

# 50 marine sanctuaries in Spain

Proposal for strictly protected marine areas





OCTOBER 2023

# Contents

What are strictly protected marine areas? .....	3
Criteria for selecting strictly protected areas .....	4
EU Biodiversity Strategy: target of 10% strict protection by 2030 .....	5
Situation in Spain .....	6
Solutions for exemplary strict protection .....	7
Proposal for strictly protected marine areas .....	9
References .....	11

Cover photo: © OCEANA / Carlos Suárez.

All photos are © OCEANA unless specified otherwise in the caption. The information contained in this report may be reproduced provided that © OCEANA is acknowledged as the source.

Funded by the European Union, Stiftung Drittes Millennium, the Pew Bertarelli Ocean Legacy Project, the Becht Family Charitable Trust, Blue Nature Alliance and other funders. Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the funders. Neither the European Union, nor the Pew Bertarelli Ocean Legacy Project, nor the Becht Family Charitable Trust, nor the Blue Nature Alliance, nor other funders can be held responsible for them.



In collaboration with:





© OCEANA / Carlos Suárez



## WHAT ARE STRICTLY PROTECTED MARINE AREAS?

Marine protected areas (MPAs) are the best tool for ocean conservation, if they are properly managed. Their purpose is to protect the marine environment and the habitats and species that live within it. Their benefits are well-known and for that reason MPAs have been established in all the seas of the world, as is the case with protected natural areas on land. However, MPAs only are effective when human activities within or around them do not have negative impacts on the marine ecosystems. In other words, it is necessary to avoid any damage to the ecosystems that make up those areas. Even so, many MPAs are poorly managed, with a high level of permissiveness of harmful activities. Thus, they become 'paper parks';<sup>1,2</sup> their protection on paper does not translate into real protection at sea and so the indisputable ability of well-managed MPAs to restore marine environment is lost.

Types of MPAs vary, depending on their targets, management levels, and effectiveness in protecting the sea. They include **strictly protected areas**, which provide complete or a very high level of protection. Their objective is to safeguard high-value ecosystems within them (including geological elements) against negative impacts, and to allow them to recover in cases where this is necessary.<sup>3</sup> These areas

protect **pristine places, shelters for vulnerable species and habitats, essential spawning and breeding grounds, and carbon-rich habitats**, which are essential for the recovery of the sea's health and to combat climate change.<sup>4,5,6</sup> Strictly protected areas use strict management measures to conserve ecosystems of high natural value, whether they are in a good state of conservation or need to recover from impacts.<sup>7</sup> For all these reasons, strictly protected areas are considered to be the most effective protected areas for both conserving and recovering sea life.<sup>5,8,9,10</sup>

There are several types of strictly protected areas, ranging from areas that are totally closed to any use (apart from non-damaging activities required for research, monitoring, and management) to areas in which certain strictly controlled uses are allowed. They are also referred to in different ways. The most common ones include the following terms: according to the IUCN, **strict nature reserve** (category *1a*) and **wilderness area** (category *1b*)<sup>3</sup>; according to *The MPA Guide*, **fully protected areas and highly protected areas**;<sup>11</sup> and, more generally, **no-entry zones** (without any activities) or **no-take zones** (without extractive activities).<sup>5,12</sup>



## CRITERIA FOR SELECTING STRICTLY PROTECTED AREAS

When selecting appropriate locations for establishing strictly protected areas, various criteria must be taken into account in order to make the areas as effective as possible. These criteria include the following:

### > Size:

The effectiveness of MPAs (including strictly protected areas) depends on both the level of protection assigned to them and their size, which should be determined based on an ecosystem approach.<sup>13</sup> In this regard, scientific studies show that the larger the marine reserve, the more benefits it generates, although small reserves can also be beneficial if their size is appropriate for the ecosystems they are aimed at protecting.<sup>14</sup> The benefits of larger MPAs include, in particular, greater abundance and larger size of the species inhabiting them and increased resilience of those species to negative impacts.<sup>11,15</sup>

### > Permitted uses:

Strictly protected areas are not necessarily areas closed to all access, as noted in the [EU Biodiversity Strategy for 2030](#).<sup>7</sup> According to the IUCN and *The MPA Guide*, both scientific and recreational use may be permitted in strictly protected areas, although always in a limited and regulated way.<sup>3,11</sup> In certain strictly protected areas, some subsistence activities are permitted, provided that their impact is minimal.

