

AQUACULTURE STORIES

<http://www.proactiveinvestors.com.au/companies/news/1526/clean-seas-tuna-raises-13-million-confident-of-improved-2009-1526.html>



Clean Seas Tuna raises \$13 million, confident of improved 2009

Friday, May 22, 2009



Clean Seas Tuna Ltd (ASX: CSS) has raised \$13 million via a placement of ordinary shares. The 23.775 million shares were placed to sophisticated and institutional investors in Australia and overseas at a price of \$0.55 per share.

The company said, "Today's equity raising allows us to step forward with confidence towards our goal of successfully producing commercial quantities of aquaculture bred Southern Bluefin Tuna (SBT).

Having achieved the world's first aquaculture production of SBT fingerlings, Clean Seas' primary business objective is to commercialise the closure of the SBT lifecycle for the benefit of all shareholders. The company will transfer its next run of SBT fingerlings to sea cages for growout on or about 31 December 2009.

Clean Seas remains strongly committed to the Kingfish business. Clean Seas believes the Kingfish business will trade positively in 2HFY2009 and anticipates a breakeven EBITDA result for this division for the full year ending 30 June 2009.

Clean Seas indicated that its oldest Southern Bluefin Tuna ("SBT") fingerlings were now over 55 days and greater than 15 cm in length. In addition, the SBT fingerlings were eating man made feeds.

<http://www.thefishsite.com/fishnews/9931/moving-salmon-nets-may-control-parasite-spread>

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Moving Salmon Nets May Control Parasite Spread

GUELPH, CANADA - Researchers at the University of Guelph have used DNA barcoding techniques to shed new light on controlling the spread of the salmon louse, a parasite blamed for devastating wild Pacific salmon stocks and costing British Columbia's salmon-farm industry millions of dollars each year.

The research team, led by integrative biology professor Elizabeth Boulding, also confirmed that the Pacific salmon louse is a distinct "sister species" of the salmon louse that has plagued the East Coast and salmon fisheries and fish farms on both sides of the Atlantic Ocean.

Their findings in the current issue of the journal *Aquaculture Research*.

Boulding's team discovered significant differences in gene frequencies between lice samples from salmon caught at different locations along the B.C. coast, as well as between samples from wild salmon and farmed fish taken from the same waters. This suggests a low level of migration of lice back and forth between farmed and wild fish, but Boulding is cautious about the conclusions that can be drawn from the data.

"Without question, we observed considerable population structure – differences in gene frequencies among the different populations," she said, adding that the dispersal of lice appears to be limited during their free-swimming larval phase. This suggests the lice could not be transmitted between farmed and wild fish if the net pens are kept far enough away from the migration routes of the wild salmon.

"However, in order to understand when the salmon louse is transmitted between wild salmon and farmed fish, we would need to do a much larger study with hundreds more samples, all taken in the same year, from the five wild species of Pacific salmon – chinook, coho, sockeye, pink and chum – and from fish farms across the region."

Salmon lice have always existed naturally in the region but generally do not cause problems for adult fish. But since the advent of salmon farming, the lice are found in higher densities in some areas due to the presence of large numbers of fish living year-round in net pens. Juvenile salmon (smolts) are vulnerable to potentially lethal infection. This is particularly true for pink salmon, which emerge from B.C.'s rivers at an earlier stage than other wild species on their journey to open water, where they spend their adult years. The current study analyzed 239 samples of lice from wild and farmed salmon hosts from British Columbia, Alaska and Japan, as well as 180 samples from areas on both sides of the Atlantic, including New Brunswick and Scotland. It included new samples obtained with the assistance of B.C. sports fishers, Stolt Sea Farm Canada and conservationist Alexandra Morton, as well as samples from previous studies.

Working with the Biodiversity Institute of Ontario (BIO), the research team extracted DNA from the lice, obtained the sequence of the mitochondrial "barcoding" gene and analyzed the frequencies of 45 different alleles.

In addition to confirming that the Pacific salmon louse is indeed a separate species, they found significant frequency differences in the sequences between lice taken from wild salmon caught in Barkley Sound and those from the Broughton Archipelago. There were also genetic differences between the lice found on wild hosts and those from farmed fish, and between lice taken from fish farms in different regions. The samples from wild hosts were collected in 2005, whereas the samples from fish farms were collected in 2006, which may account for some of the differences.

All farmed salmon on B.C.'s coast are Atlantic salmon because they are better suited to being raised in net pens. Like their wild cousins, they are vulnerable to infection from the Pacific salmon louse, costing the industry millions of dollars each year in losses and spending on chemical control measures.

Boulding said the study demonstrates the value of the genetic barcoding work being done by the BIO team in Guelph. Researchers based here are uniquely equipped to carry out a much larger study that would answer important questions about the salmon louse and possibly guide future public policy on salmon aquaculture, she said.

"This is a very important issue in British Columbia because it is the only place in the world where there are still wild stocks of salmon in areas where there are also fish farms."

Funding for the study is from the Canada Foundation for Innovation, Genome Canada, the Ontario Innovation Trust, the Natural Sciences and Engineering Research Council, and the Gordon and Betty Moore Foundation.

<http://www.fis.com/fis/worldnews/worldnews.asp?l=e&country=&special=&monthyear=&day=&id=32420&ndb=1&df=0>



Tycoon John Fredriksen confirmed a total company loss of hundreds of millions of dollars due to the devastating ISA virus. (Photo: Stock File)

Marine Harvest shareholder reports mln-dollar losses



CHILE

Wednesday, May 20, 2009, 22:50 (GMT + 9)

The majority shareholder of Norwegian firm Marine Harvest, John Fredriksen, reported economic losses of around USD 459 million due to problems afflicting Chilean aquaculture, Norwegian newspaper *Ukeavisen Ledelse* disclosed.

The losses stem from the sanitary problems that have persecuted Chilean salmon farms since viral infectious salmon anaemia (ISA) first broke out among sector facilities.

The company acknowledged the operational conduct of the Chilean industry is not above reproach, and that the same would not be acceptable in Norway.

According to Marine Harvest Communications Chief Jorgen Christiansen: "The situation is dramatic as the sector expects to destroy 160,000 tonnes of salmon this year, after sacrificing 400,000 tonnes last year. This

translates into fewer fish in plants in the future, which, in turn, also means we must sacrifice even more fish. Through May, the period will reflect negative results."

As of November 2007, Marine Harvest employed 4,800 workers, double today's number. Further layoffs in 2009 appear likely, Christiansen stated.

In terms of active farming centres, 44 were up and running in summer 2007, but 34 have since closed, leaving only 10 centres operational.

For now, it is unclear whether or not the firm will close additional centres and relocate part of the business to the US.

"The way in which aquaculture has been managed in Chile is not similar to the way it is managed in Norway. The sector has been poorly regulated and controlled. There was a very high level of production in a very small area. The current area does not have enough load capacity to deal with an infection, which spreads rapidly. Moreover, the water quality is poor. The sector had been taken to an extreme," Christiansen insisted.

Marine Harvest's communications chief admitted that the firm is somewhat responsible for the situation, but assured the company has gone to great lengths to improve operational conditions over the last two years.

"Nevertheless, what we do won't help if there are sick fish in neighbouring plants - the water is the same," he said.

Christiansen also highlighted the need for strict regulation in the sector, to avoid corporate mergers from limiting industry competition.

