

GROUND FISH ENDANGERED SPECIES WORKGROUP REPORT

The Groundfish Endangered Species Workgroup (Workgroup) had its first in-person meeting May 19-21, 2015, in Seattle, WA. The Workgroup received presentations regarding fishing effort in the groundfish fishery from Dr. Kayleigh Somers (PSMFC), and on the bycatch of the listed species from Drs. Brad Hanson (NWFSC), Tomo Eguchi (SWFSC), Rick Gustafson (NWFSC), Yong-Woo Lee (NWFSC), and Thomas Good (NWFSC). Workgroup members participating included Mr. Corey Niles (WDFW), Mr. Terry Wright (NWIFC), Ms. Sarah Williams (NMFS), Dr. Caren Braby (ODFW), Dr. Jason Jannot (WCGOP), and Ms. Laura Todd (USFWS). Also in attendance were Ms. Caroline McKnight (CDFW) and Dr. Kit Dahl (PFMC).

In general the Workgroup's objectives and duties are to recommend new analyses to improve bycatch estimates, consider if the Incidental Take Statement (ITS) amounts are appropriate, consider if new information reveals effects not considered in the biological opinion, and propose for Council consideration, conservation and management measures to minimize bycatch of listed species in the Groundfish fishery (See Appendix B below for the full Terms of Reference).

The Workgroup appreciates the work done by everyone on the bycatch teams in drafting the reports, and thanks the bycatch team leads for their presentations and discussion at the meeting.

General Comments

The Workgroup members come from a spectrum of professional experience that ranges from being very familiar with Council management of groundfish and being unfamiliar with the Endangered Species Act (ESA) to being unfamiliar with the Council process and knowledgeable regarding the ESA.

The Incidental Take Statement (ITS) as represented in the Biological Opinion (BiOp) is the primary point of consideration for the Workgroup. The Workgroup distinguished between two components of the ITS estimate: 1) the estimate of interaction between ESA listed species and fishery activities, and 2) the risk analysis of that interaction and related impacts to the population. The first component requires an estimation of interaction between the listed species and a fishery activity over a specified time period and an analysis of observed interaction. This is the primary function of the Workgroup: to compare the estimated take, with the observed take. The second component (risk analysis) is relevant to the BiOp itself, in which the USFWS and NMFS must consider all sources of take and risk to the population. This is not within the purview of the Workgroup.

In the role of evaluating incidental take, the Workgroup is functioning much like the Groundfish Management Team (GMT) in considering two different aspects of bycatch: (1) the projection of what might be taken in a year as represented in the ITS; and (2), the actual take in a given year as documented and estimated by the West Coast Groundfish Observer Program (WCGOP). While the Magnuson Steven Act (MSA) and ESA statutory frameworks require different management responses (e.g., exceeding an Annual Catch Limit vs. exceeding an ITS), the basic tasks of projecting and estimating catch are very familiar to the Council's groundfish work.

With these ESA species, the tasks of projecting and estimating catch are challenged by the “rare event” problem. Incidental take of most all of the species considered here could be considered to be very rare. Outside of the IFQ and At Sea fishery sectors and their 100 percent observer coverage, this rarity means that projections and estimates of take are inherently imprecise and variable. With the Council considering transitioning the IFQ fishery to electronic monitoring in the near future, all fishery sectors other than the At Sea whiting sector could be subject to considerable rare event uncertainty.

On this point, the Council has been considering rare event bycatch in the Drift Gillnet (DGN) Fishery and is doing so again at this meeting under Agenda Item E.3. The DGN fishery may be facing different policy considerations than the groundfish fisheries, yet both share the technical challenges of projecting and estimating rare event incidental take with less than 100 percent observer coverage. In this regard, the Workgroup discussed the value in considering using consistent methods across the Council’s fisheries.

