foot of the Oceanographic Museum in 2050, and dives under the surface in the company of dolphins that we follow through the museum's windows, transformed into portholes. The submersible continues its voyage through Posidonia seagrass meadows, a flourishing oasis of life.

Look out! A fin whale has been spotted. Just enough time to check that the anti-collision system is working, and an accident is avoided. A Risso's dolphin guides us towards a thriving coralligenous reef, while schools of fish move in their mysterious and mesmerising choreography.

We enter an underwater canyon, accompanied by a Cuvier's beaked whale and pilot whales. Ahead, tuna and swordfish looking for a feast chase a huge shoal of sardines. As the submersible continues on its way, it passes a shipwreck that is home to a multitude of fish. But the sonar is beeping again: a large group of sperm whales suddenly appears! This species has never before been observed here – it's a sure sign of a healthy ecosystem.

As the mission draws to a close, it's time to go back to the surface...

By creating a strong link between humans and these inaccessible underwater environments, this immersive experience incites action to protect the Mediterranean.



© F. Pacorel

The scenography intentionally elicits emotion as a catalyst to raise public awareness. The message: the diversity and beauty of ecosystems cannot be left to chance, but must be safeguarded by strict and sustained conservation management. Through its powerful appeal to the senses, the exhibition makes tangible the importance of decision-making and actions to protect these environments.

As visitors join the submarine's crew, throughout the mission they can consult thematic displays that delve into the science. These display cases present measuring and analysis tools and emblematic objects from prince Albert I's scientific campaigns that became benchmarks in oceanography. From the mezzanine, visitors can enjoy an excellent view of the suspended skeletons of marine mammals from the museum's collection.

TODAY, 2025

4

MY OCEANO MED

After a dreamlike dive into a Marine Protected Area, how can you not be inspired to take action? The final part of the exhibition, MY OCEANO MED, shows how you can meet the challenge.

*** This interactive space encourages young and old alike to step up for the Ocean and to encourage public authorities and the private sector to take collective action.**

READY TO TAKE UP THE CHALLENGE?

Three large interactive panels of seascapes beckon visitors.

Choices for individual action are lit up on the floor.

Depending on the choice, a projection on the floor shows parallel actions for public authorities and companies.

These combined actions result in a fourth interactive panel of a healthy marine environment.

MY OCEANO MED: TURNING VISITORS INTO CHANGEMAKERS

The first three interactive panels allow visitors to experience different ecosystems: Posidonia seagrass meadows, coralligenous habitats, and open water. Yet these environments are empty, with the exception of a lone marine mammal seemingly lost in these impoverished deserts of biodiversity, the direct consequence of human activity.

Visitors can then choose a location: on the beach, in the sea, eating at home or in a restaurant, or doing something in their daily lives. By placing themselves on one of these labels on the floor, a choice of three actions that an individual can do (or avoid doing) appears. For example, someone at the beach can use eco-friendly sun cream; refrain from collecting sand, shells or pebbles; and pick up all their rubbish.

Then, if the visitor chooses to use eco-friendly sun cream, for example, they will discover actions that public authorities can take, such as banning cosmetics containing substances that are harmful to marine life, and actions that companies can take, such as developing ocean-friendly products. The aim is to illustrate a fundamental fact: while individual action is important, it is not enough to bring about lasting change in the relationship between humans and the Ocean. Collective action – involving individual, public and private stakeholders – is essential. The combination of these three sustainable actions then transforms into a cloud of bubbles that rises from the floor to the panel, which will then display in real time the positive impacts of the choices made on the flora and fauna. Visitors will see at first-hand how a simple act, coupled with the indispensable action of public authorities and businesses, can improve ecosystems.

Before their eyes, visitors will watch the ecosystems come to colourful life as a result of the actions taken, an example of what can be achieved in a well-managed Marine Protected Area.

In this interactive display, the visitor appears in the form of small sparkling fishes, which he or she can photograph with their mobile phone and scan a QR code embedded in the display. This releases a swarm of bubbles from the QR code and updates the number of individuals committed to the creation of Marine Protected Areas on the counter. A second counter displays the total number of challenges completed by participants.

AN INNOVATIVE WEB APP THAT ENCOURAGES ACTION

The MY OCEANO MED web app invites visitors to extend the experience beyond the walls of the Oceanographic Museum. Accessible via a QR code, in press advertising, on social networks, and in the museum, this interactive platform invites users to take up a series of challenges. These include those in the MY OCEANO MED room, enhanced by other features that are exclusive to the application.