Marine Harvest ASA increased its operational EBIT to NOK 55 million (EUR 6.4 million) in the first quarter of the year from NOK 49 million (EUR 5.6 million) registered for the same period last year.

Although its branches in Norway, Canada and Scotland have posted solid results, its subsidiary in Chile is still reporting ISA-sourced profit losses.

The salmon farming giant harvested a total volume of 76,000 tonnes of salmonids amongst all its subsidiaries in the year's first quarter.

Of this total, expressed as head-on-gutted (HOG) weight, Norwegian operations harvested a volume of 42,000 tonnes; Chile, 13,000 tonnes; Canada, 11,000 tonnes; Scotland, 8,000 tonnes; and other operations, 2,000 tonnes.

<http://www.digitaljournal.com/article/272828>

 DIGITAL JOURNAL

Mysterious Ecological Disasters Bombard Chile

Published May 20, 2009 by ■ Tse Hao Guang

Share:



Chilean scientists are trying to make sense of a series of as-yet-unexplained ecological disasters. Animals have been dying in huge numbers.

The strange occurrences started in March this year when remains of large numbers of penguins were found washed up on a beach in southern Chile. Over 1200 carcasses are believed to have been deposited on the beach. This was followed soon after by millions of sardines, found dead on a nearby stretch of coast. The unbearable smell forced

school closures and the armed forces had to step in to clear the remains.

Up north on a salt lake near the Atacama Desert, flocks of endangered Andean flamingoes inexplicably abandoned their nests. Over the next three months, the neglected eggs failed to hatch. 2000 chicks died.

Taken together, these events seem to point to a larger pattern of ecological disruption. Theories thrown up include overfishing, global warming, bacterial infection as well as habitat alteration. As a result of these large scale deaths, there is a growing sense that Chile has to do more to preserve its biological diversity.

Alex Muñoz, executive director of marine conservation group Oceana, pointed out Chile's current problems regarding fishing. "Chile has very primitive legislation governing the management of its fisheries. Our marine resources are facing big problems such as overfishing, and the destruction of vulnerable marine ecosystems by industrial trawling".

"We are still waiting for an official report from the government, but we should consider the lack of sound management of fisheries if we want to work out what caused the death of the penguins and the sardines."

Local universities are conducting their own investigations into the events and their findings are expected to be published soon. An official government report, though, is not due for many more weeks.

Julio Lamilla of the Zoology Institute at the Austral University in southern Chile points out that although everyone has their opinions, no-one has uncovered enough evidence to support any theory thus far.

The death of the flamingo chicks is probably the most unnerving of all the cases. Andean flamingoes are the rarest of all 6 species, with over half of all 40,000 individuals nesting in Chile. With the inexplicable failure of the breeding season this year, it is hoped that more chicks will be born in subsequent years to make up for the loss.

<http://news.stv.tv/scotland/97574-future-of-scottish-salmon-industry-to-be-discussed-in-parliament/>

Future of Scottish salmon industry to be discussed in Parliament

According to a survey by the Scottish Salmon Producers' Organisation (SSPO), the nation's salmon farmers injected £500million into the economy in 2008.

21 May 2009 02:00 AM

- **170 Views**



The economic importance of the Scottish salmon industry is to be debated in Holyrood on Thursday afternoon.

According to a survey carried out in April this year by the Scottish Salmon Producers' Organisation (SSPO), the nation's salmon farmers injected £500million into the economy in 2008.

It found that the Highlands and Islands was the main beneficiary, with more than £5.5million pounds paid in direct employee wages and expenditure on suppliers and services in local businesses each week.

It also found that the total expenditure has increased from £253million in 2006 to £304million in 2008 and that SSPO members employed a total of 1579 people in 2008.

95% of salmon farmers completed the survey.

The release of the figures coincides with a debate in the Scottish Parliament to discuss the importance of aquaculture to the economy. It also coincided with the news that a disease which can kill the fish has been confirmed at a fourth Scottish farm.

Encouraging MSPs to support the sector, Scott Landsburgh, the Chief Executive of SSPO said: "The prospects for future development of our sector are encouraging. However, the development of policy that supports both further capital investment and expenditure in the supply chain is crucial.

"The further development of the initial proposals in the Marine Bill will be key to the future of one of the major sectors of the Highlands and Islands economy."

Last updated: 20 May 2009, 22:29

<http://www.thestarphoenix.com/Life/Tide+turning+aquaculture+produces+good+quality+fish/1607749/story.html>

Tide turning as aquaculture produces good quality fish

Canada accounts for only 0.2% of farmed seafood

By Alia McMullen, Financial Post May 19, 2009

It may be a -50C day up in Whitehorse, but that won't stop Icy Waters Ltd. from drilling through the ice of their land-based fish farm to deliver fresh Arctic char to a restaurant near you.

Demand for the fish, described as a delicate cross between salmon and trout but with a beautiful, lighter flavour, is strong, and John Rose, president of Icy Waters, said the company sells 100% of its product.

As the global population grows, there is an increasing need to supply seafood without fishing the oceans empty. The farmed seafood industry has been criticized for inferior quality products and unfriendly

environmental practices, which have included contamination of waterways with foreign species and disease outbreaks. But as technology and practices improve, the aquaculture industry says it has cleaned up its act and can provide Canada with seafood that is both sustainable and economically rewarding.

As consumers grow increasingly concerned with environmental issues, the ability to carry a sustainable label has become a key attribute for aquaculture companies looking to flourish in the market.

"The markets now are asking for fish that are sustainably grown," Mr. Rose said. "I would think that probably the biggest change over our history has been the demand of the market and demands of the people watching and making sure that we're being good stewards of not only the environment but the fish itself." Kyle Deming, a chef at Starfish Oyster Bed and Grill in Toronto, said customers were becoming increasingly interested in where their food was from. "We try to be as sustainable as possible and use fish that are aquacultured sustainably or caught sustainably," he said.

While the majority of finfish on Starfish's menu are wild, Mr. Deming said customers also enjoyed the farmed products, which, depending on availability, includes seared Arctic char with fingerling potatoes, organic beets and crispy shallots.

About 98% of Arctic char served at restaurants is farmed. Mr. Rose said IcyWaters produces about 150 tonnes of Arctic char for consumption a year, which he estimates would be about a day's production for some of the large salmon farms.

The 22-year-old aquaculture company has the equivalent of 15 full-time employees, specializes in the one species of fish, and aims to produce quality, not quantity. And that's exactly how its customers -- high-end white tablecloth restaurants -- like it.

Mr. Rose said IcyWaters has not had a single product complaint in four years -- a substantial achievement for a company where 98% of its product is shipped fresh, 52 weeks a year.

Arctic char farms in Canada have generally earned themselves a better reputation for sustainability and quality than their salmonfarming cousins.

Mr. Deming said, while there were some producers doing a great job in aquaculturing salmon, in general the quality of farmed salmon along the East Coast was noticeably inferior to wild produce. As a chef, he said the difference in taste was generally noticeable, the flesh of the farmed salmon lacked its deep red colour, the fins were often nibbled, and the fish had a slumped-over appearance from being confined to a pen.

"I truly think that aquaculture is the way forward," he said. "But at the same time there have to be responsible practices happening as far as how farms are run and how fish are raised." Ruth Salmon, the executive director of the Canadian Aquaculture Industry Alliance, said a great deal of research and development continues to go into improving aquaculture, whether it be finfish, shellfish or plants.