The Workgroup discussed the benefit of having the methods for estimating bycatch of listed species reviewed by the Science and Statistical Committee (SSC). The SSC reviews bycatch projection models from the GMT, catch estimation methods from WCGOP, and is looking at the rare event issue in the DGN fishery. The SSC considers all science related to the Council’s Fishery Management Plans and other initiatives and so can provide an added level of consistency and coordination. If the Council were to recommend SSC review of the methods for estimating bycatch, the Workgroup recommends looking for efficiencies in process (e.g. coordinating the timing of reviews with consultation).

The benefits of logbooks came up several times during the Workgroup’s discussions. The Council recommended a mandatory sablefish fixed gear logbook be implemented with the 2009-2010 biennial specifications process for the groundfish fishery. As noted by a prior GMT report (September 2012, Agenda Item H.4.b), a model logbook has been developed; however competing priorities and funding have delayed implementation. While the impetus for requiring logbooks was specific to the sablefish sector, the Workgroup recognizes the additional benefit this information may lend to estimating bycatch for protected species if broadened to all fixed gear sectors.

While resources for development and implementation would be required, a fixed gear logbook would reduce some of the uncertainty in bycatch estimates for both overfished groundfish species and protected species for fixed gear sectors that are not monitored at optimal observer coverage rates. The Workgroup discussed many data elements that could be collected and there being several potential demands on the data. A working group consisting of people from various backgrounds and experiences might be helpful to look at the trade-offs involved in which elements to collect and how to collect them. Feedback from the GAP and fishery participants on these questions would be very important to gather as well. The Workgroup heard that the North Pacific is focusing on similar issues, including collecting fixed gear longline effort in terms of the number of hooks instead of sets or trips. Coordination with those efforts would be helpful.

Workgroup recommendations:

1. Implement logbooks for all Federal fisheries to improve documentation of fishery activities.

2. Examine statistical methods being used in the drift gillnet fishery to address rare events with protected species to see if they are applicable to the Groundfish fishery.

Fishing effort report

The Workgroup received a report on fishing effort in the 2002-2013 Pacific Coast Groundfish bottom trawl and non-nearshore fixed gear sectors.¹ This report did not include the at-sea whiting fisheries because the focus of this report was how the groundfish fishery has changed in recent years, and the largest change was the implementation of the IFQ program. At this time the Workgroup did not have any comments on the fishing effort report provided by Dr. Somers.

Humpback Whales

The Workgroup received a report from Dr. Brad Hanson on humpback whale bycatch in the 2010-2013 Groundfish fisheries. There were no documented takes of humpback whales from 2010-2013 in any Groundfish fisheries. The incidental take amount in the NMFS BiOp is a 5 year average of 1 whale per year, and up to 3 whales per year in a single year. At this time take of humpback whales has not exceeded the ITS.

In 2014 there was one observed entanglement of a humpback whale. This information was not included in this biennial report because the data for the reports only examines catch through 2013. In the next reporting cycle (2014-2015), more specific information will be available on the total estimated bycatch of humpback in the Groundfish Fishery. Additionally, the current status of humpback whale is in the process of being updated with divided population segments and listing status, both of which will be considered in the next reporting cycle.

The Workgroup discussed how best to address rare events, such as whale entanglements in fishing gear. One conservation recommendation from the bycatch report was to include unique gear markers that would identify fishing activity to the gear type and fishery. The Workgroup discussed this and questioned the feasibility of this requirement with concerns expressed about expense to the fleet relative to the corresponding conservation benefit; the challenge of standardizing gear across multiple states, multiple fisheries; and the ability to enforce the requirement.

The Workgroup had a lengthy discussion regarding a federal logbook and how this would increase data on fishing effort and location, especially for fisheries that have low observer coverage. We note that the Council took final action on a fixed gear logbook in 2008, however further work by NMFS is yet to be completed. The Workgroup also notes that observers do report whale sightings, thus any sightings on observed vessels would be reported by fishery.