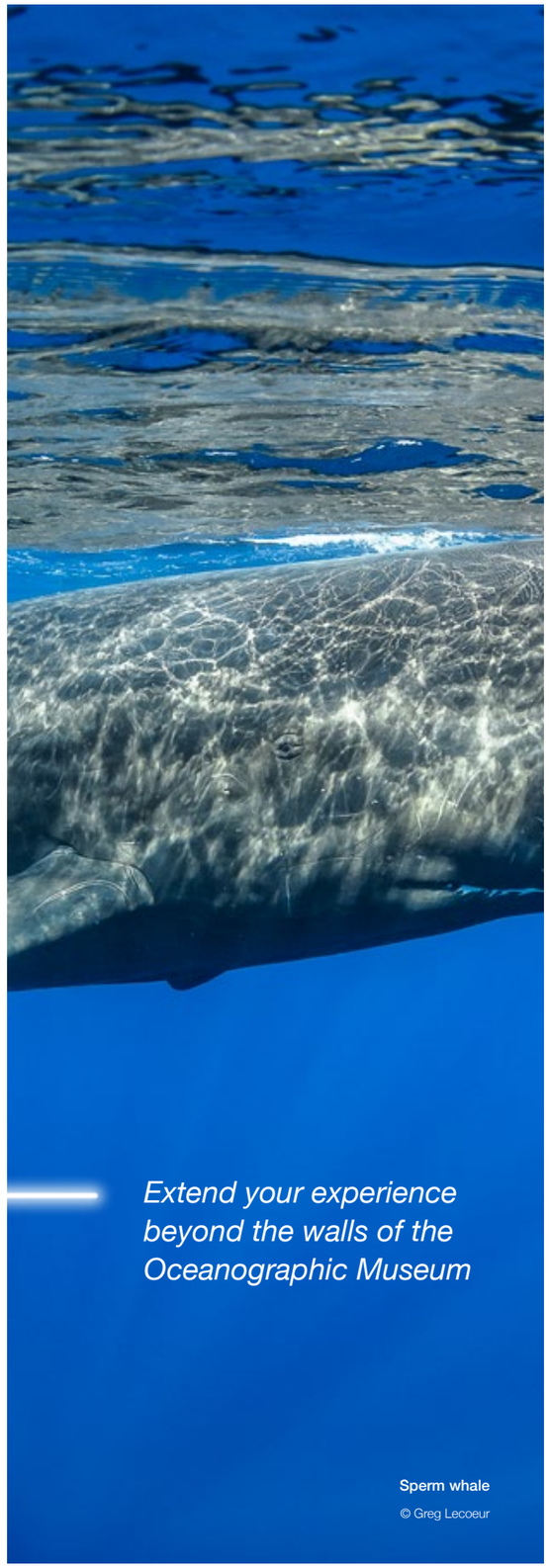
*** The app allows the user to create their own Marine Protected Area (MPA), which transforms as the challenges are met.**

Each challenge aims to raise the user's awareness of simple but high-impact actions and to explain why they are important. Users can also earn badges to improve the environmental condition of their MPA.

The app also serves as a guide to the exhibition, with lots of useful information about the museum and the MEDITERRANEAN 2050 exhibition. Users will be rewarded for their involvement with the opportunity to take part in a monthly prize draw, with a host of prizes to win.

The **MY OCEANO MED** app makes it possible to quantify and qualify visitor involvement and encourage action both inside and outside the museum.
This data will be displayed on a panel at the end of the exhibition, which will show the number of those who support creating Marine Protected Areas, corresponding to the number of scans of the QR code and the number of challenges completed in the room and on the app.

A motivating way to make collective commitment to the Ocean tangible!



Extend your experience beyond the walls of the Oceanographic Museum

Sperm whale
© Greg Lecoeur

EXHIBITION DESIGN PARTNERS

Oceanomania
Dreamed By Us Agency

Oceano Odyssey
Artisans d'Idées Agency

MyOceanoMed
Hovertone Agency

Mezzanine area of Oceano Monaco
Mazedia Agency

Artistic direction of the space–time concept
Dreamed By Us Agency

GREG LECOEUR

This press kit is illustrated with photographs by Greg Lecoeur, photographer of the *grande bleue*. He has been exploring the oceans for over 15 years, his powerful photographs bringing the wonder of the Ocean to viewers. This marine enthusiast from Nice is a committed environmentalist, using photography as a means to document the oceans and raise awareness of the need to protect them. His work has earned him over a hundred international awards, including the prestigious National Geographic "Nature Photographer of the Year" (2016) and "Underwater Photographer of the Year" (2020). The author of six books and the founder of the NGO "We Are Méditerranée", he beautifully captures marine life to raise awareness of the need to protect ecosystems, often returning to his native Mediterranean, the sea that first inspired him.

