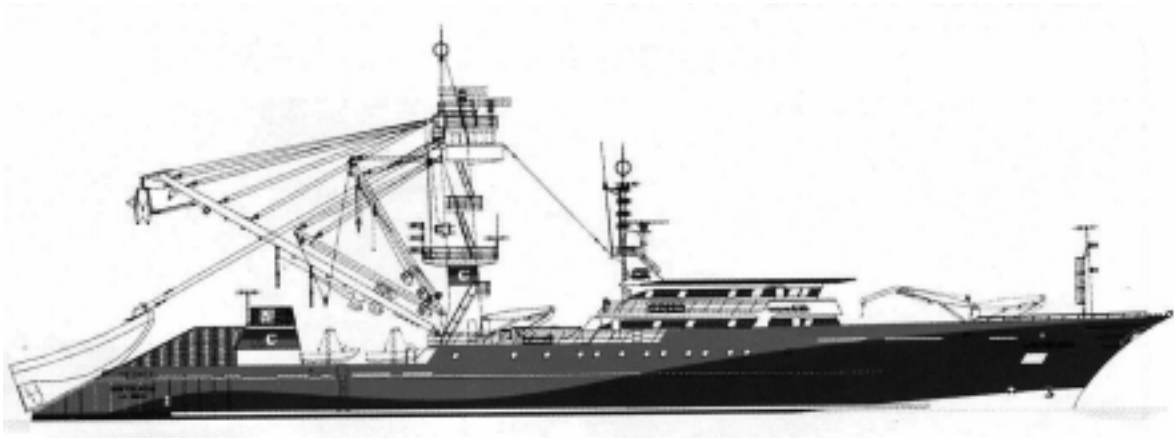


FTWG-7



Reducing the take of undersize tuna and bycatch in drifting FAD sets: project description



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The use of Fish Aggregation Devices (FADs) in the commercial tuna purse-seine fishery has increased substantially over the past few years in the Eastern Tropical Pacific and Eastern Pacific Ocean in terms of both the number of these devices and the area extent of their use. Catches associated with natural logs and FADs include larger numbers of juvenile tunas and greater proportions of skipjack (relative to yellowfin and bigeye) as well as higher levels of by-catch than sets on free schools or dolphin-associated schools. Due to concerns about the conservation of by-catch species as well as possible ecological effects on target species, the Inter-American Tropical Tuna Commission and the Center for Marine Biodiversity and Conservation have begun an investigation into means for reducing the by-catch from FAD sets.

Our approach takes two forms:

(1) We plan to test several designs for sorting grids, panels built into the seine with openings sized to permit the escape of small tunas and other species. Trials will be conducted at sea from a working commercial fishing vessel, and escaping fish (via the sorting grids) will be recaptured and held with a sample from within the net to evaluate post-escape mortality. Ideally, a design that is effective in releasing small fishes without substantially increasing the effort required of the fishermen will result. Such a modification will not effect the release of larger species (e.g. sharks, billfishes), but should reduce the fishing mortality of small tunas and other species.

(2) We plan to conduct visual observations in the field on FAD- and log-associated fishes before and during purse seine sets. Behavioral information on the spatial and temporal patterns of association should help both with the design of purse-seine sorting grids and developing potential fishing modifications for the purpose of reducing by-catch. For example, if smaller fishes remain near the surface throughout the fishing process, the gear should be designed to target fishes near the corkline rather than deeper in the net. The behavior of larger, non-target species may also suggest means of releasing them before the net is sacked up.

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