

Publication MIO : Sebastián Biton-Porsmoguer (MIO) , Daniela B?naru (MIO), Charles F. Boudouresque (MIO), Ivan Dekeyser (MIO),,,Marc Bouchoucha, Françoise Marco-Miralles, Benoît Lebreton, Gaël Guillou, Mireille Harmelin-Vivien (MIO) - Mercury in blue shark (*Prionace glauca*) and shortfin mako (*Isurus oxyrinchus*) from north-eastern Atlantic : implications for fishery management

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Abstract

Pelagic sharks (blue shark *Prionace glauca* and shortfin mako *Isurus oxyrinchus*) caught by long-line Spanish and Portuguese fleets in the NE Atlantic, were sampled at Vigo fish market (Spain) for total mercury (Hg) analysis. Hg concentration in white muscle increased with size and weight in both species, but at a higher rate in shortfin mako than in the blue shark. No difference was found with sex, year and season. Spatial variation was observed in the blue shark with higher Hg values in the North of the Azorean archipelago, but not in the shortfin mako. These high-level predators are particularly susceptible to bioaccumulate contaminants (Hg) in their tissues (muscle). However, a significant positive relationship between Hg concentration and trophic level ($\delta^{15}N$) of individuals was observed only in the shortfin mako. Most sharks landed were juveniles which presented Hg concentration lower than the maximum limit allowed by the European Union (1 mg kg⁻¹ wet weight) for marketing. However, concentrations above this threshold were most recorded in blue sharks larger than 250 cm total length (TL) and in shortfin makos larger than 190 cm TL, raising the question of the commercialization of large-sized individuals.