Aquaculture Stories 29 — Monday, 10 August 2009 10:16 PM

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Scottish wild fish organisations condemn WWF's aquaculture stewardship scheme — Monday, 23 November 2009 10:49 AM

Scottish wild fish organisations condemn WWF's aquaculture stewardship scheme

Tuesday, 17 November 2009 12:20

REPRESENTATIVES of Scotland's wild fish interests have condemned the salmon dialogue process backed by WWF, saying it is naïve, vague and without teeth.

Scotland's leading wild fish interests, the Association of Salmon Fishery Boards (ASFB), the Rivers and Fisheries Trusts of Scotland (RAFTS) and the Salmon and Trout Association (S&TA), have issued a highly critical response to proposals by the international conservation organisation WWF, to accredit salmon farm companies with "environmentally, socially and economically responsible" operations. Draft Indicators for the 'Salmon Aquaculture Dialogue' scheme have just been published and are due to be finalised following a meeting convened by WWF in Bergen on November 16th and 17th.

The Scottish wild fish organisations say that the Steering Committee for the US-inspired accreditation scheme is dominated by salmon farming companies with the companies providing all the necessary funding. Scotland's wild fish interests are adamant that the criteria that the fish farm companies will need to meet for accreditation are no more than woolly aspirations and that they will do nothing to alleviate the existing impact of salmon farming on stocks of wild salmon and sea trout.

Paul Knight, Executive Director of S&TA, said: "It is astonishing that the world's leading independent conservation body is on the threshold of finalising an accreditation scheme for salmon farming, which will give the recipients a valuable badge of environmental respectability, without proper consultation with European, let alone Scottish, wild fish interests. Indeed the only wild fish interests represented on the Steering Committee are from Chile and British Columbia. Given the failure to consult with Scottish wild fish interests, it is hardly surprising that the concerns that we have been voicing for years have not been addressed".

Mr Knight continued: "The Draft Indicators as published threaten to standardise flawed operating procedures, rather than tackling the deep-rooted problems associated with salmon aquaculture. Indeed there is little in the document that acknowledges the severe impact salmon aquaculture has inflicted on wild salmon and sea trout and the surrounding freshwater and marine aquatic environment. WWF is playing into the hands of those governments and sections of the industry which continue to deny any adverse impact, despite the wealth of peer reviewed scientific literature to the contrary. Furthermore WWF's proposed '7 Point Plan' is far too vague and without teeth. Its underlying principle seems to be the need to prove parasite and disease impact on wild salmonids against ambient natural levels before any action is required."

Andrew Wallace, Managing Director of ASFB and RAFTS, commented: "WWF has an important role as an environmental NGO. However this document will go nowhere near attracting support from the main wild fisheries bodies such as ourselves, unless it is prepared to target, articulate and address some of the obvious existing problems associated with negative interactions between wild fish and farmed fish (whether in the Atlantic or the Pacific). If WWF is not resolute on these matters then its reputation and international credibility will suffer immeasurably. One of the most significant concerns about salmon aquaculture is the impact on wild fisheries. Indications are that this report will not address those concerns as adequately and robustly as we would have expected from one of the world's largest and most respected environmental NGOs."

www.fishnewseu.com/latest-news/scottish/2285-scottish-wild-fish-org...

Hagen Stehr's Clean seas blufin tuna breeding program wins award — Monday, 23 November 2009 10:49 AM

Hagen Stehr's Clean seas blufin tuna breeding program wins award

Article from: The Advertiser

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NIGEL AUSTIN

November 18, 2009 12:01am

PIONEER fisherman Hagen Stehr's success at breeding southern bluefin tuna in captivity has been declared Time magazine's second best invention of 2009.

The magazine named the Clean Seas breakthrough as second only to "the best and smartest thing built in 2009", NASA's Ares 1 rocket, in its list of the 50 Best Inventions of 2009.

Time rated the Clean Seas achievement to breed southern bluefin tuna in March at its Arno Bay hatchery on Eyre Peninsula, ahead of other such inventions as the AIDS vaccine.

"At 8.47am on March 12, fish history happened in Port Lincoln, Australia," the magazine said. "A tankful of southern bluefin tuna began to spawn, and they didn't stop for more than a month."

"By coaxing the notoriously fussy southern bluefin to breed in landlocked tanks, Clean Seas may finally have given the future of bluefin aquaculture legs (or at least a tail)." Mr Stehr said the Clean Seas team and its collaborators were delighted by the international recognition.

"We are excited by its commercial potential and the potential to provide a sustainable source of quality seafood for a protein hungry world - particularly at a time when wild tuna stocks are under threat from over-fishing," he said.

The Commission for the Conservation of Southern Bluefin Tuna last month cut Australia's share of the world quota from 5265 tonnes to 4015 tonnes.

Clean Seas is due to start commercially breed- ing southern bluefin tuna by Christmas

www.news.com.au/adelaidenow/story/0,22606,26364931-2682,00.html?...rss

Live abalone destroyed in Yilan for having cancer-causing agents Tue, Nov 17, 20 — Monday, 23 November 2009 10:48 AM

Live abalone destroyed in Yilan for having cancer-causing agents

Tue, Nov 17, 2009
The China Post/Asia News

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Network

ILAN, Taiwan -- Yilan County authorities yesterday destroyed imported abalones contaminated with cancer-causing antibiotics.

Local officials destroyed 527 kilograms of toxic abalones left in Yong-chun Seafood Wholesale's inventory. However, the wholesaler, in Yilan's Toucheng, had imported a total of 1,080 kilograms from Hong Kong on Oct. 25 and has resold it to 16 businesses including distributors and retailers.

It will be hard to trace products distributed by the 16 businesses, but the names of those businesses have been forwarded to their local authorities for further investigation, Yilan health official said.

The imported products were slated for incineration after inspectors found residue of two carcinogenic antibiotics, 27.1 ppb of Furazolidone and 77.8 ppb of Nitrofurazone. None of the Taiwan abalones tested returned positive results for the toxins.

Health authorities tested the seafood after an Apple Daily report on Nov. 10 stating that the media has found China-imported abalones being passed off as locally-grown Yilan abalones and being sold to local catering services and bargain restaurants.

Taiwan abalones are rich in brownish color and smaller in size; while China abalones are larger, more grayish and often have smaller crustaceans attached, health officials reminded the public to differentiate the products before making any purchases.

Facing losses of at least NT$1 million (S$43,000), the importer, surnamed Yu said that he is sorry toward the consumers, but the customs officers allowed the products to enter the borders without inspection.

Yu also faces a fine of NT$60,000 (S$2,580) to NT$300,000 (S$12,900) for violating food safety regulations.

news.asiaone.com/News/Latest+News/Asia/Story/A1Story20091117-180502...

780,000 in grants to assist industry — Monday, 23 November 2009 10:46 AM

$780,000 in grants to assist industry

Article from: The Advertiser

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BEN HYDE

November 18, 2009 12:01am

A RIVERLAND winery and Kangaroo Island abalone farm are among five businesses across the state to share in $780,000 from the Regional Development Infrastructure Fund.

Kingston Estate Wines, at Kingston-on-Murray, was the biggest winner and will receive up to $300,000 from the State Government fund towards the expansion of their business.

Announcing the grants yesterday, Regional Development Minister Paul Caica said the winery continued to grow, with good sales contracts into all major export markets.

"The grant recognises the impact that the winery's further expansion has on its ability to grow its business and staff numbers, contributing to the development of the Riverland," he said.

He said the winery planned to spend $9.3 million over the next five years to upgrade its storage and processing capacity to a site capable of processing 100,000 tonnes of grapes to table wine, creating 25 jobs.

Kangaroo Island Abalone, which Two Rocks Abalone recently bought, will also benefit from the fund with a $272,000 grant towards expansion plans.

The company plans to increase abalone production on Kangaroo Island from 90 tonnes to 175 tonnes by 2012.

The other grants were:

UP TO $96,500 towards stage one of a new chicken broiler farm at Jervois, which will be developed in three stages over four years. It is expected to add $15.58 million to the state's economy over a decade and create 20 full-time jobs.

UP TO $60,000 for Earthworks Solutions at Murray Bridge to help with costs of electricity, telecommunications and water infrastructure as part of a $1 million expansion of its business which will boost its employment from 25 to 100 people over the next year.

UP TO $52,000 to Parilla Premium Potatoes to assist with upgrading electricity infrastructure as part of its construction of a packing and storage facility at Parilla. Mr Caica said the grants would help ensure a strong future for country SA

www.news.com.au/adelaidenow/story/0,22606,26363975-2682,00.html?...rss

Tuna breeding breakthrough sees Aussie company reach "50 Best Inventions of 2009" — Monday, 23 November 2009 10:41 AM

Tuna breeding breakthrough sees Aussie company reach "50 Best Inventions of 2009" list

- November 17, 2009
- James Ferre

Cleas Seas Tuna has received international recognition for their attempts to breed Southern Bluefin Tuna in captivity, with *Time* magazine naming it as the world's second best invention of the year.

Time magazine, one of the world's most influential publications, named the work of the Australian aquaculture pioneer behind "the best and smartest and coolest thing built in 2009" - NASA's Ares 1 rocket - and ahead of the AIDS vaccine.

Commenting on Clean Seas' breakthrough breeding program, *Time* magazine says "by coaxing the notoriously fussy Southern Bluefin to breed in landlocked tanks, Clean Seas may finally have given the future of bluefin aquaculture legs (or at least a tail)."

Clean Seas founder Hagen Stehr said the Clean Seas team and its collaborators were delighted by international recognition of the company's

breakthrough and excited by its commercial potential. The company is hopeful of the prospect of offering a sustainable source of quality seafood for a protein hungry world at a time when food security is of concern.

"Our achievement is a world first, and a major stepping stone to presenting the world with a sustainable food resource for the future. It is with confidence that Clean Seas Tuna will shortly commence commercialising its achievements to grow and produce Southern Bluefin Tuna," Mr Stehr said. "Australia - and South Australia particularly - has been seen as a clean and reliable supplier of premium quality seafood products for some time."

"The emergence of a reliable and significant source of high quality propagated fish, grown independently of wild catch in the clean waters of the Spencer Gulf at the same time as Northern Hemisphere fish stocks are declining will make our seafood even more attractive in world markets."

Over the next few months, Clean Seas will commence a commercial propagation and grow-out program for Southern Bluefin Tuna after becoming the first organisation in the world to close the life-cycle of SBT in April this year

www.ausfoodnews.com.au/2009/11/17/tuna-breeding-breakthrough-sees-a...

⊟ The new documentary film especially criticises Cermaq and Marine Harvest fish farming — Monday, 23 November 2009 9:38 AM

The new documentary film especially criticises Cermaq and Marine Harvest fish farming operations. (Photo: Pure Salmon)

The End of the Line for salmon?

WORLDWIDE
Saturday, November 07, 2009, 02:20 (GMT + 9)

A new short documentary produced by Canadian film-maker Damien Gillis could cause severe problems for the salmon farming sector, an industry already rife with controversy.

"Farmed Salmon Exposed: The Global Reach of the Norwegian Salmon Farming Industry" is eerily resemblant to the film "The End of the Line," which was released earlier this year and had quite an impact on the fishing industry.

This film claims to reveal the pervasive nature of the issues plaguing salmon aquaculture and features testimonials by witnesses discussing the environmental and socio-economic damage caused by what they call "poorly managed salmon farms" and places heavy emphasis on Cermaq and Marine Harvest.

">

The film's premiere will take place in Edinburgh on 9 November and at later dates around the world Including Norway, Canada and Chile as part of the Pure Salmon Campaign.

Following the widespread reaction to "The End of the Line", *FIS.com* will be keeping a close eye on this film and invites people in favour of the film and its opponents to send their opinions to opinion@fis.com.

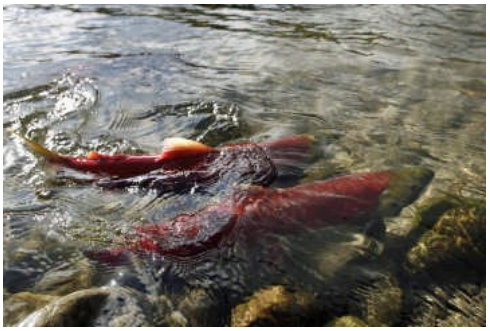
Related article:

- Greenpeace founder defends shrimp, salmon farming

www.fis.com/fis/worldnews/worldnews.asp?...r=&day=&id=34483&ndb=1&df=0

⊟ B.C. judge to head salmon inquiry — Monday, 23 November 2009 9:36 AM

B.C. judge to head salmon inquiry



British Columbia Supreme Court Justice Bruce Cohen will investigate 'the causes for the decline of Fraser River sockeye salmon'

See also:

- From the archives: Why are Tories so quiet about salmon collapse?
- An ecosystem in turmoil puts its predators at risk
- PM announces probe into B.C. salmon stocks

Mark Hume and Bill Curry

Vancouver and Ottawa — From Friday's Globe and Mail Published on Thursday, Nov. 05, 2009 7:52PM EST Last updated on Wednesday, Nov. 11, 2009 2:26AM EST

British Columbia Supreme Court Justice Bruce Cohen has been appointed to head a sweeping judicial inquiry into the collapse of the most important salmon run on the West Coast.

Justice Cohen will investigate "the causes for the decline of Fraser River sockeye salmon including, but not limited to, the impact of environmental conditions, aquaculture, predators, diseases, water temperature and other factors that may have affected the ability of sockeye salmon to reach traditional spawning grounds or reach the ocean."

Details of the inquiry were being released this morning in Vancouver by Stockwell Day, Minister of International Trade.

Prime Minister Stephen Harper's decision to hold the inquiry is being called a last, best hope to avert a fisheries disaster on the West Coast.

"This is our chance to save B.C. salmon from going the way of Atlantic cod," Phil Eidsvik, a spokesman for the B.C. Fisheries Survival Coalition, said Thursday after Mr. Harper's surprise announcement in Ottawa.

"It's a slim chance, but it's great news because we know there are ways to protect and save the run," he said. "We know the department has been unable, for whatever reason, to do it – and only an inquiry will get to those reasons."

The announcement, which will be fleshed out Friday by Stockwell Day, the regional minister for B.C., could have immediate political impact because the salmon crisis is a key issue in Monday's federal by-election in New Westminster-Coquitlam.

NDP Leader Jack Layton is arriving Friday to campaign over the weekend with his candidate, Fin Donnelly, a strong environmental advocate who once swam the length of the Fraser River to underscore the plight of salmon and who has been calling for an inquiry.

Demands for an inquiry escalated this fall after the Fraser River sockeye run collapsed – with only about one million fish returning to spawn when between 10 million and 13 million had been expected.

Mr. Harper made the announcement in the House of Commons.

"We are very concerned about the low and falling returns of sockeye salmon in British Columbia," he said, adding that Mr. Day would provide details today.

"[He] will be making an announcement outlining the terms of reference for a judicial inquiry, as well as the judge who will lead that inquiry," Mr. Harper said.

The public inquiry will be mandated to report back to the government on or before May 1, 2011. It will have complete authority to hold hearings, summon witnesses and gather evidence as needed.

"An inquiry has access to all DFO documents and they can bring people in and they testify under oath, with the chance of going to jail if they lie," Mr. Eidsvik said. "And a judicial inquiry is the only format for that to happen. It gives us the best chance to get at the truth as to what's happened to our salmon runs."

