EC-37. Short-beaked common dolphins *Delphinus delphis* from European Atlantic waters segregate in space and time according to different ecological tracers

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For the establishment of management units, ecological tracers can provide relevant information on population structure at shorter time-scale resolutions than the genetic markers which are traditionally used. This study aims to evaluate geographical variations in ecological tracers measured in short-beaked common dolphin (*Delphinus delphis*) samples from various regions in the North-East Atlantic to investigate the ecological structure of the population for time scales covering from a few weeks to several years. This species is subject to high rates of bycatch in fishery engines each year, especially in neritic waters of the Bay of Biscay (BoB), requiring a major effort to understand possible exchanges with adjacent waters. Between 2017 and

2024, 117 stranded individuals were collected by stranding networks in four European countries (France, Spain, Portugal and Ireland). In addition, 124 biopsies were collected on individuals from offshore waters in the BoB (beyond the continental slope) and around the Madeira archipelago, and 13 biopsies were collected on individuals over the continental shelf of the BoB. Carbon, nitrogen, and sulfur isotope ratios in skin as short-term tracers, as well as ratios of different families of organic contaminants (e.g. polychlorobiphenyls, dichlorodiphenyltrichloroethane and its metabolites) in blubber as long-term tracers, were analyzed. The results showed significant differences in isotope compositions and organic contaminant ratios between individuals from strandings or biopsied in neritic waters on the one hand and individuals biopsied in oceanic waters on the other hand, highlighting two main preferential feeding habits at both short and long-term scales. However, some movements between the two habitats cannot be excluded. Overall, this study provides useful information on the ecological segregation of the population between neritic and oceanic waters, which can have implications in the refinement of management units for the common dolphin living in European waters.