



Antarctic Krill Report

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The Antarctic Krill Report provides reports, information and commentaries on the Antarctic krill fishery and the associated industry.

CCAMLR Must Improve Krill Management

CCAMLR has yet to put in place measures to achieve an ecologically sustainable krill fishery. While there was some progress at the last CCAMLR meeting, there are still a number of missing elements.

While last year's action began to spread out the catch among statistical areas, it failed to address the critical need to subdivide the allowable catch between coastal and pelagic to mirror the distribution of the krill stock. While only 25% of the krill stock is found in coastal waters, over 90 percent of this catch historically occurs there, overlapping with foraging areas for krill predators eg penguins, whales and seals.

Furthermore CCAMLR has yet to divide krill catch management among small-scale management units. The impact of this failure continues to grow with the increasing interest and effort in fishing for krill by CCAMLR countries.

CCAMLR is still relying on an assessment of the krill stock which is now 10 years old – none of the krill surveyed in 2000 are now alive today. In addition the current estimate based on this survey is known to be wrong. This further raises questions over how precautionary the current 620,000 tonne trigger limit is.

As noted in the last newsletter observer coverage in the krill fishery is to be reviewed

this year in an effort to provide scientifically useful coverage and bring the krill fishery in line with other CCAMLR fisheries.

The ecosystem impacts of the krill fishery require ongoing assessment so that CCAMLR Commission can meet its obligations under the Convention. The impacts on penguins, seals, whales and fish need to be closely monitored given the crucial role of krill in the Antarctic ecosystem.

The Antarctic Krill Conservation Project is looking for significant improvement in the monitoring of krill predators, which has declined over the last 10 years.

In addition to new monitoring requirements, krill is subject to the impacts of climate change. A reduction in Antarctic ice and warmer conditions are severely reducing krill numbers. In the 2009 fishing season little krill was caught around South Georgia, which is usually one of the three most productive fisheries.

The AKCP is looking forward to CCAMLR fully exercising its mandate of management using the precautionary principle and including the consequences of climate change in its uncertainties when managing krill.

More Vessels Fishing for Krill

As of mid-May 2010, eleven vessels have been authorized to fish for krill in the current fishing season. A total of 13 vessels were notified to CCAMLR prior to the cut-off date of 1 June 2009. Norway and Korea have authorized three vessels and China has authorized two vessels. Japan, Poland and Russia have authorized one vessel each. In total these vessels propose to catch 350,000 tonnes this year.

China Goes Fishing for krill

China has for the first time authorized two vessels to fish for krill, out of the three vessels it notified. The trawlers *Kai Li* and *An Xin Hai* fished for 23 days with a reported catch of 2,000 tonnes of krill. These trawlers also fish for jack mackerel in the South-East Pacific. According to China's Ministry of Agriculture, this involved a daily catch of 100 tonnes - three times what was originally expected. However, this catch is small compared to the krill catches of vessels from Norway, Korea or Japan, which catch about 20,000 tonnes per vessel.

This effort was the first stage of a five-year scientific research programme started last September - "Development and Utilization of Marine Antarctic Bio-Resources" - to develop krill products for sale in China (including fish meal for aquaculture) and export. The project head is Li Jianhua, Director-General of the Bureau of Fisheries, Ministry of Agriculture. Chen Xuezhong, Head of the East China Sea Fisheries Research Institute (ECSFRI) is undertaking the research. The ECSFRI is under the Chinese Academy of Fishery Sciences, in the Chinese Ministry of Agriculture and is based in Shanghai.

The first three years of the project will involve exploratory krill fishing, with the last two years focusing on commercial development.

The Chinese vessels operated out of Uruguay and had eight researchers on board. A total of 88 research trawls were undertaken and biological information on krill and environmental data was collected. The vessels carried out experiments on processing krill including extracting krill oil and lecithin.

