



CALIFORNIA WETFISH PRODUCERS ASSOCIATION

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June 18, 2021

Mr. Marc Gorelnik, Chair
and Members of the Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220

RE: Agenda Item H.3: Management Framework for the Central Subpopulation of Northern Anchovy

Dear Mr. Gorelnik and Council members,

On behalf of California's wetfish industry, I'm writing to offer our suggestions and concerns in the ongoing discussion about how to manage California's small but very important anchovy fishery. Before offering our thoughts, we thank the Coastal Pelagic Species Management Team (CPSMT) for its extensive work and thoughtful approach in developing a framework concept that considers both anchovy conservation and industry stability. We also acknowledge modeling work conducted to inform management framework options, as well as the Model Report, SSC and CPSMT recognition that model analysis is unrealistic: **performance metrics overestimate risk and should be interpreted in a relative, rather than absolute, sense.** California's anchovy fishery has not achieved the catch limit since 1982, and annual landings have averaged less than 10,000 mt per year since that time. The Management Team's creation of a flowchart to illustrate a potential management framework was helpful to visualize process steps.

It's said that one picture is worth a thousand words. Here are a couple of pictures that tell a compelling story:

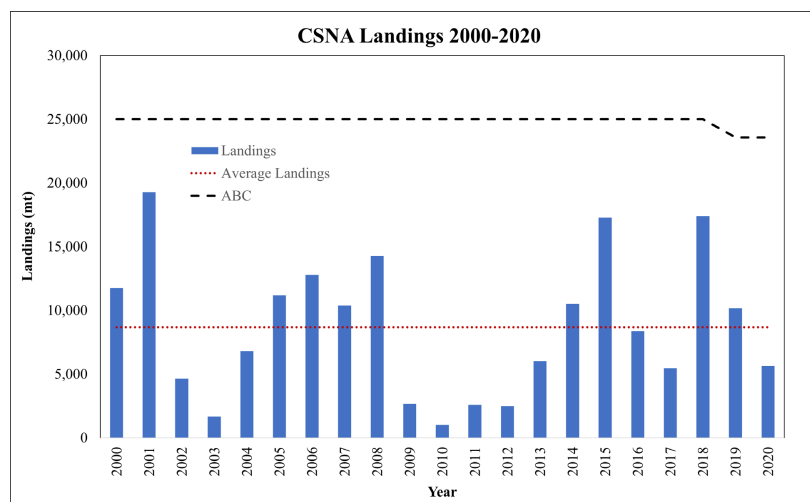
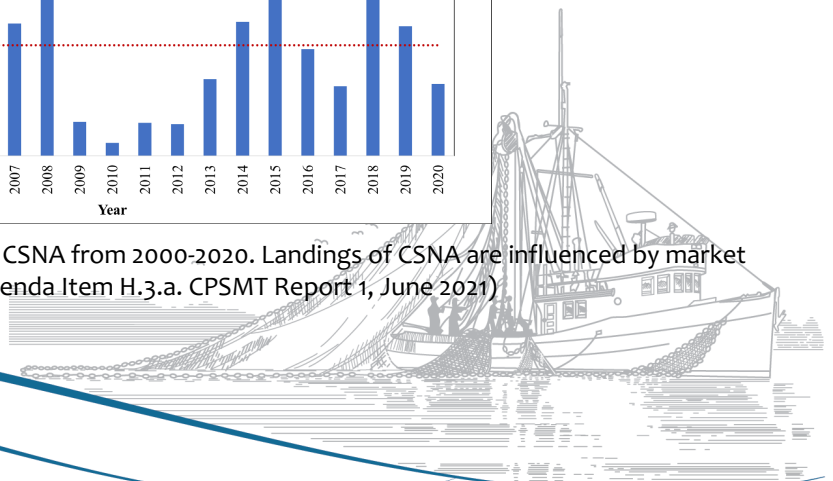


Figure 3. Annual landings and average landings (mt) of CSNA from 2000-2020. Landings of CSNA are influenced by market demand and other CPS fishing opportunities. (From Agenda Item H.3.a. CPSMT Report 1, June 2021)



Here's another picture:

Biological Context:

Anchovy is only one species in the larger forage pool
Fisheries harvest **only 2%** of key forage species, **only 0.6% anchovy**

California Current Forage Fish Consumption
 Agenda Item G.2.b. Sep '18-Parrish FEP Scoping

Table 1. **Annual consumption (mt) of forage** by major faunal groups and average (2000-2014) U. S. landings. (Calculated from Koehn et al. 2016: Table 1 and supplemental data).

