Integrative, regional assessment of bottom trawling impact on benthic habitats in the east Atlantic.

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Based on a European union request, the International Council for the Exploration of the Sea (ICES) has explored and advised on indicators of pressure and impact of bottom trawling on the seabed, and of trade-offs in the catch and value of landings. Such assessment frameworks combine pressure (trawling intensity) with benthic habitats and their sensitivity to estimate the impacts on regional scale. The main differences between the indicators lay in their underlying scientific basis for determining sensitivity. Two approaches, the longevity and the population dynamic approach, are based on a statistical prediction of the longevity distribution of the benthic community, which is a practically very attractive way to capture sensitivity to trawling. The BH3 approach uses a categorical scoring approach for sensitivity. The BH2 relies on empirical observations to estimate changes in Margaleff diversity. In general, the use of continuous environmental variables, rather than the EUNIS habitat classes seemed promising for assessing impacts as they result in larger gradients in the sensitivity layer. Major steps forward in assessing the impact of bottom trawling were made, but improved parameterization and further ground-truthing is required, which will be further taken up in the ICES working group WGFBIT.

Key words: bottom trawling, benthos, footprint, sensitivity