Alexandra Morton, an independent scientist, said the inquiry needs to examine in detail the reasons why some 130 million salmon smolts, which migrated out of the Fraser, never returned from the ocean.

"The establishment of a judicial inquiry into the management of the Fraser River sockeye fishery gives new hope for the future of a great salmon river," said Conservative MP John Cummins, who has long sought just such an investigation into DFO.

"We face a disaster of epic proportions on the Fraser. In six out of the last 11 years the fishery has been closed. Tens of thousands of B.C. families have suffered as a result," he said.

The Conservatives had promised an inquiry into B.C.'s salmon fishery before – during the 2006 campaign – but Vancouver Island North Tory MP John Duncan said the initial resistance to the idea that surfaced then has since passed.

"We now have the circumstances where it's not about finger pointing any more. It's about getting to the bottom of what's actually going on," he said, explaining that at the time of the original commitment there was some resistance from the fishing industry and first nations.

But he said that has changed .

Clarence Pennier, Grand Chief of the Stó:lô Tribal Council, welcomed the announcement, saying native communities along the Fraser are in "despair" over the failure of the sockeye run.

"We are in the dark as to why the sockeye runs didn't make it back to the river. We are still looking for the answers and this is why we support a judicial inquiry," Chief Pennier said.

Rafe Mair, a public commentator and environmental advocate, said with pressure building for an inquiry, Mr. Harper had no choice but to act.

"I don't think they are really taking any political risks here," he said. "I don't think people would blame Harper for the crash.... they would, however, pin it on him if he didn't have an inquiry. He had to do it."

Alex Rose, author of *Who Killed the Grand Banks: The Untold Story Behind the Decimation of One of the World's Greatest Natural Resources* , said an inquiry could help reshape DFO and alter the fate of B.C. salmon.

"I applaud Mr. Harper on this decision," he said. "It's long overdue and I hope we get the chance to look at the failed mechanisms in DFO, a department I consider intellectually bankrupt."

www.theglobeandmail.com/news/national/british-columbia/bc-judge-to-...

Canada to probe missing salmon stocks: PM — Monday, 23 November 2009 9:29 AM

Canada to probe missing salmon stocks: PM
(AFP) – Nov 5, 2009

OTTAWA — A judicial inquiry is to investigate why millions of Pacific salmon failed to reach Canadian rivers some months ago, devastating the local fishing industry, Canada's prime minister said Thursday.

Prime Minister Stephen Harper made the announcement in the House of Commons, saying this is a "serious matter."

"We are concerned about the low and falling returns of sockeye salmon in British Columbia," he said.

On Friday, International Trade Minister Stockwell Day, the highest ranking MP from westernmost British Columbia province, will "outline the terms of reference for a judicial inquiry as well as the judge who will lead that inquiry," Harper said.

The Department of Fisheries and Oceans had projected that between six and 10 million sockeye salmon would return to the Fraser river in a peak August run. Only a fraction showed up and where the others went remains a mystery.

A record number of salmon smolts were born in the Fraser in 2005 and migrated to the ocean. Nature dictates that most of them should have returned by now to spawn.

Officials and ecologists speculated the salmon could have been affected by warmer ocean temperatures, fewer food sources, or more prey.

Alternately, they may have contracted sea lice or other infections from area fish farms, or the fisheries department's complex forecasts may be flawed.

"Honestly, we don't know what happens to them when they go out into the ocean," Stan Proboszcz, an expert fish biologist from the Watershed Watch Salmon Society, told AFP in August.

"There's a myriad of factors that could explain what's going on," he said.

www.google.com/hostednews/afp/article/ALeqM5jd9nbEDBZJdq8bh6yU1G6H4...

Greenpeace founder Patrick Moore is highly critical of the green organisation's stance — Monday, 23 November 2009 9:27 AM

Greenpeace founder Patrick Moore is highly critical of the green organisation's stance on aquaculture. (Photo: Greenspirit Strategies/Stock File)

Greenpeace founder defends shrimp, salmon farming

CANADA
Thursday, November 05, 2009, 02:40 (GMT + 9)

One of the founders and long-time leaders of Greenpeace, Patrick Moore is voicing a stinging attack on environmentalist groups for their opposition towards salmon and shrimp aquaculture.

"Greenpeace opposes the farming of salmon, shrimp, and other species even though this takes pressure off wild stocks, provides employment farming the sea, and produces some of the healthiest foods at affordable prices," Moore explains to *FIS.com*.

On the other hand, Greenpeace says that "Rapid development and expansion of intensive aquaculture for species such as salmon and shrimp has, for example, resulted in widespread degradation of the environment and the displacement of coastal fishing and farming communities.

Moore was an active figure in Greenpeace from 1971 to 1986, serving as president of the Greenpeace Foundation in Vancouver. He is now chairman and chief scientist at Greenspirit Strategies Ltd.

"Since I left Greenpeace in 1986, partly over their decision to "ban chlorine worldwide," they have adopted a number of policies that I believe are not in the best interests of the environment or humanity," Moore says.

Moore founded his own salmon farming company, Quatsino Seafarms Ltd, at Winter Harbour. At this time, he also served as president of the British Columbia Salmon Farmers Association (BCSFA) from 1986 to 1989.

In a statement on Moore, Greenpeace said that "Patrick Moore often misrepresents himself in the media as an environmental "expert" or even an "environmentalist," while offering anti-environmental opinions on a wide range of issues and taking a distinctly anti-environmental stance."

One of the "anti-environmental opinions" raised in the statement was that of salmon farming.

Despite opposition from the organisation he was once a member of, Moore sticks to his guns: "The campaign against salmon farming, based on erroneous and exaggerated claims of environmental damage and chemical contamination, scares us into avoiding one of the most nutritious, heart-friendly foods available. Salmon farming takes pressure off wild stocks, yet activists tell us to eat only wild fish. Is this how we save them, by eating more?" he wrote in the *Miami Herald*.

In light of the recent outbreak of Infectious Salmon Anemia (ISA) in Chile, some practices, such as the use of antibiotics in salmon farming, have come under attack by environmental groups.

Moore has said that the amount of antibiotics used in salmon farming do not compare to that of more traditional livestock.

"Whereas these livestock are on low-dose antibiotics for more than 50 per cent of their lives, only 3 per cent of salmon feed is medicated. Many salmon farms are now completely antibiotic-free and some are able to qualify for "organic" status."

Responding to claims of harmful waste being produced by salmon farming, Moore said that "Activists compare salmon farms to cities of 500,000 people dumping their raw sewage into the environment. The primary reason for concern about untreated human waste is disease transfer, not the waste itself. Once human waste is treated and sterilised it is a perfectly good fertiliser, and fish waste is no different except that there are no diseases that can be transmitted from fish to people."

In the case of shrimp farming, it is, for him, a much more ethical issue. In an interview with *The Competitive Enterprise Institute,* he comments: "First World environmental activists are campaigning against shrimp farming in Bangladesh, where hundreds of thousands of people depend upon it for their livelihood."

Due to the vast negative coverage that aquaculture has received in the world press, Moore believes that he should provide a positive vision for aquaculture since "the negative side already has way too much airtime."

Related articles:

- Researchers study impact of antimicrobial agents in aquaculture on humans
- Govt encourages organic aquaculture

www.fis.com/fis/worldnews/worldnews.asp?...r=&day=&id=34446&ndb=1&df=0

Scientists are first to 'unlock' the mystery of creating cultured pearls from the — Monday, 23 November 2009 9:15 AM

Scientists are first to 'unlock' the mystery of creating cultured pearls from the queen conch

Science Centric | 4 November 2009 12:50 GMT

For more than 25 years, all attempts at culturing pearls from the queen conch (Strombus gigas) have been unsuccessful - until now. For the first time, novel and proprietary seeding techniques to produce beaded (nucleated) and non-beaded cultured pearls from the queen conch have been developed by scientists from Florida Atlantic University's Harbor Branch Oceanographic Institute (HBOI). With less than two years of research and experimentation, Drs. Hector Acosta-Salmon and Megan Davis, co-inventors, have produced more than 200 cultured pearls using the techniques they developed. Prior to this breakthrough, no high-quality queen conch pearl had been cultured. This discovery opens up a unique opportunity to introduce a new gem to the industry. This significant accomplishment is comparable to that of the Japanese in the 1920s when they commercially applied the original pearl culture techniques developed for pearl oysters.

HBOI has been working with the Gemological Institute of America (GIA) to conduct extensive laboratory testing of the queen conch cultured pearls. In its independent analysis, GIA used techniques that included conventional gemological examination, chemical composition, spectroscopy, spectrometry and microscopy. HBOI and GIA plan to jointly publish the results of these trials in an upcoming issue of GIA's scientific journal, Gems and Gemology.

'This is a significant development for the pearl industry, and we were very excited to have the opportunity to closely examine these unique conch cultured pearls in our laboratory,' said Tom Moses, senior vice president of the GIA Laboratory and Research. 'Several of the pearls we examined are truly top-quality gems. With the equipment and expertise available at the GIA Laboratory, identification criteria are being compiled to separate queen conch cultured pearls from their natural counterparts.'

Previous efforts to culture queen conch pearls were unsuccessful, probably because of the animal's sensitivity to traditional pearl seeding techniques and its complex shell. The spiral shape of the shell makes it virtually impossible to reach the gonad, one of the pearl-forming portions in pearl oysters, without endangering the animal's life.

'Perhaps the most significant outcome from our research is that the technique we have developed does not require sacrificing the conch in the process,' said Davis. 'The 100 percent survival rate of queen conch after seeding and the fact that it will produce another pearl after the first pearl is harvested will make this culturing process more efficient and environmentally sustainable for commercial application.'

Survival of the animal is critical because commercial fishing has depleted the once-abundant wild populations of queen conch, and they are now considered a commercially threatened species in Florida and throughout the Caribbean.

There are basically two types of cultured pearls: nucleated (beaded) and non-nucleated (non-beaded). Nucleated cultured pearls are produced by inserting a piece of mantle tissue from a donor mollusc and a nucleus, usually a spherical piece of shell, into the body of a recipient mollusc. Non-nucleated pearls are produced by grafting only a piece or pieces of mantle tissue, and no bead is inserted.

'We used two different seeding techniques to induce pearl formation in the queen conch,' said Acosta-Salmon. 'One was a modification of the conventional technique used to produce cultured pearls in freshwater mussels, and the other was a modification of the conventional technique used in marine pearl oysters.'

Conch pearls are formed by concentric layers of fibrous crystals, and this layering often produces the desired flame structure, which is characteristic of conch pearls. The pearls have a porcelain finish and lustre like the interior of the conch shell, and come in a wide variety and combination of colours including white, red, pink, orange, yellow and brown. Queen conch pearls are measured in carats like traditional gemstones.

The size of the cultured pearls produced by Acosta-Salmon and Davis is controlled by the size of the bead and the culture time. The researchers have experimented with culture times from six months to two years; longer culture times may produce larger pearls. The queen conch is farmed in aquaculture tanks, and the queen conch cultured pearls in the initial harvest were grown in an aquaculture facility at HBOI. Queen conch achieve full size at about three years and have a life span of up to 40 years.

The queen conch is the largest molluscan gastropod of the six conch species found in the shallow seagrass beds of Florida, the Bahamas, Bermuda, the Caribbean Islands, and the northern coasts of Central and South America.

Source: Florida Atlantic University

www.sciencecentric.com/news/article.php?...pearls-from-the-queen-conch

Marine Harvest reacts to Atlantic salmon escape — Friday, 30 October 2009 12:04 PM

Marine Harvest reacts to Atlantic salmon escape

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Vancouver Island North

- Atlantic salmon escape fish farm
- Atlantics escape Broughton fish farm
- Morton files charges against Marine Harvest

Text

By Black Press - Campbell River Mirror

Published: October 29, 2009 2:00 PM
Updated: October 29, 2009 3:28 PM

0 Comments

BROUGHTON ARCHIPELAGO - Marine Harvest Canada said they managed to recover 1,073 of approximately 40,000 Atlantic salmon that escaped from a fish farm in the Broughton Archipelago.

And the company says it has put in place measures to prevent any further escapes.

The Atlantics escaped from the company's Port Elizabeth site, at the south end of Gilford Island, Oct. 21.

The loss was discovered after scuba divers found several holes in two pens while removing fish which had died as a result of low oxygen levels, said a company press release.

Prevention methods to eliminate further escape are in place, the company said, and this incident has been reported to regulators. The cause of the holes remains under investigation, but may be related to the fish removal process.

"This is something that has to be taken seriously," said Clare Backman, environmental relations director for MHC. "There will be a full investigation and we will make changes as required to prevent this from happening again."

The exact number lost will not be known until those remaining in nets are counted, said Marine Harvest, but the company currently estimates that 40,000 Atlantics escaped.

Some of those have been recovered. The company sent a recovery ship to catch those it could in the first 48 hours after the escape, said Backman.

"They recovered 1,073," said Backman. "That doesn't sound like much ... but actually it is quite a large number for a recovery. Obviously it was worthwhile."

The news of the escape brought quick reaction from the Living Oceans Society in Sointula, which said the huge salmon farm escape reinforces the urgent need for action on closed containment.

"We knew something was up when I received a call this morning from a gillnetter who'd been fishing north of Malcolm Island and catching numerous Atlantic salmon," said Will Soltau, salmon farm campaign coordinator for LOS. "This demonstrates once again the urgent need to transition all open net-cage farms to closed containment systems," Soltau continued. "This will be a major financial loss to the company and another blow to the health of our marine ecosystems and wild salmon populations. Closed containment could have prevented both."

Backman said he expects the threat to wild stocks from the Atlantic salmon to be minimal.

"These were very healthy fish, they were not carrying any disease," said Backman of the 10-pound fish. "And they are nowhere near being ready to spawn."

Backman said in the past most escaped Atlantic salmon are found with empty stomachs, they don't survive.

"However we do know that some survive because small numbers have returned to some rivers," said Backman. "There is potential for some to survive."

First Nations in the area are also concerned about the impact of the escape.

"There are serious questions of disease, overstocking of net-pens, adequacy of emergency response plans and also follow up investigation and reporting," said Chief Bob Chamberlin of the Kwicksutaineuk Ah-kwa-mish First Nation. "Even though Marine Harvest has agreed to let Musgamagw-Tsawataineuk Tribal Council staff question Marine Harvest staff, we remain skeptical and anticipate a party line being towed to safeguard employment."

The Kwicksutaineuk Ah-kwa-mish First Nation are calling on the provincial government to publically state there will be no expansions of fish farm tenures and capacity leading up to Fisheries and Oceans Canada assuming control of the fish farm industry.

v2

www.bclocalnews.com/vancouver_island_north/campbellrivermirror/news...

SA, China to build R45m fish hatchery — Friday, 30 October 2009 8:22 AM

SA, China to build R45m fish hatchery

29 October 2009

SHARE

South Africa and China have formed a partnership to build a R45-million fish hatchery by 2011 at the Gariep Dam in the Free State province, in an effort to develop rural aquaculture and create employment opportunities.

The South Africa Agricultural Demonstration Centre in envisaged to be a fingerling supply station to rural aquaculture projects within the province and beyond.