Several of the conservation recommendations from the humpback report discuss gear issues, including storing of gear at sea, lost fishing gear, and new gear technologies. The Workgroup acknowledged that lost fishing gear and storing gear at sea were important issues but members were unsure about the magnitude of the issues. These issues would benefit from further investigation.

¹ The reports reviewed by the Workgroup are available in the Council briefing materials as Agenda Item D.4, supplemental attachments 1-6.

Workgroup recommendations:

1. Because there were no takes during the time period, there is no overage to address.
2. Address potential future problems of interaction with stored or derelict gear:
 - a. Investigate whether storing gear at sea is of a magnitude to warrant regulatory changes (e.g. surveying fishermen).
 - b. Promote voluntary use of gear-finder technology.

Leatherback Sea Turtles

The Workgroup received a presentation from Dr. Tomo Eguchi on the bycatch of leatherback sea turtles in the Groundfish fishery. The largest difficulty with the leatherback sea turtle bycatch estimation is the rarity of encounters with the Groundfish fishery. There has been 1 mortality in the open access pot/trap fishery in 2008, no other encounters have been documented since 2008. The incidental take amount in the NMFS BiOp is a 5-year average of 0.38 turtles per year and up to 1 turtle in a single year. At this time, take of leatherback sea turtles has not exceeded the ITS.

Current observer training includes information on the handling of sea turtles. Again, the Workgroup acknowledged the difficulty in managing bycatch and in estimating impacts when the encounters and mortalities are rare.

Workgroup recommendations:

1. Because there were no takes during the time period, there is no overage to address.
2. Address potential future problems by increasing documentation of turtle interactions:
3. Add to observer training a requirement to take pictures of any sea turtles that are brought onboard, if feasible.
4. Modify observer coverage plan to increase the coverage rate in the open access fishery.
 - a. The Workgroup notes that moderate increases in observer coverage does not lead to a more realistic estimate for those species where fishery interactions are rare. Also, in fisheries with moderate interactions with particularly critical species, increasing observer coverage will result in tighter confidence estimates.

Eulachon

The Workgroup received a presentation from Dr. Rick Gustafson on the bycatch of eulachon in the groundfish fishery. The incidental take amount of eulachon in the NMFS BiOp is 1,004 fish per year. Eulachon were expected to be caught in the bottom trawl and at-sea whiting fisheries. Eulachon take exceeded the ITS in 2011 and 2013. Take in 2011 was 1,624 fish, with 1,271 fish caught in the catcher processor sector, and the remaining take occurring in the bottom trawl, midwater trawl, shoreside whiting, and tribal and non-tribal mothership sectors. Take in 2013 was 5,115 fish, with 4,139 fish caught in shoreside whiting fishery, and the remaining fish caught in the bottom trawl, midwater trawl, non-tribal mothership, and catcher processor sectors.

Given the increase in the eulachon population since this species was listed, it was noted that the amount of take specified in the ITS may no longer be appropriate. In 2011 the majority of the catch from Groundfish FMP fisheries was in the at-sea catcher processor sector, while the majority of the catch in 2013 was in the shoreside hake IFQ fishery. Prior to 2010, observers were not required to identify smelt to species; therefore some catch of eulachon may not have been properly

identified. Fish tickets have not reliably reported eulachon either. Above all, continued fluctuations in the eulachon populations will translate into fluctuations in the encounter rate in the groundfish fisheries. The Workgroup discussed how building a range into the ITS would better accommodate this high variability.

While the state-managed pink shrimp fishery is not under the purview of this Workgroup, we did wish to acknowledge that participation in that fishery requires use of bycatch reduction devices and that the fleet has recently and voluntarily added deterrent lights on gear. The use of this lighting is showing promise at greatly reducing eulachon bycatch in the pink shrimp fishery. Additionally, observers are beginning to track the use of lights, and the Workgroup looks forward to the results of that work.