"We're doing some world-leading research and development here in Canada and certainly that research and development is paying off," she said. "This industry is continually evolving and changing and improving. And in terms of sustainability, many of the old practices from when aquaculture began in Canada are no longer." About half of the world's seafood is farmed. However, Canada accounts for just 0.2% of this market, despite its long coastlines, pristine waters and abundant lakes.

Ms. Salmon said aquaculture in Canada has been growing and is now almost a billion-dollar industry, with 16,000 employees.

However, some hurdles, such as government red tape, delays in the approval of new farm sites, public unconsciousness and the struggle to raise funds for the capital-intensive startup, has so far prevented the industry from growing larger.

"The demand for our products is very high and in fact in some cases we can't meet the demand because we don't have access to the sites that we need," Ms. Salmon said.

"Certainly the wild fisheries can't meet the growing global demand for seafood, so aquaculture is o Kyle Deming, chef at Starfish Oyster Bed and Grill in Toronto, aims for sustainability in his menu. n the rise and they predict that without aquaculture, the world will face a seafood shortage of 50- to 80- million tonnes by 2030." Selena Fiacco, a spokesperson for supermarket chain Metro Ontario Inc., said farmed seafood was very popular with their customers, with 65% of their products coming from farmed sources, compared with 35% from the wild. She said wild products were slightly more expensive than farmed.

"Selected areas in Ontario are looking for organic or wild product, but most consumers are purchasing farmed product from our stores," Ms. Fiacco said.

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<http://www.northernadvocate.co.nz/localnews/storydisplay.cfm?storyid=3798023&thesection=localnews&thesubsection=&thesecondsubsection=>

**The Northern
Advocate**



Waikare Inlet. Picture/Michael Cunningham

Oyster growers given thumbs up for Waikare harvesting

19.05.2009

by Lindy Laird

After eight years of watching their farms and finances go to ruin, Waikare Inlet oyster growers can get back into the swim.

The lower and middle inlet areas have been reclassified and farmers given a provisional all-clear to start harvesting oysters again. The waters were closed to aquaculture in 2001 because of severe contamination from a water-borne virus.

The announcement yesterday that the farmers may be only a signature away from getting back into full swing tasted as sweet as the famous Waikare oysters themselves. One more round of water testing, and signing a management agreement, might be all it takes, said oyster farmer Michael Hearn.

"Yes, after eight years this is great news. It really is good news," he said.

Mr Hearn said the maintenance he had been able to do on his farm over the past year meant he would be reaping his first harvest in a year. However, his family had sold their home for the money to keep the farm in working order while waiting for full production

to restart, he said.

The costs had been far greater than loss of income, Mr Hearn said. "We've missed out on business opportunities, property opportunities ... But we've held on, we're going to do it, we can't wait."

Mr Hearn said the renewed oyster farming in the inlet would be good for Bay of Islands' economy, and before long would possibly employ up to 50 people.

But many farmers had been unable to afford maintenance while their farms were non-productive, he said. They would have to rebuild this year, restock next year and would not get a financial return until the next year.

Since the closure of most of the inlet's 20 oyster beds, 11 farmers have fought and lost court cases, faced bankruptcy, forked out \$3 million plus clean-up costs and whittled away a \$300,000 legal bill.

Farmers who were able to manage the costly and time-consuming process, or who had leases elsewhere in the Bay of Islands, were able to relocate the growing oysters for eight weeks before harvesting them.

The farmers blamed the Far North District Council's Kawakawa sewage treatment plant as one of the potential causes of the 2001 contamination. In 2005, legal action began and in 2007 the farmers tried to sue the council for \$12 million. But the High Court ruled in the council's favour, saying the pollution could have originated from septic tanks or boats.

Before 2001, about 40 per cent of New Zealand's oyster exports came from the Waikare farms, which had employed more than 40 people.

<http://www.independentweekly.com.au/news/local/news/general/clean-sweep-for-clean-seas/1515431.aspx>



Clean sweep for Clean Seas

18/05/2009 7:51:00 AM



One of Australia's most complex airlifts takes place today as South Australian aquaculture pioneer Clean Seas Tuna Ltd transports millions of dollars worth of Southern Bluefin Tuna from sea-pens to its purpose built on-shore breeding facility at Arno Bay, on the State's Eyre Peninsula.

The airlift will see up to 10 Southern Bluefin Tuna weighing as much as 200 kilograms each lifted from the sea by helicopter and then lowered through a five metre by five metre access hatch in the roof of the giant breeding facility.

The highly prized Tuna will join others in the breeding tank as broodstock for the company's world-first commercialisation of aquaculture-bred Southern Bluefin Tuna later this year.

In March, Clean Seas successfully spawned Southern Bluefin Tuna (SBT) for the first time and subsequently produced SBT fingerlings - opening the door for commercial aquaculture production from the company's next scheduled spawning in October/November this year.

Up to 30 divers, scientists and aquaculture technicians will be involved in the highly complex airlift.

Divers will be located in the sea pens at depths of 30 to 40 metres to muster the tuna; aquaculture technicians will be directing the airlift operation; while scientists will be monitoring the health of the multi-million dollar fish.

A medical team will also be on-site to ensure the health of the divers.

<http://www.abc.net.au/news/stories/2009/05/18/2573281.htm?section=australia>

Flying tuna to breed

Posted Mon May 18, 2009 10:36am AEST

Updated Mon May 18, 2009 12:56pm AEST

◀ ▶ Slideshow: Photo 1 of 3



Giant 200kg tuna will be airlifted to breeding pens in SA today. (ABC News)

- [Map: Arno Bay 5603](#)

Aquaculture giant Clean Seas will today airlift millions of dollars worth of tuna from sea pens to its onshore breeding facility at Arno Bay, on South Australia's Eyre Peninsula.

Up to 30 divers, scientists and aquaculture technicians will be involved in the operation.

As many as 10 southern bluefin tuna each weighing up to 200 kilograms will be lifted from the sea by helicopter and lowered into the breeding facility.

The tuna will join others in the breeding tank for the company's world-first commercialisation of aquaculture-bred southern bluefin tuna later this year.

Clean Seas was the first company in world to airlift fish three years ago.

The chairman of Clean Seas, Hagen Stehr, says today's operation will be extremely complex.

He says if the fish are stressed, they will not breed successfully.

"Tuna are exceptionally difficult creatures to keep calm, the smallest aggravation and the tuna can become quite unruly," he said.

"It's like a human being, if you're stressed, it might be difficult to make love.

"They've been bought up to this stage for close to 10 years and they've been fed in a specific way, step by step by step, those tuna eat better than I do."

Imported fish endangers NZ fishing industry

Friday, 15 May 2009, 9:39 am

Press Release: Federation of Commercial Fishermen

PRESS RELEASE

Dateline – 13th May 2009

‘Imported fish endangers livelihood of New Zealand fishing industry’

“A recent decision by MAF Biosecurity NZ to allow the importation of Vietnamese catfish (Basa) will devastate the New Zealand inshore fishery industry” says Doug Saunders-Loder, Chairman of the NZ Federation of Commercial Fishermen.

“Vietnamese catfish (Pangasius) and Tilapia are farmed in the Mekong River which is reported to have untreated sewage from up to 60 million people discharged into it” he noted.

New Zealand has now legalised the importation of this fish species despite the fact that numerous valid questions have been raised by respected environmental agencies about the Vietnamese operations in terms of water pollution and chemicals including malachite green, a known carcinogen!

