
Selectively releasing sharks from Purse Seine gear: development and testing a release panel concept

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Abstract

A research cruise was conducted in the central equatorial Pacific onboard a tuna purse seine vessel during 2012 in support of the International Seafood Sustainability Foundation's #BycatchProject; formed to develop technical options to reduce bycatch in industrial tuna fisheries. A range of studies were undertaken to test ways to avoid undersize tuna and to reduce/minimize the incidental mortality of sharks, sea turtles and other finfish that associate with drifting FADs used by tuna purse seine fisheries. Preliminary data suggested that ways to avoid or selectively release non-target species from the net should be prioritized, as condition and post-release survival at latter stages of purse seining is very low. Dive surveys conducted inside the net documented a clear separation of tuna by size and species and between tuna and bycatch suggesting a potential for selective release. Silky sharks (*Carcharhinus falciformis*) were observed to aggregate in a pocket of net that forms during the latter stages of net retrieval where an experimental release panel was tested; designed to be opened and closed without disrupting the fishing operation and with low risk of losing target catch. Only a small number of sharks exited the panel during trials but groups of sharks were observed very close to the opening suggesting they may exit if appropriate stimuli could be applied or different environmental conditions prevailed. Although the panel failed to release significant quantities of non-target catch during the research cruise we feel that further refinement of this concept with additional testing and experimentation is warranted.

Keywords: bycatch mitigation, tuna purse seine, FAD, silky shark, release panel

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