The hatchery will also be used to advance research and will provide a facility where agricultural scientists, technicians and farmers will test new farming methodologies.

Chinese assistance

Speaking at a sod turning ceremony at the Gariep Dam this week, Free State Premier Ace Magashule said hundreds of jobs would be created as construction got underway.

The sod-turning was attended by Magashule, Agriculture Forestry and Fisheries Minister Tina Joemat-Pettersson, Chinese Ambasador Zhong Jinhua, China National Agriculture Development Corporation GM Liu Lianjun and other delegates from both countries.

Jianhua said the partnership was a result of his government wanting to assist developing countries and teach them about fisheries.

He added that the project was a sign of friendship between the two countries. The Chinese government has injected more than R45 million into the project and will give R15 million each year for the next three years.

A total of 105 locals and 12 Chinese nationals will be employed at the beginning of the project.

"Through the construction of this hatchery, unemployed communities will gain employment and develop their skills by learning more about fishery,"

Magashule said.

Aquaculture development

According to the Department of Agriculture, Forestry and Fisheries, aquaculture is defined as the culture of aquatic organisms, including fish, molluscs, crustaceans and plants, either in cages within the shallow waters of the ocean or dams or structures on land fed by water.

Aquaculture has been expanding rapidly across the world and China is the largest contributor to global aquaculture production.

According to department deputy director-general Andile Hawes, the environmental potential for aquaculture in South Africa was huge, and this could have positive effects on the unemployment statistics.

"If the industry production levels grew to the projected level of 90 000 tons per annum, then this could double the employment potential of the industry," he told a Parliamentary committee in Cape Town last month. "Abalone farming in particular had shown extremely positive growth trends that exceeded global levels."

SAinfo reporter and BuaNews

http://www.southafrica.info/business/investing/fish-290909.htm

Senator visits aquaculture industry — Friday, 30 October 2009 5:28 AM

Senator visits aquaculture industry

EUGENE BOISVERT
22/10/2009 4:00:00 AM
The Shadow Parliamentary Secretary for Agriculture, Fisheries and Forestry visited Smoky Bay, Streaky Bay and Port Lincoln last week to learn more about the local aquaculture and fishing industries.
Federal Member for Grey Rowan Ramsey hosted Liberal Tasmanian Senator Richard Colbeck's visit to the Eyre Peninsula last Tuesday and Wednesday.

They visited Zippel's Smoky Bay Oysters and attended a meeting with Liberal Party members in the Streaky Bay Hotel later that evening.

Senator Colbeck said an important issue was new Commonwealth marine parks that will be in addition to state marine parks that stirred controversy earlier this year.

"The key Commonwealth issues are the marine protected area proposals," Senator Colbeck said.

"…The government said they want to complete the rest by 2010 and there are areas of interest in the southwest and the west and Torres Strait and east coast.

"That process is going on around the country…

"They're looking at areas of interest and then there'll be a management plan like no-take zones."

South Australian Oyster Growers Association president Bruce Zippel from Zippel's Smoky Bay Oysters brought up the issue of new proposed awards changing arrangements for averaging hours and penalty rates for night and weekend work.

Weather and tides can affect when and how long oyster farm hands can go out to the beds, but they are currently paid around the same amount each week by averaging their hours over several months.

There is a proposal to only average hours over a fortnight or one month.

"That potentially has a huge impact like we've been saying this afternoon it's not a nine to five job," Senator Colbeck said.

"Dealing with a live product you have to manage it when it needs managing and there's the weather."

Also brought up was the Federal Government's plan to charge exporters the full amount of the cost of quarantine services instead of the normal 40 percent rebate.

Rowan Ramsey said the move had been stopped

"The Senator, the Coalition's spokesman in this area, played a central role in the upper house stopping the government's recent move to place another $5 million of compliance cost on exporting aquaculture/fishing exporters by removing support for the Australian Quarantine Inspection Service," the Member for Grey said.

Mr Zippel also brought up increased training required for coxswains on oyster barges, changes to the Youth Allowance and whether oyster farmers should pay a compulsory or voluntary fee for research.

www.westcoastsentinel.com.au/news/local/news/general/senator-visits...

Growers to take over abalone company — Friday, 30 October 2009 5:25 AM

Growers to take over abalone company

Posted Thu Oct 22, 2009 9:26am AEDT

- **Video:** Australian Bight Abalone to be recapitalised (7pm TV News SA)
- **Map:** Elliston 5670

The administrator of Australia's largest offshore abalone producer, Australian Bight Abalone, says growers will take over the company within months.

The company went into voluntary administration in July.

Creditors yesterday voted for a recapitalisation plan which will see growers become shareholders in the farms near Elliston on South Australia's west coast.

Administrator Sam Davies says the deal is a win for all stakeholders.

"Growers get to in effect solve their own problem, employees, those that remain with the company have ongoing employment, but those that were terminated by us will get full payment of their entitlements much sooner than they otherwise would in liquidation," he said.

"Trade creditors will get a reasonable return, those that continue to supply the company will have an ongoing revenue stream.

"The immediate aim is to continue as many of the projects as the grower group deem fit, so there are four projects in place and they'll take a view as to which ones they want to continue, then my understanding is that with further investment money they'll be embarking on a new corporate owned abalone growing operation."

www.abc.net.au/news/stories/2009/10/22/2720893.htm?section=business

Friday, 30 October 2009 5:17 AM

No big impact' from abalone group closure

'No big impact' from abalone group closure

Posted October 20, 2009 13:49:00

- **Map:** Elliston 5670

Elliston residents say it will not make a huge difference whether Australia's largest holder of abalone leases and licences comes back to town.

The Australian Bight Abalone group was put under administration in July, leaving nearly 30 people out of work.

Creditors will meet for the second time tomorrow to decide the group's future.

Grant Rumbelow owns and runs the local roadhouse and says while about 15 people have left town, a bumper tourism season means local businesses have not been greatly affected.

"We haven't noticed it very much here at the roadhouse because it's been quite a good tourist season," he said.

"We had a couple of whales here in the bay at Elliston for about three weeks so that attracted quite a few just to the town. So at the moment it hasn't affected us very much at all."

http://www.abc.net.au/news/stories/2009/10/20/2719084.htm?site=eyre

New rules make life easier for paua farmers — Friday, 30 October 2009 5:09 AM

New rules make life easier for paua farmers

By MICHAEL FORBES - The Southland Times
Last updated 05:00 19/10/2009
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Paua farmers can get special permits to take the small amounts of breeding stock they need from the ocean themselves, under new government rules.

But the Paua Industry Council warns that could result in a lack of species diversity, which may cause deformities and diseases strong enough to wipe out fish stocks.

Fisheries Minister Phil Heatley approved the issuing of special permits to paua farmers, which exempt them from a minimum quota (ACE) holding for paua.

The change came into effect on October 1. The minimum amount of paua quota a commercial fisher can hold in the PAU5A catchment around Southland is one tonne, which far exceeds the 40kg or so required by farmers.

As a result, farmers had to get breeding paua from commercial sources, such as paua divers and quota holders.

"That worked well where farmers had good working relationships with local paua divers, but some, such as Southern Marine Farms (in Bluff), appeared to be having difficulty," Mr Heatley said.

David Corbin, of Southern Marine Farms, said the old law was holding it back. "We only need about 200 animals but no quota holder wants to sell us 40kg of paua, they want to sell four tonnes of it."

The law change could increase the hatchery's production from 1.2 million to 2 million paua per year, he said.

But Paua Industry Council chief executive Jeremy Cooper said allowing farmers to repeatedly breed from stock in their own waters would generate a lot of inbred paua leading to deformities, a lack of genetic fitness and the development of diseases.

He believed a centralised supply of brood stock (breeding paua) and spat (juvenile paua), which could be certified and tagged before being sent out to farms, was a better way to go.

But Mr Corbin dismissed these concerns and said genetic diversity would be maintained under the new law, as the paua in southern waters was already a mix of abalone from other areas.

"When paua spawn, the larvae swim for anything up to 15 days before settling. Who knows where they end up after 15 days?"

Paua farmers need to contact the Fisheries Ministry office in Nelson to apply for a special permit.

michael.forbes@stl.co.nz

www.stuff.co.nz/southland-times/business/2976599/New-rules-make-lif...

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www.stuff.co.nz/southland-times/business/2976599/New-rules-make-lif...

The Aquaculture Industry Can Lead The World In Food Production — Friday, 30 October 2009 5:01 AM

The Aquaculture Industry Can Lead The World In Food Production

October 16, 2009

PrintEmail to a Friend

- Analysis by: James Aliucci
- Analysis of: How will the world feed itself in 40 years' time?
- Published at: www.guardian.co.uk

Summary

2050 is shaping up to be quite an ominous year. Forget the new millennium and " the end of the world ", recent predictions that our food supplies could be running out in 2050 seem much more troubling. Predictions about our oceans bounty, climate changes effecting land based crops, and the population levels of 2050, all tell us we are in trouble. All have a dramatic impact on our ability to feed the world. But wait, solutions abound, aquaculture is one solution moving in the right direction.

Analysis

"The world is going to get hungrier this century, and on a scale that will make the famines of the 1980s look paltry. The maths are simple and devastating: in 40 years' time the global population will be 9.2 billion people – a third larger than it is now. But to feed us all, the UN Food and Agriculture Organization says, we will need to produce twice as much food. " says Alan Renton of the Observer. This fact seems to be getting by most of the population these days.

The aquaculture industry alone cannot solve these monumental tasks we face, but it certainly can be part of a solution. One must realize up until most recently, a very large portion of our population consumed fish as basic and relatively inexpensive way to obtain protein for their diets. These inexpensive fish are currently being fished out, and in some instances these costal fisheries are closed. What and where do the people who depend on fish for their protein turn. And where does the remaining population turn for their fish needs.

Aquaculture has its own set of problems to deal with as it try's to maintain and expand. Feed, effluent (land based), waste (ocean based), land usage, water usage, as well as disease are some of the issues. But they are problems that are being solved and they also show that with better planning, design and operations, the industry has tremendous growth potential. And that growth potential leads to more product for the world to consume.

Some of the promise that we see in the industry is by developing methods for species new to aquaculture that are now being experimented with worldwide, this will be able to provide the ever expanding consumers of the world additional products. We also see more polyculture, where more than one species are grown in the same pond or tank, tilapia and shrimp come to mind. There are other polyculture start up operations that not only utilize the ponds and tanks for fish and shell fish but utilize the space for microalgae growth that can be turned into bio fuels.

The efficiencies of all our aquaculture projects whether they are land or ocean based must be improved, at all levels. We need to expand operations, move them closer to the raw materials used in feed production. We need to locate the farms closer to their markets and end users. We must be more efficient with end product usages. These are but a specific few. With our new technologies and our new scientific breakthroughs, we must dedicate our efforts to grow this industry. As we rapidly move toward 2050, we must realize some of solutions to feeding our new world are at hand.

www.glgroup.com/News/The-Aquaculture-Industry-Can-Lead-The-World-In...

Protest against fish farms draws hundreds in Vancouver — Friday, 30 October 2009 4:33 AM

Protest against fish farms draws hundreds in Vancouver

By Stephanie Dearing.
Published Oct 4, 2009 by ■ Stephanie Dearing

Hundreds of people gathered in downtown Vancouver Saturday, asking the government of Canada to do more to protect wild salmon, specifically to ban open-net salmon farms.

Organized by a group called Wild Salmon Circle, the event in Vancouver drew an estimated 600 or more people. The rally was held because the Department of Fisheries and Oceans (DFO) has been largely silent on the collapse of the Sockeye salmon fishery. Many biologists and fishermen link the collapse of the salmon to fish farms. Farmed salmon are thought to be the source of sea lice infestations, which is believed to be the reason for the loss of about 9 million Sockeye salmon. Of the over 10 million Sockeye expected to return for spawning this fall, only 1.7 million came back.

At the rally yesterday, the Wild Salmon Circle urged the the public to boycott farmed fish. Biologist Alexandra Morton, who earlier this year expressed hope that wild salmon would be protected by the DFO because the agency is "mandated to put wild salmon first." helped organize yesterday's rally. Speaking at the rally, Morton called for an inquiry into the decline of the salmon. Morton and others were also demanding that the DFO ban open net salmon farms, which are seen to be a key source of contamination for wild salmon.

There has been no federal response to the collapse of the Sockeye fishery, nor the demands to limit the types of salmon farms. Salmon farms, largely owned by non-Canadians, have been a contentious issue for years. Experts and fisherman have accused Minister of the DFO, Gail Shea, of ignoring the salmon crisis whilst courting Norwegian aquaculture businesses earlier this summer when the Sockeye run collapsed. Fish farms have long been viewed as risky to native fish.

In September, Morton charged Marine Harvest, a large Norwegian-owned aquaculture company, with illegal possession of wild salmon. The charges resulted after Morton notified the DFO of the situation and asked for action. When the DFO did not respond, Morton proceeded with pressing charges. In her press release, Morton said the charges resulted after she witnessed Pink salmon, a wild species, inside open net fish pens owned by Marine Harvest. An unnamed witness had contacted Morton after seeing Pink salmon in a harvesting net. Morton said she had

> "... received many reports over the years of herring, black cod and wild salmon in farm pens. The escaped Atlantic salmon that fishermen bring me often have wild fish in their stomachs. Are Norwegian farm salmon fattening up on wild BC fish? What happens to the wild fish when the nets are pulled? What happened to the pink salmon that may have been in the truck? DFO often charges commercial and sport fishermen with illegal possession to protect wild fish, why won't they charge these Norwegian companies? "

Earlier this summer, B.C.'s Environment Ministry released a report warning that "toxic contaminants" released by a "notorious" fish farm that was shut down in 2004, will continue to

> "... degrade seabed marine life as much as 100 metres from the site of the farm for 15 years dating from the farm's 2004 shutdown."

The contaminants are mainly copper and zinc, which had been released by owner and operator, Marine Harvest. Marine Harvest shut down the farm after it determined that ocean currents were not strong enough to dilute the toxic metals it released. Copper is used in aquaculture to reduce the growth of algae and barnacles in fish holding pens. Zinc is found in the food fed to fish.

Last year, the government of British Columbia placed a moratorium on salmon farming along the north coast of the province, because of concerns of the impacts on wild salmon. However, a court case earlier this year ruled that the government of British Columbia had been "unlawfully regulating" the salmon fishery. The judge ruled that fish farms were part of the fishery and as such, could only be regulated by the government of Canada - in this case the Department of Fisheries and Oceans. Marine Harvest, a Norwegian company with large interests in British Columbia aquaculture told press that

> "... the industry is committed to stringent standards and sustainability."

The DFO has been coming under public scrutiny frequently in the past few months. In mid-September, a Federal Court judge found that the Department of Fisheries and Oceans had not upheld its mandate, violating its own regulations to protect Species at Risk, in a case concerning a rare minnow, the Nooksack Dace, found only in a very few places in British Columbia.

Concerns about the collapse of the salmon fishery now encompass British Columbia's wild bear population. A bear count is underway in British Columbia after reports that there were fewer bears seen. The loss of bears has been attributed by some as death caused by starvation caused by a collapse of the salmon fisheries. B.C.'s Environment Minister, Barry Penner, had said he thought that the abundant wild berry crop had detained the bears away. A grizzly specialist said it was not likely that the loss of one source of food would impact bears so severely.

According to the David Suzuki Foundation, open net fish farming is a controversial technique of fish farming. As the name suggests, an open net facility is an area of water that is bounded by a net to contain the fish.

http://www.digitaljournal.com/article/280039

Scientists aim at putting omega fats into other foods — Friday, 30 October 2009 4:13 AM

Scientists aim at putting omega fats into other foods

George Roberts reported this story on Tuesday, September 29, 2009 08:06:00

Listen to MP3 of this story (minutes)
Alternate WMA version | MP3 download

TONY EASTLEY: Imagine a lamb chop with the same health benefits as a fillet of fish.

CSIRO scientists are working towards making it a reality, putting the omega-3 fatty acids, which help fight heart disease and improve brain function, into all sorts of other food.

George Roberts has the story.

GEORGE ROBERTS: Tasmanian farmer and CSIRO researcher Will Bignell says lamb is a good candidate to become a source of omega-3, and potentially replace fish.

WILL BIGNELL: Fish are a good source of it. The best source is wild caught fish however the number of those wild caught fish is plateaued at the moment and aquaculture is the alternate source. Aquaculture based fish don't have the high levels of omega-3s that we see and they also need supplementation, however that is unsustainable.

Basically it is 88 per cent of the world's fish oil is going into aquaculture and that's coming from natural sources.

GEORGE ROBERTS: Mr Bignell found the omega-3 levels in a flock of sheep varied by about 600 per cent.

He's working on selectively breeding the best and then boosting the omega-3 levels.

The aquaculture industry boosted it in fish using fish oil but it's expensive, in demand and strains the world's fish stocks

That's where Dr Surinder Singh comes in. His team at the CSIRO has already engineered omega-3 rich oil seeds.

SURINDER SINGH: The refined oil can be incorporated into different food matrixes like bread, cereals and also the mill from the hull seed can be fed to lambs for example and enrich these meats with the omega-3s as well.

GEORGE ROBERTS: The oil seeds still need to pass the tests for safe genetically modified foods, but if the theory works there may be a new alternative to fish.

Mr Bignell says thinks boosting omega-3 levels in lamb could have significant health impacts, in the way other food supplements have.

WILL BIGNELL: Folic acid is a good example of that. It's just become law to add that to flours that are going to be used for bread making so that we reduce the incidents of spina bifida so it is another example of trying to increase the healthy nutritional values of our food that are commonly eaten in the Western diet.

TONY EASTLEY: CSIRO researcher Will Bignell, ending that report by George Roberts.

http://www.abc.net.au/am/content/2009/s2699087.htm

Stofnfiskur's broodstock salmon roe is said to be unique for having been on land — Friday, 30 October 2009 4:12 AM

Stofnfiskur's broodstock salmon roe is said to be unique for having been on land during their entire life cycle. (Photo: Stofnfiskur)

Icelandic salmon roe producer unveils local subsidiary

CHILE
Tuesday, September 29, 2009, 00:40 (GMT + 9)

CEO Jonas Jonasson, of Iceland's Stofnfiskur company, an Atlantic salmon roe producer, visited Chile to participate in the opening of the firm's new facility in Los Lagos Region.

This new plant will be run by the ex-general manager of firm Patagonia Smolt, Rodolfo Infante.

During his two week stay, Jonasson will hold meetings with Infante and their main clients, among which are: Pesquera Los Fiordos, Salmones Cupquelan, Mainstream Acuinova Chile and Nova Austral de Pesca Chile, Salmones Itata, Congelados del Pacifico, Holding & Trading (Salmones de Chile), among others.

According to Infante, our "client [roster] is growing, due mainly to the sanitary quality of Stofnfiskur's Atlantic salmon roe, in originating from a country free of viral diseases, in additional to boasting very good growth and low gonadal maturation. Not to mention that it is the only purveyer firm capable of supplying [during] all the months of the year."

For Jonasson, Stofnfiskur's main strength lies in the fact that they are currently "the only company in the world capable of producing broodstock roe that have been on land during their entire life cycle."

The company initiated its breeding programme in 1991, and has been dedicated to selective breeding ever since.

"When we began to expand two years ago, our intention was to produce 100 million roe, a number we will arrive at next year," continued the Icelandic firm's CEO.

In terms of the negative impact on the Chilean industry resulting from the infectious salmon anaemia (ISA) virus, he maintained: "We realised that there was an opportunity to increase production, and that is one of the reasons for my visit to Chile, to surmise what the actual demand is going to be."

Chile is the company's main market today, representing 80 per cent of sales. The rest is distributed among the Faroe Islands, Norway, Ireland and Canada's western coast.

"For Stofnfiskur, it is very important to grow together with the industry. Of course we are aware that we are not going to be the only producers, because companies are going to begin producing their own roe, but perhaps we can merge with them in the future," Jonasson affirmed.

Stofnfiskur will not only provide roe to the Chilean market but will offer technical support to companies in the land-based fish farming field as well, Infante explained.

Jonasson also noted they were establishing a research department, and looking to fortify their position by "taking part in research programmes on diseases in Chile," among which he mentioned his interest in studying a way to increase salmon's resistance to caligus or sea louse.

The company is expected to produce about 60 million roe during 2009, and about 200 million in 2011.

The Icelandic company specialises in roe production, selective breeding, research, and national and international consultancy to other aquaculture companies at the global level. Its production stems from a network of seven farms in southwest Iceland.

In addition, it produces Arctic trout roe and selectively breeds Atlantic cod.

By Analia Murias
editorial@fis.com
www.fis.com

www.fis.com/fis/worldnews/worldnews.asp?...r=&day=&id=33988&ndb=1&df=0

Horoirangi – Centre for Seafoodand Aquaculture Innovation — Friday, 25 September 2009 8:06 PM

Horoirangi – Centre for Seafood and Aquaculture Innovation

As the driving force behind the proposed multi-million dollar aquaculture and seafood centre, Wakatu Incorporation, a major Maori-owned investment and seafood business based in Nelson, New Zealand, believes the time is right to support the New Zealand Government's aquaculture goal to become a sustainable $1billion sector by 2025.

Horoirangi is about collaboration and will fundamentally reshape the New Zealand seafood and aquaculture industry by providing a world class facility combining New Zealand's leading research and development expertise, major seafood industry organisations, iwi and education providers.

Wakatu has made a joint application with Cawthron Institute, a leading research provider already established in the region, to the Ministry of Economic Development to secure $10.45million funding via the Enterprising Partnerships Fund. That money will contribute to the establishment of enabling infrastructure being a commercial aquaculture zone and a research and development and education campus. This will enable the transfer of investment in aquaculture and seafood research and development into successful commercial enterprises, selling seafood products into premium markets.

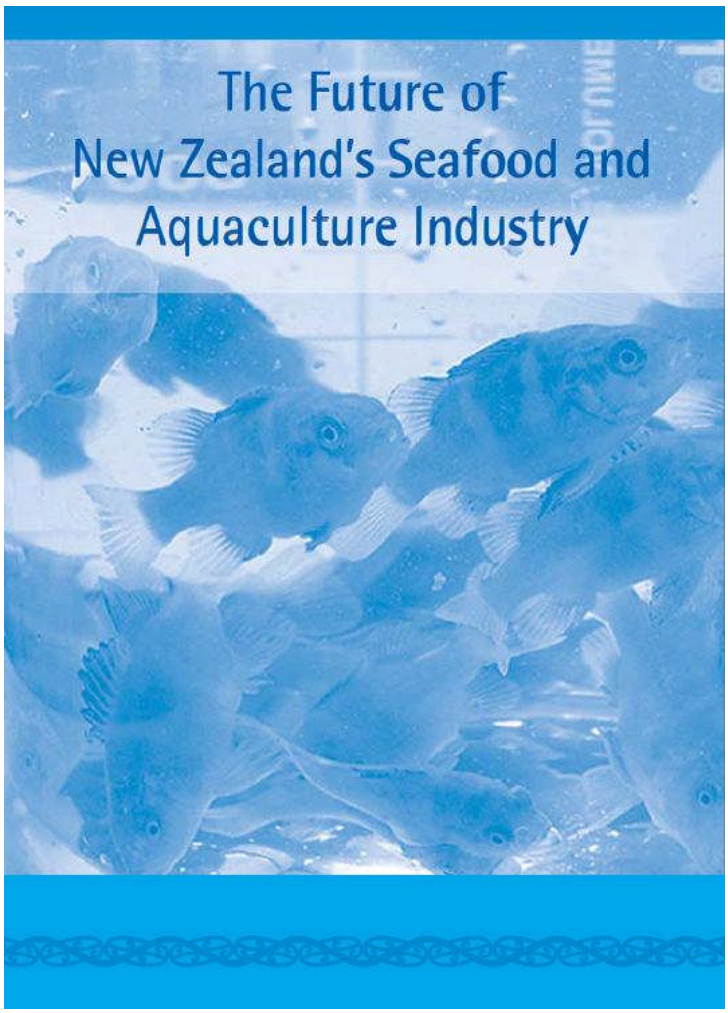
Horoirangi is all about a partnership with the wider community. The attached 'teaser' story from the September edition of 'Seafood New Zealand'; and links to published stories in Aquaculture NZ and Koha Magazine are evidence of this wider partnership, and the need for this long term vision and growth plan for New Zealand's seafood and aquaculture sector.

http://www.nzaquaculture.co.nz/AC%201%20current.pdf - Page 9

http://www.kohamagazine.co.nz/issues.html Issue 2, Page 20

We invite you to publish a story on this exciting initiative, and look forward to hearing from you by return email.

For further reference, please read the attached Horoirangi publication, and visit our interim website home page - http://www.horoirangi.co.nz.



The Horoirangi Centre of Seafood and Aquaculture Innovation ("Horoirangi") aims to fundamentally reshape New Zealand's seafood and aquaculture industry by providing a world class facility where leading research and development can collaborate with the seafood industry and commercial enterprises.

As one of the world's youngest commercial forms of food production, the growth of the international aquaculture sector is outstripping other forms of food production. The New Zealand Government has highlighted the Aquaculture sector as a priority area for economic growth and has set a goal to become a sustainable $1 billion sector by 2025. Pivotal to growing the New Zealand Aquaculture sector is the transfer of investment in research and development into successful commercial enterprises selling seafood products into premium markets. Sourcing foods from New Zealand is attractive for global companies who are demanding fresh and sustainable food sources.

- Horoirangi is located 10km from the centre of Nelson City.
- Horoirangi will provide core infrastructure including research and development and education facilities and land based aquaculture pilot scale research, together with a significant commercial aquaculture zone to allow full scale commercial aquaculture developments.
- Horoirangi will achieve its goals through the major collaborative efforts of industry, iwi, research organisations, education providers, and strong local community commitment and support.
- Horoirangi will be a place that fosters innovation, where new products and species will be trialled and new processes and systems developed to drive industry change and growth.

The Horoirangi Plan

The project is in three key stages:

- Stage one is completed, being the acquisition of land, completion of a feasibility study and development of a business plan.
- Stage two is the establishment of enabling infrastructure being a commercial aquaculture zone and a research and development and education campus.
- Stage three is establishing large scale commercialisation activities.

Enabling Infrastructure Development

Commercial Aquaculture Zone

Around 80% of New Zealand's aquaculture products are currently grown in Te Tau Ihu (Nelson-Marlborough), including greenshell mussels, salmon, oysters, paua, rock lobsters and finfish.

- Wakatu has 120 hectares of land at Horoirangi available for this commercial development.
- Horoirangi will boost exports by finding ways to shorten life cycles for high value species and by breeding wild fin fish species that are currently in decline.
- Wakatu completed a feasibility study into the establishment of commercial aquaculture activity at Horoirangi and identified there is a need to provide more substantial infrastructure to support the commercial investment in aquaculture.
- Wakatu is looking to secure Government funding to support the establishment of an offshore pipeline to provide the quantities of high quality seawater crucial to the commercial scale development of aquaculture ponds, hatcheries and incubator facilities.

We will develop a commercially viable complex which will support and enhance ecological and meaningful sustainability of regional and national fisheries and aquaculture. The long term vision is to include cultural and social infrastructure opportunities, including a café, cultural interpretation centre, museum and recreational facilities such as walkways and cycle tracks.

Research Et Development and Education Campus

The Cawthron Institute have operated from Horoirangi since 1992. Cawthron Institute is to increase the scale, quality and robustness of existing infrastructure available for research and scientific development activity through to pilot scale. This new facility will incorporate wet and dry laboratory spaces, common service areas, offices, upgraded plant room, additional storage space and additional seawater pond capacity.

By co-locating research and education providers it is expected that these organisations will be able to provide an improved level of integrated service to industry, and be able to collaborate to increase the speed of innovation and the development process.

Commercial Activities

Horoirangi provides a coordinated approach to creating a base for industry and science to work together so they can apply research to grow the industry to the benefit of all partners, increase employment and provide growth to the nation's GDP.

The third stage is focused on large scale commercialisation of species, undertaken with industry partners, over an initial 14 ha.

Wakatu, through its feasibility stage undertook development

work on various algae, shellfish and fin fish species with a view to attracting suitable local and international investment partners. It is intended to take each species, develop a commercialisation model and provide interested partners the opportunity to

participate at ground level.

Figures to date show these species models have the potential to generate the following:

- **G D P** Regional annual GDP generated $58 million
- **Annual revenue**
  Onsite production $35 million
  Additional downstream added value $57 million
- **Employment**
  Salary and Wages $15 million
  Potential job creation - onsite 375
  Potential job creation - downstream 650-750

Wakatu believes that establishing Horoirangi will offer business opportunities that fit with the aspirations of its Maori owners. Wakatu is a brand that stands for integrity and we have a business model that promotes cultural and environmental sustainability through commerce.

The Horoirangi logo

The central element of this icon is two ripples of water that form a koru – symbolic of the intrinsic value of our natural world and its replenishing pure water.

The second element represents the layers of people woven together. It is also the middle ripple – completing the full shape of the droplet, it leads to and supports the growth (koru) of Horoirangi.

WAKATU
INCORPORATION

Wakatu Incorporation is a commercial investment organisation based in Nelson city with 3,500 Maori owners. Established in 1977 with an asset base of NZ$11 million, Wakatu has grown to NZ$250 million through investments in seafood, property, horticulture, viticulture and tourism.

Wakatu are a people of the land and the sea and we embrace our history and traditional values, whilst we grow the business for the future, we honor and respect the past.

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Clipboard Capture

Grower plan to bail out ab farm — Friday, 25 September 2009 7:58 PM

Grower plan to bail out ab farm

BILLIE HARRISON
23/09/2009 11:30:00 PM
GROWERS have put forward a proposal to recapitalise Australian Bight Abalone after it went into voluntary administration in July.

A second meeting of ABA creditors is planned for around October 14 to consider the proposal.

An initial creditors meeting was held in July and a second meeting was planned for earlier this month but the meeting was delayed to give administrators McGrathNicol time to consider the proposal from the growers.

A report on the proposal will be prepared and given to creditors before the October meeting.

McGrathNicol said it was making progress toward recapitalising the Elliston-based abalone farm.

www.portlincolntimes.com.au/news/local/news/general/grower-plan-to-...

