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Fisheries effects of Atlanto-Mediterranean marine protected areas

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For decades fisheries management has utilised closed areas to encourage the rebuilding of excessively fished stocks. In recent years permanently closed areas, embodied by marine reserves and other types of marine protected areas (MPAs) have received renewed attention as a method for protecting vulnerable habitats and species. State of the art reviews have been numerous although the postulated hypotheses have been largely untested owing to the lack of ecological studies in this area. Furthermore, insufficient empirical evidence has been presented to support the effectiveness of protected areas to enhance adjacent commercial fisheries. Within the EU project EMPAFISH, commercial fisheries data from 16 established European MPAs, representing a broad spectrum of habitats, fisheries and fishery management regimes, have been assessed. Diverse fishery regimes were characterised and classified according to fishing and management attributes. For each location an appraisal of the trend in catch per unit effort (CPUE) of aggregated catch was undertaken for fishers operating in restricted areas of the MPAs and in their vicinity. Meta-analysis was employed to determine the patterns in CPUE across study sites. These trends were investigated in terms of the size of the respective MPA and the length of time elapsed since protection was established. Patterns in yields between zones of the MPA, representing levels of enforcement, were also investigated.