Workgroup recommendations:

1. In two years during the current reporting period, there is an overage of take that is possibly attributable to population fluctuations.
2. Reinitiation or a modification to the ITS on eulachon. This should include an estimate that accounts for the variation in eulachon abundance, and includes the shorebased hake fishery, as well as bottom trawl and at-sea sectors.

Green Sturgeon

The Workgroup received a report from Dr. Yong-Woo Lee on the bycatch of green sturgeon in the groundfish fishery. Green sturgeon encounters have only been documented in LE bottom trawl (prior to 2012) and IFQ bottom trawl, and at-sea sectors. Because only the Southern Distinct Population segment (DPS) of green sturgeon is listed under the ESA, a ratio of southern to northern DPS fish was applied to take estimates from the groundfish fishery. This ratio, derived from genetic work completed by Carlos Garze (SWFSC), suggests take estimates from Washington and Oregon were allocated 50% to the Southern DPS and estimates of take in California were allocated 90% to the Southern DPS. Accounting for these genetic percentages, the take of the Southern DPS of green sturgeon is estimated to be 4.4 fish in 2010, 20.9 fish in 2011, 12.1 fish in 2012, and 5.5 fish in 2013, all from the IFQ bottom trawl and at-sea sectors. The estimated bycatch of green sturgeon has thus not exceeded the ITS amount. While not covered under the Groundfish BiOp, the bycatch report does include a section on the catch of green sturgeon in California halibut fishery. There was concern from some on the Workgroup that the ITS amount for green sturgeon comes from a time period when there was less than 100 percent observer coverage in the bottom trawl fishery. Green sturgeon bycatch in the tens of fish each year makes it a rare event. Indeed, the pre-IFQ years show a typical pattern for rare event species, with many years showing zero or very low bycatch with a few large years. The near 100 percent observer coverage available in the bottom trawl fishery presently leads to more precise estimates of what the bottom trawl fishery is likely to take. The electronic monitoring EFPs may complicate the estimates for 2015, yet five-year estimates from near 100 percent observer coverage would be available for the bottom trawl fishery in the fall of 2016. Additional genetic information may soon shed light on the proportion of green sturgeon bycatch belonging to the Southern DPS, which may be reason enough to update the ITS amount even without catch exceeding the current ITS amount.

Workgroup recommendations:

1. Because the takes were fewer than projected, there is no overage to address.

2. The Workgroup did not have any recommendations at this time. When better estimates are available, the Workgroup would consider the new information and make any recommendations, which may include reinitiation or modification of the ITS, as appropriate.

Short-tailed albatross

The Workgroup received a report from Dr. Tom Good on the bycatch of short-tailed albatross (STAL) in the groundfish fishery. Only one short-tailed albatross has been caught in a Pacific Coast Groundfish fishery, and that was in the sablefish longline fishery in 2011. However, the most recent (2012-2013) two-year average short-tailed albatross take, using expanded annual estimates of black-footed albatross (BFAL) as a proxy ranged from 1.35 to 3.4/STAL per year, using a lower short-tailed albatross global population estimate to 1.45 to 3.75 STAL per year, using a higher global population estimate. See Tables 4a and 4b in the short-tailed albatross report (Agenda Item D.4, Supplemental Attachment 5, June 2015) for the annual estimates.

Dr. Good indicated there are several issues that have arisen since the USFWS BiOp was completed including: needing an updated black-footed albatross global population estimate (some colonies have been lost since 2009), updating/refining take limits based on increasing short-tailed albatross global population (0.8 birds/year based on STAL global estimate from 2011 (N=3,463)), and refining the correction factor (A) by exploring ratios of STAL/BFAL at smaller spatial scale. These reasons and more speak to the benefit of updating the risk assessment that was done in conjunction with the initial BiOp.

As a result of these changes, the Workgroup recognized that the estimates of STAL take are likely to be quite variable because of several factors, including the increasing abundance of STAL, the changing ratio of STAL to BFAL in the Council's management area, and the limited observer coverage in the fixed gear fleets.

