



CALIFORNIA WETFISH PRODUCERS ASSOCIATION

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March 15, 2018

Mr. Phil Anderson, Chair
And Members of the Pacific Fishery Management Council
7700 NE Ambassador Place #200
Portland OR 97220-1384

RE: Agenda Item C.3. Acoustic Trawl Survey Methodology Review

Dear Mr. Anderson and Council members,

I'm Executive Director of the California Wetfish Producers Association (CWPA), representing the majority of coastal pelagic species 'wetfish' fishermen and processors in California. I'm also co-chair of the CPS Advisory Subpanel, and served as the CPSAS representative on the Acoustic Trawl Survey Methodology Review Panel. On behalf of the fishing community, I question many of the assumptions made, which have significant impact on ATM estimates of biomass, and consequently also adversely impact sardine stock assessments and potentially other assessments if and when ATM biomass estimates are considered a measure of abundance.

I recount concerns expressed in the CPSAS statement included in the ATM Methods Review Report:

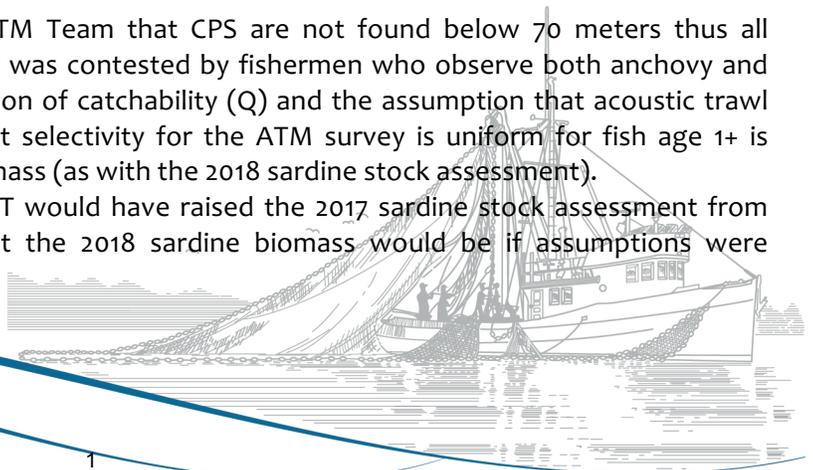
Throughout the 2018 review, CIE scientists expressed concerns with the same general issues found in the 2011 ATM methods review. Similar issues were also noted in the 2017 sardine STAR Panel and CIE Reports, but that discussion was deferred to this 2018 methods review.

Target strength as well as the other problems stated – including incomplete survey coverage, small biological sample size, stratification and aging – along with the scaling problem that has haunted sardine Star Panel reviews for many years, again were discussed at length. **Two CIE comments were especially troublesome:**

- **the current ATM trawl procedure seems to focus on precision at the expense of accuracy, and**
- **the protocol is repeatable but not necessarily objective.**

One burning issue is the assumption of the ATM Team that CPS are not found below 70 meters thus all backscatter below that depth is eliminated. This was contested by fishermen who observe both anchovy and sardine at deeper depths. Another is the question of catchability (Q) and the assumption that acoustic trawl surveys "see" all the fish. The assumption that selectivity for the ATM survey is uniform for fish age 1+ is acknowledged to lead to lower estimates of biomass (as with the 2018 sardine stock assessment).

Assuming that selectivity is logistic in Model ALT would have raised the 2017 sardine stock assessment from 86,586 mt to 153,020 mt. One wonders what the 2018 sardine biomass would be if assumptions were reconsidered?.



Perhaps the greatest bone of contention: the presence of an abundance of sardine and anchovy in nearshore waters inside current ATM survey grid. Fishermen have been reporting an abundance of both sardine and anchovy inside the 20-fathom curve – extending into the surf line – for the last few years. Yet throughout the ATM Methods Review, the ATM Team insisted that CPS abundance inside the ATM survey tracks was “insignificant,” and presented a survey conducted in the Pacific Northwest last June by an industry purse seiner, who didn’t see much, but said that June was a little early.

The point we would make to the Council: Fish behavior in California is vastly different from that in the Pacific Northwest! During the 2017 summer acoustic trawl survey, the California Department of Fish and Wildlife / CWPA conducted an aerial survey at the same general time and inshore of the NOAA acoustic survey as it transited offshore the Half Moon Bay – Monterey area. Our spotter pilot estimated tens of thousands of tons of sardine and anchovy in the nearshore. The ATM team discounted this evidence, saying the spotter pilot estimates were not calibrated. This is another critical reason why we need the Council to approve our EFP, whose purpose is to obtain the ‘proof’ recommended by the SSC so spotter estimates can be used as indices of abundance, accounting for fish now missing from current ATM surveys, and included in future stock assessments.

CIE scientists offered several recommendations for further study to resolve these problems that both the CPSMT and CPSAS unanimously supported. In addition, the CPSAS, as well as the CPSMT, also supported the Panel recommendation for full documentation of methods and the decision process involved in field operations and data processing of the acoustic and trawl components of the survey, in providing a complete reference for future consideration and evaluation of the ATM methodology. CWPA agrees with these recommendations and encourages the Council to support them also.

The fishery representatives on the CPSAS (and CWPA) greatly appreciate the support and recommendations of the CIE scientists for collaborative research involving the fishing industry, and we also appreciate the support of the SWFSC and willingness of the Team to work with fishermen to **resolve outstanding questions, such as:**

- **validating that the fish caught in the trawls from the night time scattering layer share the same species, age and size structure as the fish ensonified in the daytime clusters**
- **expanding sample size by testing the efficiency (relative catchability) and selectivity of the trawl among and within species by comparing samples from the same area taken with the survey trawl and purse seine.**
- **cooperating in inshore surveys to provide an estimate of abundance or correction factor for those unsurveyed areas.**

Resolving these issues will lead to better surveys and more accurate stock assessments.

The fishing industry in both the Pacific Northwest and California is ready and willing to cooperate with NOAA to improve CPS surveys, and stock assessments, if adequate funding can be secured to help support such cooperative research ventures.

In conclusion, we encourage the Council to approve the ATM Methods Review report and recommendations from the Panel, including their finding that current ATM biomass estimates **cannot be used as absolute estimates of biomass (Q=1)** “because of uncertainties related

- (a) to target strength (borrowed relationships from other areas),
- (b) the proportion of the biomass inshore, offshore, and to the north and south of the survey area,
- (c) target species identification, avoidance, migration during the survey, and
- (d) the surface blind zone, all lead to Q values that may differ substantially from 1.”

We also support the Panel finding that, although ATM surveys may be used as “relative” indices abundance in certain cases, as itemized in Table 3, they can be used to directly inform management **ONLY following a Management Strategy Evaluation**, and in the case of anchovy, **ONLY if the inshore area is addressed and incorporated**.

We strongly suggest that the same guidance also apply to sardine, particularly in California.

Thank you very much for your consideration of these comments.

Best regards,

A handwritten signature in cursive script, reading "Diane Pleschner-Steele", is displayed on a light gray rectangular background.

Diane Pleschner-Steele
Executive Director