United States Bycatch Initiatives

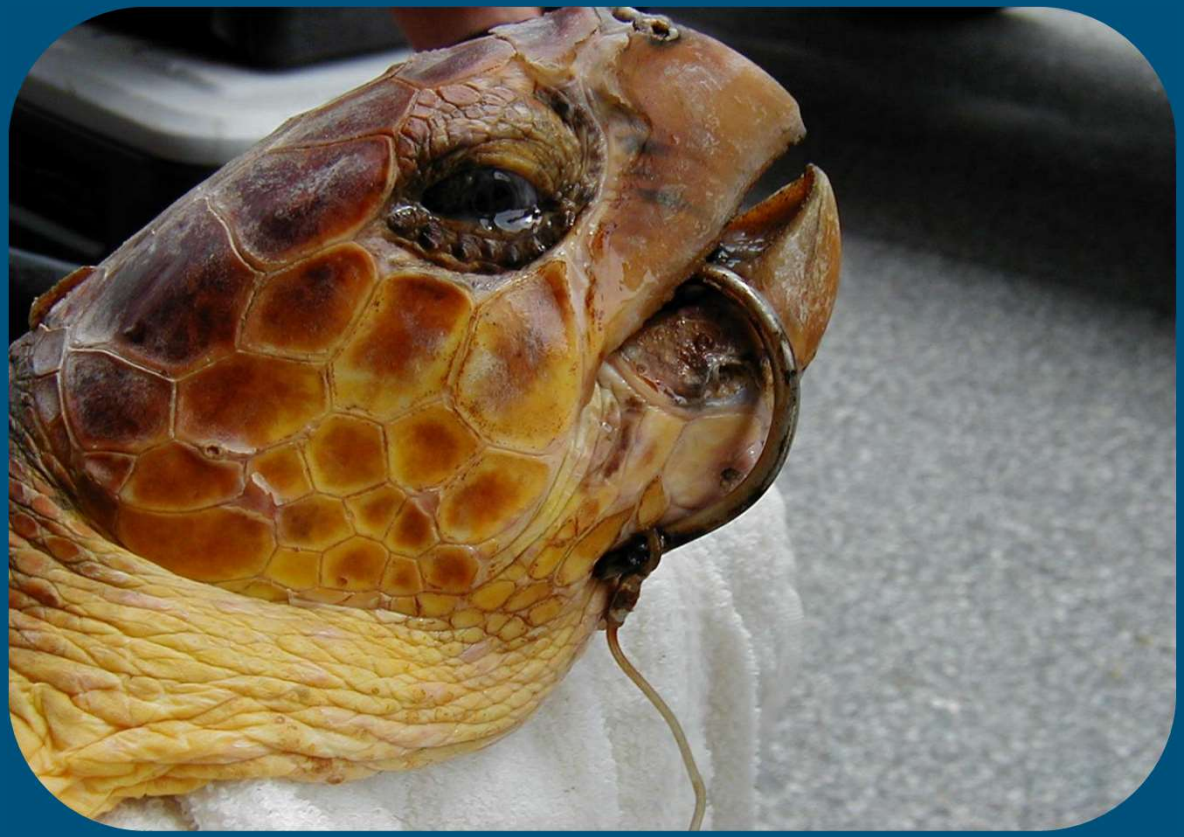
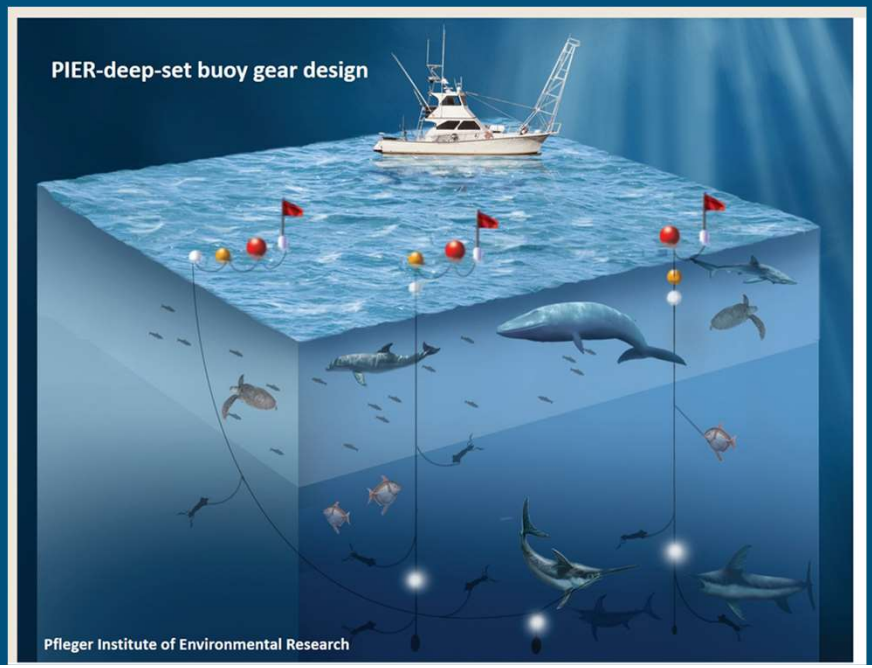


