
Behavior of target and non-target species when encircled by tuna purse seine gear

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Abstract

Observational and photographic data were collected from 31 sets made from a tuna purse seine vessel during the International Seafood Sustainability Foundation's (ISSF) WCPO #BycatchProject. 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. Untested assumptions relating to natural behavior of encircled finfish and sharks in purse seine gear were clarified; divers observed spatial separation of target tuna species by species as well as size. Additionally, non-target species consistently separated themselves from target species and remained shallow. This species segregation was consistently observed during all sets and lasted throughout the duration of the haul until the beginning of sacking was reached, at which point individuals and schools were forced to intermingle. These observations provide much needed insight to behavioral patterns of non-target and unwanted species, which may inform further research and development of options to selectively release or sort these from the net before these animals sustain mortal injuries. < !-EndFragment->

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