Understanding Non-Compliance Behavior with U.S. Protected Species Regulations

Kathryn Bisack*, Chhandita Das*,

*NMFS/NEFSC/SSB

Abstract

Marine mammals and sea turtles are protected from commercial fishery interactions under the U.S. Marine Mammal Protection Act and Endangered Species Act. By design, enforcing area closures is generally less problematic than gear modifications from an enforcement standpoint. Consequently, non-compliance is a greater issue with gear modification regulations. The 1999-2007 National Marine Fisheries Service (NMFS) observer data show non-compliance with gear regulations as high as 65% in the South Cape area where pingers are required to protect porpoise (Palka and Orphanidaes, 2008). In our study, we attempt to identify factors that influence a fisherman’s decision to comply or not comply. Using observer data we develop a model to estimate the probability of compliance as a function of past and present revenues, vessel characteristics, and a vessel’s history of fishing and compliance. More complete models of compliance behavior account for factors such as social influence, moral values and the perceived legitimacy of regulations and the regulatory authority. In the absence of data on these variables, we use proxy variables in our empirical compliance model. Further, we conduct a pilot study to validate our results and expand our knowledge on the social, moral and perceived legitimacy aspect of the NMFS porpoise regulations. Specifically we interview fishermen in a focus group setting. We present these preliminary focus group findings and our empirical compliance model for vessels fishing under the 1999 and new 2007 porpoise regulations. Understanding determinants of individual fisher’s compliance behavior may allow regulatory agencies