



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Blvd
Long Beach, CA 90802-4213

Agenda Item I.4.c
Supplemental SWFSC Report
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Mr. Chairman, Members of the Council,

Good morning and thank you for the opportunity to provide comments today. My name is Kristen Koch and I am the Deputy Director of the NOAA National Marine Fisheries Service's Southwest Fisheries Science Center (SWFSC). The purpose of my comments today is to provide complementary information to the discussion on management of Pacific sardine that this year includes a call for the Council's re-consideration of the present harvest control rules.

The Council members are aware of an article jointly authored by a SWFSC scientist and a contractor scientist that appeared in February 2012 in the Proceedings of the National Academy of Sciences (PNAS) entitled "*A cold oceanographic regime with high exploitation rate in the Northeast Pacific forecasts a collapse of the sardine stock*"⁽¹⁾. In March of 2012, Dr. Cisco Werner, Director of the SWFSC, provided comments on the article to this Council.

As the title indicates, the authors claimed, based on their interpretation of the data, that "the northern sardine stock of the west coast of North America is declining steeply and that imminent collapse is likely".

As stated last March 2012, based on current information, expertise, and extensive peer-reviewed research, NOAA's National Marine Fisheries Service believes that the population of Pacific sardines is cyclical and capable of large fluctuations as has taken place in previous decades, with observed increases and decreases in abundance, and is not currently in a state of imminent collapse as referenced in the PNAS article⁽¹⁾ of March 2012. Subsequent to Dr. Werner's comments to the Council last year, scientists in the SWFSC and NWFSC collaboratively prepared a response² to the results and interpretations presented in the PNAS article.

We welcome the scientific community's healthy debate that has taken place in the peer reviewed literature [see PNAS^(1,2,3)]. We also encourage that the discussions presently taking place in the public arena, and within the Council's Scientific and Statistical Committee, the Coastal Pelagic Species Management Team, and on the Council floor recognize the broader nature of this debate.

Related to these discussions, public comments have been submitted for this meeting (under agenda item I.4.d) including a call for the Council's consideration of alternative harvest control rules for Pacific sardine. One proposed alternative is largely based on an unpublished working draft of a paper co-authored by a SWFSC scientist and presented at a public Council-sponsored sardine harvest parameters workshop in February of this year. The draft paper was discussed by fisheries scientists, managers and economists present at the workshop. A revised version of the paper has been submitted to a scientific journal and is undergoing external peer-review. We expect it will be published in some form at a later date.

The Science Center, and indeed the Council process, routinely considers draft science as a way to propose and push new ideas forward. We should welcome opportunities to advance our thinking on fisheries management. The Science Center will continue to ensure draft papers coming from our scientists are subject to rigorous peer review through the scientific publication process. Likewise, we support the Council's Scientific and Statistical Committee and Management Teams processes that ensure rigorous review of published and unpublished work put before them. These unbiased reviews are essential as the Council determines the appropriateness of the available information for use in fishery management decisions.

I again thank the Council for the opportunity to provide these comments, and we are of course available to help in any way we can.

References

1. Zwolinski J.P., Demer D.A. (2012) A cold oceanographic regime with high exploitation rates in the Northeast Pacific forecasts a collapse of the sardine stock. Proc. Natl. Acad. Sci. USA, 109:4175–4180.
2. MacCall A.D., Hill K.T., Crone P., Emmett R. (2012) Weak evidence for sardine collapse. Proc. Natl. Acad. Sci. USA, 10.1073/pnas.1203526109.
3. Demer D.A., Zwolinski J.P., (2012) Reply to MacCall et al.: Acoustic trawl survey results provide unique insight to sardine stock decline, Proc. Natl. Acad. Sci. USA, www.pnas.org/cgi/doi/10.1073/pnas.1203758109.

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