

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON DRIFT GILLNET FISHERY HARD-CAPS

The Scientific and Statistical Committee (SSC) received a presentation from Dr. Stephen Stohs (NMFS SWFSC) on a bootstrap simulation model used to analyze a range of alternatives to establish hard-caps for high priority protected species (HPPS) in the large-mesh drift gillnet fishery. The model predicts the effects of different hard-cap options on the catch of marketable and unmarketable species, HPPS mortalities and injuries, and revenue and profits. The SSC reviewed an earlier version of the bootstrap simulation model in September 2015. The model has been revised to accommodate hard-cap options for individual and fleet closures of varying lengths and separate treatment of unobservable vessels.

The SSC supports using the bootstrap simulation model to estimate the effects of the hard-cap alternatives. While the SSC discussed several ways in which the model could be extended to analyze the performance of hard-cap alternatives under higher HPPS interaction rates, the SSC agrees that the current simulations from the bootstrap model provide an adequate basis for evaluating the range of alternatives. However, the reporting and the discussion of the simulation results should be improved for decision-making purposes in the following ways:

- The estimated effects of the hard-cap options are primarily reported as averages; however, with HPPS interactions being relatively rare, the average is not an appropriate metric since the distribution of impacts can be highly skewed, and the average does not capture the risk (economic- or conservation-wise) associated with the different hard-cap options. The analysts should also report measures of risk that focus on the magnitude of the economic and conservation impacts associated with extremely bad events—for example, the expected effects conditional on being in the 5 percent worst-case outcomes.
- Rather than comparing the distributions of the simulated outcomes under the different hard-cap options, the analysts could report the distributions of the effects for each hard-cap option as differences from the status quo.
- While there is little quantitative difference between some of the Alternative 3 options, there are qualitative differences between the options that should be discussed in the analysis. For example, vessel-level caps are relatively riskier for individual vessels than fleet-wide caps and may not provide additional conservation benefit if vessels do not have much control over the likelihood of HPPS interactions. On the other hand, individual caps would provide additional incentives to the extent that vessels can influence the likelihood of HPPS interactions.