



# MARINE MAMMAL COMMISSION

28 October 2020

Dr. Shannon Bettridge, Chief  
Marine Mammal and Sea Turtle Conservation Division  
Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910

Dear Dr. Bettridge:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service's (NMFS) proposed List of Fisheries (LOF) for 2021 ([85 Fed. Reg. 59258](#)). The Commission generally concurs with the proposed changes for the 2021 LOF, and provides the following comments and recommendations for your consideration.

## **Southeast Alaska Salmon Gillnet Fisheries**

The Commission, in commenting on the proposed 2020 LOF ([84 Fed. Reg. 54543](#)), [recommended that NMFS reclassify](#) the Category II Yakutat salmon set-gillnet and Southeast Alaska salmon drift-gillnet fisheries (the Yakutat and Southeast fisheries, herein) as Category I fisheries. As defined in regulations, a Category I fishery is one that causes mortalities and serious injuries (M&SI) to a given stock in excess of 50 percent of that stock's PBR; Category II fisheries cause annual M&SI between 50 and 1 percent of PBR (potential biological removal; [50 C.F.R. § 229.2](#)). The Commission based its recommendation concerning placement of these fisheries in Category I on [NMFS's 2016 stock assessment report](#) (SAR) for the Southeast Alaska stock of harbor porpoises (*Phocoena phocoena*; SEAK harbor porpoises, herein). That report estimated that, on average, 34 porpoises per year are killed or seriously injured in the Yakutat and Southeast fisheries combined. This estimate was nearly four times greater than the stock's PBR of 8.9 at that time. Estimated annual M&SI has not changed since, and although the stock's PBR was increased to 12.0 in the [2019 SAR](#), fishery-related removals from the population still exceed PBR by nearly threefold. In fact, both the [2016](#) and [2019](#) SARs identified the SEAK harbor porpoise stock as 'strategic'<sup>1</sup> in recognition that M&SI exceeds the stock's PBR level. Despite the fact that M&SI clearly exceeded 50 percent of PBR (the Category I threshold) in both the Yakutat and Southeast fisheries, NMFS declined to adopt the Commission's recommendation and retained the Category II classifications for the Yakutat and Southeast fisheries in the final 2020 LOF ([85 Fed. Reg. 21079](#)).

NMFS did not explain explicitly why it rejected the Commission's 2020 LOF recommendation, but noted that (1) the abundance estimate in the 2018 SEAK harbor porpoise

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<sup>1</sup> Under MMPA section 2(19) the term "strategic stock" includes any marine mammal stock—"(A) for which the level of direct human-caused mortality exceeds the potential biological removal level." There are other definitions, but this is the one that applies in this situation.

SAR (NMFS 2019) was “based on a survey that covered only a portion of the currently-recognized distribution of this stock,” and (2) the SAR “included commercial fishery mortalities or serious injuries that occurred far north of the surveyed areas.” The Commission assumes that the first point refers to the fact that the 2010-2012 survey used in making the abundance estimate ( $N_{best}$  and  $N_{min}$ ) covered only inland waters of Southeast Alaska, but not areas to the northwest, where the Yakutat fishery operates, and therefore that the abundance estimate for the stock is negatively biased. On the second point, the observer data reported in the SAR included an M&SI estimate from the Yakutat fishery, which operates to the northwest of the area surveyed in 2010-2012, and therefore that the M&SI estimate was derived from a portion of the population with an unknown abundance. The Commission assumes NMFS was implying that (1) because the survey and observer coverage did not provide estimates of  $N_{min}$  and M&SI for the entire population, and (2) because there was a geographic mismatch between the available survey and observer data, a meaningful comparison of M&SI to PBR could not be made.

