

Science for Environment Policy

Managing fishery footprints may benefit the seafloor

Trawling can disturb the seabed, impacting habitats and biodiversity. Results from a new study in the North Sea have shown that changes in the distribution of trawling activity – the result of fishers' choices among fishing grounds and the effects of fisheries' regulations - have greater implications for the overall state of seabed habitat than the protection that might be provided by proposed Marine Protected Areas.

To fully understand the impact of trawling on marine habitats, researchers used data from the European satellite vessel monitoring system. The system tracks the position and speed of fishing vessels, and the data can be used to predict where vessels are fishing. The researchers studied an area of 76,221 km², covering 11 proposed marine conservation zones (MCZs), and used modelling to estimate habitat sensitivity and impacts of trawling.

Most trawl fishing took place in small, intensively fished core regions of the study area. However, overall impacts on the seabed were greatest in the larger, less frequently fished areas around the margins of the study area. This may be explained partly by the fact that the greatest impact on the seabed occurs with the first pass of a trawler – subsequent passes in frequently fished areas have a lower impact.

There were variations in the location and extent of trawled areas over the years, due to factors such as regulations, fish migrations and oil prices. According to the researchers, these variations would have had a much bigger influence on the overall impacts of fishing on the seabed than any trawling restrictions that may be introduced in the proposed MCZs.

'Seabed integrity' is one of the categories used to define Good Environment Status under the Marine Strategy Framework Directive. In terms of meeting any targets to reduce the overall impacts of trawling in the seabed, the researchers suggest that it might be more effective to define fishing zones that limit activities to core areas and exclude the less frequently fished margins.

Efforts within Europe to conserve the marine environment with Marine Protected Areas (MPA) were largely separate from efforts to limit fishing to sustainable levels. However, they are now linked under the Marine Strategy Framework Directive¹. The researchers highlight that the management of trawling footprints has the potential to support the achievement of emerging environmental objectives at lower cost than MPA, allowing fisheries' management actions to contribute to both fisheries and environmental policy commitments.



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1. http://ec.europa.eu/environment/water/marine/directive_en.htm