Key Forage Species	TOTAL	Fishes	Mammals	Birds	Fishery	Fishery %
Sardine	918,256	379,032	530,061	9,163	76,754	8.4%
Anchovy	1,318,094	633,862	429,545	254,687	8,095	0.6%
Herring	913,513	709,657	136,559	67,297	1,829	0.2%
Other for. fish	1,322,808	906,608	220,288	195,911	16	0.0%
Juvenile fishes	2,887,172	1,691,576	842,913	352,682	0	0.0%
Market squid	1,309,632	406,604	650,128	252,901	80,460	6.1%
Pacific mackerel	100,146	23,915	75,512	718	5,860	5.9%
Total	8,769,620	4,751,254	2,885,006	1,133,360	173,014	2.0%
Euphausiids	52,478,145	49,085,682	3,132,986	259,478	0	0.0%

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As we've testified many times throughout this discussion:

- The central anchovy stock is now acknowledged to be at record abundance
- This abundance occurred in the presence of California's anchovy fishery
- **Best available science and fishery managers recognize: Anchovy abundance is driven primarily by environmental forcing and variability occurs even without a significant fishery**
- **Current anchovy management is ultra-precautionary**
 (... Far more precautionary than other fisheries managed under the MSA, i.e. the typical reduction for precaution is usually less than 10 percent, which means that the reduction for anchovy is seven and a half times more conservative than for other species)
- **It is important to recognize: The California anchovy stock has NEVER been declared overfished nor is overfishing occurring**

The final sentence in the CPSMT Report 1 (Agenda Item H.3.a, Jun3 2021) stated: *"The modeling analysis provides the Council some confirmation that current management for CSNA, with its 75 percent reduction from the OFL to the ABC, is relatively risk averse over time to changes in stock size."*

Further, a recent study, *Evaluating the impacts of forage fish abundance on marine predators* (Free et al, 2021) found that although there are increasing calls from some to further limit forage fish catches to safeguard their fish, seabird, and marine mammal predators, *"results [of the study] suggest that additional limitation of forage fish harvest to levels well below sustainable yields would rarely result in detectable increases in marine predator populations."* This paper and many others studying forage fish and fisheries have not found a significant relationship between Q and predator abundance.

In light of these points, we offer the following suggestions in support of much of the CPS Management Team's framework reasoning: For example:

- There is virtually **no difference in results among the three choices for Y, the frequency for conducting stock assessments (4, 8, 16 years)**. We concur with the CPSMT rationale for recommending 8 years as the frequency for both

conducting stock assessments and updating OFL, as illustrated in the revised flowchart. (OFL should not be revised absent a full stock assessment.) This time period achieves the balance objective, limiting both conservation risk and disruption to the fishery. As the Management Team report noted, “Choosing an 8-year interval for CSNA assessments also allows for flexibility for the Council and stock assessment teams to focus on other CPS matters and assessments.”