The Commission recognizes the problems associated with comparing reported M&SI values for these fisheries and PBR for the SEAK harbor porpoise. However, notwithstanding NMFS’s decision on the 2020 LOF, if the M&SI and PBR data in either the 2016 or the most recent SAR are used, the Southeast and Yakutat fisheries previously met, and still meet, the criteria established by NMFS for what constitutes a Category I fishery. Whether considered collectively or individually, both fisheries clearly meet the applicable regulatory definition of a Category I fishery. The MMPA and implementing regulations require NMFS to classify each commercial fishery as a Category I, II or III fishery in accordance with the frequency of incidental M&SI of marine mammals. In this case, because M&SI clearly exceeded 50 percent of PBR, the Yakutat and Southeast fisheries both meet the definition of a Category I fishery and should have been classified accordingly. The Commission also notes that NMFS used the relative magnitude of the same M&SI and PBR values to determine that the stock is ‘strategic’. The Commission believes that NMFS should have followed the same approach when classifying these fisheries and, if it had, both would be Category I fisheries. To do so in the former instance but not the latter was then, and still appears to be, inconsistent and illogical. Therefore, the Commission recommends that NMFS either explain why it believes it has not acted inconsistently relative to the M&SI and PBR information for the Yakutat and Southeast fisheries or resolve the inconsistent application of the MMPA and its implementing regulations.

The clearer case can be made for reclassifying the Southeast Alaska fishery as a Category I fishery. The [2019 SEAK harbor porpoise SAR](#) reported that the annual M&SI in the Southeast fishery, based on data collected in salmon management areas 6-8 in 2012 and 2013, was 12 porpoises. That rate exceeded the 2016 PBR and equaled the 2019 PBR (derived using the area surveyed in 2010-2012 (Figures 2 and 3)), and as such, exceeded the Category I threshold of 50 percent of PBR. This is a conservative result, because as shown in Figures 1 and 2, salmon management areas 6-8 made up only a small portion of the total area surveyed in 2010-2012. If one makes the parsimonious assumption that the M&SI rate observed in areas 6-8 was representative of the inland waters of Southeast Alaska, i.e., the entire area of the 2010-2012 survey, then extrapolating the area 6-8 data would have produced a much larger M&SI for the entire survey area, leaving no doubt that M&SI substantially exceeds 50 percent of PBR. On this basis alone, the Commission recommends that NMFS reclassify the Southeast salmon drift-gillnet fishery as a Category I fishery. The situation with respect to the Yakutat fishery is more difficult to address because there is a complete geographical disconnect between where the observer data were collected and where the population surveys were conducted. Therefore, the comparison of the estimated

M&SI level with the stock's PBR does not provide a meaningful basis for categorizing this fishery, given the likely population structure found in the SEAK harbor porpoises, as described in the [2019 SAR](#).

The Commission recognizes that the comparison above still relies on geographically mismatched information, in that the observer data used to estimate M&SI were collected in Alaska state fisheries management areas 6-8 (Fig 1; Manly 2015), which make up a small portion of the area surveyed to estimate harbor porpoise abundance (Fig 2; Dahlheim et al. 2015). As can be seen by comparing Figs 1 and 2, fisheries management areas 6-8 are nested within the much larger area surveyed in the inland waters of Southeast Alaska. An improved geographic match is achieved by comparing the M&SI rate from fisheries management areas 6-8 with the estimate of the number of porpoises present in the spatially coincident survey strata. Fisheries management areas 6-8 are nested mostly within survey stratum 5, and small portions of strata 3 and 6 (Figure 2), strata that were covered in each of the three survey years (2010-2012; Figure 3; Dahlheim 2015). Table 6 in Dahlheim et al. (2015) shows the porpoise abundance estimates in each of these strata as: 30 porpoises in stratum 3, 526 in stratum 5, and 21 in stratum 6, or a total of 576 in the three strata combined. Calculating and summing  $N_{\min}$  for each stratum and applying the same values of  $R_{\max}$  (0.04) and  $F_r$  (0.5) used to calculate PBR in the 2019 SEAK harbor porpoise SAR, a PBR for strata 3, 5 and 6 would be 7 porpoises.<sup>2</sup> Thus, the M&SI reported for management areas 6-8, 12 porpoises per year, is roughly 170 percent greater than the current PBR, or over three times greater than the Category I threshold. Therefore, for this portion of the range of the SEAK harbor porpoise stock (the area encompassed by survey strata 3, 5 and 6), it is clear that M&SI substantially exceeds 50 percent of a corresponding PBR. The Commission is not aware of any reason to believe that this bycatch rate is not representative of the remaining portion of the inland waters of Southeast Alaska, and therefore this comparison provides the clearest and strongest evidence of SEAK harbor porpoise M&SI in the Southeast fishery exceeding a corresponding PBR. Therefore, the Commission reiterates its recommendation above that NMFS reclassify the Southeast salmon drift-gillnet fishery as a Category I fishery.