The World Wildlife Fund (WWF) are quoted as noting the following:

Health management, antibiotics and chemicals: Pangasius farms are prone to health problems that can impact farmed and wild stocks. Also, the inappropriate use of antibiotics and chemicals can have unintended consequences on the environment and human health, such as antibiotic resistance and unsafe products.

“Because child labour is used and environmental standards are minimal in some Asian countries, the cost of the fish that will be imported into New Zealand, under encouragement from Australian supermarket chains, could be up to half the price of New Zealand fish supplied to supermarkets and fish & chip shops. This could wipe out the inshore fishing industry as the market could be flooded with cheap Asian products” he said.

The New Zealand inshore fishery employs approximately 1,200 inshore fishermen operating out of all the coastal ports throughout New Zealand. These people spend their money within their communities and generate economic benefit for the country. They harvest their fish from the clean green waters of New Zealand and fish in a sustainable manner. It is absolutely crazy to think that the Government would consider allowing such product to enter New Zealand and to compete on the domestic market against our wonderful seafood products. It is one thing to provide the consumer with additional choice but at the absolute least, not to have some indication of the Country of Origin is in actual fact taking the public’s choice away. It is simply misleading.

When Vietnamese catfish importation was allowed in Australia the market for New Zealand Hoki dropped by 90%.

New Zealand consumers will not have any way of knowing what they are eating when they order their fish & chips or buy fish products in the supermarket as we have no country of origin labelling requirements in New Zealand.

New Zealanders are proud of their clean green image and, if they knew, would demand fish that comes from clean pure water and harvested in an environmentally sound way. The Prime Minister, just last week noted that “our seafood industry is a model for the rest of the world to follow”

Why then, at a time of increasing unemployment has the Government made the decision to effectively export New Zealand jobs by allowing a Vietnamese catfish product into New Zealand?

<http://www.stuff.co.nz/marlborough-express/news/2407497/Fish-farm-no-threat>

**The
Marlborough
Express**

Fish farm no threat

The Marlborough Express

Last updated 13:46 13/05/2009

Marlborough's Ormond Aquaculture has been granted approval to continue its operations in the Wairau Valley for another 25 years.

The firm applied to the Marlborough District Council to continue its aquaculture operations, divert and use water from Mill Stream up to a maximum rate of 200 litres per second for fish farming, and discharge water from the farm into Mill Stream.

It has been farming freshwater finfish and crayfish on the site for the past 15 years.

In approving the application, the hearing committee noted the proposal was for the continuation of an activity that had not had any significant adverse environmental impact.

http://news.bbc.co.uk/2/hi/uk_news/scotland/8042539.stm



Salmon farmer regulation warning

Salmon farmers have warned too much regulation could limit future investment in their industry.

The Scottish Salmon Producers' Organisation, (SSPO), said the industry had invested nearly £85m in Scotland over the last three years.



Almost all salmon farming investment was spent in the Highlands and Islands

But SSPO chairman Prof Phil Thomas warned current regulations did not encourage development opportunities.

The SSPO said the level of investment had risen year-on-year from £19.5m in 2006 to £35m in 2008.

The organisation said it represented more than 95% of Scottish salmon producers.

The organisation's first annual report showed 96% of the investment had been in the Highlands and Islands area.

That investment represented £35m in Shetland, £23m in Argyll & Bute, £15m in Highland, £5m in the Western Isles and £3m in Orkney.

Prof Thomas said: "Capital investments are crucial to the sustainability of many remote, rural areas.

"They help to safeguard employment and the viability of community resources.

"If we are to continue to attract these major investments, it is essential that the planning and regulatory system is speedier, more efficient and lighter in touch."

The majority of the investment (£33m) went on measures to improve containment such as nets, pens and moorings.

Sixteen million pounds went towards machinery for filleting, primary processing and added value production, while £15m was ploughed into farming infrastructure such as state-of-the-art feeding systems, boats, buildings and land.

'Sustainable production'

Prof Thomas added: "With the demand for salmon increasing globally as people seek a healthier diet, we must continue to encourage policy decisions that support further investment.

"When the salmon sector performs well, many other parts of the Scottish economy benefit hugely.

Scott Landsburgh, SSPO chief executive, added: "In these challenging economic times, a confident, growing primary food production industry is of major benefit to a small economy trading in an international market.

"It is our goal to be one of the leading countries in the world for sustainable production of high quality salmon.

"This can only be achieved with the support of government, both local and national, and other key stakeholders in the industry."

The salmon farming industry claims to support 6,200 full and part-time jobs in Scotland, many in remote rural areas on the west coast and islands.

“ When the salmon sector performs well, many other parts of the Scottish economy benefit hugely ”

Prof Phil Thomas
SSPO

<http://www.fis.com/fis/worldnews/worldnews.asp?l=e&country=&monthyear=&day=&id=32285&ndb=1&df=0>



Product price and demand

Marine Harvest's CEO Ase Aulie

Michelet. (Photo: Stock File)

Marine Harvest optimistic despite below-forecast Q1



NORWAY

Friday, May 08, 2009, 00:40 (GMT + 9)

Leading global fish producer Marine Harvest ASA has increased its operational EBIT to NOK 55 million (EUR 6.4 million) in the first quarter of the year from NOK 49 million (EUR 5.6 million) in the same period last year. Although its branches in Norway, Canada and Scotland have posted solid results, its subsidiary in Chile is still reporting profit losses.

Because Chile's currency is favourable toward company revenues and financial items but not toward EBIT, the company says it will look to restructure that country's aquaculture operations during the second quarter.

Marine Harvest's active production sites in Chile dropped from 22 to 11 during the first quarter of 2009. The company's rigorous harvest of small salmon was riddled with infectious salmon anaemia (ISA) and displayed low weight and quality, so that the cost of the fish was high while its price per kilo was low.

Still, throughout the majority of markets, demand for salmon has remained the same or increased. During the first quarter of 2009, volume-weighted prices matched those of 2008's first quarter in local currencies. In Norway and Scotland as well as in Canada, costs largely appear to be falling.

All in all, Marine Harvest CEO Ase Aulie Michelet expressed confidence in the market: "With strong demand, increasing prices and decreasing costs, I have an optimistic view on the development for the rest of 2009."

The company's operating revenues equalled NOK 3.217 billion (EUR 373 million) this first quarter with an operational EBIT of NOK 55 million (EUR 6.4 million) and EBIT of NOK 101 million (EUR 11.7 million).

The total volume of fish (HOG) sold this first quarter was 76,177 tonnes compared to last year's 83,135 tonnes in the same quarter. The stronger US dollar and euro starting in the first quarter of 2008 relative to the NOK greatly benefited Marine Harvest despite lower volumes and problematic operational revenues.

However, the operational EBIT of NOK 82 million (EUR 9.5 million) was affected adversely and directly by unstable currency rates compared to the first quarter of last year's NOK 79 million (EUR 9.2 million). The 2009 first quarter yielded NOK 327 million (EUR 38 million) compared to NOK 608 million (EUR 70 million) generated the same period last year.

Shifts in currency and interest rates led to net financial items of NOK 254 million (EUR 29 million) this first quarter and an equity ratio of 47.8 per cent compared to 42.3 per cent at the end of the fourth quarter of 2008.