Graphic design: **Amandine Poncin**
Printed in April 2025 by **GS Communication Monaco,**
on 100% PEFC-certified paper.

Partners for the mezzanine area of OCEANO MONACO:

ACCOBAMS
Académie de la Mer (Academy of the Sea)
Académie Monégasque de la mer (Monaco Academy of the Sea)
Beyond Plastic Med (BeMed)
IAEA Marine Environment Laboratories
International Commission for the Scientific Exploration of the Mediterranean Sea (ICSEM)
International Hydrographic Organisation (IHO)
MedFund
Mediterranean Action Plan
MedPAN
Monaco Department of Education, Youth and Sport
Monaco Explorations
Monaco Ministry of Public Works, the Environment and Urban Development
Monaco Scientific Centre
Monaco Yacht Club
Monk Seal Alliance
National Association for the Protection of Nature (AMPN)
Pelagos Agreement
Plan Bleu
Prince Albert II of Monaco Foundation
Princess Charlene of Monaco Foundation
RAMOGE
Regional Activity Centre for Specially Protected Areas (SPA/RAC)

The Oceanographic Institute would like to thank:

Gouvernement Princier
PRINCIPAUTÉ DE MONACO

CFM INDOSUEZ
WEALTH MANAGEMENT

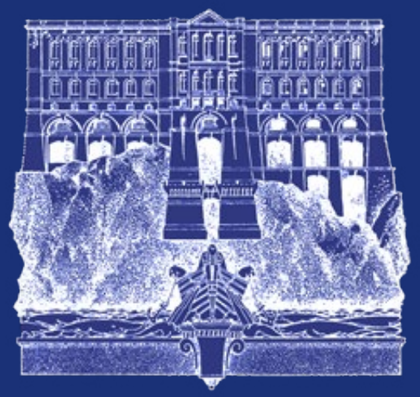
ROLEX

as well as its major individual donors

Media partners:

LE FIGARO MAGAZINE
SCIENCE&VIE
SCIENCE ET VIE DÉCOUVERTES
arte
TV5 MONDE
BFM NICE CÔTE D'AZUR

ABOUT THE OCEANOGRAPHIC INSTITUTE OF MONACO



TO PROMOTE KNOWLEDGE, LOVE AND PROTECTION OF THE OCEAN

The Oceanographic Institute, Prince Albert I of Monaco Foundation,

was founded in 1906 by prince Albert I, a passionate and visionary sailor. Recognised as a public interest organisation, the Foundation has been working to protect the Ocean for over a century. It brings together political, scientific, economic and non-profit stakeholders, as well as the general public, "to promote knowledge, love and protection of the Ocean". Supported by its two establishments, the Oceanographic Museum in Monaco and the Maison de l'Océan in Paris, the Oceanographic Institute is the driving force behind numerous national and international projects (symposia, exhibitions, educational programmes, etc.) aimed at promoting sustainable management of the Ocean.

The Oceanographic Museum,

built on the side of the legendary Rock of Monaco, welcomes more than 650,000 visitors a year. Beyond its remarkable architecture, the museum stands out for its world-renowned aquarium, its special exhibitions, and its linking of art and science. The Oceanographic Museum is a space of culture and exchange, organising and hosting international conferences where people come together to share their experiences of protecting the ocean.

INSTITUT
OCÉANOGRAPHIQUE
MONACO

PRACTICAL INFORMATION

OCEANOGRAPHIC MUSEUM OF MONACO

Avenue Saint-Martin
MC 98000 Monaco
+377 93 15 36 00

MEDIA CONTACTS

Alexandra Bardy
Head of media relations & communications
a.bardy@oceano.org
+377 93 15 36 82

Carla Debaste
Media relations officer
c.debaste@oceano.org
+377 93 15 36 45

oceano.org

With the support of Gouvernement Princier Principauté de Monaco, CFM Indosuez Wealth Management, Rolex as well as major individual donors