

Science for Environment Policy

Seagrass worth €190 million per year to Mediterranean fishing

Seagrass meadows are worth around €78 million every year to commercial fishing in the Mediterranean, a new study estimates. Their annual value to recreational fishing is even bigger, at an estimated €112 million. The researchers say that marine policies should consider the socioeconomic effects of the loss of seagrass, which provides habitat for many fishery species.

Beds of seagrass play a fundamental role in supporting populations of marine species that are caught by commercial and recreational fishers. As well as providing habitat, they act as nursery areas for juveniles, feeding grounds and refuge from predators. These meadows are protected under the EU's [Habitats Directive](#)¹ within designated areas, and EC [Regulation 1967/2006](#)² bans the use of mobile fishing gear over seagrass beds. Despite this protection, seagrass is in decline in the Mediterranean. The main seagrass species in this sea is *Posidonia oceanica*.

Placing an economic value on ecosystem services provided by seagrass can support arguments for their conservation. It can also help inform decisions on the costs and benefits of different marine development options. Therefore, this study developed a way of valuing the contribution of seagrass to Mediterranean fishing, both commercial and recreational. The research was conducted under the EU [KNOWSEAS](#) project³.

The researchers used an index, the 'Seagrass Residency Index', which gives different fishery species a score based on how much time they spend in seagrass meadows at different stages of their life, compared with other habitats. The score was then combined with information on the economic value of seafood caught by commercial fisheries to calculate the value of seagrass to this industry. For recreational fishing, the scores were combined with figures on how much is spent each year by anglers, for example, on equipment and transport, i.e. recreational fishing's contribution to the wider economy.

The results indicate that seagrass contributed between €58.3million and €91.5 million per year to commercial fishing in the Mediterranean, between 2006 and 2008 (the figure varied by year, depending on how much fish was landed and the price of the fish at the time). The average annual figure over the three years was €77.7 million, which was approximately 4% of the value of all seafood caught (in the range of €1.9 billion).

Certain species would have a significant economic impact for commercial fishing if seagrass were to further decline. These include cuttlefish (*Sepiidae*, *Sepiolidae*), scorpion fish (*Scorpaenidae*) and octopus (*Octopodidae*).

Approximately 4.5%, or €112.6 million, of annual angling expenditure (totalling around €2.5 billion) could be attributed to seagrass meadows, the researchers estimate. As well as cuttlefish and scorpion fish, declines in seabass (*Dicentrarchus* spp.) would have a particularly damaging economic effect, in terms of recreational fishing's expenditure, if seagrass were to further deteriorate.

The researchers say that these figures should be treated conservatively, owing to uncertainties in their data. For example, they did not account for specific effects of different species of seagrass or locations. Nonetheless, they say they have demonstrated that there is a clear cost associated with seagrass decline.

The EU's [Marine Strategy Framework Directive](#)⁴ requires the cost of marine degradation to be determined. The full economic value of seagrass beds could be determined if other ecosystem services were also accounted for, such as erosion protection. The study recommends aligning fisheries and seagrass management. In addition, it says that policymakers should take account of the socioeconomic implications of seagrass decline for both recreational and commercial fisheries.



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1. http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

2. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:409:0011:0085:EN:PDF>

3. KNOWSEAS (Knowledge-based Sustainable Management for Europe's Seas) was supported by the European Commission under the Seventh Framework Programme. See: www.knowseas.com

4. http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm