{rokbox title=|Map of the Balearic Islands (western Mediterranean) showing the sampling stations and the surface chlorophyll-a concentration and sea surface temperature (SST) during the sampling surveys, together with the vessel monitoring system (VMS) records of the bottom trawl fleet operating around the two major islands (Mallorca and Menorca). :: Image: Authors|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-respuestas-ciclo-vital-especies-quetglas-et-al-2016-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-respuestas-ciclo-vital-especies-quetglas-et-al-2016.jpg{/rokbox}

Antoni Quetglas, **Lucía Rueda**, Diego Alvarez-Berastegui, **Beatriz Guijarro**, **Enric Massutí**, 2016.
Contrasting Responses to Harvesting and Environmental Drivers of Fast and Slow Life History Species
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Abstract: According to their main life history traits, organisms can be arranged in a continuum from fast (species with small body size, short lifespan and high fecundity) to slow (species with opposite characteristics). Life history determines the responses of organisms to natural and anthropogenic factors, as slow species are expected to be more sensitive than fast species to perturbations. Owing to their contrasting traits, cephalopods and elasmobranchs are typical examples of fast and slow strategies, respectively. We investigated the responses of these two contrasting strategies to fishing exploitation and environmental conditions (temperature, productivity and depth) using generalized additive models. Our results confirmed the foreseen contrasting responses of cephalopods and elasmobranchs to natural (environment) and anthropogenic (harvesting) influences. Even though a priori foreseen, we did expect neither the clear-cut differential responses between groups nor the homogeneous sensitivity to the same factors within the two taxonomic groups. Apart from depth, which affected both groups equally, cephalopods and elasmobranchs were exclusively affected by environmental conditions and fishing exploitation, respectively. Owing to its short, annual cycle, cephalopods do not have overlapping generations and consequently lack the buffering effects conferred by different age classes observed in multi-aged species such as elasmobranchs. We suggest that cephalopods are sensitive to short-term perturbations, such as seasonal environmental changes, because they lack this buffering effect but they are in turn not influenced by continuous, long-term moderate disturbances such as fishing because of its high population growth and turnover. The contrary would apply to elasmobranchs, whose multi-aged population structure would buffer the seasonal environmental effects, but they would display strong responses to uninterrupted harvesting due to its low population resilience. Besides providing empirical evidence to the theoretically predicted contrasting responses of cephalopods and elasmobranchs to disturbances, our results are useful for the sustainable exploitation of these resources.

Keywords: