GROUNDFISH MANAGEMENT TEAM REPORT ON COUNCIL ADOPTION OF A METHOD TO APPORTION THE COASTWIDE SABLEFISH ABC TO ACLS FOR NORTH AND SOUTH OF 36° N. LAT.

The Scientific and Statistical Committee (SSC) reviewed the Groundfish Management Team's (GMT's) proposed methodologies on apportioning the coastwide sablefish acceptable biological catch (ABC) to the north and south of 36° N. lat. annual catch limits (ACLs) (Agenda Item H.6.b, Supplemental SSC Report, November 2019; Agenda Item H.6.a GMT Report 1 November 2019). The status quo method apportions the ACLs based on the long-term (2003-2018) average ratio between the two areas of swept-area biomass estimates, as calculated from the annual trawl survey, which we hereafter refer to as the survey distributions (Figure 1). The GMT proposed a second method that would instead use a rolling 5-year average, as it better fits the recent survey distributions from 2014-2018 and would be more responsive to future changes in distributions.

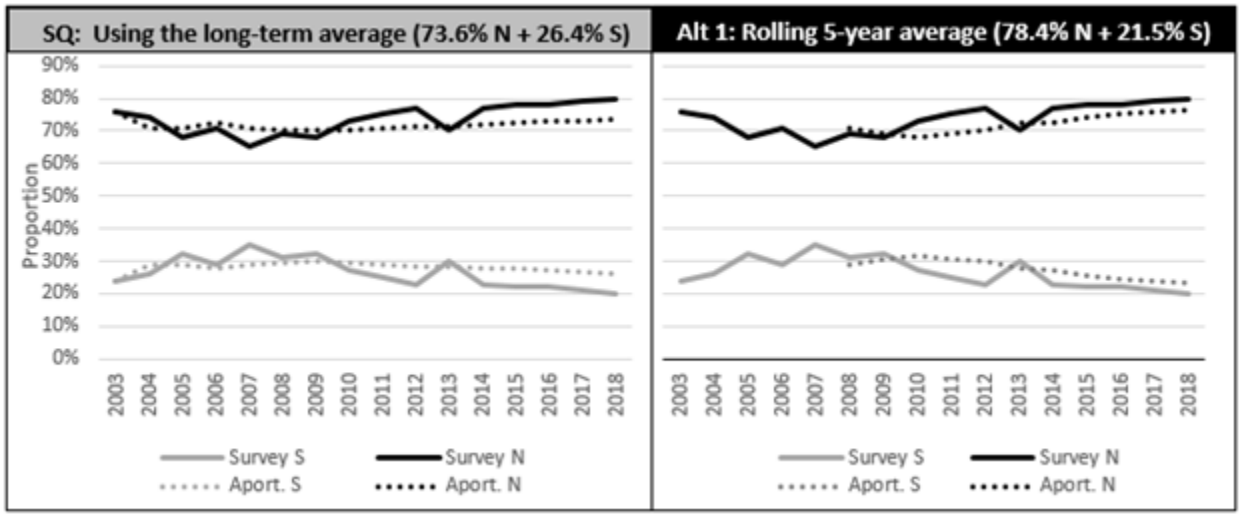

Figure 1 . The GMT's proposed methods to apportion the sablefish ABC to the north and south of ACLs for 2021-22.

As mentioned in Agenda Item H.6.a, Supplemental SSC Report 1, the SSC determined that ACL apportionment is a policy call, since it is an allocation issue that is outside the scope of their responsibilities. The SSC also reported in their H.6.a supplemental report that if the Pacific Fishery Management Council (Council) would like to continue using a method that apportions ACLs in proportion to the current distribution of sablefish biomass, then Method 2 (the 5-year average) is likely to better achieve that goal. The SSC states that neither method for apportioning the ACL presents a biological risk.

Both the GMT and SSC acknowledge that there could be biases in the survey estimates due to a multitude of factors (e.g., untrawlable habitats and larger fish being able to outswim the trawl) that can reduce certainty in absolute abundance estimates. However, the trawl survey is generally regarded as being suitable for gauging changes in relative abundance throughout time and across space, such as north and south of a management line.