### > Ecosystems:

The EU has indicated those ecosystems that Member States must prioritise for strict protection.<sup>16</sup> This allows concrete areas to be defined and for their designation to be put in motion immediately. Priorities for strict protection include **carbon-rich ecosystems**, such as seagrass meadows and **other ecosystems of high natural or potential value**, particularly habitats that provide ecosystem services (climate regulation or coastal protection, among others), or zones that are essential for threatened species, such as reproduction and nursery areas.



The common denominator of all strictly protected areas is their objective of **protecting or re-establishing features and ecological processes** in zones of high natural or potential value. Additionally, extractive or other harmful activities are prohibited within these areas, although some activities may be permitted that have minimal impacts and are carried out under completely controlled conditions. Such activities will always be prohibited in areas where there are species or habitats that may require full protection, because of their high level of vulnerability or need for restoration, or that serve as reference areas for research.



## EU BIODIVERSITY STRATEGY: TARGET OF 10% STRICT PROTECTION BY 2030

In the face of the current crises of biodiversity loss, ecosystem degradation, and climate change, it is essential to have a resilient ocean. Strictly protected areas are the most effective tools for achieving this aim.<sup>8</sup> For this reason, both the United Nations and the EU have recognised the need to designate not only MPAs but also strictly protected areas.<sup>3</sup> Thus, a multitude of countries across the planet are committing to the designation of strictly protected areas, with the EU and Spain at the bottom of the world ranking in terms of total marine area that is strictly protected.<sup>17,18</sup>

### The EU defines strictly protected areas as follows:

*“Strictly protected areas are fully and legally protected areas designated to conserve and/or restore the integrity of biodiversity-rich natural areas with their underlying ecological structure and supporting natural environmental processes. Natural processes are therefore left essentially undisturbed from human pressures and threats to the area’s overall ecological structure and functioning, independently of whether those pressures and threats are located inside or outside the strictly protected area”.*<sup>16</sup>



The EU Biodiversity Strategy for 2030 has established a target of protecting 30% of the EU sea area by 2030, with **at least one third of these protected areas under strict protection**. In other words, a minimum of 10% of EU marine area should be strictly protected by 2030. Strict marine protection is currently far below the 10% target. The highest levels barely reach 1% in countries such as Sweden and France, where, despite such low levels, the high capacity of these areas to regenerate ecosystems is already being demonstrated.<sup>14,18,19</sup>

In order to reach the 10% strict protection target by 2030, the designation of strictly protected areas should begin immediately, based on the best scientific information available, in accordance with the natural values of each Member State. The situation is particularly urgent in countries that have no or almost no strict protection of their waters, as in the case of Spain. The sooner these designations start, the sooner we will see the benefits and recover healthy and productive seas.



## SITUATION IN SPAIN

Spain is known for its rich marine biodiversity and is the only EU Member State with three marine regions (Atlantic, Macaronesian, and Mediterranean), containing a huge variety of habitats and species. In 2020, the Spanish government acknowledged that only 0.2% of Spain's protected marine area was under strict protection.<sup>20</sup> According to the [Propuesta de Adecuación de la Red Natura 2000 marina](#) (the Proposal for the Adaptation of the Natura 2000 Marine Network) of the LIFE IP INTEMARES project,<sup>22</sup> Spain lacks strictly protected marine area, or any that it does have is negligible, if integral reserves designated within marine reserves of fishing interest are considered as strictly protected areas. That proposal also determined that Spain should reach at least 10% of its marine area under strict protection, transferring the commitment established for the EU as a whole to Spain's national waters.

Furthermore, the [Plan Estratégico del Patrimonio Natural y la Biodiversidad](#) (the Strategic Plan on Natural Heritage and Biodiversity)<sup>21</sup> sets out how Spain intends to meet its EU Biodiversity Strategy commitments, including the declaration of zones under strict protection. To achieve this, Spain will designate strictly protected areas both within existing MPAs and in newly created ones, proposing that such designations in existing MPAs be done by revising their management regime.<sup>21,22</sup> However, many existing MPAs lack management plans, even though in many cases, the six-year deadline for these plans, established by the Habitats Directive for Natura 2000 areas, has expired. In the case of new MPAs, it will take years to create management plans and, in the best scenario, to establish proper zoning that includes strictly protected areas.