Ridley develops new feed for tuna — Friday, 25 September 2009 7:42 PM

Ridley develops new feed for tuna

September 23, 2009
Stockfeed and salt supplier Ridley Corporation Ltd has successfully developed a new feed for captured tuna, which the company says boosts the size of the fish better than other diets.

Ridley, which supplies feed products to the agriculture and aquaculture industries, on Wednesday announced the results of its feed trial for southern blue fin tuna.

Ridley said a commercial-scale trial on "catch and grow" southern blue fin tuna had been conducted on the premises of Clean Seas Tuna Ltd at Port Lincoln in South Australia.

The trial showed that a formulated, factory-made feed product could be used exclusively to feed juvenile southern blue fin tuna from capture through to harvest size and achieve growth rates superior to traditional frozen wild fish diet rates.

Ridley shares were one cent higher at $1.075 at 1031 AEST on Wednesday.

news.smh.com.au/breaking-news-business/ridley-develops-new-feed-for...

Sea lice 'slow down' can kill sockeye salmon — Friday, 25 September 2009 7:16 PM

Sea lice 'slow down' can kill sockeye salmon

News ServicesSeptember 8, 2009

Even non-fatal levels of sea lice can "slow down" sockeye salmon increasing their mortality rate, said a B.C. scientist. Conservation biologist Michael Price, who has spent years researching the number of lice on salmon off the B.C. coast, said the big fish with sea lice cannot swim as fast or catch as much food and are more susceptible to predators.

Price said officials from the federal Fisheries Department need to consider the connection between sea lice and the collapse of the Fraser River sockeye fishery.

www.vancouversun.com/lice+slow+down+kill+sockeye+salmon/1974278/sto...

http://www.themercury.com.au/article/2009/09/20/98511_food-wine.html
Tide turns for seafood Playing to Tasmania's cool-climate and cold-water advantage in seafood.

Tide turns for seafood Food & Wine - The Mercury - The Voice of Tasmania — Sunday, 20 September 2009 8:16 AM

Tide turns for seafood

GRAEME PHILLIPS

September 20, 2009 12:21am

James Ashmore

Playing to Tasmania's cool-climate and cold-water advantage in seafood.

AFTER making a living as a sailmaker, a prawn and tuna fisherman, working on oyster, abalone and salmon farms and circumnavigating Tasmania with Bern Cuthbertson, James Ashmore found his niche in marketing _ first with Vecon in Asia and later as Tassal's man in New South Wales.
And it was in Sydney that he began to appreciate good food and the quality demands of restaurants, working with the likes of Simon Johnson, Tony Bilson, the Mohr's smokehouse family, Christine Manfield and Neil Perry, and running a couple of food and wine masterclasses with Len Evans on Hamilton Island.
It was this sort of industry knowledge, along with wide mainland and Tasmanian contacts, that stood him in good stead when he returned to Tasmania to find a business offer had evaporated and he received two phone calls.
One was from a Brisbane fishmonger saying his oyster order hadn't arrived, the other from a local oyster grower complaining he had oysters he hadn't been paid for and asking could Ashmore do something about it.
He saw one call was the answer to the other, sent off the oysters and started Ashmore Foods from his home in 2005. And he has been bringing suppliers and customers together ever since, these days from a modern processing and new retail facility in the Mornington industrial estate.
Strange as it might seem with Tasmania's many islands and thousands of kilometres of coastline, one of the perennial complaints from restaurants is the difficulty they have in accessing regular supplies and a variety of fresh fish and shellfish.
That's why ``tonight's fish is blue eye'' has almost become a Tasmanian restaurant mantra. The big operators specialise in big quantities which are easier to ship straight off to the Melbourne market rather than deal with the bits and pieces of local orders. Local wholesalers then often have to buy the fish back.
``I'm not interested in dealing with the trawlers and big boats with fish five days old or frozen at sea,'' Ashmore says.
``I want to stay small, boutique, handle the flounder my night fisherman brings in or deal with the guy who pulls up in a ute towing a dinghy with some squid he's caught that morning.
``If someone on the mainland wants 50kg of cooked king crab claws, I'll ring round, source it and ship it.
``If a local restaurant wants some king flathead, if they're available, I'll find them.''
When Japanese chef Yoshi Suzuki was here a few months ago for masterclasses at Drysdale and a dinner at Meadowbank, he needed a long list of fresh seafood.
Bluefin tuna? Ashmore flew a fresh one in from Queensland. A large stripey trumpeter was sourced from a Margate fisherman, fresh garfish from his ``night'' fisherman. Abalone? Ashmore simply asked ``What size?'' Crayfish? No problem. Sea urchins? He dived for them himself on the morning of the masterclass.
Today he processes and sends to the mainland about 750,000 dozen oysters and 300 tonnes of Van Diemen Aquaculture salmon each year.
``I have a passion for Tasmanian food because the producers I deal with have such passion. Good food isn't ego-driven, it comes from passionate artisans,'' he says.
``And whatever South Australia or Victoria and the other states do with their produce and seafood, they can never put it on menus with the word Tasmanian.
``And that's our great advantage: the quality, the flavours and textures that our cool climate and cold waters bring.''

www.theglobeandmail.com/news/national/british-columbia/bc-questions...
Province questioning Ottawa's handling of fisheries

B.C. seeks probe into sockeye collapse - The Globe and Mail Saturday, 19 September 2009 10:44 AM

THE GLOBE AND MAIL

B.C. seeks probe into sockeye collapse

Province questioning Ottawa's handling of fisheries

Justine Hunter

Victoria — From Friday's Globe and Mail Last updated on Friday, Sep. 18, 2009 03:29AM EDT

The B.C. government is challenging Ottawa's fisheries management after the collapse of the sockeye salmon run, asking for a public review of the "adequacy" of the Department of Fisheries and Ocean's forecasting abilities.

Environment Minister Barry Penner said Thursday a public probe is needed to restore confidence in DFO's management of the West Coast fishery.

In August, the department confirmed the number of sockeye returning to the Fraser River this year was down dramatically from the expected run of at least 10.6 million.

The current estimate is that just 1.37 million sockeye are returning this year.

"The wide disparity between the forecasted and actual returns of Fraser River sockeye is a serious issue for British Columbians," Mr. Penner said in a letter to federal Fisheries Minister Gail Shea.

He said he'd like a "comprehensive public review of the 2009 sockeye returns, the adequacy of scientific data and the capacity of forecasting techniques."

Mr. Penner's letter is dated Aug. 26, although his concerns are only just coming to light now.

In an e-mailed statement Thursday, Ms. Shea said she accepts the need for a review – although she did not commit to a public forum.

"I am committed to looking at all aspects of DFO's 2009 postseason review, which involves counting the numbers of spawning salmon on spawning grounds, looking at environmental impacts, catch numbers, forecasted and actual returns," she stated.

"In addition, DFO will be considering all aspects of the salmon season, including our approach to salmon forecasting, as we work to enhance our understanding of the dynamics of salmon survival."

Mr. Penner's criticism comes to light as environmentalists raise concerns that the B.C. Liberal government's green agenda is fading away.

Mr. Penner pointed to his action on the sockeye salmon issue as evidence that his government has not, in fact, lost interest in environmental issues.

The Liberal's green agenda was a significant issue in the spring election campaign, as some environmentalists vowed to punish the rival New Democratic Party for its proposal to dismantle the Liberal government's carbon tax.

Since the election, enthusiasm from some of those same sources has waned after cuts to clean-energy grants, the approval of a trophy hunt for grizzlies and the failure to act on protecting species at risk.

Tzeporah Berman, a high-profile activist, said during the election she felt "betrayed" by the NDP. Thursday, she said she's worried now that the Liberal's green agenda is losing ground in the postelection era of fiscal restraint.

"We still have in B.C. some of the best policies in North America to address global warming and pollution. That said, we are concerned they are losing focus," she said in an interview. "What a tragedy it would be if they held firm all the way through the recession and then lost focus fighting the deficit."

Faisal Moola, director of science for the David Suzuki Foundation, said he is "disturbed" that Mr. Penner is allowing a grizzly hunt to continue, despite anecdotal reports that the bears are in serious decline.

"It is surreal, this government actively promotes trophy hunting of a known species at risk," he said.

Merran Smith of Forest Ethics, who helped put the carbon tax on the public agenda in the election, said she's seen "no progress" on the file in the wake of the vote.

"The carbon tax is a strong, bold move and still deserves support," she said. "But now the budget has been gutted on many of the climate and energy initiatives, which is a real setback for B.C."

This week, a new front of dissent opened when the provincial government vowed to move ahead with building a new electric power line to open up the northwest corner of the province, a move that will give the sparsely populated region access to cleaner energy.

The project is touted as an environmental initiative – about a third of the money is coming from the federal "green infrastructure" fund – but environmentalists are alarmed because the main purpose of the development is to attract new mining projects.

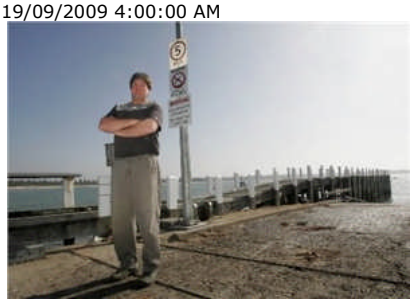
Ms. Smith said attempts to paint the project as an environmental initiative is misleading. "This transmission line is anything but green," she said.

www.standard.net.au/news/local/news/general/divers-earn-award-for-f...
ABALONE divers have been recognised with a state award for their efforts in handling a virus outbreak which devastated the industry.

Divers earn award for fight against abalone virus - Local News - News - General - The Warrnambool Standard — Saturday, 19 September 2009 10:37 AM

Divers earn award for fight against abalone virus

BY PETER COLLINS
19/09/2009 4:00:00 AM



High price paid: Victorian Abalone Divers' Association executive officer Vin Gannon. 070215JW20 Picture: JEMMA WALLACE

ABALONE divers have been recognised with a state award for their efforts in handling a virus outbreak which devastated the industry.
Ganglioneuritis (AVG) was first reported in 2005 and has since spread as far as Cape Bridgewater and Aire River, causing some of the state's most productive coastline to be closed for harvesting.

Portland's Vin Gannon, executive officer of the Victorian Abalone Divers' Association, said the seafood industry environmental award came after considerable work to manage the area's recovery.

``We haven't had an active virus sighting for some months now,'' he said.

``We are cautiously optimistic it is under control and are awaiting better weather conditions to send research divers down for an update.

``Divers are still urged to wash their gear when changing location and to report any new disease outbreak or illegal harvesting.''

The divers' association was instrumental in developing a bio-security system as well as raising community awareness to help stop the spread.

With most of the coast closed off the industry is only a shadow of what it was before 2005.

``We had the best quality and were world leaders in sustainability,'' Mr Gannon said.

``It's very marginal now. Market prices are only a quarter of what they were and abalone licences have fallen by about 75 per cent.

``Divers, deckhands and factory workers have left the industry and we face a severe shortage of deckhands.''

Mr Gannon said the western zone now only had six regular divers, compared with 14 in the boom days, while the central zone numbers had dropped from 34 to 25.

Only Discovery Bay, Lady Julia Percy Island, Julia Banks near The Crags and Discovery Bay are open for abalone harvesting in the western zone.

The region's abalone harvest has fallen from 280 tonnes a year to about 40.

www.canada.com/Biologist+lays+charges+over+salmon+deaths/2007807/st...
Biologist Alexandra Morton has laid charges under the Federal Fisheries Act against Marine Harvest

Biologist lays charges over salmon deaths — Saturday, 19 September 2009 10:25 AM

Biologist lays charges over salmon deaths

Courier-IslanderSeptember 18, 2009

Biologist Alexandra Morton has laid charges under the Federal Fisheries Act against Marine Harvest Canada Inc. for illegal possession of wild juvenile salmon from an endangered stock.

Hundreds of small salmon were apparently seen spilling onto a dock in Port McNeill June 16, during a transfer of live Atlantic salmon brood stock from the fish farm vessel M.V. Orca Warrior. The vessel's registered owner is Marine Harvest.

"When I received photos of the incident minutes later," says Morton, "I was really surprised the fish lying on the road were young pink salmon, I could not understand what were they doing in Marine Harvest's boat."

"Marine Harvest emailed stating that the young wild salmon had come from the Potts Bay fish farm, just west of Glendale River in Knights Inlet," says Morton. "They were apparently in the farm salmon pens and were scooped up with the Atlantic salmon. We have no idea how many pink salmon ended up going down the highway in the tanks on the truck."

When Morton took her boat to the Potts Bay fish farm she said she saw large schools of pink salmon leaping inside the pens.

"While millions of tax payers dollars and environmental donations have been spent to protect the Glendale River pink salmon from fish farms, last fall was the lowest return yet.

"These are the offspring from that generation and far from safe, they are right in the farm and in their fish packers," said Morton.

Morton has published 15 scientific papers on juvenile pink salmon.

Morton's lawyer, Jeffery Jones corresponded with DFO for six weeks but the Department did not taken any action.

"I have received many reports over the years of herring, black cod and wild salmon in farm pens. The escaped Atlantic salmon that fishermen bring me often have wild fish in their stomachs.

"Are Norwegian farm salmon fattening up on wild BC fish?

"What happens to the wild fish when the nets are pulled?

"What happened to the pink salmon that may have been in the truck?

"DFO has often charged commercial and sport fishermen with illegal possession to protect wild fish, why won't they charge fish farms for the same violation?," asked Morton.

Morton asks that anyone with information on other wild fish in fish farms to contact her at www.adopt-a-fry.org

www.timescolonist.com/technology/Jack+Knox+Retired+fisheries+expert...
For retired fisheries biologist Gordon Hartman, it was the sight of Nero fiddling while Rome burned.

Retired fisheries expert slams minister Friday, 18 September 2009 7:43 AM

Retired fisheries expert slams minister

By Jack Knox, Times ColonistSeptember 17, 2009

- Story
- Photos (1)

Jack Knox

Photograph by: File, Times Colonist

For retired fisheries biologist Gordon Hartman, it was the sight of Nero fiddling while Rome burned.

With a full-scale salmon crisis on the West Coast, the famed Fraser River sockeye run approaching total collapse, where was federal Fisheries Minister Gail Shea? In Norway, banging the drum on behalf of the fish-farming industry.

Which, after hearing some of her comments, told Hartman all he needed to know about Shea's priorities when it comes to Pacific salmon.

"It was the straw that broke the camel's back," Hartman says from his Nanaimo home.

So Hartman recruited another retired Department of Fisheries and Oceans scientist, Casey McAllister, and drafted an Aug. 31 letter accusing Shea and DFO of doing a poor job of protecting wild salmon while giving unrestrained support to the aquaculture industry.

"Historically, we recall times when DFO stood out clearly on environmental issues," they wrote. Marine oil exploration, fish habitat, coastal logging, the Site C dam proposal -- DFO was always there, on the side of the angels.

"As opposed to this, DFO's performance during the past 25 years or so is lamentable." That's particularly true regarding the protection of Pacific salmon, they wrote. The letter accuses DFO of sitting quietly by while fish-bearing streams are pre-empted for private power development, condoning massive gravel removal in salmon habitat in the lower Fraser River and playing hand-maiden to the aquaculture industry.

On the phone, Hartman is quick to say he doesn't know why the Fraser sockeye run fell to 1.3 million fish from the predicted 10.6 million. Salmon runs can collapse for many reasons. But it was disturbing that DFO, with no evidence, was so quick to dismiss sea lice from Broughton Archipelago fish farms as a cause.

