



Effect of Bycatching in Marine Species

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DESCRIPTION

There is an increasing necessity for ecosystem-based fisheries management. Proper assessments of the impacts of pelagic longline fisheries on non-target species are required. Both global and regional frameworks led by the Food and Agriculture Organization of the United Nations (FAO) have been created to limit the unintentional catch of seabirds and to manage shark stocks. To prevent sea turtle deaths in longline and other fisheries, the FAO published rules. In addition to existing sea turtle conservation strategies, it is vital to further reduce fishery-related sea turtle bycatch using holistic approaches. By using blue-dyed bait, seabird bycatch can be prevented since it makes bait less visible or enticing to seabirds. Because sea turtles have well-developed colour vision, colour changes of bait or fishing gear may alter their feeding behavior, as may differences in bait species. Few studies, however, have examined the colour and type of bait as a mitigating strategy to lower sea turtle bycatch in longline fisheries. Therefore, a deeper analysis of the impact of bait species and colour on sea turtle catches is required. Also, it's important to assess the possible effects of altered bait on both target and non-target fish species' catch rates.

An enormous amount of work has been put in over the past few decades to quantify and minimize bycatch in marine fisheries. Given that bycatch is a frequent threat listed for sharks on the International Union for Conservation of Nature Red List, there has recently been a special focus on sharks. Nevertheless, there aren't any quantitative reviews or synthesizes that look at the problem of shark bycatch on a worldwide scale right now, which is problematic because such a synthesis may guide conservation

efforts and reveal critical research gaps. To define trends in shark bycatch research, we conducted a qualitative and quantitative study of the peer-reviewed literature with the specific aim of identifying research needs and possibilities.

It is challenging to evaluate the sustainability of bycatch species in tropical prawn (shrimp) trawl fisheries due to their diversity and lack of historical and biological data for quantitative stock evaluations. In order to assess the potential effects of prawn trawling on the viability of bycatch species, we created a technique, and we then applied it to fish bycatch in the Australian Northern Prawn Fishery. The sensitivity to capture and mortality from prawn trawling, as well as the population's potential to recover after depletion, were two overarching qualities that the 411 fish species that were bycatch were classified according to species ranking on these two criteria indicated its relative ability to withstand trawling and, consequently, its priority for investigation.

In order to better understand and manage bycatches, this paper aims to present a summary of a number of pertinent concerns. It also includes other effects of fishing, whether at sea or in port, as well as a recommended set of definitions for the various harvesting components. Additionally, it offers a framework for categorizing bycatches that highlights certain fundamental parallels and divergences among fisheries. The classifications are made based on a variety of factors, such as how much bycatch is "aggregated" in space or time, how much control the fishers have over it, how frequently it occurs, how predictable it is, whether it has an ecological or random origin, how much of an impact it has, and whether it is the result of market forces or regulations.

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