

Investigating dietary changes in the common dolphin (*Delphinus delphis*) in the Bay of Biscay over the last 20 years

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The short-beaked common dolphin (*Delphinus delphis*) is the most abundant delphinid in the Bay of Biscay (BoB). It is known to forage on the locally abundant species of small pelagic shoaling energy-rich fish (i.e., anchovy (*Engraulis encrasicolus*), sardine (*Sardina pilchardus*), horse mackerel (*Trachurus spp.*) on the neritic areas or myctophids in oceanic areas). Last years, an increase of common dolphins by-catch in various fisheries has been observed in the BoB, coinciding with a change in its spatial distribution (c.a. higher densities closer to the coast). In this study, we examined the temporal variation of *D. delphis* diet to outline the potential role of the feeding strategy in increasing the risk of capture. We analyzed 259 stomach contents coming from dolphins captured in the BoB to investigate the diversity and biomass of major preys identified between two periods (“former”: 1999 – 2006 and “recent”: 2017 – 2019) totaling > 60,000 prey items. The diet of the common dolphin was found to be still mainly composed of small pelagic shoaling energy-rich fish in the recent period. However, indicator species analysis revealed different characteristic species. Horse mackerel, squids (*Loligo spp.*), and blue whiting (*Micromesistius poutassou*) characterized the former period while anchovy, European sprat (*Sprattus sprattus*) and flatfish characterized the recent period, comforting the exploitation of more coastal feeding ground by the common dolphin. In addition, we highlighted a significant decrease in the mean size of prey ingested (sardines: from 18.2 to 15.7 cm and anchovy from 11.3 to 9.0 cm) between periods indicating a potential decrease in the energetic profitability of targeted prey to meet the high cost of living of dolphins. Comparison with fish stock assessments is now needed to understand whether these variations are a response to changes in prey availability and the location of more profitable foraging areas for common dolphins in the BoB.