Spain's role should be ambitious and exemplary, bearing in mind the richness of its marine ecosystems and its extensive marine area. The strict protection of at least 10% of Spanish waters will contribute significantly to the total strictly protected marine area in the EU. **By 2030, Spain should strictly protect at least 10% of each of its marine regions.** As a logical intermediate step to ensure the achievement of this target, Spain should designate



© OCEANA / Carlos Suárez

at least 5% of the sea area in each of its marine regions as strictly protected by 2025.

Given the short time frame and the almost non-existent area currently under strict protection, Oceana considers it is essential to designate strictly protected areas not only by reviewing existing protection, but also by urgently preparing management plans for the MPAs that still lack them. We also recommend designating strictly protected areas at the same time as creating new MPAs, using precautionary protection measures (Art. 23 of the Natural Heritage and Biodiversity Law).<sup>23</sup> Furthermore, strictly protected areas can be designated that do not necessarily lie within existing MPAs, if surrounded by appropriate buffer zones.<sup>12</sup>

The clear starting point in Spain is the existing MPAs, which are zoned according to areas with different levels of protection and management, including zones with particularly restrictive measures. Oceana considers that some of these zones could count towards the 10% target, if they comply with the objectives and management standards of strictly protected areas or were amended to do so, even if others do not comply with them. These standards include objectives related to ecosystem conservation, maximum protection, the prohibition of all extractive and harmful activities, and visits and other uses reduced to the minimum or not allowed. Other areas are not likely to meet the required standards.

## Zones that can be considered as strictly protected areas:

**Reserve areas** in national parks, where the maximum level of protection is granted, and use is strictly limited to scientific and management purposes.<sup>24</sup> The Cabrera Archipelago and the Atlantic Islands of Galicia are the only two national parks (out of the 16 that currently exist in Spain) with marine areas, and both have reserve zones.

## Zones that could be considered as strictly protected areas if they comply with, or are amended to comply with the objectives and management standards established for strictly protected areas:

**Restricted use zones** of national parks, according to their management of permitted uses, such as visits.

**Integral reserves** within (state and autonomous) marine reserves, according to their management of permitted uses, such as navigation. Ecosystem-based conservation objectives and management are necessary, and should extend beyond fisheries resources.

**Other highly protected zones** in protected spaces, such as marine reserves in natural parks, or natural monuments, according to their objectives and management of permitted.

## Zones that cannot be considered as strictly protected areas:

**Multiple use zones** that are only partially protected, or not protected at all, within spaces designated under any framework of protection – such as Natura 2000 areas, marine reserves, areas protected by regional agreements, or national and natural parks – should not be considered strictly protected.

A good example is El Cachucho MPA in the Cantabrian Sea, which has an ecosystem-based “maximum protection zone” with conservation and management objectives, but in which restrictions have only been introduced on bottom fishing, but not on other types of fisheries. This means that extractive activities are allowed, preventing this zone from being considered as a strictly protected area. However, it would be possible to designate strictly protected areas within El Cachucho immediately, on the basis of the extensive scientific information available about this area.



## SOLUTIONS FOR EXEMPLARY STRICT PROTECTION

### Selection of zones and time frames for action

- 1** Start the designation of strictly protected areas immediately and establish precautionary management measures as soon as they are designated.
- 2** Gather the best scientific information available on the main ecosystems to be strictly protected and on the areas where they are found, whether they already protected, in the process of being protected, or not yet protected. The LIFE IP INTEMARES project offers a unique opportunity to achieve this, through its scientific committee.
- 3** Establish the intermediate aim of 5% strict protection of Spain’s marine area by 2025, to ensure that a total of 10% protection can be achieved within the established timeframe. For this protection to be consistent and representative, it is important to strictly protect at least 10% of each marine region by 2030, considering the rich diversity and particularities of each one.

- 4 Expedite the preparation of pending MPA management plans while taking advantage of the designation processes for new MPAs to simultaneously designate strictly protected areas within them, by implementing precautionary protection measures.
- 5 Include all ecosystems worthy of strict protection, giving particular attention to ecosystems of high natural or potential value and carbon-rich ecosystems. Among these, it is worth highlighting ecosystems that are on national and international conservation lists because of their rarity or vulnerability. These include *Posidonia* seagrass meadows; kelp forests; coralligenous reefs; maerl beds; gorgonian aggregations (on rocky or sedimentary bottoms); coral and/or sponge aggregations; and the habitats of threatened species (with an emphasis on essential habitats, such as feeding, breeding and nursery grounds).
- 6 Consider all areas subject to restoration processes, whether active or passive, as strictly protected areas and manage them as such, in order to accelerate their complete recovery.
- 7 Consider the expansion of all existing strictly protected areas (see *Situation in Spain*), so that already protected ecosystems receive additional protection, or to extend these areas to encompass other important ecosystems in adjoining areas.

