

King Mackerel Hooking Mortality

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ABSTRACT

The original goals of the project were to improve preliminary estimates of king mackerel release mortality, and to determine if hooking mortality estimates based on short-term (first two hours after release) survival can be used to provide reasonable estimates to hooking mortality, by tracking king mackerel for periods of up to 24 hours. An ancillary goal was to provide information which would increase confidence in hooking mortality estimates for Spanish mackerel and would serve as rough estimates for hooking mortality of other pelagic fishes. A total of 18 king mackerel were caught, tagged and released. Of these, 16 were tracked and two were lost. With regard to the first goal, the additional number of king mackerel tracked during this project greatly improved the estimate of king mackerel release mortality by decreasing the statistical confidence interval. Previously, the estimated mortality would have been 17.6% with a 95% confidence interval of 3.3 to 48.5% (Edwards, 1994). As a result of the project, the estimate was revised to 19.4% and the 95% confidence interval was reduced to 7.4 to 37.8%. If past data on Spanish mackerel release mortality are pooled with the present information on king mackerel, a release mortality estimate of 8.9 to 28.5% is obtained. With regard to the second goal, the project showed that the projected low (<10%) release mortality was a reasonable estimate. Taken together, these two findings should allow fishery managers to apply reasonable estimates of hooking mortality for king mackerel (and indirectly to Spanish mackerel and other pelagic species) with reasonable confidence.

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