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Preliminary analysis on marine mammal interactions in SIOFA fisheries targeting Patagonian toothfish from the EU-Spain longline fleet

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Abstract	<p>The specialised behaviour of killer whales (<i>Orcinus orca</i>) and sperm whales (<i>Physeter macrocephalus</i>) feeding on longline-caught fish, known as 'predation', which has been linked to the development of longline fisheries targeting Patagonian toothfish (<i>Dissostichus eleginoides</i>) in the Southern Ocean, appears to be increasing in the SIOFA convention area. The interactions between these two odontocete species with fishing vessels leads to decreasing fishing yields and increasing uncertainty as to the proportion of the catch lost to predation. This, in turn, may affect the accuracy of Patagonian toothfish population dynamics models and, consequently, the effectiveness of stock management strategies.</p> <p>Using scientific observer data from 2022 to 2024 on the Spanish longline fishery for Patagonian toothfish in the Del Cano Rise and South Indian Ridge fishing grounds, within the SIOFA area, this document evaluates the levels and interannual trends of interactions with sperm whales and killer whales. Observations of these interactions, without being conclusively identified as depredation events, are assessed as proportions of fishing sets and spatial grid cells within the fishing areas, as well as through the relative catch loss index for Patagonian toothfish.</p>

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Recommendations

- Enhance Data Collection by Onboard Observers – Improve the data recording protocols for observers aboard the Spanish longline fleet to ensure they can accurately document interactions with killer whales and sperm whales, distinguishing between different behaviours, including depredation events.
- Adopt the actions already recommended in SC -05-21 for longline fishing vessels subject to interactions with killer whales, to reduce the risk of spreading predation behaviour:
 - a) stop trawling and remove the buoy from the line when killer whales are sighted,
 - b) move at least 30 nautical miles away,
 - c) not turn any line within 30 nautical miles of the initial sighting point; and
 - d) resume longline tacking once killer whales are absent.

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