Marine Harvest Norway's operational EBIT per kg the first quarter was NOK 2.79 (EUR 0.32) while that of Chile's was NOK -13.74 (EUR -1.59). When adjusted to direct currency effects, the operational EBIT per kg for Marine Harvest Norway was NOK 5.36 (EUR 0.62); Marine Harvest Canada, NOK 5.88 (EUR 0.68); and Marine Harvest Scotland NOK 6.97 (EUR 0.81).

Marine Harvest VAP Europe had an operational EBIT margin of 3.3 per cent in the 2009 first quarter.

Marine Harvest plans to harvest 296,000 tonnes of salmonids this year, including 73,000 tonnes during the second quarter.

"Both demand and prices have developed favourably so far in 2009," Michelet said. "From April, global supply of salmon will fall. We have achieved good cost control in Norway, Canada and Scotland. From the second quarter we will gradually start harvesting salmon fed on lower cost feed.

"During Q2 we will implement a new business plan for Chile. This will have negative financial consequences on EBIT in this quarter, mainly as accounting effects. I am very encouraged by the strong market, and our operational improvements in key regions, and expect continued improved performance in 2009."

Related articles:

- [Salmon crisis forces to find new markets](#)
- [Marine Harvest's Q1 harvest volumes dented by Chile](#)

<http://www.fis.com/fis/worldnews/worldnews.asp?l=e&country=&monthyear=&day=&id=32267&ndb=1&df=0>



The total harvest for shrimp increased slightly last year compared to 2007. (Photo: Luis Eustaquio)

Abalone, shrimp and lobster topped 2008 Baja California output



MEXICO

Thursday, May 07, 2009, 01:30 (GMT + 9)

The state of Baja California produced a total of 99,284 tonnes of fisheries and aquaculture products in 2008, revealed National Aquaculture and Fishing Commission (CONAPESCA) Subdelegate Jose de Jesus Gallo Ramirez.

A surge of 30,000 tonnes was registered in this Mexican state in 2008, even though previous landings had remained below 70,000 tonnes for years.

Abalone, shrimp and lobster were the three resources that registered significant hikes, Gallo Ramirez explained.

Similarly, increases were also registered in squid, sardine, anchovy, macarela, scalefish and octopus harvests.

Some 209 tonnes of abalone were harvested in 2008, against 199 tonnes in 2007, statistics released by the authority show.

Meanwhile, 5,296 tonnes of squid were landed last year compared with 414 tonnes the year before.

In terms of shrimp, 699 tonnes were landed in 2008 against 681 tonnes the year before; 7,477 tonnes of scalefish, against 5,788 tonnes in 2007; and lobster registered 308 tonnes against 206 tonnes two years ago.

The official also mentioned that lesser pelagics - sardine, anchovy and macarela - registered the highest volume captures in Baja California, with 69,099 tonnes in 2008 and 42,300 tonnes in 2007, *Ensenada.net* reports.

By *Analia Murias*
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http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10570878

[nzherald.co.nz](http://www.nzherald.co.nz)

Minister hails \$97 million iwi aquaculture deal

4:00AM Thursday May 07, 2009

The Government yesterday signed a Deed of Settlement with South Island and Hauraki iwi that delivers a \$97 million payment for aquaculture space that was approved between 1992 and 2004.

The deal replaces a previous settlement plan that involved sharing out a percentage of the space.

It turned out to be unworkable and years of delay severely limited aquaculture development, which the Government wants to advance to a \$1 billion-a-year industry.

Prime Minister John Key and Fisheries Minister Phil Heatley were at the ceremony in Wellington for the first Deed of Settlement signing by the new Government.

Mr Heatley said the settlement covered the vast majority of current aquaculture development areas, including the Marlborough Sounds, Tasman Bay and Hauraki Gulf, and also the remainder of the South Island.

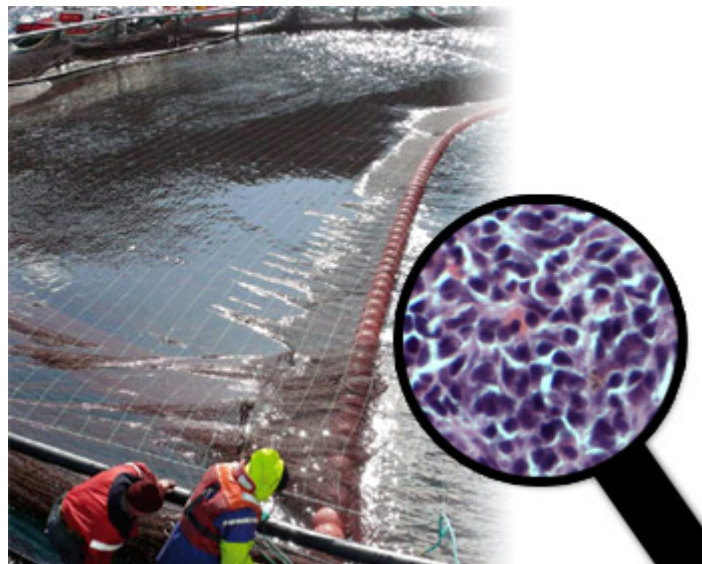
"Settling claims for commercial aquaculture space will give a financial boost to the iwi groups involved as well as helping to give the aquaculture industry certainty for future development," Mr Heatley said.

"This is an innovative and ground-breaking agreement."

He said it would be necessary to amend the Maori Aquaculture Settlement Act and he would table a bill in Parliament next week so the settlement could be effective by the end of the year.

- NZPA

<http://www.fis.com/fis/worldnews/worldnews.asp?l=e&country=&monthyear=&day=&id=32220&ndb=1&df=0>



Proliferative kidney disease can be especially fatal to recently introduced fish in a farm. (Photo: Aqua.stir.ac.uk/marlab.ac.uk)

Scientists discover key carrier link behind fish disease



UNITED KINGDOM

Monday, May 04, 2009, 17:40 (GMT + 9)

Biotechnology and Biological Sciences Research Council (BBSRC) researchers have discovered that fish can carry and spread proliferative kidney disease (PKD), which can infect and kill large amounts of fish, particularly in fish farms. The finding opens the door for research on more specific treatments for the disease.

The research, published in *BBSRC Business*, was led by Professor Sandra Adams and David Morris at the University of Stirling's Institute of Aquaculture.

PKD provokes a severe inflammation of the fish kidneys, and is known to especially affect fish recently introduced to infected farms. The estimated annual cost of the disease's impact on the UK trout industry alone is GBP 2.5 million (EUR 2.8 million).

Although the condition's impact on the industry has been serious and widespread, research on the PKD has been sparse until now. Scientists had previously discovered the parasite in freshwater bryozoa, which are colony-forming animals that feed on algae. Some bryozoa species can fragment to form new colonies with the potential to spread the disease to fish.

Adams and Morris have now found that native fish can also spread PKD, not just suffer from it.

"We were able to show that the parasite that causes deadly PKD in fish could cycle between brown trout and bryozoa indefinitely," Adams said, the *Science Daily* reports.

The team has also constructed a working model for studying the parasite's lifecycle, information that will be imperative in developing measures to fight off PKD.

Research suggests that brown trout can host PKD despite not being particularly vulnerable to it, while UK rainbow trout can die from the disease.

"In their native environment in the US, rainbow trout are more resilient to PKD," Adams explained. "This suggests that there are at least two strains of this particular parasite: one adapted to North American species and one adapted to European species. Therefore, rainbow trout introduced to European waters are likely to be infected with the wrong strain of the parasite, which explains the severe immune response and subsequent disease."

