OCEANA Protecting the World's Oceans

99 Pacific Street, Suite 155C
Monterey, CA 93940 USA

+831.643.9266
OCEANA.ORG

August 27, 2018

Mr. Phil Anderson, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220

RE: Agenda Items H.5 Drift Gillnet Performance Metrics Methodology

Dear Chair Anderson and Council members:

We thank the Pacific Fishery Management Council (Council) for striving for sound performance metrics for fish discards and protected species takes in the drift gillnet (DGN) fishery. In conjunction with hard caps and enhanced monitoring, the performance objectives were established to track how the DGN fishery performs at minimizing bycatch. The Council stated it would use the metrics to review fishery performance at the end of each fishing season, and, in conjunction with other fishery information, determine if any new management measures are needed to further minimize bycatch in the DGN fishery.

The performance metrics are objective indicators of whether the bycatch of any particular species or species group is increasing relative to a baseline period. In the absence of Council-recommended hard caps, performance metrics should be used as a tool to prevent increases in bycatch. Therefore, to achieve the Council's goal of minimizing bycatch and preventing increases in bycatch, the Council must swiftly respond to any performance standard that is not met by adopting new management measures to further reduce bycatch. Over the past two seasons, the fishery failed to satisfy bycatch performance metrics for certain species, indicating the need for the Council to consider additional management measures. The Council has not done so, forgoing the opportunity to address bycatch concerns.

We understand the Council is considering changing its approach to addressing the uncertainty in current estimates of bycatch by moving from ratio estimates to regression tree estimates. The performance metrics for the DGN fishery, in their current form, were calculated based on the ratio estimation method, where rates of bycatch over each season on observed sets are extrapolated to the unobserved sets. The Council's objective was to prevent increases in bycatch over current levels, by setting the performance metrics equal to the highest bycatch in a season over the base period of 2004-2013. Since the Council chose to use a 10-year maximum, rather than a 10-year average, a single year of exceeding the performance metric constitutes an increase in bycatch, as it means that the current year's bycatch is higher than it ever was during the base period. If the Council prefers to take a multi-year approach, performance standards should be set at the average bycatch. When met or surpassed, these metrics are intended to trigger Council consideration of additional management measures to address the indicated increase in bycatch.

Since the Council approved its performance standards in September 2015, NMFS has subsequently deemed the regression tree estimation method to be more accurate and representative of DGN

protected species bycatch than the ratio estimation method.[1] We support a change to the regression tree estimation methodology provided the Council avoids weakening the performance metrics, which were established through a public review process. Therefore, we request the Council maintain consistency with its current approach and intent by:

1) using the same base period of 2004-2013 to establish the new performance metrics;

2) using the 10-year high annual regression tree estimates over this period as the performance standard;

3) evaluating the fishery performance annually based on current annual regression tree estimates;

4) reaffirming the Council's original intent that a single year of exceeding the performance metrics is the trigger for considering implementation of additional management measures.

It is critical that any performance metrics are developed and assessed using a consistent methodology. Therefore, if the Council chooses to use the regression tree approach to develop the performance standards, they should use the annual regression tree estimates to determine whether they are being exceeded in any given year. Conversely, regression tree estimates should not be used for comparison to the performance metrics for protected species which were determined based on ratio estimation. If the performance metrics are recalculated, it must be done utilizing criteria equivalent to what was used to calculate current metrics, to achieve the goal of preventing increases in bycatch relative to a recent baseline. Table 1 shows our recommended performance metrics by which annual regression tree estimates of mortality/serious injury may be compared to evaluate bycatch of marine mammals and sea turtles in the DGN fishery. We include some species for which no previous performance metrics were set as the regression tree analysis indicates that catch of these 'new species' (Dall's porpoise, beaked whale, fin whale and killer whale) is not zero.

For finfish (billfish, prohibited sharks, hammerhead sharks, manta ray) performance standards, we are not aware that regression tree estimates of finfish bycatch are available, so we request the Council continue to base current performance metrics on 10-year averages, and reaffirm the intent that a single year of exceeding the performance metric warrants Council consideration of additional management measures.

As recommended repeatedly by the Council, 100% monitoring of the DGN fishery will provide the most accurate picture of the impact of the fishery on non-target species. The observed DGN sets (frequently less than 30% of total annual sets) from 2008-2018 yield a discard rate of 52%.[2] The high-bycatch rates observed in this fishery are indicative of the need to fully and accurately characterize the impact of the fishery on non-target species while shifting to low-bycatch gears. Thank you for your work to minimize bycatch in this fishery.

Sincerely,

---

[1] Carretta, J.V., J.E. Moore, and K.A. Forney. 2017. Regression tree and ratio estimates of marine mammal, sea turtle, and seabird bycatch in the California drift gillnet fishery: 1990-2015. NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-568. 83 p. http://www.pcouncil.org/wp-content/uploads/2017/02/J1b_SWFSC_Rpt_ElectricOnly_Carretta_etal_2017_RegressionTreeBycatch_Mar2017BB.pdf

[2] NMFS Observer Program Data 2008-2018. http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_report_sw_observer_fish.html

Geoffrey Shester, Ph.D.
California Campaign Director & Sr. Scientist

Erin Kincaid
Marine Scientist

Table 1 Recommended marine mammal and sea turtle performance metrics based on Carretta et al. 2017.[3]

Marine Mammal and Sea Turtle Performance Metrics		
Species	**Highest 2004-2014 calendar Mortality/Serious Injury estimate from Carretta et al. 2017**	**Notes**
Minke whale	1.4	
Short-beaked common dolphin	59.9	
Long-beaked common dolphin	5.8	
Risso's dolphin	3.6	
California sea lion	59.1	
Northern right whale dolphin	8.5	
Gray whale	1.6	
Pacific white-sided dolphin	13.4	
Northern elephant seal	3.2	
Dall's porpoise	*0.8*	*new species*
Beaked whales	*0.6*	*new species*
Fin whale	*0.3*	*new species*
Killer whale	*0.2*	*new species*
Sperm whale	2	*hard cap species*
Humpback whale	0.2	*hard cap species*
Short-finned pilot whale	6	*hard cap species*
Bottlenose dolphin	6.8	*hard cap species*
Leatherback sea turtle	1.1	*hard cap species*
Loggerhead sea turtle	0.6	*hard cap species*
Olive Ridley sea turtle	0	*hard cap species*
Green sea turtle	0.3	*hard cap species*

[3] Carretta, J.V., J.E. Moore, and K.A. Forney. 2017. Regression tree and ratio estimates of marine mammal, sea turtle, and seabird bycatch in the California drift gillnet fishery: 1990-2015. NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-568. 83 p. http://www.pcouncil.org/wp-content/uploads/2017/02/J1b_SWFSC_Rpt_ElectricOnly_Carretta_etal_2017_RegressionTreeBycatch_Mar2017BB.pdf