Also in 2009 a Chinese company initiated a project to research krill and krill products. The Shandong Keruier Biological Products Company joined with the Ocean University of China to undertake the research and Professor Jiang Guoliang leads the programme for the University. The Company is based in Jinan, and the University is in Qingdao, both in the Shandong Province. The Liaoning Long Range Fishing Company and Shanghai Kaichuang Deep-sea Fisheries Company have operated two Antarctic fishing vessels to provide a base for the research.

Shandong Keruier has developed a cooperation agreement with Norwegian krill fishers and developers Aker BioMarine group. Part of the agreement will be the construction of China's first specialized catching vessel for the Antarctic region, including a processing plant for krill products on board. In addition the agreement involves promotion of trade in krill products between both companies. Aker and Keruier are looking at developing joint ventures in marketing and development of krill products.

Whole Foods Stops Selling Krill

Specialist retailer Whole Foods is reported to have stopped selling krill supplements in its 270 stores in North America and the UK. The company is based in Texas, USA.

Whole Foods made its decision based on the existing concerns over the impacts of the krill fishery on marine animals including penguins, seals and whales.

Moody's Krill Certification Approved After Appeal

The certification of Aker's Krill fishing operations has been approved despite an appeal by ASOC. No fishery has been rejected at the appeal stage and only one fishery has been rejected in the earlier full Marine Stewardship Council (MSC) certification process.

The ASOC appeal of the certification of Aker's krill fishing operations was decided by an independent adjudicator appointed by the MSC Council, Mr. Eldon Greenberg.

The adjudicator first remanded the certification for further consideration, identifying a "serious procedural error" by the certifier Moody Marine in ignoring a risk assessment on krill prepared in 2009.

The adjudicator ignored ASOC's concerns that:

- MSC's standards allow for certification of a single operator in a multi-vessel, multi-country fishery and assumes all vessels act responsibly.
- Climate change impacts on species are not considered by MSC methodology. As krill have been proven to be susceptible to

climate change, the impact of warming temperatures on the population should be considered, if fishing is to be sustainable.

- Numerous uncertainties are associated with the determinants and drivers of krill population size, which are still being studied.
- The impacts of the fishery on krill predators (eg whales, seals and penguins) is not adequately known or monitored.

Neptune Patents dispute continues

Neptune has appealed a decision of European regulators to reject a krill patent which has been challenged by Aker Biomarine and Enzymotec.

Neptune has also filed a patent infringement lawsuit in the US District Court for the District of Massachusetts against Aker Biomarine ASA, Jedwards International, Inc., and Virgin Antarctic LLC. The patent involves a method of extracting total lipid fractions from krill.

Aker Expands

In addition to the agreements with mainland Chinese companies, Aker has also signed a distribution agreement to sell its krill products in Taiwan. The agreement is with Compson Trading, a supplier of dietary and pharmaceutical products in Taiwan.

At the same time Aker BioMarine is reporting an increase in revenue and profit for the first quarter of 2010 compared to 2009. Revenue raised to \$US8.80 million, representing an increase of 260% over a year earlier. According to Aker the increase was largely due to increases in its Superba krill oil sales.

In the South Atlantic, Aker reported catching over 28,000 tonnes of krill from its vessel the *Saga Sea*.

Enzymotec Gains EU Novel Food Approval

An Israeli biotech company and krill oil formulator, Enzymotec, has gained novel food status for its krill oil products in Europe. Novel foods under EU Regulations is for food or ingredients designed for human consumption that has no significant

consumption prior to 1997 or is produced by a new or novel method.

This follows similar status obtained for Aker Biomarine's krill products and Neptune Bioresources krill products.

Both Enzymotec and Aker Biomarine have been opposing Neptune's exclusive patents in Europe.

Correction

In the last issue we mistakenly stated that US-based AC Grace was promoting krill oil products based on Neptune krill oil. This was not the case, and Neptune Technologies and Bioresources has no business relationship with AC Grace.

Disclaimer: *The material in this newsletter is intended to assist people in understanding the nature of the krill fishery and the associated industry. While we try to ensure that information is accurate and up to date, the Antarctic and Southern Ocean Coalition gives no warranty as to its accuracy.*

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