It appears that PKD has affected wild salmon in Europe and North America, suggesting it is a budding threat to these central fisheries.

"Farmed fish are a crucial part of the food chain, providing nutritious and affordable food for many people. They are also economically important in many areas," remarked Janet Allen, Director of Research at BBSRC. "When a disease such as this threatens fish farming it is vital that we provide the science to understand the problem and its source and deliver the research to tackle it."

By *Natalia Real*
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www.fis.com

<http://theland.farmonline.com.au/news/state/niche/general/aquaculture-sector-grows/1497925.aspx>



Aquaculture sector grows

28/04/2009 1:59:00 PM

TOTAL production of NSW aquaculture has increased by almost five per cent to \$52 million, according to the latest yearly snapshot released by the Minister for Primary Industries Ian Macdonald on Monday.

He said the NSW Government's Aquaculture Production report revealed the industry continued to prosper.

"The NSW aquaculture sector produces high quality seafood and provides employment and significant contributions to many regional communities," Mr Macdonald said.

"Aquaculture covers all farmed fish in NSW, including oysters, prawns, ornamental fish, silver perch, trout and yabbies.

"The value of the Sydney rock oyster industry rose by 4 per cent in the past year to \$36 million, this is our most valuable aquaculture industry."

Mr Macdonald said the report revealed the Hawkesbury River was on its way to regaining its historical position as a major oyster producing estuary in NSW.

His statement follows the devastating impact of OX oyster disease in 2004.

"Drought has had an ongoing impact on freshwater aquaculture farms but despite this, production figures are still comparable to last financial year and the easing of the drought in some regions has resulted in a 48 per cent increase in hatchery production," he said.

"Prawn farming also increased in production by 8 per cent to \$3 million."

<http://www.ausfoodnews.com.au/2009/04/28/clean-seas-makes-aquaculture-history.html>



Clean Seas makes aquaculture history

- April 28, 2009
- Daniel Palmer

Clean Seas Tuna has advised that its ongoing Tuna research and feed trials have been successful, with continuous spawning over a 35 day period from 12 March 2009 to 16 April 2009. In a world first, over 50 million fertilised eggs and 30 million larvae were produced.

"Our dream has become reality," Chairman Hagen Stehr proclaimed. "Hatchery staff at our Arno Bay complex, assisted by some of the worlds best propagation scientists need to be congratulated."

"The achievements are world firsts, and major stepping stones to present the world with a sustainable resource for the future," he added. "It is with confidence that Clean Sea Tuna will now accelerate the commercialisation of its achievements to grow and produce Southern Bluefin Tuna."

However, he cautioned that challenges remained.

Professor Abigail Elizur from the University of the Sunshine Coast (USC), who has been involved since its inception, was especially proud with the achievement. "Clean Seas Tuna have broken the mould," she said. "They have shown it is biologically possible to spawn giant tuna in the temperate waters off Port Lincoln, thousands of miles from their tropical breeding grounds, commercially the path is open to revolutionise the tuna industry and see captive Aussie tuna aquaculture grow to a multi billion dollar sector."

"This is a triumph of planning and persistence with great Australian entrepreneurs who believed in the role science can have in achieving such a breakthrough."

Mr Stehr said the spawning would reshape the Tuna industry of the world in the years to come, with commercialisation not far away.

"Research and development is ongoing and commercialisation is the next step," he said. "Developments such as this are of immense financial value and closely guarded, but the company will endeavour to keep shareholders informed as much as possible in this exciting phase."

The project was supported by the Australian Seafood Cooperative Research Centre, with a team of scientists that included experts from the USC, the Center of Marine Biotechnology at the University of Maryland, and the European Tuna Consortium.

<http://sj.farmonline.com.au/news/state/agribusiness-and-general/general/aquaculture-industry-red-tape-cut/1498194.aspx>



Aquaculture industry red tape cut

28/04/2009 12:21:00 PM

Cuts made this week to red tape will allow aquaculture licence holders to save time and money, according to Minister for Urban Development and Planning Paul Holloway.

Mr Holloway said licence holders previously needed to apply for development approval to move their pens, even if they were within an existing aquaculture zone.

But changes to development regulations will remove this "cumbersome" administrative hurdle.

"It's a common sense initiative and will help reduce costs for the aquaculture industry," Mr Holloway said.

"Business owners previously were required to apply for approval to move their pens and then wait while the application was reviewed by the Development Assessment Commission.

"These changes will allow licensed operators to avoid this burdensome application process if their pens are to be relocated are within the same aquaculture zone."

The changes to the Development (Aquaculture) Variation Regulations 2009 affect aquaculture zones in eastern Spencer Gulf, Smoky Bay, lower Eyre Peninsula, Anxious Bay and Coffin Bay.

<http://www.fis.com/fis/worldnews/worldnews.asp?l=e&country=&monthyear=&day=&id=32200&ndb=1&df=0>



Cambodia's vast potential for aquaculture is largely untapped. (Photo: Stock File)

Great aquaculture potential hindered by sanitary conditions



Despite falling international prices, officials expect some 50,000 tonnes of farmed fish to be harvested in 2009 from the country's 300,000 fish ponds, said the director of the Fisheries Administration at the Ministry of Agriculture, Forestry and Fisheries, Nao Thuok.

But low quality and sanitary standards are still preventing Cambodia's growing fish industry from accessing important markets, reports the *Phnom Penh Post*.

"We are aiming to export more of our fisheries products abroad to earn more income and boost the national economy," he said.

Diminishing fish stocks around the world are prompting importers to look towards countries like Cambodia, where limited technology has left resources largely untouched.

"We will encourage more aquacultural production in the country to increase fish production for future export," said Thuok.

According to ministry statistics, last year, Cambodia harvested 365,000 tonnes of freshwater fish, 66,000 tonnes of marine fish, and 40,000 tonnes of farmed fish.

Of this, 25,000 tonnes of fish were exported to Australia, Vietnam, Thailand, China, Malaysia, Singapore and Hong Kong last year.

Fish exporters say that increases in local production – particularly from aquaculture - would contribute to a surge in exports this year.

"This year, we are receiving only about USD 6 or USD 7 per kilo, which is about half of the price we got last year," said Chhay Heang, president of the Chhay Heang Group, which exports to several countries in the region.

However, low production costs would allow Cambodia to sell fish at lower prices while still earning a profit, Heang said.

Vuth Chanthou, managing director of Chanthou Meanchey Company, which exports to Thailand and Vietnam, said that an increase in fisheries production would also boost exports.

"We will be able to export more fish than last year because we can buy more fish locally," he said.

According to figures from the World Bank, fish production accounted for 7 per cent of Cambodia's GDP in 2007, with freshwater fish mostly going to the local market and saltwater fish for export.

Cambodia collects around USD 100 million per year from fish exports, but low sanitary standards have meant that Cambodian fish are currently banned from the European Union (EU) and the United States.

The World Bank has recognised Cambodia as a country with strong potential as an exporter of both fish and fish feed. In its most recent report, it said that Cambodia has the potential to raise between 500,000 and 1 million tonnes of catfish and tilapia per year.



*A woman sorting fish in Cambodia.
(Photo: FIS)*

<http://www.theage.com.au/environment/eel-deal-restores-indigenous-legacy-20090429-anh5.html>



Eel deal restores indigenous legacy



Environment Minister Peter Garrett with conservationist Damein Bell.

