European Environment Agency

8th Environment Action Programme

Designated marine protected areas in Europe's seas

8TH EAP HEADLINE INDICATOR, 2023

European Environment Agency

Marine protected areas in Europe's seas

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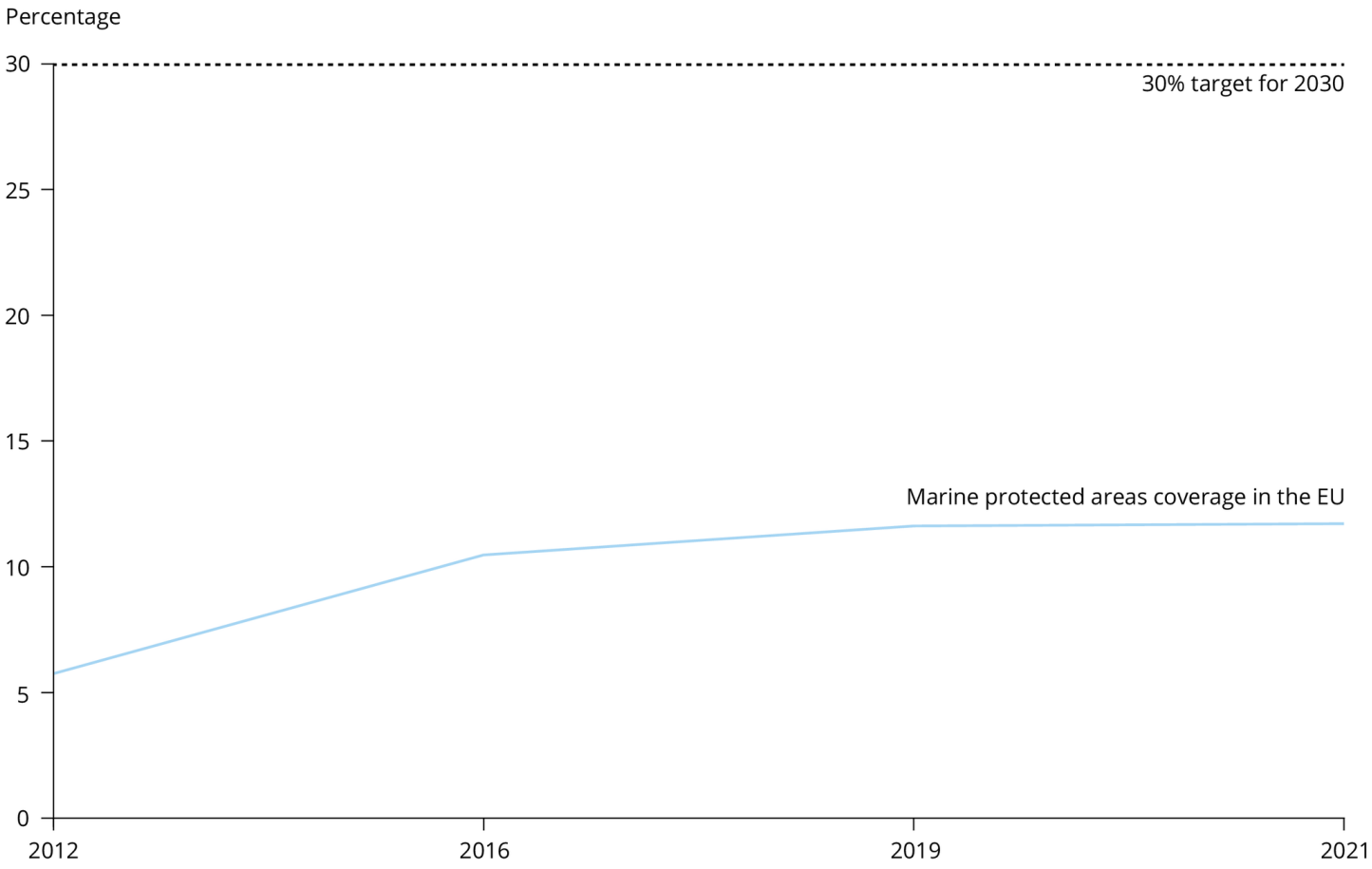
The EU has made substantial progress in designating new marine protected areas, both as part of the EU Natura 2000 network and through complementary national designations. As a result, marine protected area coverage more than doubled, to 12.1%, between 2012 and 2021. However, efforts will need to increase significantly to achieve the EU biodiversity strategy target of protecting at least 30% of EU seas by 2030, while also ensuring that all protected areas are effectively managed. Whether or not this target will be met is uncertain but also rather challenging.

