{rokbox title=| Correlations between the state of the seabed and the intensity of bottom trawling :: Image: Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-assessment-bottom-trawl-impacts-2026-farriols-thumb-et-al.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-assessment-bottom-trawl-impacts-2026-farriols-et-al.jpg{/rokbox}

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Assessment of Bottom Trawl Impacts on the Status of Seabed Communities in European Seas.
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Abstract:Bottom trawling affects seabed habitats, but its large-scale impacts remain poorly quantified. Assessment of trawling impactsis essential to support monitoring and achieving sustainability objectives under international conventions, sustainable develop -ment goals, and seafood certification programs. We present a Europe-wide quantitative assessment of bottom trawling impacts,accounting for regional seabed-community sensitivity drivers, across the Baltic, Atlantic, Mediterranean and Black Sea continen-tal shelves. Using two risk-based indicators of seabed status—Relative Benthic Status determined as benthic community biomass relative to seabed fauna carrying capacity (RBS tot) and RBS sen (biomass of the 10% most sensitive fauna relative to carrying ca -pacity)—we found substantial regional and habitat differences. The Black, Baltic and Aegean-Levantine Seas showed low trawl-ing intensity and high seabed status across habitats. In contrast, the Western Mediterranean, Ionian and Central Mediterranean and Adriatic Seas were the most severely impacted. Trawling affected the sensitive species biomass fraction more strongly thanthe total community biomass. RBS tot was in good condition (here chosen as RBS > 75% for epifauna) for over 79% of habitat-ecoregion combinations. In contrast, RBSsen met this threshold in only 46% of these. A strong correlation emerged

between themean trawling intensity and RBStot and RBSsen , allowing the use of SAR to estimate ecosystem status. This relationship can sup-port decisions on where, and by how much, SAR reductions are needed to achieve good environmental status in regions where nodetailed assessment is available. Our approach provides a quantitative framework to balance fishery production with ecosystem sustainability, offering tools for environmental and fisheries management in Europe.

Keywords:beam trawl, benthic ecosystems, demersal seines, ecosystem approach to fisheries management, impact assessment,mobile bottom gears, otter trawl,scallop dredge.