"In regard to aquaculture in coastal B.C. we are deeply concerned about the policy direction and the inadequacy of federal government science," the letter read. "We are concerned not only because the high-profile conflict in the Broughton Archipelago area is unresolved, but because the industry apparently wishes to expand beyond where it now extensively operates."

The letter rips DFO for failing to adhere to the precautionary principle and for backing the expansion of aquaculture despite independent research, "refereed" by other scientists, that shows open-net fish farms carry a risk of serious or irreversible harm. "While being quick to criticize outside research, DFO's own research provides a weak and fragmentary foundation for management of aquaculture in B.C."

The letter accuses DFO of putting too much weight on the relative tonnage of fish produced by the wild and farmed fisheries, to the exclusion of broader considerations. "The effects that we make to sustain wild salmon and their habitats also help to support an array of other wildlife."

"It is clear that wild salmon face a daunting array of man-made environmental challenges, including other land uses, climate change, forest loss, water abstraction and ocean condition changes that we do not understand well. This given, your government should protect them as well as possible for as long as possible. This can be done. However, it requires a more sincere concern for wild fish than is evident to date on behalf of DFO. In the long term, it requires a vision on the part of elected people and senior bureaucrats that goes beyond winning two- to four-year electoral popularity contests and serving the apparently biggest 'business' on the block."

What makes all this disturbing to read is the source. When if comes to the salmon debate, most of us, those whose understanding of marine science is no greater than that of George Costanza, are mired in uncertainty by our own ignorance.

But Hartman and McAllister have real credentials, are retired DFO scientists with doctorates in biology and oceanography, have a passion for their life's work and a combined 85 years experience in their fields.

If Gail Shea has the same sort of passion for her portfolio, for the fish and oceans placed in her care, then she should at least give them a listen.

jknox@tc.canwest.com

www.fishupdate.com/news/fullstory.php/aid/12811/NAFC_STAFF_RETURN_F...
Fishupdate.com: News » Aquaculture . A team from the NAFC Marine Centre's Marine Science and Technology department has just returned from a fact finding mission to Norway where some salmon farming companies are using Ballan wrasse as 'cleaner fish' to control sea lice levels on salmon farms in a natural and sustainable way. Head of Marine Science and Technology, Dr Martin Robinson, aquaculture development manager, Kenny Gifford, and aquaculture scientist and technician, Gregg Arthur, were very impressed to see cleaner fish in action and to hear how some large Norwegian salmon farms, by using a mixture of wrasse species as cleaner fish, don't require any chemical treatments for delousing. The visit focused on the two main aspects of cleaner fish use: firstly, hatchery production of Ballan wrasse at the Institute of Marine Research in Austevoll (near Bergen 60°N) and, secondly, the use of cleaner fish on a commercial salmon farm at Villa Organic

NAFC STAFF RETURN FROM NORWEGIAN FACT FINDING MISSION - Fishupdate.com — Friday, 18 September 2009 6:44 AM

NAFC STAFF RETURN FROM NORWEGIAN FACT FINDING MISSION
Published: 16 September, 2009
A team from the NAFC Marine Centre's Marine Science and Technology department has just returned from a fact finding mission to Norway where some salmon farming companies are using Ballan wrasse as 'cleaner fish' to control sea lice levels on salmon farms in a natural and sustainable way.

Head of Marine Science and Technology, Dr Martin Robinson, aquaculture development manager, Kenny Gifford, and aquaculture scientist and technician, Gregg Arthur, were very impressed to see cleaner fish in action and to hear how some large Norwegian salmon farms, by using a mixture of wrasse species as cleaner fish, don't require any chemical treatments for delousing.

The visit focused on the two main aspects of cleaner fish use: firstly, hatchery production of Ballan wrasse at the Institute of Marine Research in Austevoll (near Bergen 60°N) and, secondly, the use of cleaner fish on a commercial salmon farm at Villa Organic in Rekdal, near Vestnes (62°N).

Discussing the visit, Kenny Gifford said: 'At the Institute of Marine Research, we met with two research scientists leading the work on Ballan wrasse juvenile production, which is now in its final year of the three-year contract. They commented that the 2009 season had been quite successful: the broodstock had spawned and they had succeeded in raising a number of juveniles.

Results have demonstrated that juveniles take at least one year to grow to a size ready to be used as cleaner fish and that hatchery-reared stocks were effective only a few days after being introduced to salmon pens.

'The visit to Villa Organic was also very enlightening. The farm currently has four large cages, moored across the tidal flow, with a current stock of 450,000 200g salmon. Each cage had a mixture of wild caught wrasse added at a stocking of approximately four per cent – around 5,000 cleaner fish per cage (a mixture of Ballan, Corkwing and Goldsinny wrasse). We witnessed a lice count during the visit and were shown records from the last few months, which highlighted a fall in lice burdens to a negligible level without any treatments. This success was attributed by the operators to the work of the cleaner fish.

'Much discussion took place on wrasse management and current Norwegian salmon farming practices during our trip. I was particularly interested in what the managing director of Villa Organic, Dr Per Gunnar Kvenseth, had to say about the resurgence of interest in using cleaner fish in Norway with around 20 per cent of farms currently using wrasse.

'He felt that the uptake in using wrasse across the Norwegian industry would certainly increase with the introduction of new regulations that require reporting of weekly sea lice burdens to the Government and the provision of a sea lice strategy to the authorities.

'This method of treating sea lice in a natural and sustainable way has also been tried in Shetland, albeit a long time ago. Much has changed since then and, while there are a number of challenges to using cleaner fish effectively – such as using smaller mesh sizes and having to restrict net fouling – many pockets of the Norwegian industry are reaping the economic benefits of having stocks of high quality salmon due to the biological control of sea lice through cleaner fish. On behalf of the NAFC Marine Centre, I would like to thank Shetland Aquaculture Trust for its support in funding this valuable fact finding mission.'

The NAFC Marine Centre has been holding potential broodstock Ballan wrasse for some time now and hopes that additional information gained during the trip can now be used to obtain fertilised eggs for on-growing if sufficient industry interest exists. This will however require positive support from industry in the very near future, with a clear intent to move toward the use of cleaner fish in the Shetland aquaculture sector.

www.ausfoodnews.com.au/2009/09/07/victorian-seafood-industry-celebr...
Minister Responsible for Fisheries in Victoria, Joe Helper, has commended the top shelf of Victoria's seafood crop as the state's seafood industry celebrated

Victorian seafood industry celebrates night of nights | Australian Food News — Sunday, 13 September 2009 7:23 PM

Victorian seafood industry celebrates night of nights

- September 7, 2009
- James Ferre

Minister Responsible for Fisheries in Victoria, Joe Helper, has commended the top shelf of Victoria's seafood crop as the state's seafood industry celebrated its annual award night last week.Attending the Victorian Seafood Industry Awards at Port Melbourne, Mr Helper said the industry deserved high praise for its environmental awareness, innovation and commitment to sustainability.

"Many Victorians enjoy eating seafood and it is important we have a sustainable and profitable seafood industry in this state to provide fresh seafood to the Victorian community," Mr Helper said. "Victoria supports diverse commercial fisheries from abalone, rock lobster, scallops and eels, to King George whiting, snapper, flathead, bream, calamari and garfish."

"Fresh fish is an important source of omega-three fats, known to assist in reducing the risk of heart disease."

Mr Helper added that the industry was a major source of employment in the state.

"Commercial fishing is also an important source of regional employment in places as far east as Mallacoota and far west as Portland, with more than $120 million worth of fresh seafood landed in Victorian ports," he noted. "The Brumby Labor Government is proud to be a major sponsor of these awards."

Award winners:
• Seafood Business Award - She Sells Seafood, Castlemaine;

• Seafood Restaurant Award - Fishermen's Pier, Geelong;
• Seafood Training Award - Rural Training Initiatives for the National Seafood Industry Leadership Program and 3M's;
• Seafood Industry Producer Award - Victorian Fisheries Association into Resource Management;
• Seafood Industry Promotion Award - Cliff Rossack for the Queenscliff Seafood Feast;
• Environment Award - Victorian Abalone Divers Association for work on the Abalone Viral Ganglioneuritis;
• Research and Development Award - Victorian Abalone Industry for improved spatial management of the Victorian abalone industry; and
• Seafood Industry Icon Award - Lakes Entrance Fishermen's Co-operative Ltd

http://www.canada.com/Salmon+farms+need+removed/1962775/story.html
Re: Fish Farming not the only culprit...C-I Sept. 2 2009.

Salmon farms need to be removed — Sunday, 13 September 2009 7:22 PM

Salmon farms need to be removed

Courier-IslanderSeptember 4, 2009

Re: Fish Farming not the only culprit...C-I Sept. 2 2009.

Fisheries and Oceans Canada has been a little too quick in downplaying the possible role of salmon farms in the decline of Fraser sockeye. Manager Barry Rosenberger suggests that the species of sea lice found on sockeye are not common to salmon farms; hence, sea lice from farms aren't an issue or answer.

But according to a 2008 study published in the North American Journal of Fisheries Management, two species of sea lice occur on juvenile sockeye, and information published online by BC's largest farming company indicates that both species are regularly found on farmed salmon.

Fisheries and Oceans is conflicted as both protector of wild fish and promoter of farmed salmon. The auditor general has raised this conflict often but nothing has changed, despite the global weight of evidence linking salmon farms to decreases in abundance and survival of wild salmon.

While assessing potential threats to Fraser sockeye may be a complex task, removing farms from wild salmon migration routes based on a global weight of evidence is a simple concept that even Fisheries and Oceans should be able to follow.

Craig Orr,

Watershed Watch Salmon Society

http://telegraphjournal.canadaeast.com/opinion/article/780266
Cooke Aquaculture is taking a lead role in improving the environmental performance and standards of salmon farming.

telegraphjournal.com - Company is setting new standard | NELL HALSE - Breaking News, New Brunswick, Canada — Sunday, 13 September 2009 7:13 PM

Company is setting new standard

Published Thursday September 3rd, 2009

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Cooke Aquaculture is taking a lead role in improving the environmental performance and standards of salmon farming. Unfortunately columnist Janice Harvey continues to shoot down those efforts ("Transparency is elusive where labels are concerned," Sept. 2) with criticisms that could leave readers confused. She questions our recent achievement - Eco Label Certification. That certification was awarded after extensive review of Cooke's operations by Global TRUST, an internationally-respected and accredited certifying body.

Harvey tells readers that Global TRUST is not transparent and she criticizes our company for not disclosing Global TRUST's standards, which are proprietary intellectual property developed at great expense to that company. However, despite the competitive nature of the certification industry, Global TRUST has offered to show Ms. Harvey the standards in order to satisfy her concerns. She says she is "still waiting" to review the standards. We're not sure what she's waiting for.

It is disheartening to our 1,500 employees, who are working hard in hatcheries, farms and plants all over Atlantic Canada and Maine to meet the rigorous environmental standards of the Seafood Trust Eco Label, when someone who has not bothered to step into a pair of rubber boots to visit one of our farms, launches such devastating criticisms.

Further confusing readers is Harvey's case against the use of AlphaMax, a treatment for sea lice. AlphaMax trials that were being conducted this summer have little to do with Eco Label Certification, which, despite confusing aspects of Ms. Harvey's column, is not an organic label.

In her critique, Ms. Harvey points out that AlphaMax is "very toxic to aquatic organisms" as though she's uncovered something scandalous. AlphaMax is being used to kill sea lice, a naturally occurring parasite. But, just like any treatment prescribed by veterinarians, Alphamax must be used correctly. Cooke and the wider industry want assurance that AlphaMax, used responsibly, will have no impact on marine life or the other industries that depend on it. That is why we were one of several companies that took part in carefully controlled and monitored AlphaMax trials this summer. The trials were led by government researchers and veterinarians who conducted an extensive water sampling and ongoing monitoring program. For example, lobsters placed in the direct current from the salmon pens showed no signs of impact but are still under observation at the St. Andrews Biological Station to be sure there are no long-term effects.

The AlphaMax trials are an attempt to expand the limited treatments available to farmers and give them a multi-pronged approach to fish health that includes preventative measures like crop rotation and fallowing. Relying on one treatment without experimenting and innovating would be irresponsible. To be consistent with the principles of the Eco-label, all of this work has been carried out in a transparent manner. Salmon farming officials have voluntarily met with representatives of the fisheries as well as environmental watchdogs to share information about the trials and to disclose preliminary results, which showed no impact on other species.

Working with non-government organizations and the community at large is part of Cooke Aquaculture's corporate culture. We've shared company information and opened our salmon farms to visitors from all over the world including David Suzuki, the Environmental Defense Fund and the World Wildlife Fund. We continue to be active participants in the WWF Salmon Aquaculture Dialogue, which is developing salmon farming standards. We also serve on technical committees for the development of standards by the Global Aquaculture Alliance and the development of a Canadian Organic Standard.

Our decision to not wait for these programs to become available, but to pursue certification to an existing, international and credible program, has not only set our products apart in the marketplace, but it has also placed our operations and our people under intense scrutiny.

We welcome that scrutiny and are proud that the Seafood Trust Eco Label gives us a tangible way to assure our workers, our customers and our communities that we are dedicated to producing healthy salmon in a healthy environment.

Nell Halse is Cooke Aquaculture's Vice-President of Communications. Contact her at nhalse@cookeaqua.com

http://www.dispatch.co.za/article.aspx?id=342156

Daily Dispatch Online — Sunday, 13 September 2009 7:12 PM

Threat to sink abalone farm

2009/09/04

A FAMILY feud is threatening to sink a multi-million rand East London abalone farm, with only weeks left to go before seawater to the project may be cut off, killing all the precious stock.

At the centre of the controversy are allegations that two brothers, Colin and Roger Kriel , had cheated their sibling Eden and his partner Trevor Page , out of a 30 percent shareholding in the company when they sold it to a black empowerment company, Royal Square Investments, in December 2007 .

The dispute took another dramatic turn this week when Page served notice on the current owners of the company, Seatek, on Tuesday.

He advised them that the seawater supply to the project in the East London Industrial Development Zone (Elidz) would be discontinued in 30 days' time.

"The rights to the pipeline were negotiated with Buffalo City Municipality in our private capacity and not included in the sale of Seatek," he said.

Page said he had a letter signed by Colin and Roger stating his shareholding in the company, and that he had been opposed to the sale of Seatek to the Royal Squares Group.

Two civil claims are currently under way, with Page claiming his 15 percent, while Eden Kriel is claiming money owed to him, which was being held in a loan account with the company.

Eden said he was not prepared to comment on the matter, but the court documents show he is claiming R739325.79 from his brothers after the company had been sold to Royal Square for more than R12 million.

Roger Kriel denied the allegations yesterday, saying Eden Kriel and Page's shareholding had been conditional to the success of the enterprise, and the dispute over the money owed to his brother stemmed from Eden trying to access his money prematurely.

" I don't think (Page and Eden) understand the complexities.

"They have no claim on the pipeline; the company paid for it. If they cut off the water there are huge damages claims that could follow."

If the water is cut off, about seven tons of abalone stock at Seatek would be destroyed. Also at risk is the R22million Kob marine-aquaculture project being run by Espadon Marine.