Figure 1. Marine protected area coverage in the EU, 2012-2021



Source: EEA/HELCOM Secretariat/OSPAR Commission.

The conservation of coastal and marine areas is important for maintaining biodiversity and ensuring that ecosystems and their services are fully functional. Marine protected areas (MPAs) play a key role in conserving coastal and marine ecosystems, and provide significant economic and societal benefits and support local livelihoods.

To protect the EU's seas, the EU biodiversity strategy for 2030 set the target that, by 2030, at least 30% of the sea area should be legally protected (with 10% of the sea area to be strictly protected) [1].

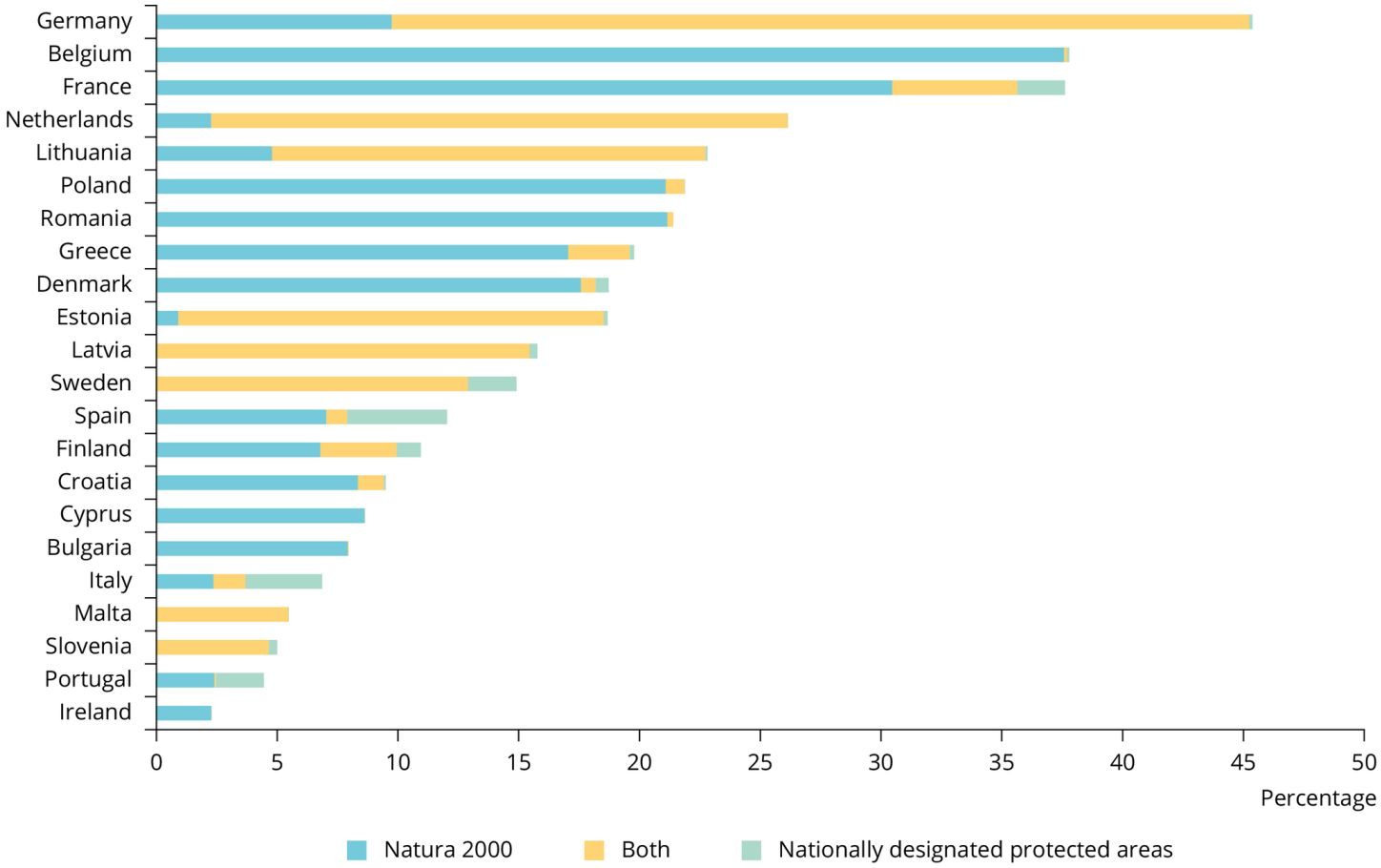
Over the last decade, the total area covered by MPAs in the EU has increased substantially — from 5.9% in 2012 to 12.1% in 2021. This is the result of both the expansion of the Natura 2000 network — a network of protected areas designated under the EU Birds and Habitats Directives — and protected areas established through complementary national designations.