## Hawaii Troll Fisheries

The [2017 SAR for the Hawaiian Islands Stock Complex](#) of the pantropical spotted dolphin (*Stenella attenuata attenuata*) stated that “[n]o estimates of human-caused mortality or serious injury are currently available for nearshore hook and line or gillnet fisheries because these fisheries are not observed or monitored for protected species bycatch.” However, the SAR noted that “hooking or entanglement in various hook and line fisheries have been reported for small cetaceans in Hawaii (Nitta & Henderson, 1993).” Further, some fishermen have reported spotted dolphins taking lures or bait, and sometimes getting hooked in the mouth or body (Rizzuto 1997 as cited in the SAR). The SAR also reports two bycaught spotted dolphins, one entangled in fishing line and the other hooked in the jaw and trailing fishing line, injuries NMFS assessed to be serious injuries.

As noted in the SAR, commercial and recreational troll fishermen target spotted dolphin groups associated with tuna (see references in the SAR), which puts the dolphins at risk of being accidentally hooked or entangled, or incidentally caught when they try to depredate bait or catch.

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<sup>2</sup> This value is not exact due to rounding errors introduced because its constituent values are not reported in the SAR to their full precision.

Baird and Webster (2020) addressed this issue in a new paper. While conducting research on odontocetes around the Main Hawaii Islands, Baird and colleagues documented numerous instances of vessels trolling in close proximity to spotted dolphins. Of 360 sightings of spotted dolphins from 2008 to 2018, 15 percent around Oahu and 30 percent around the Island of Hawaii were in association with fishing vessels; 25 percent for all islands combined. Photo documentation indicates that a large number of different vessels ‘fish on dolphins’ off the Kona coast of Hawaii. Twenty-four encounters were examined in detail, revealing that trolling through a group of spotted dolphins occurred 92 percent of the time, and repositioning ahead of a group to set fishing lines occurred in 54 percent of those encounters. Trolling around the group occurred in just 13 percent of the encounters. Off the Island of Hawaii, where such interactions are most common, Baird and Webster (2020) estimated that there are in the “low-hundreds” of vessels that ‘fish on dolphins’.

In 2011, NMFS proposed to classify the Category III “HI charter vessel” fishery, which is primarily a troll fishery, and the “HI trolling, rod and reel” fisheries as Category II fisheries ([76 Fed. Reg. 37716](#)). NMFS based the proposed change on reports of hooking spotted dolphins, citing Rizutto 2007 and Courbis et al. 2009, and information on the prevalence of vessels from these fisheries targeting spotted dolphin pods, citing unpublished data collected by Baird cited in Courbis et al. 2010. Although no observer or other quantitative data were available to assess interaction rates for these fisheries, NMFS stated that it could “project the likely level of serious injury and mortality in these fisheries based on the available information.” Considering the PBR at the time, NMFS estimated that M&SI would be, at a minimum, roughly 2 percent of PBR, thus warranting Category II classifications for both fisheries. However, in response to strong objections from some commenters, the [final LOF](#) did not contain classification changes for these fisheries.

Regulations allow NMFS, in the absence of reliable estimates of the M&SI rate, to determine whether M&SI occurs ‘not at all or with a remote likelihood’ (Category III), ‘occasionally’ (Category II), or ‘frequently’ based on analogy with similar fisheries or other factors. NMFS initially took this approach in 2011 and judged that M&SI likely occurred ‘occasionally’. However, NMFS did not follow through with reclassification at that time, in part because of claims that the majority of fishermen do not troll ‘on’ or ‘in front of’ the dolphins. In response to feedback and new information offered by the public, NMFS decided that it needed “additional time to consider and investigate the information provided by the public commenters to better understand the nature and level of interactions between these fisheries and Pantropical spotted dolphins.”