Photo: *Glen Watson GRW*

Adam Morton

April 30, 2009

Advertisement

IT IS called aquaculture today, but 30,000 years ago it must have just seemed a common sense way to feed the clan.

The south-west Victorian landscape had been dramatically altered by the eruption of Mt Eccles. The Gunditjmarra people adapted with it.

Wetlands created by lava flow were transformed into a series of weirs and channels using piles of rock. Gaps were plugged with elaborate eel and fish traps woven from reeds.

Once caught, the eel was smoked in the hollowed hull of a eucalyptus and traded with neighbouring clans.

Thousands of years on, the channels of one of the world's oldest aquaculture systems sit in an undulating rocky field on the Budj Bim National Heritage Landscape, which in 2004 was the first site placed on the National Heritage List.

According to Denise Lovett, chairwoman of the Winda Mara Aboriginal Corporation, the site was a "food-producing factory". Stone hut remains nearby have been cited as evidence it became Australia's first settled society. "That thing of all Aboriginal people wandering aimlessly over the land and doing nothing is just not correct," Ms Lovett says.

Also nearby is an eel-shaped tourist centre — signs of an attempt to turn local history into an industry.

That push was helped yesterday by Environment and Heritage Minister Peter Garrett announcing the area would receive \$360,000 to develop a plan over the next six months.

The funding is the first announcement under the \$60 million jobs-related heritage funding demanded by the Greens in return for their support of the Federal Government's second stimulus package.

The money will be used to build the Budj Bim tracks — more than 60 kilometres of walking and mountain bike paths linking the Mt Eccles Visitor Centre to Allambie and Lake Condah. "This is an absolutely critical part of the natural and cultural heritage history of Australia, but it's a place that is very much alive with possibilities," Mr Garrett said.

Budj Bim was the first heritage site to receive funding because work was "ready to go". About six jobs will be created during construction, more once the tracks open. The Gunditj Mirring Traditional Owners and Winda Mara Aboriginal Corporation hope it will attract nearly 180,000 tourists a year by 2015.

The Government has promised to make \$6 million worth of community heritage announcements by June.

<http://www.abc.net.au/news/stories/2009/04/29/2555944.htm>

Funds to protect Aboriginal heritage site

Posted Wed Apr 29, 2009 1:20pm AEST

Updated Wed Apr 29, 2009 1:59pm AEST



Environment Minister Peter Garrett says the money will be used to develop eco-tourism [file photo] (AAP: Alan Porritt, file photo)

- [Map: Portland 3305](#)

The Federal Government has announced \$360,000 to help protect an Aboriginal heritage site in Victoria's south-west.

The Budj-Bim area, near Portland, is one of the world's oldest known aquaculture systems.

But many of the area's lakes and ponds have been emptied by local agriculture operations.

Environment Minister Peter Garrett says the money will be used to develop eco-tourism.

The site's traditional owners were granted their native title rights last year.

The Budj Bim National Heritage Landscape was included in the National Heritage List on 20 July 2004.

<http://www.fis.com/fis/worldnews/worldnews.asp?l=e&country=&monthyear=&day=&id=32143&ndb=1&df=0>



The struggles of the salmon farming sector have led to a jump in stored oils which and is driving the search for new markets. (Photo: Stock File/FIS)

Salmon crisis forces to find new markets



CHILE

Monday, April 27, 2009, 11:30 (GMT + 9)

The farmed salmon industry crisis is forcing firms Corpesca and Pesquera Iquique-Guanaye (Igemar) to hunt for new export markets in Asia and offset sinking demand for Chilean salmon products.

A massive outbreak of infectious salmon anaemia (ISA) has plagued the Chilean salmon industry, in particular, the farming centres of the south, with economic and sanitary problems since mid-2007.

The demand for salmon has dwindled 50 per cent as a result, and explains why the two companies are exploring new markets in Japan, Korea and China to help reverse their situation, stated Corpesca President Angelini Robert.

The issue facing salmon producers "has boosted oil inventories, and driven [the two firms to] search for new export destinations," Angelini explained.

"In particular, the value of oils with a high content of Omega-3 fatty acids has grown as a result of increasing demand from both the pharmaceutical and nutrition industries," the executive indicated.

Through SouthPacific Korp (SPK), the company is evaluating new projects focused on "expanding its share in these markets, which have grown at two-digit rates over the last five years," he said.

On SPK, Angelini pointed out that canning production did not fall as much as the salmon harvest. He attributed these results to the strategic decision of "boosting business lines for human consumption, increasing the processing capacity of the new Colonel complex, and the greater efficiency of its fleet."

"The ISA virus is regrettable, because all the salmon firms are clients of ours, therefore there is a diminution in our product sales by both Corpesca and SPK to those clients, which we are going to endure this this year

and perhaps for a few years more. Thus we are looking for other markets through the two companies," he added.

The executive also indicated that he lowered the price of standard fishmeal as a result of its excess inventory in China, the liquidation of stocks by part of Peruvian producers and the fall in vegetable meal prices, its main substitute, *Estrategia* reports.

As for the future, "the depressed dynamism of the global economy, the permanent competition exerted by Peruvian fishing, and the sanitary crisis in the Chilean aquaculture industry are factors that can negatively affect the evolution of fishmeal and fish oil prices," Angelini maintained.

Meanwhile, he mentioned several factors that might help to improve the performance of the two companies in the next few months. These include improved oceanographic conditions, a solid start of the jack mackerel fishing season, a fall in fuel prices, and an emphasis placed on products for human consumption.

The general manager of Corpesca, Francisco Mujica, agrees the forecasts for the year are better, but warns "the difficulty is in the fishing sector."

"The catch quota for jack mackerel dropped in spite of abundant stocks in the north. These are maximum catch limit errors, here, the overwhelming loser is the North and what Chile does not harvest only benefits Peru," stated an executive to *Diario Financiero*.

Several companies dedicated to farming Atlantic salmon are diversifying their production with other salmonid varieties, like coho salmon and trout, in an attempt to skirt the economic and sanitary complications of viral ISA.

<http://www.fis.com/fis/worldnews/worldnews.asp?l=e&country=&monthyear=&day=&id=32149&ndb=1&df=0>



The Pew Environment Group accused the FDA of keeping double standards on the issue of unapproved drugs in salmon farming. (Photo: Stock File)

Environmentalists challenge FDA on salmon farming drugs



UNITED STATES

Monday, April 27, 2009, 16:50 (GMT + 9)

The Pew Environment Group is blowing the whistle on unapproved drug use by salmon farms in a bid to pressure the Food and Drug Administration (FDA) to conduct testing on salmon imports from Canada, Norway, Scotland and Ireland.

The Pew's letter was sent to the acting commissioner of the FDA and refers to possible environmental threats resulting from illegal drug residues moving from the fish into waterways and posing health risks to humans and wildlife. The letter also disputes the use of emamectin benzoate for salmon farming companies in Maine, allowed as an exception under an Investigational New Animal Drug permit provided by the FDA.

Emamectin benzoate is employed to treat sea lice and is "very toxic to aquatic organisms [and] may cause long-term adverse effects in the environment," the manufacturer's safety data reports.

When antibiotics are used for non-therapeutic purposes, their residues left in animals raised for human consumption may breed antibiotic resistant bacterial infections in those who eat them.

