

KRILL READER



Issue. 2

THIS ISSUE

Welcome to issue 2 of the Krill Reader. In this edition we will cover some exciting news about the future of SKAG, find out what's on the agenda at this year's Scientific Committee meeting of CCAMLR, get to know the SKAG community (follow the link in Know Your Swarm), and catch up on the latest events and publications from the world of krill.

SCAR KRILL EXPERT GROUP

We have some big news here at SKAG. . We are now officially SKEG, the SCAR Krill EXPERT Group! SCAR Expert Groups, like Action Groups, seek to increase research and coordination in specific areas, but have a lifetime of around 6 to 8 years with an option of renewal. Congratulations to our chairs for all their hard work getting us here.

Skeg noun 1. The aft end of a keel connecting to a rudder, 2. a fin situated on the rear bottom of a small craft used for steering and stability, 3. (var. **SKEG**), an International organization of scientists, industry members, and interest groups, fostering communication, collaboration, and guidance in order to improve our understanding and management of krill.

Know Your Swarm

with

Emma Cavan, PhD.

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get to know
Emma



NEWS

Change in SKEGs relationship status

Krill at the CCAMLR 41 meeting

HAPPENINGS

13th SCAR Biology Symposium

7th ICES/PICES Zooplankton Production Symposium

HOT OFF THE PRESS

The latest in krill research from our members.



CCAMLR NEWS

The final CCAMLR meetings of the year will occur over a busy few weeks this month. For the first time since the pandemic began members will be meeting in person.

Starting off are a series of working groups; IMAF (Incident Mortality Associated with Fishing), which is reconvening for the first time since 2011, and FSA (Fish Stock Assessment) which meets at the same time. Next up is the Scientific Committee meeting, which will provide formal scientific advice to the Commission which meets the following week. If you need a refresher of what the different working groups are and how they fit into the CCAMLR management scheme check out Issue 1.

The big issues this year once again revolve around whether the CCAMLR's Scientific Committee can reach agreement on the implementation of the proposed krill management plan. To understand why this matters, let's go back and look at how krill management has changed in the past.

Article II of the CCAMLR Convention (1982) states that krill harvesting should be managed to prevent the decrease of krill population so that, ecological relationships are maintained between harvested and dependent populations and, in case we screw up the first two, changes in the ecosystem are reversible over 2 or 3 decades. (Check out the text [HERE](#), it's quite inspirational, as management documents go). A decade later it was agreed that members should do something about Article II, so a catch limit was set for Area 48 (that's the Atlantic sector of the Southern Ocean, including the Antarctic Peninsula region) at 1.5 million tons. Members realized that catching this much from a single subarea might not be ideal, so it was decided that 620,000 tons was probably enough until someone thought of a better way to distribute the catch. Another decade later the catch limit was revised to 5.4 million tons after a large scale survey was conducted, and twice more to 3.4 and finally 5.6 million tonnes, following revaluation of the survey data in 2007 and 2010.

CCAMLR Meetings 2022- Hobart, AUS

SC CAMLR 41 24 Oct to 28 Oct
CCAMLR 41 24 Oct to 04 Nov

How to follow

Non-Profit groups in attendance including ASOC and PEW will be posting with:

#CCAMLR #CCAMLR41 #Krill
#MPAs #ProtectAntarctica
#SouthernOcean #Antarctica



CCAMLR NEWS CONTINUED

The 620,000 ton limit, known as the “The Trigger Level”, is still in place and designated to be used, “until the Commission has defined an allocation of this total catch limit between smaller management units based on the advice from the Scientific Committee” (CCAMLR).

This caveat effectively sets the trigger level, determined in 1991, as the reigning catch limit for Antarctic krill. In 2009 the trigger level was portioned into four established subareas in the western part of Area 48 to limit spatially concentrated fishing. It was decided that these limits would end in 2021 by which point, a better management plan would surely be in place. In the ensuing years, the fishery grew and consistently reached the subarea trigger level. Furthermore, studies showed that even these may not be precautionary enough to maintain ecological relationships. So members got to work on a new krill management plan and while they may not have finished by 2021, they got very close. Close enough that they decided that one more year would be enough and here we are. **So, what’s in this new krill plan?**

The krill management plan is focused only on subarea 48.1 and consists of three parts: a regional biomass assessment, a yield model, and a risk assessment model. Each has been spearheaded by a group of members over the last several years with results being presented at the working groups for discussion and modification. It is now up to the members to agree on aspects of various models. For example, the yield model is currently up and running due to the hard work of members, but several parameter values have yet to be agreed on. The risk assessment model group has presented several ways to distribute the yield into smaller areas across subarea 48.1. The ideal scale would balance the risk to foragers like penguins and seals with catch for the industry, address areas that are data poor, and be practical to monitor.

Several members submitted full proposals laying out their case for various parameters and scales. Members have also put forth partial proposals, such as selecting a scale for the risk assessment layer but waiting to implement the new yield model until parameters are agreed on. The big question is whether members at the Scientific committee meeting will find consensus around any parts of the krill management plan when they send their advice to the Commission, or whether they will advise a continuation of the current interim catch limits and distribution.

HAPPENINGS/OPPORTUNITIES

- 13th SCAR Biology Symposium, Christchurch, New Zealand, 31 July - 03 August, 2023. scarbiology2023.org
- 7th ICES/PICES Zooplankton Production Symposium, Hobart, Tasmania, 17 - 22 March, 2024

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HOT OFF THE PRESS continued

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- Zhu J, Zhu G. Trophic linkage between mackerel icefish (*Champsocephalus gunnari*) and Antarctic krill (*Euphausia superba*) at South Georgia. *Fisheries Research*. 2022 Sep 1;253:106366.
- Yang, G., Atkinson, A., Pakhomov, E. A., Hill, S. L., & Racault, M. F. (2022). Massive circumpolar biomass of Southern Ocean zooplankton: Implications for food web structure, carbon export, and marine spatial planning. *Limnology and Oceanography*. doi.org/10.1002/lno.12219

Hey SKAG Members, you can promote your latest publication here. Just send the publication information (Title, Authors, Journal info, DOI) to SKAG Communications Chair Ryan Driscoll (ryan.driscoll@awi.de) and we will be sure to include it.

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