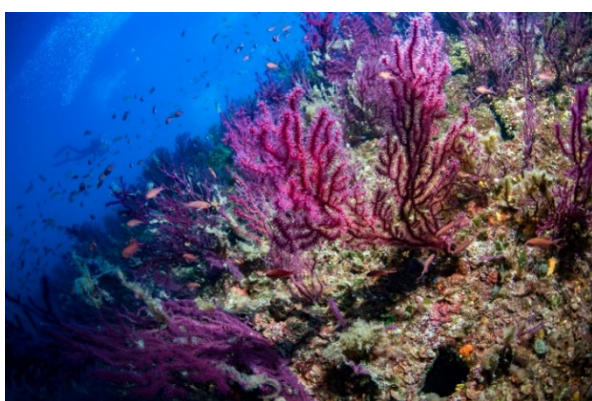


# Research for PECH Committee – Costs and benefits of spatial protection measures as tools for fisheries management

## KEY FINDINGS

- The European Union (EU) **Biodiversity Strategy** sets the target for protected areas in the EU at 30% of its sea area, one third of which need to be strictly protected. Understanding the impact of **spatial protection measures** therefore, is of particular interest to the EU.
- The objective of this study is to evaluate the concrete costs and benefits of three types of protected areas within the marine environment: (i) **Fish Stock Recovery Areas (FSRAs)**, (ii) **Marine Protected Areas (MPAs)**, and (iii) areas designated as **Other Effective area-based Conservation Measures (OECMs)**.
- There is evidence that *FSRAs*, *MPAs* and *OECMs* provide **economic benefits** to **fisheries** and **aquaculture** sectors in Europe.



## Background

The European Union (EU) **Biodiversity Strategy** sets the target for protected areas in the EU at 30% of its sea area, one third of which is to be strictly protected. Protected areas need to be established to fulfil the implementation of the EU's Common Fisheries Policy (CFP), the Marine Strategy Framework Directive (MSFD) and the Birds and Habitats Directives. Various designations of **spatial protection measures**

The present document is the executive summary of the study on "Costs and benefits of spatial protection measures as tools for fisheries management". The full study, which is available in English can be downloaded at: <https://bit.ly/3l8m8mr>

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are therefore used in EU waters. These have been established to fulfil different objectives such as biodiversity protection and sustainable fisheries management.

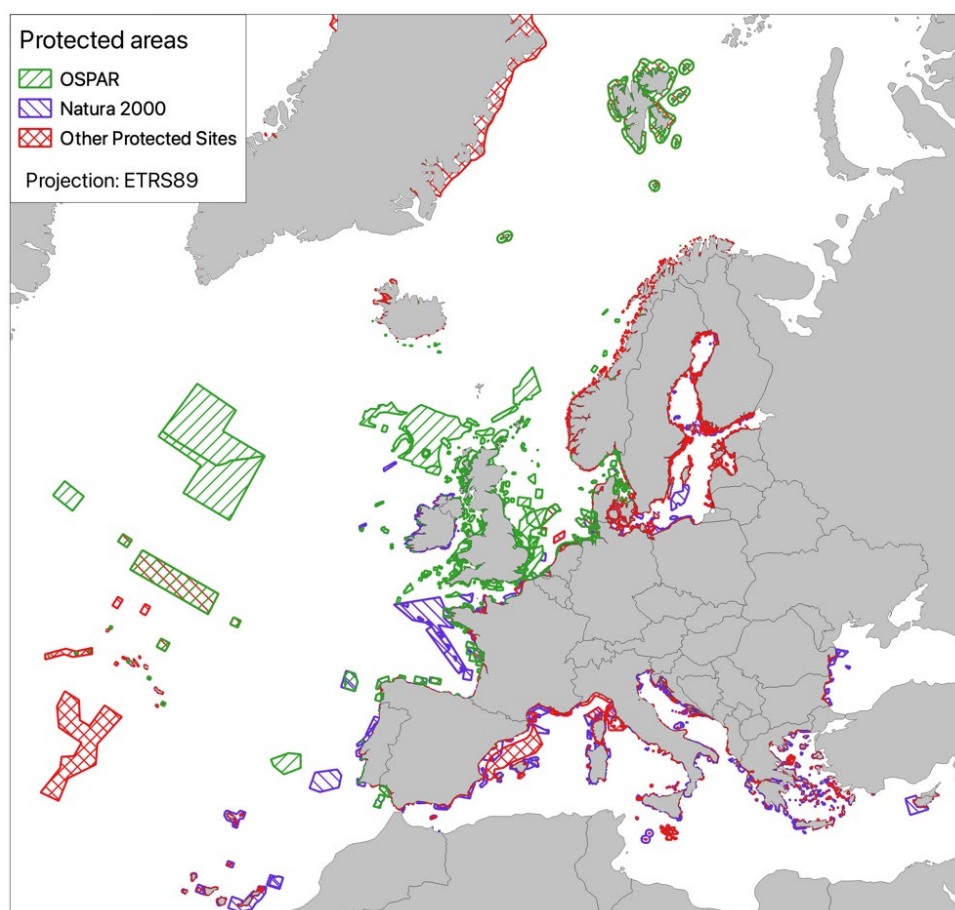
Understanding the impact of spatial protection measures is of particular interest to the EU. The impact of spatial protection measures on society is often measured using a **cost-benefit analysis** (CBA) framework.

