

Assessment of the deep water trawl fishery off the Balearic Islands (western Mediterranean): from single to multi-species approach.

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We assess the bottom trawl fishery developed on the slope off Balearic Islands (western Mediterranean), from different sources of information: (i) data obtained during experimental bottom trawl surveys developed annually since 2001; (ii) daily sale bills from the bottom trawl fleet, available since 2000. Considering both hydrographical and geomorphologic conditions, the study area was divided in four geographical sectors. Uni- and multivariate techniques were applied to identify assemblages and their main species, and to investigate the influence of environmental variables in the slope communities. Fishery-independent and fishery-dependent indicators were calculated, both at community and specific level, for the assemblages identified. In both cases, they were summarized using the Traffic Light approach. Three assemblages have been identified in the slope trawl fishing grounds off the Balearic Islands: (1) the almost unexploited shelf break, where teleosts predominate; (2) the upper slope, where teleosts still predominate but crustaceans are also very important (with *Nephrops norvegicus* as target species); (3) and the middle slope, where crustaceans predominate (with *Aristeus antennatus* as target species). Depth was the main factor affecting the species composition of the assemblages, although other factors such as area, year and level of effort also affect. Indicators estimated from both set of data suggested an improvement in the state of assemblages on the upper slope, which can be related to a decreasing trend found in the fishing effort exerted in this depth range. Similar results were obtained for *N. norvegicus*, although the results suggest the influence of other factors than fishing impact in the state of this resource. Indicators from the middle slope showed differences for both sets of data, with very distinct results for *A. antennatus*. The characteristics of both data sources are discussed as responsible of these differences.