## Management measures

- 8 Establish buffer zones around all strictly protected areas to minimize external impacts.<sup>12</sup> Any of these impacts that are difficult to manage, such as pollution or noise, should not limit the designation of a strictly protected area, but additional measures should always be applied to eliminate these threats.
- 9 Ban, without exception, extractive and harmful activities; these are red lines for the management of strictly protected areas. The only way to protect ecosystems effectively is to ensure that these activities have no place in any type of MPA.<sup>1,2,3,11</sup>
- 10 Prohibit by default all uses, apart from those activities that are absolutely necessary for management (research, monitoring). This is to safeguard natural processes to the greatest extent possible, and maximise the possibilities of restoration, as necessary. This would represent a first type of strictly protected area, similar to IUCN category *1a*, or a fully protected zone (no-entry), such as national park reserve zones.
- 11 Allow certain recreational uses only on an exceptional basis, with authorization, and after a case-by-case analysis. This type of use is determined by factors such as the state of the area, the types of habitat and species, the size of the area, and its depth. It should be ensured that the use has practically no impact, occurs under fully controlled conditions, and that the state of the ecosystem and each of the protected habitats and species is monitored. This would represent a second type of strictly protected area, similar to IUCN category *1b*, or a highly protected zone (no-take), such as integral marine reserves or restricted use zones in national parks.







## PROPOSAL FOR STRICTLY PROTECTED MARINE AREAS

Oceana proposes a selection of 50 marine sanctuaries that we consider priorities for strict protection (Figure 1, below), spread across the three marine regions of Spain. These enclaves have been selected according to scientific information gathered from Oceana's expeditions and from campaigns, research, and studies carried out by various scientific institutions.<sup>i</sup>

**Together, these 50 proposed strictly protected areas cover 4.2% of Spain's exclusive economic zone** – with 99% of the area proposed for strict protection in national waters and the rest in autonomous waters. By marine regions, the proposed areas represent: 3.3% of the Atlantic region (14 zones); 3.1% of the Mediterranean region (25 zones); and 6.2% of the Macaronesian region (11 zones). The proposal includes areas that fully or partially overlap with existing MPAs, and others that lie outside them. It does not include existing MPAs that we consider could be defined as strictly protected areas (see *Situation in Spain*). The proposed zones have been delimited using polygons that contain some of the best known examples of important ecosystems to be protected (Figure 1).

In these places, we propose the protection of **ecosystems of high natural or potential value** found in Spanish waters, such as: seagrass meadows; kelp or macroalgal forests; maerl beds; coralligenous concretions; gorgonian forests (on both rocky and soft bottoms); aggregations of black, white, or tree corals; sedimentary bottoms with bamboo coral or sea pens; sponge aggregations (hexactinellid, lithistid or demosponges); oyster aggregations (on rock or sediment); crinoid beds; and other unique or essential habitats.

All of the proposed zones harbour ecosystems and long-lived species that can store significant amounts of **carbon**, such as seagrass meadows.<sup>25</sup> Many of these zones also contain muddy and sandy sediments that accumulate large quantities of organic matter from the water column, or from adjacent areas.<sup>26</sup> To ascertain the true importance

of each of these zones as carbon sinks, detailed studies should be carried out to establish the actual volume of carbon that they currently store and their accumulation capacity.

Finally, we include proposals for areas to strictly protect **geological elements**, such as seamounts, leaking gas zones (with or without chimneys and/or pockmarks) or paramoudras, as well as areas for the protection of **critically endangered species**, such as bamboo coral, fan mussel, and guitarfish.

Granting strict protection to the locations included in this proposal will not only safeguard the ecosystems and geological characteristics they harbour, but will also provide a fundamental boost to advance the process of strict marine protection in Spain.