The new owner of Seatek, Sibusisiwe Zokwe, refused to speak to the Daily Dispatch, citing concerns over the safety of her staff.

Zokwe denied receiving notice about the water being cut off.

Espadon Marine managing director Liam Ryan said he was aware that notice had been given, but referred the Daily Dispatch to the Elidz for comment.

Elidz spokesperson Ayanda Ramncwana said a team had already been put together to look at possible interventions to minimise the impact of the Seatek dispute on Espadon. - By DERRICK SPIES

Business Reporter

www.alaskadispatch.com/alaska-beat/91-august-31/1727-a-rogue-hatchery
An internal Fish and Game review alleges misconduct on the part of a hatchery in Prince William Sound.

A rogue hatchery? — Sunday, 13 September 2009 7:04 PM

A rogue hatchery?

The Deckboss has another great but disturbing post -- this time about misconduct at a major hatchery operation. The post is careful not to say that misconduct is going on right now, but a Fish and Game internal review of Prince William Sound Aquaculture Corp. (hilariously pronounced 'pizz-wack') from 2006 alleges pretty serious things, including the shocker that the hatchery may not have been been doing enough to prevent its stock from mingling with wild salmon populations. For your weekly astonishment fix, read the post here. Deckboss's post fuels our paranoid fears that "Wild Alaska Salmon" will eventually become a marketing gimmick not based in genetic reality

www.patagoniatimes.cl/index.php/20090831897/News/Salmon-News/CONSEQ...
The Patagonia Times - Pto. Montt and Valdivia News

CONSEQUENCES OF THE "CHILEAN MIRACLE"

Written by Raúl Zibechi
Monday, 31 August 2009

The once-booming salmon industry hasn't benefited everyone in Chile equally
Photo by Benjamin Witte

The Salmon Farms And The Privitization Of The Sea

By Raúl Zibechi

The so-called "Chilean Miracle" is based on three pilars: the high price of copper, the production of celulose driven by Pinochet's dictatorship, and the salmon industry, which have expanded in the current democracy. But overfishing has caused a great health, environment, social, and economic crisis.

A little over 1,000 kilometers south of Santiago, from Puerto Montt and across the Chacao Canal on boat, is the fantastic island of Chiloé, where vast plains and hills are dotted by various shades of green sprouts due to abundant southern rains. In the spring, the symphony of green is scattered with numerous wild flowers, yellow, purple, and red, while myrtles, oak trees, hazlenut trees, and pangue plants stand out on the hills.

Each year, these forests receive 2,000 milimeters of rainfall; they are covered with fern and moss, and together with the native trees they form a mystical atmosphere. The rich biodiversity of the island and the presence of native animal and plant species impressed Charles Darwin in the 19th century. At the time he believed that the potato originated in Chiloé. Although later it was proven that it originated in southern Peru, the island is home to some 400 varieties of potatoes, the same ones consumed by the majority of the world today.

But the isolated island not only allowed the growth and conservation of an impressive diversity of life, including the indigenous horse Caballo Chilote, that measures just 1.25 meters in height, and the Chilean Pudu, the smallest deer in the world. The Chiloens also maintained its linguistic dialects, artesanry, family fish farms, and a peculiar architectural style that uses wood shingles. The churches, inspired by those found in Bavaria, and the stilt houses show that the traditions of the place have endured much longer than in other areas.

This paradise located in the southeastern Pacific Ocean, is one of the five most productive marine areas of the planet. "Although its surface is less than 1 percent of the world's oceans, it attracts 25 percent of the world's fishing boats," points out Ecoceanos1, an environmental organization. Similar productivity has attracted companies from around the world, whose investments reaped promising profits.

About 15 years ago, the Chiloé island and the Puerto Montt zone were known for their vigorous growth in aquaculture, and by a very special mode of salmon production. Substantial investments from Northern European and Japanese companies permited the growth of salmon aquaculture in Chile at an annual rate of 15 percent; in other words, growing 13 times larger in just 15 years. Chile exports about $2.5 bilion in salmon to the United States, Japan, and the European Union. As such, salmon added to copper and celulose production explains the 70 percent increase in exports, the "Chilean Miracle."2

Chile has become the fifth country in the world in marine product exports, the seventh exporter of fish resources, and the second exporter of cultivated salmon, after Norway. The reason for this impressive growth is due to one thing: it is the country with the lowest cost in salmon production in the world.

The Achille's Heel

On March 27, 2008, The New York Times published an article titled "Salmon Virus Indicts Chile's Fishing Methods."3 It was a major scandal. The article called attention to millions of salmon that died from the ISA (Infectious Salmon Anemia) virus and the health crisis caused thousands of worker layoffs.

"The breeding of salmon in crowded underwater pens is contaminating once-pristine waters and producing potentially unhealthy fish," added the report. Professor Felipe Cabello, from the Department of Microbiology and Immunology at the New York Medical School, pointed out "an underlying lack of sanitary controls" and explained that "the Parasitic infections, viral infections, and fungal infections disseminated when the fish are stressed and the centers are too close together." Additionally, it was showned that in Chile, high levels of antibiotics were used in fish, some of which were prohibited in the United States.

If taken into account that 30 percent of Chile's salmon exports go to the United States, the Times report had a major impact. The Norwegian enterprise, Marine Harvest, the largest producer of cultivated salmon in the world, who exported 20 percent of Chilean salmon, recognized that the ISA virus arose from their farm as well as its high usage of antibiotics in

Chile. The article went on to say, "Salmon feces and food pellets are stripping the water of oxygen, killing other marine life, and spreading disease, biologists and environmentalists say."

What is striking is the response that the largest companies in the world has to the recognition of the environmental and health problems that resulted. "As long as everybody has been making lots of money and it has been going very well, there has been no reason to take tough measures," said Arne Hjeltnes, spokesperson for Marine Harvest in Oslo.4

In 2005, the OECD (Organization for Economic Cooperation Development) released a report with strong criticism of the Chilean salmon industry, given the escape of one million fish each year, the use of fungicides such as malachite green—a carcinogen—and the excesive use of antibiotics that has been prohibited since 2002. Doctor Cabello estimated that Chile uses between 70 and 300 times more antibiotics than Norway, and there is a black market for salmon antibiotics in the country.5

In the following days, the government of Michelle Bachelet supported the salmon industry due to her concern for the business climate and a possible fall in exports.6 Nevertheless, production fell by between 30 percent and 50 percent and 20,000 of 50,000 workers were laid off. The industry went into a serious crisis because aquaculture businesses were unable to pay their bank debts due to a drop in production.

Ironically, everything that has happened in the past two years (ISA virus was discovered in July 2007), had been anticipated by several studies and investigations.

The Lowest Cost in the World
The main explaination for the low cost of salmon production in Chile is bad working conditions for the 50,000 workers in the sector. The salmon cultivation sector is number one in rates of accidents in the country and it has been confirmed that between February 2005 and June 2007, 42 workers from the sector died or disappeared into the sea according to data from the Navy and the National Department of Labor. Between 2003 and 2005, there were 572 pre-scheduled inpsections, and 70% of these cases received a fine.7

The main problems are in hygiene and worker's safety in the cultivation centers (enormous underwater cages) and processing plants. Two-thirds of the salmon companies violate labor laws and there is a tendency to outsource the most dangerous functions. Women, who make up 70 percent of the sector's workers and 90 percent in the plants, suffer from the cold, humidity, overcrowding, and lack of access to bathrooms. The same conditions apply to pegnant women, some of which have been dismissed.

Divers have the riskiest job. Among the 4,000 divers that worked in 2007, only 100 have received certified training according to international standards.8 Subcontracting and financial difficulties in the companies have made it such that only between 13 percent and 15 percent of the workers are affiliated with a union.

Workers are not the only ones to have filed complaints. Tourism companies and family fish farms have also complained. Until 2005, almost 5,000 hectares of the waters on the edges of lakes, fjords, canals, and estuaries were granted to salmon companies (1,215 hectares were granted to the Norwegian Marine Harvest alone). These are the same sites visited by tourists and where fishing communities are located.

The complaints are against contamination and massive salmon escapes (two million in 2004), that contribute to the propagation of contagious disease in other species and human beings, threatening the survival of wildlife species. However, the most concerning and scandolous of all is the massive use of antibiotics.

Dr. Cabello argues that the use of antibiotics in fish farming may encourage bacterial resistance, resulting in generations of resistant strains affecting humans and fish.9 On various occasions, Japan and the United States have found antibiotic residuals in Chilean salmon. One of the purposes for the use of antibiotics is to control salmon sepsis, for which quinolones are used. The bacterial resistance to these chemicals is increasing at an alarming rate around the world.

During a seminar organized by Ecoceanos in March 2007 in Puerto Montt, the director of the School of Chemistry and Pharmacy from Austral University presented convincing evidence on the increase of bacterial resistance in the hospitals of Puerto Montt and Castro (in Chiloé). In the first city, between 1999 and 2003, the resistance to ciprofloxacin increased from 2.6% to 9% and in Castro, it surpassed 4.4 percent to 8.3 percent.10

The decision of the salmon producers to reduce their costs and maximize capacity has led to "a negligible contribution to scientific research, very high concentrations of salmon farms, the indiscriminate use and lack of rotation in the use of antiparasitics such as emamectin benzoate and antimicrobials, coupled with a failure to respect basic aspects of environmental and health management."11

Other serious environmental problems are related to fish net manfacturing zones and wastes. In the Aysén region, south of Chiloé, the Chilean Environmental Authority fined every one of the salmon fish net manufacturers in 2005, and in the Lagos region (that belongs to Puerto Montt), more than 50 percent received fines for the improper treatment of industrial liquid residuals. In 2006, none of the waste industries from Los Lagos complied with the standards and 30 out of the 49 industries were shut down.

Juan Carlos Cárdenas, a veterinarian and the director of Ecoceanos, argues that "The European multinationals do things in Chile that are banned in their own country."12 It is believed that Chile is one of the last areas of expansion for fishing, mining, and forestry multinationals. The Puerto Montt zone and Chiloé have a comparative advantage over Northern Europe because the water is warmer and this allows a higher rate of salmon production. The concentration of fish farms is the serious problem causing contamination: "Here we have 300 kilometers occupied by 600 fish farms cultivating 120 million fish; that is the same quantity of fish produced in 1,000 kilometers in Norway," explains Cárdenas.

The salmon is grown in circular cages of 30 meters by 60 meters deep. The intensive farming led to the increase from $190 million in salmon exports in 1991 to $2.4 billion in 2008. The prices are unbeatable: Chile produces salmon at $2.90 per kilo

while the price is $7.90 in the international market. "But, here in Chile, a kilo in the supermarket is sold at $10, more expensive than in New York," assures Cárdenas.

Now that Puerto Montt and Chiloe are contaminated, the salmon producers are seeking to expand south, toward the Aysén and Magallanes regions. According to Cárdenas, the contamination remains the same in these regions, where the ISA virus has already been detected, showing that it has spread over 2,000 kilometers in 10 months. He adds that "none of this would have happened if the state was not absent and there were no high levels of corruption."

This is evident with the knowledge of just one piece of information: according to the company Marine Harvest, in its last annual report, in 2007, 0.02 grams of antibiotics were used for each ton of salmon produced in Norway. In the same year 732 grams were used per ton in Chile. In 2008, the statistics are 0.07 in Norway and 560 grams in Chile.13 This means 36,000 times more antibiotics in 2007 and 8,000 times more in 2008 were used in their Chilean plants, although no authority has questioned this.

Last July, the government declassified a 2008 report requested by the organization Oceana, which pointed out that the Chilean salmon industry used 325 tons of drugs, while Norway, the leader of the world's market, used only one ton. The report affirms that almost 40 percent of the antibiotics belong to the quinolone family, a drug prohibited by the Food and Drug Administration in the United States.14

Dr. Cabello argues that it has been proven that the ISA virus was probably introduced to Chile from Norway in 1996, and that its dissemination "was probably facilitated by the large population of virus generated by the bad health conditions in the salmon farms of Chile."15 From the biological point of view, what occurred in Chile is comparable to that of the swine flu virus.

The Privatization of the Sea
"We are transforming public assets into financial capital," says Lucio Cuenca from the Latin American Observatory for Environmental Conflicts.16 This came from the blessing of authorities many years ago. For example: in April of 2007, the Chamber of Deputies voted on a report from the Committee of Fisheries, Aquaculture, and Natural Resources, which argued that the Chilean salmon industry "worked under the international standards (inlcuding environmental standards) demanded by the modern market it supplies."

This report recieved 67 votes in favor, one against, and one abstention. Three months after declaring the ISA virus outbreak, a few claimed that it has been hiding for some time before.

Nevertheless, the failure of the Chilean parliament is evident.

A recent event brought evidence of all these problems to the surface. Felipe Sandoval was the assistant secretary of the Fishery Ministery during Ricardo Lagos' administration (2000-2006), which was in charge of promoting the privatization of the state's fishery industry. Currently he serves as executive secretary of the Salmon and Cluster Aquaculture Bureau, which brings together the business sector and the state to reposition the salmon industry. He acts as a representative of President Michelle Bachelet on salmon issues.

On Februrary 5, 2009, the Regional Comptroller of Valparaíso accused Sandoval of impinging on administrative integrity after having used $740,000 from the state with falsified service receipts, when he was assistant secretary of the Fishery Ministry. The accusation from the Comptroller came about in the midst of a debate on a new Fishery and Agricultural Act to revise industry measures for businesses. On June 21, the Bachelet government issued a decree to pardon charges against Sandoval and argued that due to the lapse of time he was absolved of any resposibility.

According to the Ecoceanos News on August 3, since Sandoval has been in office he has managed the receipts of $450 million for the salmon industry, with 60 percent support from Chilean taxpayers. This shows that the state is in favor of the industry, despite its failure to comply with labor, environmental, and health laws.

The Fisheries Act seeks to reboost the salmon industry through the transfer of perpetual rights on maritime territory to businesses.17 According to the Economics minister, Hugo Lavados, the law permits businesses the right to "use and take advantage" of matritime and coastal territories, so that it can be appropriated as mortgage assets, a crucial key for banks to issue loans and refinance debts. Juan Carlos Cárdenas argues that articles 81 and 81a permit "salmon producer debtors to mortgage national assets, such as agricultural concessions with bank creditors."

The presidential candidate for the December election, Senator Marco Enríquez-Ominami, along with other law makers, argued that the law "privatizes the sea by giving the salmon producers aquaculture concessions that are forever binding and mortgagable," which he considers "unconsititutional."18 Environmentalists, who did not expect any major opposition to this law, were thrilled when the Senator added 160 ammendments to the Fishery Act. "What the Senator has done is an important step against the unconstitutional act of impunity and attempted robbery of our national assets," said Cárdenas.

Meanwhile, there are those who are profitting from this salmon crisis. Marine Harvest announced that despite its losses in Chile, it is preparing to acquire Chilean salmon producers as part of the restructuring process in the industry, as each crisis opens an "opportunity" (acquisitions, sales, mergers), acknowledged Jorgen Andersen, the president of finance in the company.19

To the extent that Chile has signed free trade agreements with 24 different countries, and the elites are proposing, in the words of Lucio Cuenca, "a strategic project that could turn the country into a food producing power," everything indicates that the salmon industry will continue to grow. Regions in the south, where businesses are moving, are mirrored by Chiloé. Fifteen years ago, the island was a society of small farmers, herders, fish, and seafood farms. "Now workers are dependent on the transnational industry," said members of Ecoceanos.

