Thank you for providing a copy of the *Unobserved Fishing Mortality Working Group Report* and for requesting public comments. Information that is provided in that report is quite interesting, and the first item that catches attention is in Table 1 of that report regards the amount of bottom contact time for each gear type. The associated bottom contact entry for hook and line gear is given as hours to days, which makes perfect sense. However, the bottom contact entry for pelagic trawl gear is given as minutes, which is problematic. That might be true for a textbook definition of what pelagic trawling is supposed to be, but it does not adequately reflect what is actually happening with pelagic trawl gear in the Bering Sea.

The highly regarded National Academy of Sciences (NAS) produced an extensive report on the *Effects of Trawling and Dredging on Seafloor Habitat* [NAS (2002)] that includes a case study on the effect of gear modification for the pollock trawling industry in the Bering Sea. That case study discusses the1999 North Pacific Fishery Management Council (NPFMC) mandated transition from bottom trawling for pollock in the Bering Sea to pelagic trawling, in an attempt to reduce crab and halibut bycatch, but the case study notes that it is still the case after the transition that "these trawls may be frequently fished in contact with the seafloor" and then suggest that that "If the trawls never touch the bottom, the pelagic trawl definition could be set at zero crab tolerance" (Page 58).

A much more specific assessment of the amount of time that pelagic trawl gear makes bottom contact is presented in a report from the NPFMC in a research discussion paper that was prepared for their April 2022 meeting [NPFMC (2022)]. The primary results of interest from that study (Page 24) indicate that the percentage of actual bottom contact time with pelagic trawl gear for pollock ranges from 20% to 60%, with a median value of 40%, for catcher vessels in the Bering Sea. When catcher/processor vessels were considered, the actual percentage of bottom contact time increases to an astonishing 70% to 90% during the A Season and 80% to 100% during the B Season.

Very recent reports from other sources also indicate that pelagic trawl gear spends considerable amounts of time on the bottom while catching pollock in the Bering Sea. A recent audit reports a breakdown of the pelagic trawl catch for At-Sea Processors Association in the Bering Sea/Aleutian Island (BSAI) pollock fishery. This audit was conducted to certify that standards were being met by At-Sea Processors to renew certification by the Marine Stewardship Council [MSC (2024)]. The results in Table 7 (Page 10) of that report indicate that 185 metric tons of sea stars were scraped off the bottom by nets in 2022 alone by this pelagic trawl group while catching pollock in BSAI. Even these results that are provided by pelagic trawl groups themselves clearly show that their nets are on the bottom for extended periods.

Results that are reported by NAS, NPFMC and trawling groups themselves indicate that pelagic trawl gear actually spends a significant percentage of time dragging the bottom of the Bering Sea, so assigning an entry of "Minutes" to bottom contact for pelagic trawl gear in Table 1 of your working group report needs to be seriously re-evaluated. Otherwise, it could appear that an attempt is being made to cover up the facts of what is actually happening with pelagic trawling in the Bering Sea with elementary textbook definitions of what pelagic trawling is supposed to be, to allow pelagic trawl groups to continue their destructive behavior with bottom contact.

The second observation from Table 1 of your working report that is of interest regards the reported lethality for bycatch with the different gear types. It is very realistic to see that bycatch lethality rates show hook and line gear as low, while it is listed for pelagic trawling gear as being high. This high degree of lethality for pelagic trawl gear would seem to be appropriate for all species of bycatch, and the NAS [2002] study indicates that a very large proportion of halibut bycatch comes from trawling in the Bering Sea (page 28). Given the high degree of lethality for bycatch with pelagic trawling that is acknowledged in your report, it is difficult to believe that halibut mortality is actually reduced to only 50% when deck sorting is being used while measuring mortality for halibut bycatch [ADFG (2022)]. The actual number of metric tons of halibut that is being killed as bycatch is therefore probably significantly greater than the already very high amount that is currently approved by NOAA.

This very high level of actual halibut bycatch is particularly disturbing since the weight of the average halibut taken as bycatch in the Bering Sea weighs less than five pounds [Towers (2015)], so a huge number of juvenile halibut are being killed as bycatch in the halibut nursery in the Bering Sea. The resulting long-term impact on the overall halibut population is predictable. Jung, et. al (2024) study the collapse of the pollock population in the East Sea of Korea, while the same phenomenon did not occur for pollock populations for other areas including the Bering Sea. They evaluate the major contributing factors that led to the collapse of the pollock population in the East Sea and note in their discussion that "In summary, the high fishing pressure on juveniles is associated with a decline in adult biomass and appears to be a significant factor contributing to decreased reproduction and recruitment." That study shows a strong correlation between high fishing pressure on juvenile pollock in the East Sea of Korea and the collapse of the corresponding pollock population. We have been witnessing for years a strong correlation between the killing of a very large number of juvenile halibut as bycatch in the Bering Sea and the onset of a collapse of the corresponding halibut population.

The damage that is being done in the Bering Sea as a result of bottom contact from pelagic trawling for pollock has to be stopped. The destruction of the bottom habitat itself cannot be repaired. The significant negative impact from bycatch on crab and halibut populations that is resulting from this so-called pelagic trawling is evident. The entry in Table 1 of your report states that the priority for studying the lethality of pelagic trawl gear on bycatch is "High". It is indeed a high priority that a fair evaluation of this problem must be done very soon. What is not needed is yet another report to greenwash what is happening with so-called pelagic trawl gear in the Bering Sea.

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