

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON ANCHOVY MANAGEMENT UPDATE

The Coastal Pelagic Species Advisory Subpanel (CPSAS) met jointly with the CPS Management Team (CPSMT) to review the CPSMT white paper on anchovy management options. The CPSAS thanks the Management Team for their thoughtful report. The white paper explains that the Active Management category is for fisheries with significant catch levels that require intense harvest management procedures, such as annual stock assessments and overfishing limit (OFL), acceptable biological catch (ABC) control rules, while the Monitored category is intended for lightly fished species where annual assessments are not necessary. Anchovy was moved to Monitored status at the initiation of Amendment 8 because the reduction fishery was no longer operating and anchovy catches had been light for more than two decades prior to adoption of the CPS Fishery Management Plan (FMP). The white paper stated one of the goals of Active and Monitored management categories is to use available agency and Council resources in the most efficient manner. In her presentation, CPSMT Chair Lorna Wargo emphasized that alternative management options are available for stocks in the Monitored category, and a move to Active management would present major challenges as existing data are inadequate. Developing a harvest control rule would entail a very large workload, along with workshops to analyze various options.

The CPSAS supports using best available science for management of northern anchovy, and would appreciate the Council's consideration of the following points and recommendations regarding anchovy management:

- The biomass of northern anchovy is extremely variable and this variability occurs even without a significant fishery.
- Catches of the Central Northern Anchovy stock (CSNA) have remained well below their respective ABC/annual catch limit levels since implementation of the CPS FMP in 2000.
- The anchovy fishery showed no response to the population spike estimated at more than one million mt in 2005-06. The lack of canning and fishmeal processing equipment and the small market for fresh or frozen anchovy is what has limited California landings for the past few decades.
- Now the CSNA is a fishery of "last resort," fished primarily in Monterey when no other CPS are available. But this fishery is very important to California's wetfish industry to keep the fleet fishing and market doors open. This was evident in 2015, when landings increased above average (but still well below the 25,000 mt harvest limit) because the sardine fishery was closed and squid were unavailable due to El Niño.
- The CalCOFI DEPM and Acoustic-Trawl Method surveys, both designed primarily for sardine, do not effectively quantify the nearshore environment where age 1 and age 2 anchovy reside.
- The juvenile rockfish survey reported the catch-per-tow of northern anchovy young-of-the-year at record levels in 2015, and high numbers were observed again in 2016.
- Fishermen now observe an abundance of age 1+ fish (both anchovy and sardine) in the nearshore and estuaries from southern CA to Canada.
- The assessment workshop report and SSC acknowledged that an interim "DEPM light" anchovy assessment, which will be reviewed by the SSC subcommittee in October, would be negatively biased, in part due to the omission of the nearshore.

- An interim assessment utilizing existing data, which excludes nearshore abundance and evidence of recent recruitment, would seriously underestimate the current biomass. A majority of the CPSAS believe it should not be used for management.
- A growing body of research finds that variability in small coastal pelagic fish (i.e. anchovy and sardine) is controlled predominantly by the environment; fishing pressure is generally negligible.

A majority of the CPSAS believe there is no biological point of concern regarding anchovy abundance, but there could be a serious socio-economic point of concern if the small 25,000 mt harvest limit now allowed for the CSNA fishery is further restricted. It should be noted that current fishery management has had essentially no impact on the resource as the conservative annual quota was larger than the market.

Further, the extreme biomass variations demonstrate that CSNA stock assessments are worth very little for real time management if they are more than a year old. If anchovy were actively managed, annual stock assessments would be very expensive for a fishery that has averaged less than 10,000 mt per year over the past decade.

For all these reasons, a majority of the CPSAS believe the anchovy fishery should be allowed to continue under the current management framework. Any reduction in existing harvest limits, precluding fishing opportunity to fish on anchovy in slack times, could be the proverbial last straw that curtails California's wetfish industry, the backbone of California's fishing economy.

A majority of the CPSAS recommend that the Council:

[1] Retain status quo management for the CSNA fishery with current harvest specifications, which represent a reasonable **average** OFL and precautionary 25,000 mt harvest limit, in light of the variability in anchovy abundance and the negligible impact of the fishery on the ecosystem or dependent predators.

[2] Acknowledge recent record anchovy recruitment in 2015 and 2016; young anchovy are now superabundant in nearshore waters and in estuaries from southern CA to Canada.

[3] Recognize the need to expand surveys into the nearshore to completely assess biomass (for both anchovy and sardine) and include that information in new stock assessments.

The conservation representative recommends that if and when the Council receives an anticipated abundance estimate at its November meeting, it may decide that management measures should be updated to reflect this or other new information on the status of the stock, in order to meet key goals and objectives of the CPS FMP. The conservation representative notes that the most recent information available on the abundance of the central subpopulation shows that the adult stock was at low levels as recently as 2015, and may currently be an order of magnitude below the stock size upon which the existing MSY proxy and related harvest specifications were modeled. Further, it appears there is no data available at this time indicating that the large spawning event observed in 2015 resulted in significant recruitment of larval or young-of-the-year anchovy to the spawning stock. If, in response to updated information on biomass to be considered later this year, the Council opts to update management measures for the central subpopulation (e.g., via reducing the catch limit), the CPS FMP provides several options for doing so, as described in the CPSMT's report and in public comment – any of which the Council could decide to utilize.

Thank you for your attention.

PFMC
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