



Krill Industry Report Number 7

Antarctic and Southern Ocean Coalition

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

Russian Joint Venture With Ocean Trawlers

Hong Kong-based Ocean Trawlers is reported to have developed a krill joint venture project with two Russian fishing companies. The two companies are based in Murmansk and Kaliningrad respectively.

Ocean Trawlers owners Magnus Roth and Vitaly Orlov have more than ten years experience in joint venture and bareboat projects with Russian fishing companies. In the mid 1990s they both worked for Scandinavian operator Scanseas and they pooled their contacts and experience to establish Ocean Trawlers, originally in Drøbak, Norway. They soon gained control over ten Russian cod and haddock quotas.

They have repeatedly been accused of IUU fishing in the Barents Sea and after failing to have their Norwegian accounts accepted in 2002, they moved to Hong Kong. They are still the kings of the Barents Sea fishery with an annual supply of about 75,000 tonnes of cod (live weight) – i.e, a third of the Russian Barents Sea cod quota.

Hong Kong is currently outside CCAMLR as China did not include the territory when it became a member of the CCAMLR Commission last year.

The Chief Executive of Ocean Trawlers, Thomas Zachrisson, was appointed in March 2007. He previously worked for Swedish manufacturer of food products machinery Alfa-Laval as head of their Life Science and HSS (High Speed Separators) segment

which included biodiesel production equipment.

The Russian companies will harvest krill for meal and oil while Ocean Trawlers will assist with oil and meal technology. Alfa Laval is likely to provide vessel equipment for producing meal and oil for the krill joint venture.

Russia notified CCAMLR last year of its intent to catch 125,000 tonnes of krill in 2008 with three trawl vessels.

Two of the Russian notified vessels are from the Kaliningrad based fishing company Morskaya Zvezda, which aims to catch 75,000 tonnes of krill. The vessels are:

- *Marshal Vasilevskiy*
- *Kapitan Sukhondyayevskiy*

Both these vessels are 104 metre long freezer trawlers (BATM), which have oil and meal plants installed in association with Ocean Trawlers. The Kaliningrad company has an additional nine trawlers greater than 90m, used to catch a range of species including blue whiting, herring, horse mackerel, and redfish.

The third vessel, the *Maksim Starostin*, is operated by the Murmansk Trawl fleet and is slated to catch 60,000 tonnes of krill. The *Maksim* is the largest of the three vessels at 120 m.

The Murmansk Trawl fleet is the main partner of Ocean Trawlers. The Murmansk Trawl fleet vessels *Strelets*, *Korund*, *Topaz A*, and *Zapolyarye*, were all Norwegian vessels provided by Ocean Trawlers and operated by them. Ocean Trawlers still controls the catch. The details of the krill joint venture have yet to be fully reported.

Krill Vessel Conversions Continue

Norwegian Company Ervik Marine Services is in the process of converting the former New Zealand Sealords fishing vessel, the *Paerangi*, to a krill factory vessel. Last year Ervik gained one of three Norwegian licences to fish for krill in Antarctic waters.

The *Paerangi*, which was built in 2003, has been cut in two and is being extended by 40 metres. This will allow additional storage and processing facilities. The vessel is being renamed the *Juvel*.

The conversion is being undertaken in Bremerhaven, Germany and is reported to cost over \$US 90 million. In early February the conversion was interrupted by a fire in which two workers were taken to hospital for smoke inhalation.

CCAMLR-licensed Krill Vessels

By mid-March, five CCAMLR countries had advised the CCAMLR Secretariat in Hobart that they have licensed six vessels to fish for krill. The vessels are:

Japan – *Niitaka Maru*

Korea – *Dongsan Ho* and *Insung Ho*

Norway – *Saga Sea*

Poland – *Dalmor II*

Ukraine - *Konstruktor Koshkin*

Korea has yet to licence the *Kwang Ja Ho*, which fished last year.

No Further Norwegian Krill Licences

The five Norwegian companies that were turned down for licences last year have been turned down again.

The five companies involved are Andre Vågsholm, Henning Veibust, Norway Krill Company Ltd, Olympic-Stig Invest, and the Fish Group of Norway.

It has been suggested that some of these companies may be interested in using one of the Netherland's controlled pelagic trawlers to fish for krill using non-Norwegian flags. Vanuatu is one country that could flag the vessels, as it has an open registry and has already flagged several large trawlers proposed for fishing krill.

The Netherlands trawlers operate off East-Africa and off South America.

The Norwegian Government is known to disapprove of its fishers using flags of convenience and that may be one reason why these venture are not going forward.

Neptune Krill Approved for Human Consumption

Canadian-based Neptune Technologies and Bioresources has gained approval for use of its krill oil (NKO) for human consumption in the US.

The Neptune krill oil was approved by an independent panel of experts from GRAS Associates, based in Oregon, USA. GRAS undertook a review of the product on whether it meets US Food and Drug Administration (FDA) tests for "generally recognised as safe". The review involved range safety and clinical tests.

The results have been notified to the FDA, which can take several months to provide comments. This process is voluntary for a food company.

These results means the krill oil formulation can be used in food products. Neptune has agreements with food giants Nestle and Yoplait to develop a range of functional food products.

Neptune is seeking approval to use NKO in food in Europe and Australia as well as other markets.

Aker Shares Take a Hit in Market Fall

The share price of Norwegian krill processor Aker BioMarine, ASA has declined precipitously over the last six months - nearly 60 percent.

Aker Biomarine experienced a \$US38 million loss on its operation last year while turnover fell by 14 percent. The company has had high research and development costs as it advances its krill oil products for use in Europe and the US.

Aker BioMarine produced 9000 tonnes of krill meal last year, and predicts a doubling in production by next year when a second vessel, the *Atlantic Navigator*, is operative. Aker sells krill meal to companies in 26 countries for salmon, marine fish, and shrimp farming. Krill naturally contains astaxanthin, an antioxidant which causes the red color in salmon meat.

The other side of the Aker operation, Aker Seafoods, ASA, is also in the process of acquiring a 70 percent stake in the French seafood company Viviers de France, SA. Viviers operates two processing plants in France and two farming operations in France and Spain. The group has 260 employees and annual revenues of \$US96m.

At the same time Norwegian marine farming giant Marine Harvest, ASA has acquired 11.78 % of Aker Seafoods ASA.

Cyanotech Uses Krill Oil

Cyanotech Corporation, based in Hawaii, has been developing skincare products based on a blend of krill oil and its microalgae-based astaxanthin product, BioAstin. It grows the microalgae at its 90-acre facility in Hawaii. Astaxanthin has a number of antioxidant properties and provides the red color in salmon meat.

This product is being sold through the direct marketing firm OceanGrown.

Cyanotech has also developed a network of distributors in Europe and is looking at sales in Korea and China.

Disclaimer: The material in this newsletter is intended to assist people in understanding the nature of the krill 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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