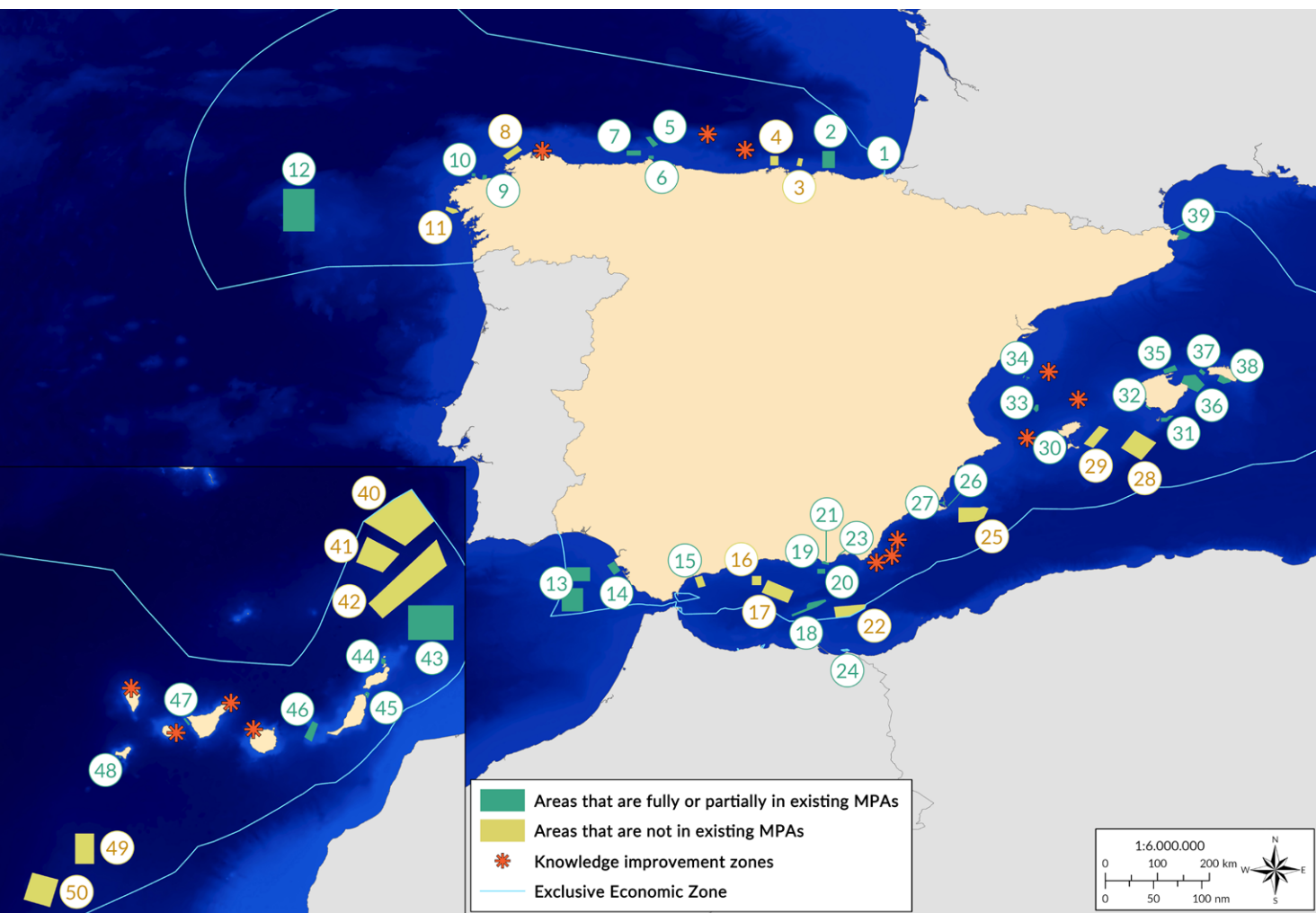


© OCEANA / Carlos Suárez

<sup>i</sup> Oceana has additional information on each of the proposed zones.