In the nine intervening years, NMFS has had sufficient opportunity to study and resolve this issue. If anything, the case for reclassifying the troll fisheries as Category II fisheries has only strengthened – serious injuries due to hooking or entanglement in fishing line have been documented (see above), and reliable estimates of rates of troll vessels fishing in and through spotted dolphin groups have been published (Baird and Webster 2020). In addition, the spotted dolphin stock considered in 2011, was split into four stocks (three insular and one pelagic) in the [2013 SAR](#), and each of the insular stocks is likely to have a smaller PBR than the value used in 2011. Given NMFS’s assessment in 2011 that interactions were likely ‘occasional’, combined with more recent information strengthening that determination, [the Commission recommends](#) that NMFS reclassify the Category III “HI troll” fishery<sup>3</sup> as a Category II fishery.

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<sup>3</sup> NMFS reorganized the names of some of the Hawaiian fisheries, removing the ‘HI charter vessel’, and splitting the ‘HI trolling, rod and reel’ fisheries into the ‘HI troll’ and ‘HI rod and reel’ fisheries.

Thank you for the opportunity to comment on the draft 2021 List of Fisheries. Please contact me if you have any questions about our recommendations or rationale.

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

## References

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## Figures

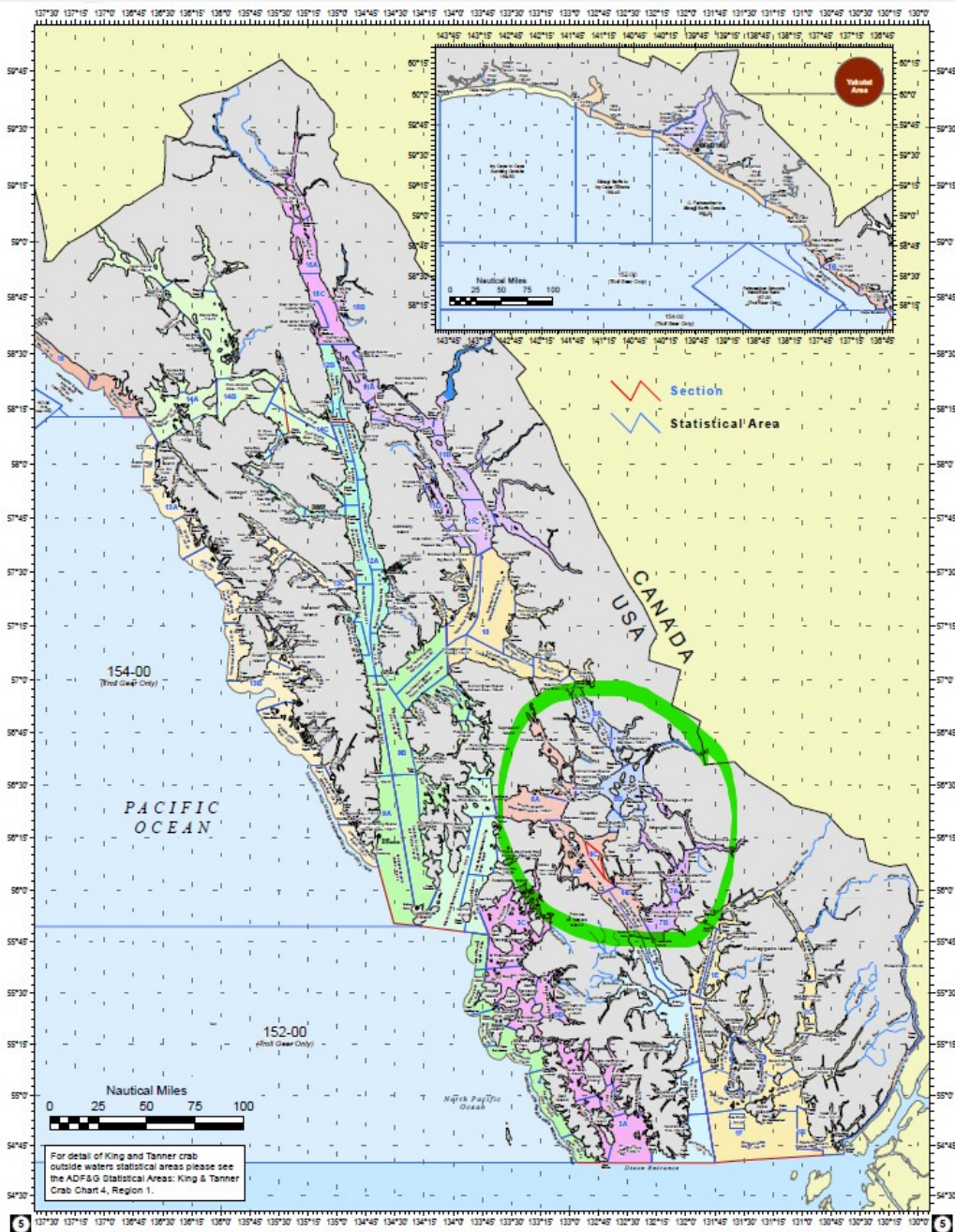


Figure 1. Alaska Department of Fish and Game salmon fisheries management areas. Fisheries observers aboard Southeast Alaska salmon drift-gillnet fishery vessels collected harbor porpoise bycatch data in salmon management areas 6-8 (highlighted in green) during 2010-2012.<sup>4</sup>

<sup>4</sup> Image source: [http://www.adfg.alaska.gov/static/fishing/PDFs/commercial/maps/chart05\\_salm\\_shell\\_all.pdf](http://www.adfg.alaska.gov/static/fishing/PDFs/commercial/maps/chart05_salm_shell_all.pdf), highlight added.