The objective of this study is to evaluate the costs and benefits of **FSRAs**, **MPAs** and **OECMs** on fisheries and aquaculture, and assess how far fisheries **co-management approaches** can potentially help to achieve EU targets for these spatial protection measures. The study addresses **two aspects** of spatial protection measures in EU waters:

- It provides an **overview and maps** of the (i) existing spatial protection measures under *FSRAs*, *MPAs* and *OECMs* and the relevant obligations for Member States under the EU's Maritime Spatial Planning Directive, and (ii) critically reviews co-management arrangements evident in the various marine areas, and the state of play of the CBA framework in assessing spatial protection measures.
- It executes **site visits** to collect primary data and consultation with stakeholders at three case study sites (one for each designation), to assess the economic costs and benefits of existing spatial protection measures in EU waters as tools to manage fisheries resources.

The study seeks to make substantiated **conclusions and recommendations** on the costs and benefits of *FSRAs*, *MPAs* and *OECMs* as tools for fisheries management.

### Map 1: Overview of *Marine Protected Areas (MPAs)* in European waters



Source: European Environment Agency (EEA)

## Main messages of the study

The **legal framework** for the establishment of *FSRAs*, *MPAs* and *OECMs* derives from a mixture of **international law**, **EU law** and **national laws** of the Member States. The Maritime Spatial Planning Directive in particular establishes a framework for **Maritime Spatial Planning (MSP)** aimed at promoting the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources. As such, the basic requirement of the Directive is that Member States must establish and implement MSP through the establishment and implementation of marine spatial plans.

The majority of protected areas in marine waters in the EU are **multiple use MPAs**. Most of these have integral no-take zones, which can be classified as *FSRAs*.

Member States have freedom to determine their own **co-management mechanisms** for the use of spatial protection areas in accordance with national legislation. However, if such spatial protection areas impact capture fisheries, then it is necessary to align them with the requirements of the CFP Basic Regulation.

**MPA networks** designated under the Natura 2000, nationally designated sites and Regional Sea Conventions in the EU cover a surface area of **338 623 km<sup>2</sup>**, or 5.9% of Europe's seas<sup>1</sup>. While the majority of these are established to protect vulnerable species or habitats (as conservation tools), there are several where fishers have set aside areas to protect/recover fish stocks.

There is evidence that *FSRAs*, *MPAs* and *OECMs* provide economic benefits to fisheries and aquaculture sectors in Europe. All the **case studies** used here showed that they **benefited the fisheries and aquaculture sectors**.

Consultation with stakeholders in the case study sites shows that MPA **costs** are generally paid for through **public funds** by **government ministries and agencies**. Apart from the *OECMs*, the *FSRA* and *MPA* had **no income** generating activities.

The benefits of the *FSRA* include **stabilising catches** of common spiny lobster in the entire fishery, **increased abundance** of juveniles and **improved understanding** of the biology and population dynamics of lobsters through research and monitoring.

The benefits of the *MPA* include an **increase** in annual **income** and **profit** of local fishers which has led to an increase in **local employment** in the fishery sector, and an increase in **recreational opportunities** that are driving growth in tourism facilities, including restaurants and hotels.

The benefits of the *OECMs* include an **increase** in the **income** of **small-scale fishers** and the development of **ecotourism activities** that combine aquaculture with diving tourism around the cage farms.

The benefits to fisheries, aquaculture and other sectors evident in the case study sites indicate that not only does **biodiversity** fare better in **protected areas**, designating *FSRAs*, *MPAs* and *OECMs* is an **economic imperative** justifying the need for more marine areas to be strictly protected in line with the EU's Biodiversity Strategy.

## Recommendations

This study has the following recommendations:

- 1) **Data sharing improves** the evidence base and can result in better *MPA* planning and management decisions. There is a general need for government and fisher records to be made

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<sup>1</sup> Reker J (2015) Spatial analysis of marine protected area networks in Europe's seas. [EEA Technical report No 17/2015](#)

readily available so that community benefits and industry baselines regarding catch levels and impacts of spatial protection measures can be studied/known.

- 2) **Robust cost-benefit analyses** are needed, supported by **more disaggregated data** to decouple whether the observed direct benefits of the *FSRA* and *MPA* reported here are the result of the spatial protection measures alone or the result of other wider management measures.
- 3) **More funding** is needed to support (i) initiatives to better explain to society the benefits derived from the spatial protection measures with the involvement of the regional fisheries, (ii) surveillance and enforcement or regulations in *FSRAs* and *MPAs*, and (iii) undertake ecological and fisheries monitoring programmes, together with disaggregated social and economic data.
- 4) There is a need to capitalise on the **opportunity** presented by marine cage farms as **OECMs** as they represent a win-win situation to support both wild-capture and mariculture.
- 5) There is a need to raise **more awareness** of the spatial management measures to encourage compliance and more sustainable fishing practices.
- 6) **MPA research and monitoring**, typically underpins management decisions. There is need to improve such formal knowledge, and complementing it with stakeholder knowledge, to further enhance sustainable use of marine resources and increase buy-in in spatial protection measures.
- 7) In the EU, MPA designation has largely been driven directly by the requirements set out in legislation such as the Nature Directives, and therefore has had little involvement of stakeholders. Member States need to use the economic benefits of the spatial protected measures assessed here together with the **multi-objective process** of marine spatial planning to bring stakeholders together to **explore** closely **co-ordinated establishment** of more protected areas.
- 8) **More participative planning and enforcement**, where stakeholders participate in self-policing, can provide an effective supplement to formal enforcement, increasing the likelihood of management measure compliance by users and promote sustainable use.

## Further information

This executive summary is available in the following languages: English, French, German, Italian and Spanish. The study, which is available in English, and the summaries can be downloaded at: <https://bit.ly/3l8m8mr>

More information on Policy Department research for PECH: <https://research4committees.blog/pech/>

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