ECONOMIST IMPACT
World Ocean Initiative

Beyond the surface

The rising tide of marine protected areas

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A key ambition in the world of marine conservation is 30x30: to safeguard 30% of the world's ocean by 2030, whether as marine protected areas (MPAs) where human activity is restricted to a certain extent, or other types of conservation area.

By establishing regions that prioritise conservation and restrict human activity, ecosystems have the space to recover and flourish.

30% *of the ocean* *by* **2030**

However, time is running out. We need to establish MPAs at a much faster rate to achieve this goal.

110kph
Top speed of the sailfish

Significant investment of US$9 bn–12 bn is needed every year. This is up to 12 times more than the current annual spending on MPAs of $980m.[1]

Nevertheless, there are reasons to be optimistic. In 2022, annual philanthropic funding for marine conservation initiatives reached $122m, up from less than $50m in 2010.[2]

US$9bn–12bn
per year

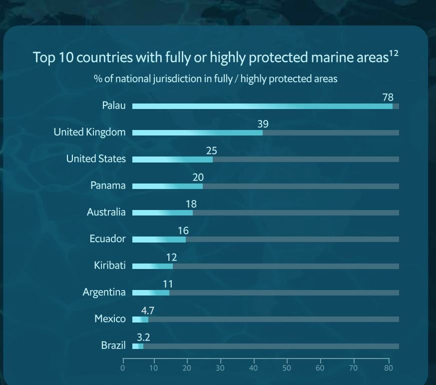
How much of the ocean is currently protected?

18,208 *marine protected areas*[3]

29.7m sq km *of ocean is protected*[4]

8.2% *of the ocean has MPA status*[5]

3% *is fully or highly protected from fishing impacts*[6]



39% *of the ocean is within national jurisdictions*[7]

18.7% *of this area is currently designated as MPAs*[8]

61% *of the ocean lies outside national jurisdictions*[9]

1.4% *of these international waters are currently designated as MPAs*[10]

55.4% *of the ocean's fully or highly protected areas are part of the world's five largest MPAs*[11]

What are the environmental benefits?

The majority of MPAs seek to establish conditions that enable marine species to thrive as they would naturally.

400 *species of coral*

Australia's Great Barrier Reef is the world's largest coral ecosystem. It supports over 1,500 species of fish, 4,000 types of mollusc and many marine mammals and sea turtles.[13]

A study along the Southern Great Reef found that fully protected areas of the Great Barrier Reef Marine Park had 30% more fish species and two and a half times the fish biomass than areas with no restrictions.[14]

+30% *more fish species*

2.5X *more fish biomass*[11]

Great Barrier Reef Marine Park, Australia
See case study

To conserve fragile habitats and species, some MPAs impose a complete restriction on human interference.

South Africa's Prince Edward Islands MPA observes a 12-nautical-mile sanctuary zone in which all human activity is prohibited apart from an annual research expedition.[15]

These strict measures are of global significance. The MPA is home to 44% of the global population of wandering albatross, and 30% of the global breeders of sub Antarctic fur seal.[16]

44% *of the global population of wandering albatross*

Prince Edward Islands MPA, South Africa
See case study

What are the wider benefits?

MPAs are powerful tools of the "blue economy". When designed and managed effectively, they maintain ocean health, ensure sustainable use of resources, and bring many other benefits to economies and people's lives. These can range from larger catches in adjacent fishing areas to increased ecotourism.[17]

A 2023 study of Mexico's Revillagigedo National Park found no detrimental impacts on Mexico's industrial fishing sector since the MPA was established in 2017. However, it has helped the MPA's 300 fish species to thrive, of which 36 are not found elsewhere.[18]

300 *species of fish*

Revillagigedo National Park, Mexico
See case study

What are the drivers of success?

Regular engagement with local communities, frequent monitoring, consistent funding and strong enforcement are key contributors to a successful MPA.

During the inception and designation phases of Tun Mustapha Park in Malaysia, an extensive survey of local residents was carried out, and a community officer was appointed to gather feedback.[19, 20]

500 *local residents*

58 *villages*

Tun Mustapha Park, Malaysia
See case study

The vastness of some MPAs can create monitoring and surveillance challenges. Nevertheless, regular data collection is essential for assessing an MPA's environmental, economic and social outcomes.

Papahānaumokuākea Marine National Monument in Hawaii is monitored via 13 projects, and includes human impact surveys, acoustic monitoring and a maritime heritage survey. Regular data is also collected on many marine species, such as monk seals and green sea turtles.[21]

Hawaiian monk seals can hold their breath for **20 minutes**

and dive up to **550 metres**

Papahānaumokuākea Marine National Monument, Hawaii, USA
See case study

MPAs require a sustainable, long-term funding mechanism to ensure they have sufficient resources to meet their management needs and maintain staff capacity.

Tubbataha Reefs Natural Park in the Philippines developed a comprehensive funding model in which revenues from tourism and conservation fees are combined with funding from government, NGOs and private organisations.[22]

Sources of funding for Tubbataha Reefs Natural Park over the last five years

Tubbataha Reefs Natural Park, Philippines
See case study

Protecting an MPA's integrity requires strong enforcement with clear penalties that are proportionate to the offence.

In the St Kilda Special Area of Conservation (SAC) and Special Protection Area (SPA) in Scotland, non compliance can result in fines of up to £50,000 (US$60,700) and even indictment.[23]

£50,000 *maximum fine for non-compliance*

St Kilda, Scotland
See case study

Charting a new course: a framework for assessing MPA effectiveness

While there is no universal compass to guide MPA design, there are consistent measures that underpin their success.

Economist Impact, supported by Blancpain, has developed a new framework to assess the effectiveness of MPAs and other types of marine conservation area.

MPA assessment framework

Pillar 1: MPA design and governance	Pillar 2: Environmental, economic and social outcomes
Legal and administrative systems	Environmental outcomes
MPA design and structure	Economic outcomes
MPA protection	Social outcomes
Institutional arrangements	
MPA monitoring and data	
Stakeholder engagement	
MPA performance	

Go beyond the surface to explore our analysis of ten diverse MPAs and marine conservation areas around the world.

https://impact.economist.com/ocean/beyond-the-surface

- Abéné Marine Protected Area, Senegal
- Galápagos Marine Reserve, Ecuador
- Great Barrier Reef Marine Park, Australia
- Gwaii Haanas National Marine Conservation Area Reserve & Haida Heritage Site, Canada
- Papahānaumokuākea Marine National Monument, Hawaii, USA
- Prince Edward Islands Marine Protected Area, South Africa
- Revillagigedo National Park, Mexico
- St Kilda Special Area of Conservation and Special Protection Area, Scotland, UK
- Tubbataha Reefs Natural Park, Philippines
- Tun Mustapha Park, Malaysia

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Footnotes

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