- We also agree with the Management Team’s recommended definition of average long-term biomass as 10 years, and can support the short-term biomass definition, “a 3-year rolling average from CPS/ATM surveys with nearshore correction factor” as a reasonable period, **with the caveat that multiple indices – not solely the Acoustic Trawl (ATM) survey, even with nearshore biomass included – should be employed to assess anchovy population status, both short and long term.** Other indices, such as CalCOFI DEPM and Juvenile Rockfish surveys, have been suggested and can provide useful information, and the annual IEA Report also is informative and should be considered to assess trends in anchovy abundance.
- The CPSMT saw no reason to change the current very large buffer ($Q=0.25$) set by the original CPS management team as a precaution against infrequent stock assessments, even though the new management framework will provide for routine scheduled stock assessments and interim short-term biomass reviews. Supplemental SSC Report 1 (Agenda Item D.4.a, November 2019) stated “the smaller Q is, the less sensitive the results are to the frequency of OFL and ABC updates.” **This double protection against the risk of overfishing should be recognized as justification for the Team’s recommended eight-year frequency for stock assessments and OFL adjustments, and 0.4 as the X_2 short-term trigger to reduce ABC. (But what about increasing the ABC when biomass increases?)**
- The Management Team also suggested a “check in” every two years to assess short-term trends in anchovy population status and adjust the ABC if needed. This also seems reasonable, if the CPSMT’s flowchart parameters were adopted. The Management Team correctly recognized that if ABC was updated every year, the estimate would be heavily influenced by the error associated with a single [AT] survey, and ABC would likely vary wildly with little predictive value for the next season’s fishery. This would be disruptive to the industry.
- We also point out that the draft flowchart and management framework provide a one-way road to reduce catches in between stock assessments, but there is no mechanism built in to **INCREASE** catches in the interim years if warranted. We suggest that such a mechanism be incorporated in the final management framework and flow chart somehow, to provide more flexibility to adjust catches either down **or up** as the population status warrants.
- For example, currently the revised flowchart suggests calculating a new B_{st} if $Q * E_{msy} * B_{st}$ is less than ABC by a proportion of at least 0.4. Why can’t this framework follow a parallel path if the equation produces a number that is **more than** ABC? At present, the only possibility to increase catch during interim years is if the catch exceeds 90 percent of ABC, which would only trigger an evaluation for new assessment, but would not guarantee one.

A key objective of the work by the CPSMT and SSC is to achieve consistency. The Report of the Joint Meeting of... the SSC CPS Subcommittee, CPSMT and CPSAS... stated: (Agenda Item D.4 Attachment 1, November 2019, page 10) “An ideal management scheme would implement changes when necessary, but not more frequently than necessary. The frequency of changes should be balanced by the objectives of limiting both conservation risk and disruption to the fishery.”

Keeping that objective in mind, we appreciate CPSMT suggestions for how this framework information could be incorporated into the management process. For example, the final flowchart (including a pathway to increase catches as well as reduce them) could be included in the SAFE document as an illustration (not a hard-wired mandate) of a management framework. The 8-year stock assessment schedule and 8-year OFL update could simply be included in the stock assessment priorities framework, i.e. Council Operating Procedure 9, and the two-year check-in could also be included in the SAFE document, with recommendations for updating the ABC following flowchart guidelines made only as needed, rather than having a defined explicit, and rigid, biannual management framework, requiring another FMP Amendment.

The Management Team also suggested changing the season start from January to July, paralleling sardine and Pacific mackerel. That rationale seems reasonable, but we diverge from the Management Team's suggestion that anchovy discussion be added to the Council's April agenda. In our view, that would not provide sufficient time for managers and stock assessment scientists to consider information from the IEA Report, which is presented at the Council's March meeting. Rather, we suggest June as a more appropriate time to discuss anchovy, **as needed**. This would allow more time to incorporate additional indices, such as the IEA Report and CalCOFI spring DEPM survey, into the assessment of anchovy abundance, both long-term and short-term.

We see no need for yet another full-blown FMP amendment with a rigid biannual schedule, beyond the revision already planned; we believe such an administrative overload is not necessary. As noted above, anchovy landings have averaged less than 10,000 mt annually for decades, but the opportunity to harvest anchovy when abundant and other CPS are unavailable is very important to California's wetfish industry, particularly in Monterey.

We also support recommendations put forth by the CPS Advisory Subpanel (expanded from the November 2019 CPSAS statement):

- Continue the stepwise process to gather the information required for a benchmark CSNA assessment in 2021
- Support the use of industry vessels as the preferred method to conduct nearshore acoustic and aerial surveys in conjunction with offshore AT surveys to provide the nearshore estimate needed for CPS biomass estimates.
- Utilize multiple indices to assess anchovy population abundance and trends.
- Provide sufficient flexibility to achieve the objective: implement changes when necessary, but not more frequently than necessary.

Thank you for your consideration of our comments.

Best regards,



Diane Pleschner-Steele
Executive Director