## 50 MARINE SANCTUARIES IN SPAIN

Proposal for strictly protected marine areas



### Areas that are fully or partially inside existing MPAs

- |   |  |                                       |                      |
|---|--|---------------------------------------|----------------------|
| 1 Fondos de Jaizkibel                   | 15 Placer de las Bóvedas y Cañón de Guadalmina | 31 P.N. Archipiélago de Cabrera       | 44 Isla Graciosa     |
| 2 Cañón de Capbreton                    | 18 Cresta de Alborán                           | 32 Cap Blanc                          | 45 Isla de Lobos     |
| 5 Cañón de la Gaviera (Cañón de Avilés) | 19 Adra  | 33 Stone Sponge Seamount              | 46 Amanay y Banquete |
| 6 Somos Llungo (Cabo de Peñas)          | 20 Seco de los Olivos                          | 34 Columbretes                        | 47 Punta de Teno     |
| 7 Cudillero (Cañón de Avilés)           | 21 Punta Entinas - El Sabinar                  | 35 Cap Formentor (Canal de Menorca)   | 48 Mar de las Calmas |
| 9 Baldaio                               | 23 Arrecifes de Roquetas de Mar                | 36 Capdepera (Canal de Menorca)       |                      |
| 10 Islas Sisargas                       | 24 Islas Chafarinas                            | 37 Cacahuete (Canal de Menorca)       |                      |
| 12 Banco de Galicia                     | 26 Cabo de Palos                               | 38 Cañón de So Bou (Canal de Menorca) |                      |
| 13 Volcanes de fango de Cádiz           | 27 Mar Menor                                   | 39 Golfo de León                      |                      |
| 14 Bajos de Chipiona y Rota             | 30 Arrecife barrera de S'Estany des Peix       | 43 Banco de la Concepción             |                      |

### Areas that are not inside existing MPAs

- |                                       |                              |             |
|---------------------------------------|------------------------------|-------------|
| 3 Castro Verde                        | 22 Cabliers y Catifas        | 42 Tritón   |
| 4 Bajos de la Maruca y Castro         | 25 Seco de Palos             | 49 Bimbache |
| 8 Bajos Bermeo y Niebla               | 28 Emile Baudot              | 50 Echo     |
| 11 Villar de Fuentes y costa da Morte | 29 Ausias March y Ses Olives |             |
| 16 Banco de Algarrobo                 | 40 Atlantis, Rybin y Anika   |             |
| 17 Djibuti y El Idrissi               | 41 Dacia                     |             |

**Figure 1.** Areas proposed by Oceana for designation as strictly protected areas. Knowledge improvement zones are areas for which there is some information indicating that they might be areas of interest for strict protection. However, information is still insufficient to determine their significance and define them.