Workgroup Recommendations:

1. Because the take exceeded the ITS, there is an overage to address by reinitiating consultation -
 - a. Develop an ITS that adapts to population estimates; population estimate could be based on yearly population growth, averages over several years, etc.
 - b. Update the ITS estimate to include new information, (e.g., the 25% increase in the short-tailed albatross population since the 2011 take estimate was calculated, improved estimates in relative abundance and distribution of short-tailed albatross to black-footed albatross).
 - c. Incorporate new fishing gear modifications and potential future changes.
 - d. Details would be addressed in consultation between NMFS and USFWS.

Night-Setting Analysis/Streamer Lines

The Workgroup received a presentation from Dr. Tom Good regarding the night setting analysis that was completed in response to public comments NMFS received on the proposed rule for streamer lines (79 FR 53401, September 9, 2014). The issue of a night setting exemption had not come up at the Council prior to the proposed rule being issued; however, the Council did receive a presentation at the April 2015 meeting on this issue from Ed Melvin (WA Sea Grant).

The Workgroup discussed the trade-offs between including the exemption in the NMFS final rule on streamer lines versus delaying the night setting exemption and instead including it with other issues such as the use of floating gear, in a subsequent Council action. Floating gear and night setting were identified after the proposed rule was published. Both of these issues could be addressed through reinitiation with USFWS.

While the analysis shows that the rate of encounters is almost certainly lower at night, the Workgroup understands that the Council and NMFS may wish to consider other factors when choosing to issue an exemption. Along those lines, the Workgroup discussed the benefit of the night setting exemption being reviewed through the Council process including input from the Council's GMT, GAP, and EC. The Workgroup also recognizes that several public meetings were held along the coast and that the Council received a presentation on the analysis at the April Council meeting. Finally, some Workgroup members believe the night setting exemption was appropriate for implementation through the NMFS final rule on streamer lines.

Workgroup Recommendations:

1. Recommend that the Council consider recommending NMFS delay implementing a night setting exemption to the streamer line requirement and wait for further vetting through the Council and its advisory bodies. The Workgroup believes the priority is to finalize the current streamer regulation (without further delay) and make modifications in the near future. This recommendation was not supported by some on the Workgroup who believe the exemption is appropriate for implementation.
2. Recommend the Council request NMFS redo the risk assessment as part of the reinitiation.
3. Further analysis and consideration of management measures should include an examination of implementing streamer lines for boats smaller than 55 feet; floating gear; night setting; differences in encounter rates based on area and depth, and sector; and a comparison of the effectiveness at reducing seabird bycatch between streamer lines and night setting.

Appendix A.

Summary Catch Table.

Detailed bycatch reports are presented in supplemental reports for this meeting. The table below shows the listed species covered in the NMFS and USFWS BiOp, the incidental take allowances, and the estimated catch from the bycatch reports.

Species	Incidental Take Amount or Extent of Take from Groundfish and USFWS BiOps	Estimated Catch
Eulachon	Lethal bycatch – 1,004 fish/year	2010 – 22 2011 – 1,624 2012 – 191 2013 – 5,115
Green Sturgeon	Non-lethal bycatch/handling in the fishery - 28 fish/year expected and up to 86 fish/year in no more than 2 years within a period of 9 consecutive years; Lethal bycatch in the fishery - 2 fish/year expected and up to 7 fish/year in no more than 2 years within a period of 9 consecutive years; Observer Program handling - 375 fish/year	2010 – 4.4 2011 – 20.9 2012 – 12.1 2013 – 5.5
Humpback Whales	Injury or mortality from entanglement - 5-year average of 1 whale/year and up to 3 whales/year in a single year	2010-2013 - 0
Leatherback Sea Turtles	Injury or mortality from entanglement - 5-year average of 0.38 turtle/year and up to 1 turtle/year in a single year	2010-2013 - 0
Short-tailed albatross ^{1/}	Yearly average of one short-tailed albatross. – Average take should not exceed two over a two-year period. A floating two year period beginning in November 2012 will be used.	2010 – 1.3-1.90 2011 – 2.8-4.01 2012 – 1.9-2.80 2013 – 0.8-1.2

1/ Only one short-tailed albatross was caught in a Groundfish fishery 2011. However, the most recent (2012-2013) two-year averages are presented here using expanded annual estimates of black-footed albatross as a proxy. See Tables 4a and 4b, in the short-tailed albatross report in this briefing book for the annual estimates of take from which the yearly averages in this table are calculated from.

