

Study on the experiment of mitigation devices for marine mammals interacted with dolphinfish fishery in the eastern waters of Taiwan

Summary

Dolphinfish (*Coryphaena hippurus*) is one of the important economic fish species for Taiwanese offshore and coastal fisheries, and most of the catches are mainly exported to the markets of the United States. This study will conduct the bycatch mitigation experiments for the marine mammals interacted with Taiwanese dolphinfish fishery, including pingers and LED lights to analyze the effect of these mitigation devices on fishing and avoiding bycatch or dolphin bites. The implementation of this study will also help to achieve the requirement of the Marine Mammal Protection Act (MMPA) for fishery products transported to the United States, which asked the fishing method must adopt protection measures for marine mammals. Based on the data collected from 90trips of dolphinfish longline fishery operated in the eastern waters of Taiwan. During the study, 82% of the catch dolphinfish for dolphinfish longline, the by-catch are only 18%. The results showed that these pingers and LED do not reduce catch rates with than no device. Squid bait is preferred has indicated high catch and we did find all devices catch fish bites of sharks, and catch sea turtles but dolphin bites only find in no device. The installation mitigation devices for marine mammals willingness survey shows that 80% are willing to install it, and 20% of them are not willing, because it is difficult to increase the operation and think it has no effect. The implementation of this study will also help to achieve the requirement of the Marine Mammal Protection Act (MMPA) for fishery products transported to the United States, which asked the fishing method must adopt protection measures for marine mammals.