## REFERENCES

- 1 Perry, A.L., Blanco, J., Fournier, N., Garcia, S., & Marin, P. (2020). *Unmanaged = Unprotected: Europe's marine paper parks*. Oceana, Brussels.
- 2 García, S., Blanco, J., Marín, P., & Fournier, N. (2021). *Parques de papel en España - Arrastre de fondo en áreas marinas protegidas*. Oceana, Madrid.
- 3 Day, J., Dudley, N., Hockings, M., Holmes, G., Laffoley, D.D.A., Stolton, S., Wells, S.M., & Wenzel, L. (2019). *Guidelines for applying the IUCN protected area management categories to marine protected areas*. IUCN, Gland.
- 4 Roberts, C.M., O'Leary, B.C., McCauley, D.J., Cury, P.M., Duarte, C.M., Lubchenco, J., ..., & Castilla, J.C. (2017). Marine reserves can mitigate and promote adaptation to climate change. *Proceedings of the National Academy of Sciences*, 114(24), 6167-6175.
- 5 Sala, E., & Giakoumi, S. (2017). No-take marine reserves are the most effective protected areas in the ocean. *ICES Journal of Marine Science*, 75, 1166-1168.
- 6 Laffoley, D., & Baxter, J.M. (2022). *Blue Carbon in Marine Protected Areas - Progress Review*. JNCC Report No. 709 (Review Report). JNCC, Peterborough.
- 7 European Commission. (2020). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. EU Biodiversity Strategy for 2030: Bringing nature back into our lives. COM(2020) 380 final.
- 8 Mangi, S.C., Owen, H., Wakeford, R., Hodgson, S., Richardson, H., Hamer, I., ... & Pita, P. (2022). *Research for PECH Committee - Costs and benefits of spatial protection measures as tools for fisheries management*. European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.
- 9 Sala, E., Lubchenco, J., Grorud-Colvert, K., Novelli, C., Roberts, C., & Sumaila, U.R. (2018). Assessing real progress towards effective ocean protection. *Marine Policy*, 91, 11-13.
- 10 Roberts, C.M., & Hawkins, J.P. (2000). *Fully protected marine reserves: a guide*. WWF Endangered Seas Campaign, Washington, DC and Environment Department, University of York, York.
- 11 Grorud-Colvert, K., Sullivan-Stack, J., Roberts, C., Constant, V., Horta e Costa, B., Pike, E.P., ..., & Lubchenco, J. (2021). The MPA Guide: A framework to achieve global goals for the ocean. *Science*, 373(6560), eabf0861.
- 12 Wolters, H., Galparsoro, I., Castro, R., Korpinen, S., Nurmi, M., Tsangaris, C., ..., & Uyarra, M.C. (2015). *Proposal for an assessment method of the ecological coherence of networks of marine protected areas in Europe*. Report 1208917-000-ZKS-0018. Deltares.
- 13 UNEP-WCMC. (2008). *National and Regional Networks of Marine Protected Areas: A Review of Progress*. UNEP-WCMC, Cambridge.
- 14 Bergström, U., Berkström, C., Sköld, M. (eds.), Börjesson, P., Eggertsen, M., Fetterplace, L., ..., & Wennhage, H. (2022). *Long-term effects of no-take zones in Swedish waters. Aqua reports 2022:20*. Swedish University of Agricultural Sciences, Lysekil.
- 15 Claudet, J., Osenberg, C.W., Benedetti-Cecchi, L., Domenici, P., García-Charton, J.A., Pérez-Ruzafa, Á., ..., & Planes, S. (2008). Marine reserves: size and age do matter. *Ecology Letters*, 11(5), 481-489.
- 16 European Commission. (2022). Commission Staff Working Document. Criteria and guidance for protected areas designations. SWD(2022) 23 final.
- 17 Marine Conservation Institute. (3 de marzo de 2020). *Frontrunners in global marine protection*. [Press release].
- 18 Marine Conservation Institute. (2020). The Atlas of Marine Protection. <https://mpatlas.org/countries/list>
- 19 Sveriges lantbruks universitet (SLU). (24 de enero de 2023). *No-take zones enhance fish populations and restore the marine environment*. [Press release].
- 20 Ministerio para la Transición Ecológica y el Reto Demográfico. (24 de septiembre de 2020). *España avanza en el cumplimiento de los objetivos nacionales e internacionales de conservación marina*. [Press release].
- 21 Ministerio para la Transición Ecológica y el Reto Demográfico. (2022). Real Decreto 1057/2022, de 27 de diciembre, por el que se aprueba el Plan estratégico estatal del patrimonio natural y de la biodiversidad a 2030, en aplicación de la Ley 42/2007, de 13 de diciembre, del Patrimonio Natural y de la Biodiversidad.
- 22 WWF. (2021). *Propuesta de adecuación de la Red Natura 2000 marina*. LIFE IP INTEMARES. WWF Spain, Madrid.
- 23 Jefatura de Estado. (2007). Ley 42/2007, de 13 de diciembre, del Patrimonio Natural y de la Biodiversidad.
- 24 Ministerio de Agricultura, Alimentación, y Medio Ambiente. (2016). Real Decreto 389/2016, de 22 de octubre, por el que se aprueba el Plan Director de la Red de Parques Nacionales.
- 25 Hendriks, I.E., Escolano-Moltó, A., Flecha, S., Vaquer-Sunyer, R., Wessellmann, M., & Marbà, N. (2022). Mediterranean seagrasses as carbon sinks: methodological and regional differences. *Biogeosciences*, 19(18), 4619-4637.
- 26 Sala, E., Mayorga, J., Bradley, D., Cabral, R.B., Atwood, T.B., Auber, A., ... & Lubchenco, J. (2021). Protecting the global ocean for biodiversity, food and climate. *Nature*, 592(7854), 397-402.



© OCEANA / Enrique Talledo

## OCEANA IN EUROPE

**European Headquarters:**

Madrid, Spain

[europe@oceana.org](mailto:europe@oceana.org)

**European Union Office:**

Brussels, Belgium

[brussels@oceana.org](mailto:brussels@oceana.org)

**Baltic and North Sea Office:**

Copenhagen, Denmark

[copenhagen@oceana.org](mailto:copenhagen@oceana.org)

[europe.oceana.org](http://europe.oceana.org)

 **OCEANA** Protecting the  
World's Oceans