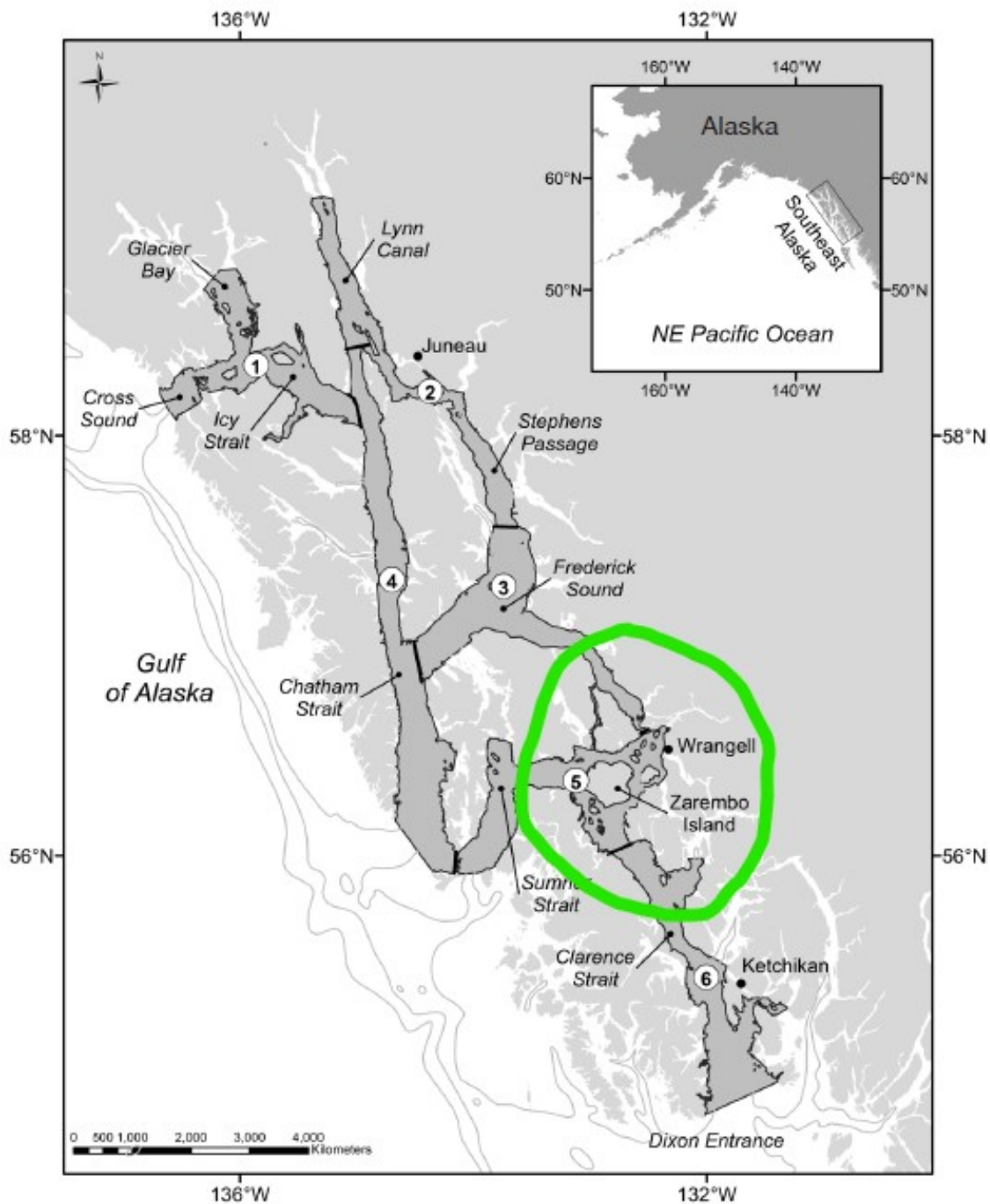


Figure 2. 2010-2012 (A-C) SEAK harbor porpoise survey strata. Fisheries observers aboard Southeast Alaska salmon drift-gillnet fishery vessels collected harbor porpoise bycatch data in salmon management areas 6-8 (highlighted in green) during 2010-2012. Those areas overlapped with most of survey stratum 5, and small portions strata 3 and 6.<sup>5</sup>

<sup>5</sup> Image source: Figure 1 in Dahlheim et al. 2015; highlight added.