Pew obtained FDA documents through the Freedom of Information Act earlier this year, which disclosed the use of drugs unapproved by the US Government at three Chilean salmon farms, including the country's two largest salmon producers. Pew has recently obtained documents revealing unapproved drug use in Canada, Norway and Scotland as well.

The US imported more than 50 per cent of its salmon from these four countries in 2008.

"It's appropriate that the FDA limits an exporting country such as Chile to those drugs 'approved' by the FDA/Center for Veterinary Medicine, but exempting certain US producers, such as those in Maine, creates a double standard," said Pew's Marine Aquaculture Campaign Director Andrea Kavanagh.

"The FDA's standards should be universal and enforced accordingly."

In its letter, the Pew also requests further documents on the use of these theoretically unapproved drugs in fish and fish-derived products. The group's concerns are two-fold: whether the FDA will demand that all companies exporting salmon to the US comply with the conditions set by the FDA/Center for Veterinary Medicine Approved Drugs in Aquaculture; and how the FDA will handle the double standard of requiring Chile to use theoretically FDA-approved drugs while exempting Maine salmon farms from the same requirement.

"The agency has made progress in relation to some imported farmed fish," Kavanagh said. "It is time for the FDA to tackle the outstanding environmental and food safety problems associated with farmed salmon, not just in Chile but also in Norway, Scotland, Ireland, Canada and even right here at home."

Back in 2007, the US decreased its imports of Chinese seafood after continuously finding unapproved drugs, such as fluoroquinolones, in the fish. The FDA was then asked to conduct additional tests to avoid further oversights.

Related articles:

<http://www.abc.net.au/news/stories/2009/04/22/2549239.htm>

Scientists make tuna breeding 'breakthrough'

Posted Wed Apr 22, 2009 9:00am AEST

Sunshine Coast scientists have helped in an aquaculture breakthrough - for the first time southern bluefin tuna have bred and produced eggs in captivity.

Sunshine Coast University's Professor Abigail Elizur says tuna is a desirable food source and being able to breed them means there is no risk of endangering the species with overfishing.

"We can do it in captivity, have control over the process over the numbers we want to produce and go the way that terrestrial agriculture went with respect to wheat and milk production," she said.

"We don't milk wild buffalo any more - we have cows - and the same can be true for tuna now."

Professor Elizur helped a team of overseas scientists to breed southern bluefin tuna in captivity.

She says being able to breed the fish out of the wild in a South Australian facility is a triumph that has taken years of research and planning.

"The tuna are very difficult fish to handle in captivity - they are very sensitive to handling," Professor Elizur said.

"They are large fish normally, they spawn at the sea of Java, and that is a long way away from where they've been spawned in an onshore facility in a tank."

<http://www.theaustralian.news.com.au/business/story/0,28124,25395649-36418,00.html>

Clean Seas hails tuna breeding as world first

Pia Akerman | *April 28, 2009*

Article from: [The Australian](#)

AFTER years of research and millions of dollars, tuna baron Hagen Stehr has finally hit the jackpot - the world's first southern bluefin tuna bred in tanks.

Now he confidently declares the revolutionary impact this could have on the booming seafood market: sidestepping tough fishing quotas and even replenishing wild supplies.

"It could have monstrous paybacks for Australia and the world," said Mr Stehr, chairman of Clean Seas Tuna, based at Port Lincoln in South Australia.

The tuna are still tiny, with the oldest only a month out of the egg. They range from the size of an apostrophe to about 2.5cm.

Swimming in large tanks at Clean Seas' Arno Bay hatchery, an hour north of Port Lincoln, the fish are closely guarded by staff who are in uncharted scientific territory.

But Mr Stehr says it is "purely a numbers game" from now on, a question of how much money to pour in for commercial production.

It's welcome news for investors, with the share price hovering between 70c and 80c, double what it opened at this year but a long way short of the \$2.10 highs struck in 2007.

While Clean Seas' fingerlings are still years away from maturity, they are already showing strong signs of development, such as cannibalism.

"It's a very, very good sign but it pisses you off," said Mr Stehr, one of South Australia's more colourful characters since he emigrated from Germany in the 1960s. "Every fish now is worth \$4000-\$5000."

Clean Seas aims to produce 10,000 tonnes of the tuna annually by 2015 with a \$10-per-kilogram before tax farmgate margin. Market size for the fish, known as the "Porsche of the sea" because of its 70km/h top speed, is about 20-30kg.

Interesting developments over the project's past three years include 35 days of continuous spawning this March and April, viewed as a world first by Mr Stehr.

That result came after the breeding team finally conquered the biggest hurdle: coaxing the female tuna to spawn.

In the end, it came down to getting the ladies relaxed and comfortable, naturally. "If you are stressed, you can't make love at all," Mr Stehr said.

"Tuna are exactly the same. Stressed fish can't make love."

Tank conditions can be manipulated to replicate the natural migratory routes the tuna would take on the outside, using simulated tide and weather patterns to even recreate a moonlit night off the West Australian coast.

Once the tuna mated, there was enough larvae to meet Australia's current tuna production for 33 years, or 15 years of world production.

The resulting fingerlings testify to progress made since March last year, when the company announced the world-first hatching of live and active larvae, only to have the larvae die five days later.

Clean Seas' success follows a few years on the heels of the Japanese, who have now bred northern bluefin tuna, a project that Mr Stehr said took more than 35 years.

Meeting with some Japanese visitors -- "our friends from the north" -- last week, Mr Stehr was startled to learn they had grown the northern bluefin up to 70kg in three winters, and he proceeded to consult every fishery worker he came across on the news.

"That's bloody outrageous," he said. "It's unbelievable."

If the fingerlings grow to maturity and the process can be reproduced, Clean Seas will be able to get around tough quotas imposed on Australian, Japanese and New Zealand wild tuna catches, and cash in on the insatiable demand.

"The quota pressure is coming on around the world, not just in Australia," Mr Stehr said. "This is the Holy Grail, that's what everybody thinks we have done."

<http://www.saipantribune.com/newsstory.aspx?cat=1&newsID=89567>

Tuesday, April 28, 2009

Local

Tuesday, April 21, 2009

Abalone workshop prompts biz startup



Four farmers in Rota have recently decided to pool their resources to create a commercial abalone farm after attending a workshop conducted by the Northern Marianas College - Cooperative Research, Extension, and Education Service.

Facilitated by aquaculture specialist Michael Ogo, the “Grow-out Requirements for Abalone Production” was held earlier this month at the NMC Tatachog Campus on Rota.

There were 14 participants who attended the workshop and learned about biology of abalone, feeding requirements, water quality management, system maintenance, and the economic of abalone farming.

According to Ogo, the workshop was highly successful. The farmers who attended and who have decided to pool their resources are looking into negotiating with the Rota Municipality to lease idle aquaculture tanks in Tatachog for their venture.

“The workshop is a good example of how NMC and CREES are transferring research-based knowledge that will ultimately help to develop large and small industries in the CNMI,” said Tee Abraham, dean of the NMC Community Programs and Services.

Abalone is an edible mollusk that is a highly priced delicacy in Asia. They have been mass-produced in China and Japan since the 1950s. A disease has reduced the Chinese abalone stock, thus giving chance for the CNMI to enter into this market.

In addition to their use as food, the abalone's highly iridescent shells have traditionally been made into buttons, inlays for furniture, musical instruments, or jewelry. Pearls from abalone are popular in New Zealand and Australia and very expensive rarities. (*NMC*)