Although this trend is positive, the area protected will need to expand at a significantly faster rate than it has in the last decade if the EU is to meet the 30% biodiversity strategy target by 2030. The submission of protected area pledges by EU Member States, expected by the end of February 2023 and subject to review in 2023, will provide initial insights into how realistic achieving this target is and identify any major gaps that remain.

Furthermore, the EU biodiversity strategy for 2030 highlights the importance of building a truly coherent trans-European network of protected areas through improving their connectivity. It will therefore be particularly important to base the designation of new protected areas in EU seas on sound scientific analysis, to ensure that these areas are ecologically representative and coherent, enhancing connectivity.

In addition, ensuring more effective management of individual MPAs and their networks should become a major focus in the coming years, as the designation of new MPAs alone will not guarantee the conservation of the EU's marine ecosystems. Although no comprehensive information is yet available to provide an overview of how effectively EU MPAs are managed, developing such indicators in the coming years will be essential for tracking progress towards implementing the targets of the EU biodiversity strategy for 2030.

Figure 2. Marine protected area coverage in EU Member States, 2021



Source: EEA.

By 2021, several EU Member States had made significant progress in protecting their marine ecosystems through the designation of MPAs. Germany, Belgium and France had designated more than 30% of their waters [2] as MPAs, while the Netherlands, Lithuania, Poland and Romania had expanded their MPA networks to cover more than 20% of their waters. In most countries, the majority of MPAs are part of the Natura 2000 network, with nationally designated MPAs adding to some countries' networks, most notably in Sweden, Spain, Finland, Italy and Portugal.

Although most Member States have made progress in designating new MPAs over the last 10 years, this progress has been slow in many countries. However, differences between countries are in part the result of the wide variation in ecological conditions between Europe's marine regions. While it is important that Member States continue efforts to define new MPAs at the national level, cooperation across regional seas will also be crucial to support the development of a coherent MPA network across the EU and achieve the target of protecting at least 30% of seas across the EU.

Supporting information

Definition

This indicator measures marine protected area (MPA) coverage at the EU and Member State levels and trends in this coverage over time. It considers MPAs reported as both Natura 2000 sites and nationally designated protected areas.

Methodology

Methodology for data collection

The data for nationally designated protected areas are delivered by Eionet partnership countries as spatial and tabular information and are updated every year. For Natura 2000 MPAs, the European database of Natura 2000 sites is used. This consists of a compilation of the data submitted by the Member States of the European Union. This European database is generally updated once a year to take into account any changes at national level by Member States. However, the release of a new EU-wide database does not necessarily mean that a particular national data set has recently been updated. For total coverage of EU waters, protected areas designated under the Regional Sea Conventions namely the Barcelona Convention, the Helcom Convention and the OSPAR Convention, were also included, using the latest available data from the databases published under these conventions.

Methodology for indicator calculation

The 'end2012', 'end2016 and 'end2019' MPA data (meaning the data reported in 2012, 2016 and 2019, respectively) were taken from the respective EEA and European Topic Centre on Inland, Coastal and Marine Water (ETC/ICM) report [3]. These were combined with new data sets produced in 2022 based on the latest available data. An overview of the data sets used to support the analysis is provided in the 'Data sources and providers' section (Table 1).

The methodology and the procedure used for selecting marine Natura 2000 and nationally designated sites from the tabular and spatial data are outlined in detail in Section 2.6 of EEA (2015)[4] and in Agnesi et al. (2017)[5].

The spatial statistical analysis was carried out in ArcGIS. The calculations were automated by a series of procedures developed in the Python programming language. The conceptual basis of the analysis procedures can be found in Agnesi et al. (2017)[5] and are therefore only briefly described here. The procedures included the creation of a feature class, for every protected area network, containing Natura 2000 and nationally designated MPAs for every Member State. The dissolve operation was used to calculate the surface coverage so as to exclude any overlap between sites. After obtaining the surface area per network, the overall surface of the combined networks was calculated through the union of the dissolved features of the different networks. Aroutine was written to assign the values of the distinct Natura 2000 and nationally designated sites and the overlapping portion of these networks. The surface area was extracted from each feature class and the percentage cover was obtained by relating the surface of protected area against that of the marine waters of each Member State.

Policy/environmental relevance

The indicator is a headline indicator for monitoring progress towards the goals of the Eighth Environment Action Programme (8th EAP). It will contribute mainly to monitoring progress towards the 8th EAP biodiversity-related priority objective set out in Article 2(e), to be met by 2030: 'protecting, preserving and restoring marine and terrestrial biodiversity and the biodiversity of inland waters inside and outside protected areas by, inter alia, halting and reversing biodiversity loss and improving the state of ecosystems and their functions and the services they provide, and by improving the state of the environment, in particular air, water and soil, as well as by combating desertification and soil degradation'[6]. The European Commission's communication on 8th EAP monitoring specifies that this indicator should monitor progress towards meeting the target to legally protect at least 30% of the EU's sea area by 2030[7].