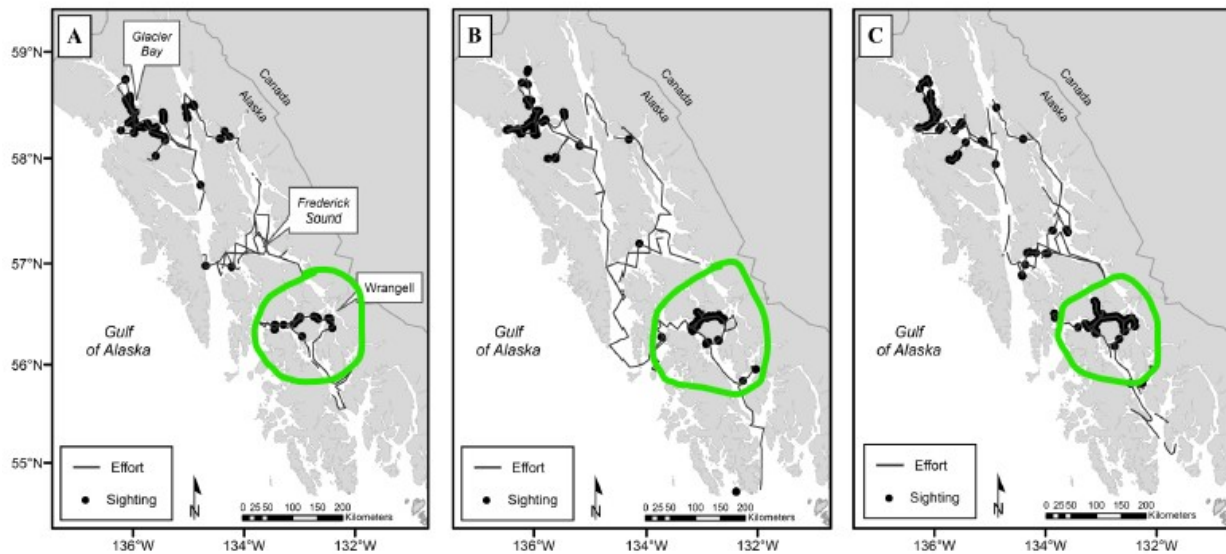


Figure 3. 2010-2012 (A-C) SEAK harbor porpoise survey track lines and sightings. Fisheries observers aboard Southeast Alaska salmon drift-gillnet fishery vessels collected harbor porpoise bycatch data in salmon management areas 6-8 (highlighted in green) during 2010-2012.<sup>6</sup>

<sup>6</sup> Image source: Figure 4 in Dahlheim et al. 2015; highlight added.