

**SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
CONSIDER BAROTRAUMA DEVICE MORTALITY RATES**

The Scientific and Statistical Committee (SSC) reviewed the Groundfish Management Team (GMT) report on “Proposed discard mortality for cowcod, canary rockfish and yelloweye rockfish released using descending devices in the recreational fishery” (Agenda Item D.5.b) and received a slide presentation by Mr. John Budrick (California Department of Fish and Wildlife [CDFW], GMT). The report condenses and refines information presented to the Council in two previous reports and presents revised values for the mortality of recreationally caught cowcod, canary rockfish and yelloweye rockfish if they were released and returned to depth using descending devices. The GMT report reflects suggestions made in SSC comments to previous reports and resulting from a joint meeting in January of the GMT and SSC Groundfish Subcommittee.

The task of estimating discard mortality rates for these three species is particularly challenging due to the limited number of field studies on the mortality of rockfish released using descending devices. The few studies that include these three particular species provide some data for canary and yelloweye rockfish, but almost no information for cowcod. The mortality estimates developed by the GMT cover four depth bins (0-10 fm, 10-30 fm, 30-50 fm, and >50 fm) and account for three types of mortality: short-term, long-term, and sources not otherwise accounted for.

The information contained in the GMT report is much more clearly presented than in previous versions. The SSC supports the GMT’s approach for deriving point estimates of the discard mortality rates by species and depth-bin, with the caveat that the estimates for combined short- and long-term mortality for any of the three species should not decrease with an increase in depth. The mortality estimates for canary rockfish and cowcod taken from depths greater than 50 fm are inconsistent with this principle.

The SSC remains concerned about the lack of information on cowcod. The mortality-by-depth estimates for this species are almost entirely based on proxy species, but the estimates provided in the report do not include an explicit buffer to account for the additional uncertainty due to the use of proxy species. An acoustic tagging study that is currently underway in the southern California bight will provide additional information on the mortality of cowcod released and returned to depth using descending devices. The SSC recommends that the results of this study be examined as soon as possible to evaluate the estimates based on proxy species. Further, the SSC recommends that the Council encourage additional field research to collect information for these three focal species on their mortality after release using descending devices, particularly for capture depths >50 fm.

The SSC notes that the sets of upper confidence limits shown in Table 7 indicate only minor differences in the mortality rates by depth between the different confidence levels (60 percent, 75

percent, 90 percent, and 95 percent). Such small differences imply an implausibly high degree of scientific certainty regarding the mortality rate estimates. The SSC has suggested several methods to the authors of the GMT report for developing more reasonable estimates of the scientific uncertainty. In addition, buffers for bias and scientific uncertainty should be independently delineated.

The SSC was unable to review the supplemental reports from Oregon Department of Fish and Wildlife and Washington Department of Fish and Wildlife regarding implementation of the new mortality rates in the accounting of catch mortality for management. Should the Council decide to use the new discard mortality rates, the SSC would be willing to review how the rates would be applied in the catch accounting for all three states.

PFMC
04/08/13