Photo Credit: Damien Bailey (NOAA)

Bycatch Initiatives

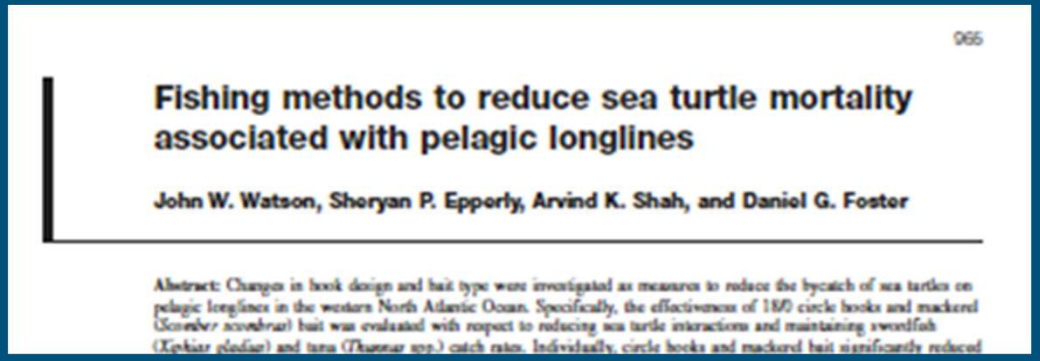
- COLLABORATION: Tri-national Loggerhead Turtle Recovery Plan; California Dungeness Crab Fishing Gear Working Group
- PROTECTIONS: oceanic white tip sharks listed as threatened
- NEW GEAR TYPES: deep set buoy gear
- STUDIES: effectiveness of measures to decrease sea turtle bycatch



U.S. Sea Turtle Bycatch Mitigation Research

Longline fisheries (shallow and deep set)

- Location/SST important predictor of risk
- Large circle hooks, minimal offset
- Whole finfish for bait
- Set deeper hooks



965

Fishing methods to reduce sea turtle mortality associated with pelagic longlines

John W. Watson, Sheryan P. Epperly, Arvind K. Shah, and Daniel G. Foster

Abstract: Changes in hook design and bait type were investigated as measures to reduce the bycatch of sea turtles on pelagic longlines in the western North Atlantic Ocean. Specifically, the effectiveness of 18/0 circle hooks and mackerel (*Scomber scombrus*) bait was evaluated with respect to reducing sea turtle interactions and maintaining swordfish (*Xiphias gladius*) and tuna (*Thunnus* spp.) catch rates. Individually, circle hooks and mackerel bait significantly reduced

Domestic Measures for Sea Turtles

Hawaii Longline Fishery

Deep set → bigeye tuna / Shallow set → swordfish

- Large circle hooks (size 18/0 or larger) - maximum of 10 degrees offset - mackerel-type fish bait
- Observer coverage: 100% in SSLL / 20% in DSLL
- Annual protected species workshops for captains
- In SSLL: 'hard caps' on the number of turtle interactions whereby the fishery is closed (for the remainder of the calendar year) if 34 loggerhead or 26 leatherback turtle interactions occur

Effectiveness of Domestic Measures

post implementation of measures (large circle hooks and finfish bait) mean bycatch rates declined:

84% for leatherback turtles

95% for loggerhead turtles

Conclusion

Collaboration

Trials / Research

Implementation