The Council should therefore adopt their preferred method to apportion the north and south of 36° N. lat. sablefish ACLs for 2021-22 at this time, incorporating economic impacts as desired. This preferred method would be reflected in both sablefish ABC alternatives also being considered at this time (i.e., No Action P* of 0.40 and Alternative 1 P* of 0.45). The resulting ACLs for 2021-22 are shown in Table 1 for north of 36° N lat. and in Table 2 for south of 36° N lat.

Table 1 . Sablefish ACLs for north of 36° in 2021-22 based on the choice of P* to set the coastwide ABC and the apportionment method used to set the ACL. The 2019-20 ACLs are shown for reference.

Year	Coastwide ABC (mt)		N 36° N lat ACLs (mt)			
	P*0.40	P*0.45	P*0.40 + 73.6% long-term avg	P*0.45 + 73.6% long-term avg	P*0.40 + 78.4% 5-year avg	P*0.45 + 78.4% 5-year avg
2019	7,596	7,596	5,606	---	---	---
2020	7,755	7,755	5,723	---	---	---
2021	8,208	8,791	6,041	6,470	6,435	6,892
2022	7,811	8,375	5,749	6,164	6,124	6,566

Table 2 . Sablefish ACLs for south of 36° in 2021-22 based on the choice of P* to set the coastwide ABC and the apportionment method used to set the ACL. The 2019-20 ACLs are shown for reference.

Year	Coastwide ABC (mt)		S 36° N lat ACLs (mt)			
	P*0.40	P*0.45	P*0.40 + 26.4% long-term avg	P*0.45 + 26.4% long-term avg	P*0.40 + 21.5% 5-year avg	P*0.45 + 21.5% 5-year avg
2019	3,783	7,596	1,990	-	-	-
2020	3,863	7,755	2,032	-	-	-
2021	8,208	8,791	2,167	2,321	1,765	1,890
2022	7,811	8,375	2,062	2,211	1,679	1,801

The northern management area typically catches their full ACL, and there would likely be economic benefits associated with Method 2 (the 5-year average), as it would increase the northern ACL by ~400 mt per year. This gain to the north would come from a reduction to the south. Based on historic catch rates, the reduction is not expected to negatively impact the south, since the annual mortality estimates, typically less than 800 mt per year during the past decade with a 1,221 mt high (Table 3), would still be ~500-1,000 mt below the Method 2 ACLs. However, potential reopening of the cowcod conservation areas (CCAs) in the south is expected to increase southern attainment

of sablefish. At the same time, limited processing infrastructure in the south was identified during the 5-Year Catch Share Review and Sablefish Management and Trawl Allocation Attainment Committee (SaMTAAC) process as a major factor limiting southern attainment. Recently industry has signaled a commitment to build the necessary infrastructure, so reducing the southern allocation may stymie this growth and hinder the potential of the southern fishery to reach full attainment.

Table 3 . Total mortality (mt) of sablefish in each management area during the past decade.

Area	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
North of 36° N lat.	6,675	6,117	5,357	4,749	3,623	3,837	4,693	4,974	5,358	4,980
South of 36° N lat.	782	1,041	1,221	705	621	685	612	608	471	466

Any changes to apportionment methods could be revisited in future cycles, as new information becomes available. For example, if in the future the trawl survey is allowed within the CCA, the survey estimates could potentially better reflect north and south distributions.

Much like the SSC, the GMT does not have a recommendation, since allocations are a policy call best addressed by the Council. Apportioning assessment outputs (i.e., ABCs based off overfishing limits) across management lines is necessary for many stocks. Using trawl survey distributions for sablefish, while imperfect due to potential biases, is generally regarded as superior to apportionment methods used for other stocks (e.g., catch per unit effort x habitat, average catch, or other non-survey techniques). Apportionments are typically based on the best biologically-based approach, but economic factors can also be part of that decision.

The GMT recommends the Council adopt either Method 1 (long-term average) or Method 2 (short-term average) at this meeting for apportioning the coastwide sablefish ABC to the ACLs for each management area to be included in the overwinter analysis.

PFMC
11/17/19