Appendix B.

Pacific Coast Groundfish and Endangered Species Work Group Terms of Reference

PURPOSE:

The Pacific Coast Groundfish and Endangered Species Work Group is established pursuant to Section 302(g)(2) of the Magnuson-Stevens Act to serve as a multi-party advisory body to the Council for the purpose of supporting Endangered Species Act (ESA) compliance of the Pacific Coast Groundfish Fishery (Fishery) for green sturgeon, eulachon, humpback whales, Steller sea lions, leatherback sea turtles, and short-tailed albatross consistent with the requirements of NMFS and USFWS ESA Section 7(a)(2) biological opinions on the continuing operation of the Fishery.²

COMPOSITION:

The Work Group shall consist of 11 or more members as specified from each entity or category below. The representatives selected to serve on the Work Group shall have appropriate expertise in conservation of the aforementioned species, groundfish fisheries management, or quantitative analysis.

- Four taxa experts. One each for fish, marine mammals, sea turtles, and seabirds.
- One representative of the West Coast Groundfish Observer Program.
- Two representatives from the NMFS. One from the Protected Resources Division and one from the Sustainable Fisheries Division.
- One representative from the USFWS.
- Three representatives of State management agencies. One each from California, Oregon, and Washington.
- Other representatives as determined by the Council. Representatives in this category may be short-term appointments (e.g., one meeting) to address specific issues.

OBJECTIVES AND DUTIES:

1. The Work Group shall at a minimum convene on a biennial basis or more frequently as directed by the Council.
2. The Work Group shall review NMFS reports on annual tracking of observed take, fleet-wide take reporting, spatial and temporal characteristics of fisheries by gear type, observer coverage analysis and implementation plans, and other reports as outlined in the biological opinions or generated under 3.a, below.
3. Based on review of the NMFS reports, the Work Group shall
 - a. Recommend new analyses, reports, or changes to sampling protocols to improve bycatch estimates of the aforementioned species.
 - b. Consider whether the amount or extent of incidental take stipulated in the biological opinions is exceeded.
 - c. Consider whether new information reveals effects in a manner or to an extent not previously considered in the biological opinions.

² The opinions are available here:

https://alaskafisheries.noaa.gov/protectedresources/seabirds/esa/pcgf_biop1112.pdf
https://pcts.nmfs.noaa.gov/pcts-web/dispatcher/trackable/NWR-2012-9437?overrideUserGroup=PUBLIC&referer=%2fpcts-web%2fpublicAdvancedQuery.pcts%3fsearchAction%3dSESSION_SEARCH

- d. Propose, for Council ³ consideration, conservation⁴ and management measures to minimize bycatch of the aforementioned species. If directed by the Council, the Work Group will meet jointly with the Groundfish Management Team, Groundfish Advisory Panel, or other Council advisory bodies, to incorporate stakeholder perspectives in the development of management measures.
4. NMFS shall take a lead role in chairing the committee, developing agendas, developing or procuring review materials, and drafting and presenting Work Group reports.
5. Council staff will notice meetings, coordinate presentations to the Council and its advisory bodies, and provide logistical support.

PFMC
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² Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, conservation recommendations are suggested regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information.

⁴ Conservation measures are actions to benefit or promote the recovery of listed species that are proactively taken to minimize or compensate for effects on the species under review. These may include actions taken prior to initiation of consultation or actions committed to through the course of a consultation.