The EU biodiversity strategy for 2030 contains specific targets for protected areas to be delivered by 2030, including expanding the current network, in line with the following targets:

· to legally protect a minimum of 30% of the EU's land area and 30% of the EU's sea area and integrate ecological corridors, as part of a true trans-European nature network

· to strictly protect at least a third of the EU's protected areas, including all remaining EU primary- and old-growth forests

· to effectively manage all protected areas, defining clear conservation objectives and measures, and monitor them appropriately.

This indicator directly tracks progress towards achieving the 30% target for protecting the EU's seas. The indicator is used by several EU monitoring mechanisms, such as the EU biodiversity dashboard and for the EU's Sustainable Development Goal (SDG) monitoring.

Other relevant EU policy instruments include the EU Marine Strategy Framework Directive (MSFD).

At the global level, new targets for protected areas have recently been adopted as part of the Kunming-Montreal Global biodiversity framework, including a target to effectively conserve and manage at least 30% of the world's coastal and marine areas.

Accuracy and uncertainties

Methodology uncertainty

The selection of marine sites from databases containing both terrestrial and marine protected areas was carried out using different approaches for the Natura 2000 network and the nationally designated protected area data sets. While Natura 2000 site information declares the presence of marine habitats or species, this is not the case for the national designations; therefore, the latter sites were selected based on whether they were reported as having marine ecosystems or not.

Data sources and providers

- HELCOM MPAs, Helsinki Commission (HELCOM)
- OSPAR Marine Protected Areas Network, OSPAR Commision
- EEA coastline for analysis, European Environment Agency (EEA)
- EEA marine assessment areas, European Environment Agency (EEA)
- Natura 2000 data - the European network of protected sites, Directorate-General for Environment (DG ENV)
- Nationally designated areas (CDDA), European Environment Agency (EEA)

Metadata

DPSIR

Response

Topics

 # Biodiversity

Tags

 # Designated areas **# protected areas** **# 8th EAP** **# CDDA** **# Habitats Directive** **# MAR004** **# Natura 2000**

Temporal coverage

2012-2021

Geographic coverage

Austria
Belgium
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands

Poland
Romania
Slovenia
Sweden
Portugal
Slovakia
Spain
United Kingdom

Typology

Descriptive indicator (Type A - What is happening to the environment and to humans?)

UN SDGs

Life below water

Unit of measure

Percentage

Frequency of dissemination

Once a year

Contact

info@eea.europa.eu

References and footnotes

1. EC, 2022, 'Biodiversity strategy for 2030', *European Commission* (https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en) accessed December 8, 2022.
↲
2. This indicator refers to marine waters based on 'EEA marine waters for analyses, Oct. 2022', which originates from the second edition of Marine waters used in Marine Strategy Framework Directive (MSFD), which was subsequentially harmonised with maps 'EEA coastline for analysis' and 'MSFD regions and subregions' from map 'Regional seas around Europe, Oct. 2022'. The 'Watercolumn and seabed' areas mark the area from the Member State coastline to 200NM from the coast except for the 'Watercolumn and seabed' areas of Greece, which extend from the coastline to 6NM from the coast. 'Seabed only' areas represent extended continental shelf beyond 200NM where some Member States have advanced seabed/subsoil claims.
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3. ETC/ICM, 2020, *ETC/ICM Report 3/2020: Spatial Analysis of Marine Protected Area Networks in Europe's Seas III*,
↲

4. EEA, 2015, *Spatial analysis of marine protected area networks in Europe's seas*, EEA Technical Report, 17/2015, European Environment Agency.
↲

5. Agnesi, S., Mo, G., Annunziatellis, A., Chaniotis, P., Korpinen, S., Snoj, L., Globevnik, L., Tunesi, L. and Reker, J., 2017, *Spatial analysis of marine protected area networks in Europe's seas II, Volume A, 2017*, ETC/ICM Technical Report 4/2017, European Topic Centre on Inland, Coastal and Marine Water.
a b

6. EU, 2022, Decision (EU) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a general Union Environment Action Programme to 2030, OJ L 114, 12.4.2022, p. 22–36.
↲

7. EC, 2022, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the monitoring framework for the 8th Environment Action Programme: measuring progress towards the attainment of the programme's 2030 and 2050 priority objectives, COM(2022) 357 final.
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