According to Lucio, "The process of politicalization driven by dozens of small struggles against contamination in mining, salmon, and celulose production, who have succeeded in putting issues such as water on the public agenda, will continue to

grow until it has become a social movement." The criticisms you hear in the Senate largely mirror the new politicization of the Chilean society.

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Translated for the **Americas Program** by Jessica Shao.

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Recommended citation:
Raúl Zibechi, "Consequences of the "Chilean Miracle": The Salmon Farms and the Privatization of the Sea," Americas Program Report (Washington, DC: Center for International Policy, August 21, 2009).

Web location:
http://americas.irc-online.org/am/6377

Production Information:
Author(s): Raúl Zibechi
Translator(s): Jessica Shao
Editor(s): Laura Carlsen
Production: Chellee Chase-Saiz

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Ask just about anyone with a history of fishing for salmon along Canada's West Coast and they'll likely

Fish farming not the only culprit in salmon decline — Wednesday, 2 September 2009 8:30 AM

Fish farming not the only culprit in salmon decline

Various factors may be combining to hit Fraser River sockeye

By Quintin Winks, Canwest News ServiceAugust 31, 2009

Ask just about anyone with a history of fishing for salmon along Canada's West Coast and they'll likely say it's not what it used to be.

Fishing seasons keep shrinking and fewer fish are caught. Salmon stocks have been mediocre at best lately, and often downright dismal. Entire runs all but vanished this season, with salmon returning to their spawning grounds in record low numbers, most notably on the Fraser River. Millions of salmon predicted to swim up the river to lay their eggs simply never showed up. Where they went is open to much speculation and scientists and ecologists are casting about desperately for answers.

In the thick of the controversy over the disappearing fish is the British Columbia fish-farming industry. The government, scientists and environmentalists have heaped blame on the industry in recent years, and it's the first place many are turning for answers about the great vanishing of millions of sockeye.

In the Alberni Valley, the subject of salmon doesn't come with the same clang of alarm that it does in the Lower Mainland. For starters, the sockeye run there this year was the best in recent memory. Anglers were catching fish by randomly dragging unbaited hooks through the water. And while fish farms are largely blamed for the current state of wild salmon stocks, fish off Port Alberni don't pass any open farms during their annual migration. Yet drawing the conclusion that fish populations are booming here because they don't pass fish farms is patently false.

Instead, with everyone from the Department of Fisheries and Oceans to environmentalists leading the charge for answers through forensic science, the conclusion is that there are a number of factors at play when it comes to the survival of salmon.

"I don't think there's any question around the adult salmon and the impact of sea lice," said Barry Rosenberger, area director for the DFO and the Fraser Panel chairman.

"Fish farms may well be having an impact to some degree, though they can't explain all the problems in the Fraser sockeye."

Tests of Fraser sockeye show that some are infected with sea lice, but not lice that are common to fish farms nearby, Rosenberger said.

"That's not to say that fish farms don't have an impact, but it's difficult to see where they explain all of this," he added. "Clearly there's issues going on in the marine environment and they're interconnected in different ways."

Among those issues is rising sea temperatures. The increase has led to the migration north to Canada of warm-water predators, such as Humboldt squid and mackerel. Still, they're unlikely to be the cause of such mass disappearances. But the decline of plankton, a big source of food for salmon, could be.

"The part where people are disappointed is that we don't have all the directive science," Rosenberger said. "But to understand these things you need to have a long-term trend of science. And if you don't have the science over a period of time, if you just have points of information, when you try and do an evaluation of it, it might not answer all of your questions."

Craig Orr, executive director of Watershed Watch Salmon Society, mourns the loss of scientific study at the federal level. He said there was once a very strong fisheries research board attached to the federal government, but that much of that science capacity has eroded.

"We have very little capacity for looking at what's happening in the near-shore ocean environment right now and that's a tragedy, considering how valuable our wild fish are," Orr said.

Orr claims that independent studies have shown that the biggest impact on wild salmon, bigger even than over-fishing and global warming, are fish farms. But he also stops short of getting into specifics when it comes to apportioning that blame. Instead, he blames a number of factors affecting wild salmon, from past over-fishing to poor ocean productivity. But one of the leading suspects he said, remains sea lice.

Sea lice live on salmon. They are able to swim for short bursts from fish to fish. They prefer smaller salmon, but will also attack bigger ones. Sea lice have few known natural predators, but are controlled in fish farms with a pesticide called SLICE.

"But it's a pesticide that probably has effects outside of killing sea lice and people worry about applying those kinds of drugs on a consistent basis," Orr said. "They're expensive for the farmers to administer and these things kill anything with a shell in certain concentrations, including shell fish, and we just don't know the fate of chemicals like SLICE."

If scientists could formulate a drug or chemical that would specifically target sea lice without affecting other parts of the environment, then they might be able to resolve some of the issues facing wild salmon, Orr said.

"You would still have disease transfer and you would still have the escape issue," Orr said. "That's why groups like Watershed Watch and Coast Alliance for Aquaculture Reform are calling for closed containment technology, at least a commercial scale trial for it."

Mary Ellen Walling, executive director of the B.C. Salmon Farmer's Association, admits the industry has become the punching bag for scientists, governments and environmentalists. Much of that stems from early practices that weren't environmentally sound.

"We carry a little bit forward, some of the early bad reputation that we did earn," she said. "So part of the challenge we have now is to make people understand that things have changed drastically. There have been a lot of improvements made. There's always more that you can do, but I think the industry is very responsible and different than it was in the early days."

foodbizdaily.com/articles/92292-chilean-wild-fish-and-aquaculture-e...
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Clipping: Chilean wild fish and aquaculture exports reached USD 2.021 billion in June — Wednesday, 2 September 2009 8:29 AM

Clipping: Chilean wild fish and aquaculture exports reached USD 2.021 billion in June

FIS.com

Exports grow 5.6 pct in first six months

Chilean wild fish and aquaculture exports generated USD 2.021 billion in sales through June, which represents an increase of 5.6 per cent compared to the USD 1.913 billion registered in the same period in 2008, Fisheries Subsecretariat (SUBPESCA) statistics reveal.

In terms of volume, exports rose 25.7 per cent from 662,500 tonnes in the first six months of 2008 to 832,500 tonnes from January to June, states the latest SUBPESCA *Fisheries and Aquaculture Sector Report*.

Sales of frozen seafood products and fishmeal were the largest contributors in terms of volume in accounting for 45.4 per cent and 33.5 per cent of total seafood sales, respectively. Fish oil, refrigerated fresh products, dry algae and canned fish took second, third, fourth and fifth place.

The average price of seafood exports through June was USD 2.4 per kg, a value 15.9 per cent less than 2008's first six months.

Atlantic salmon was the most exported product with 30 per cent of the total value of Chilean export sales. Rainbow trout, pelagic fish and Pacific salmon were next in terms of value.

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www.stuff.co.nz/nelson-mail/opinion/2811523/Editorial-Marine-strate...
The Nelson Mail: Get the latest local, national and world opinion from Nelson's daily newspaper

Editorial: Marine strategy a welcome initiative | Stuff.co.nz — Wednesday, 2 September 2009 8:04 AM

Editorial: Marine strategy a welcome initiative

The Nelson Mail
Last updated 13:04 28/08/2009
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The importance of the marine environment to the top of the south region would be difficult to over-state.

From the Marlborough Sounds, where three-quarters of the New Zealand aquaculture crop is produced, to the country's largest fishing port in Nelson, the prime South Island visitor entry point through Picton and the tourism magnet based around Abel Tasman National Park, the region's fortunes are inextricably linked to the sea.

With steady growth in marine farming likely in Golden and Tasman bays in the years ahead, the continuing role of nearby commercial fishing grounds and the huge importance of the marine environment to a range of recreational pursuits, its ongoing health and viability carries national significance.

Agreement this week on a trendsetting and wide-ranging partnership formed to protect the region's marine waters from invasive pests is promising.

Though there has been some focus in recent weeks on the differences between the Nelson and Tasman councils, the truth is that in many areas the two bodies work together well.

For the Top of the South Marine Biosecurity Partnership, they have also joined with the Marlborough District Council, local iwi, industry representatives, port companies and the Government, in the form of the Ministry of Fisheries and the Department of Conservation.

The three councils are each contributing $40,000 across two years to get the national pilot programme under way, and this is being matched by MAF and Biosecurity New Zealand.

While this all illustrates the importance of the partnership's main focus, it also suggests a high degree of co-operation can be achieved within the wider region, when the cause is right.

That in itself is encouraging.

A fully regional approach was essential invasive marine pests show no respect for boundary lines and it is to be hoped that the partnership's work and ideals will evolve as a workable model for the rest of the country.

It is partly because the top of the south is such a marine force that the partnership has been established here.

There is already a high level of co-operation around the various agencies and industries associated with the sea, and recognition of the consequences of biosecurity breaches.

A push to develop Nelson as an oil industry servicing centre and the potential for marinas and hull-cleaning operations to be entry points for marine invaders all highlight the importance of developing a co-ordinated environmental protection strategy in this region.

The unintended and unforeseen consequences of lax biosecurity in past years are legion. New Zealand's land and rivers, and the surrounding sea, have all been hammered by the introduction, intended or otherwise, of foreign pests.

Unwelcome recent invaders in local marine waters include two types of sea squirt that pose a particular threat to mussel farming, the invasive Japanese kelp undaria, the Pacific oyster, a saltmarsh cordgrass and the South African brown mussel, deposited in Tasman Bay last year from an oil rig and sparking an $85,000 clean-up.

As well, the Fisheries Ministry has identified a further six species a clam, two species of crab, a seastar and a type of worm that are not yet present in New Zealand waters but considered a high risk of being introduced, and perhaps then thriving here.

The environment has already been compromised, but let us hope the partnership will be effective in stopping things from getting worse.

www.ausfoodnews.com.au/2009/08/25/tassal-reaps-benefits-of-strong-d...
Tassal has reported a 47 per cent rise in profit as demand for Salmon in Australia continues to build. The ASX-listed Atlantic Salmon marketer saw volume

Tassal reaps benefits of strong demand for Salmon | Australian Food News — Thursday, 27 August 2009 3:02 PM

Tassal reaps benefits of strong demand for Salmon

- August 25, 2009
- James Ferre

Tassal has reported a 47 per cent rise in profit as demand for Salmon in Australia continues to build.

The ASX-listed Atlantic Salmon marketer saw volume growth of 31.66% in the domestic market, while profits were further boosted by cost reduction initiatives.

"It is extremely pleasing to deliver another solid profit outcome in such a difficult economic climate," Tassal Group's Managing Director and Chief Executive Officer, Mark Ryan, said. "We continue to experience strong sales momentum in the domestic market with sales revenue growth of around 30% despite the challenging economic environment."

"Salmon sales are proving resilient to the effects of the global financial crisis."

"We acknowledge the challenges ahead that the current economic environment has presented, but

we remain excited by the opportunities that continue to present themselves," Mr Ryan concluded.

www.popsci.com.au/environment/article/2009-08/robotic-fish-farms-co...

Giant Free-Roving Robotic Cages Could Be the Healthy Future of Fish Farming | Popular Science — Tuesday, 25 August 2009 11:56 AM

Giant Free-Roving Robotic Cages Could Be the Healthy Future of Fish Farming

By Stuart Fox Posted 21.08.2009 at 5:46 am 0 Comments

Aquapod Fish Farm: Someday remote controlled motors could direct fish farms like this around the ocean. via Ocean Farm Technologies, Inc.

With over 70 percent of the world's natural fisheries taxed beyond the point of replenishment, the demand for farmed fish will only rise in the coming years. Unfortunately, the cramped conditions and shallow locations of most existing fish farms result in low yields and sickly, parasite-ridden fish.

That's where Cliff Goudey, director of the Massachusetts Institute of Technology's Offshore Aquaculture Engineering Center, comes in. He has attached robotic motors to a giant fish cage, allowing it to travel around the sea, rather than stay tethered in shallow water.

Goudey's specially equipped fish cage is the first step in a project to create giant mobile fish farms that would encase entire schools of fish, and travel with them through their natural migration routes. These "free range" fish would avoid the health and size problems associated with the current stationary fish farms, helping the farmers increase yield and relieving pressure on overextended fisheries.

So far, Goudey admits that the project is a little too futuristic to attract most fish farmers. But with plans to equip future models with GPS systems and radio transmitters, the day when a fisherman steers his fish towards his boat, not vice versa, may be approaching.

[via National Geographic]

http://www.bloomberg.com/apps/news?pid=20601087&sid=abewUVg_kh4k
[bn:WBTKR=MHG:NO] Marine Harvest ASA, [] the world's largest salmon farmer, expects supply to fall short of demand as Chile's output will take as many as six years to return to levels seen before a virus ravaged its fish farms.

Marine Harvest Chief Says Salmon Supply Squeeze Will Persist - Bloomberg.com — Friday, 21 August 2009 10:21 AM

Marine Harvest Chief Says Salmon Supply Squeeze Will Persist

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By Meera Bhatia

Aug. 20 (Bloomberg) -- Marine Harvest ASA, the world's largest salmon farmer, expects supply to fall short of demand as Chile's output will take as many as six years to return to levels seen before a virus ravaged its fish farms.

"It will take long for Chile to come back to volumes they used to have," Chief Executive Officer Aase Aulie Michelet, 56, said in an interview yesterday at the company's headquarters in Oslo. "We will be undersupplied for a while."

Salmon export prices from Norway, the biggest supplier ahead of Chile and the U.K., climbed 13 percent this year on a growing world shortage. Global supply is estimated to slump 10.3 percent to 1.3 million metric tons this year after an outbreak of the Infectious Salmon Anemia virus at Chilean farms, according to industry consultant Kontali Analyse AS.

Marine Harvest plans to increase investment in technology, research and development to better understand diseases, the chief executive said. Similar outbreaks in 1970s and 1990s also hurt the industry, which traces its origins to commercial salmon farms in Scotland and Norway in the 1960s.

"The winners will be those who can improve fish health," Aulie Michelet, whose company was formed in 2006 through the merger of three salmon producers, said. She said she'd "welcome" consolidation to better prevent disease.

Supply Squeeze

Salmon supply has risen about 55 percent this decade, according to Kontali Analyse, in part as health-conscious consumers eat more salmon. Demand has also risen as increased cultivation has driven down prices relative to other foods such as beef and chicken, according to Marine Harvest.

While the company has benefited from the supply squeeze, it was forced to take a $115 million charge in the second quarter for its unit in Chile and has cut its workforce in the country 67 percent to about 1,600 workers. Chile had accounted for 23 percent of its total output.

It plans to further reduce its workforce in Chile "substantially," the CEO said, adding that it will be in 2014 or 2015 before volumes return to earlier levels. Global volumes will drop 8 percent to 13 percent in second half, she said, adding that she's "quite positive for the next quarters."

The company is sending more Norwegian salmon to the U.S, where it set up a processing plant in Miami and will open a plant in Los Angeles to take advantage of the Chilean shortfall.

Quarter Loss

Marine Harvest last week reported a second-quarter loss of 66.1 million kroner, compared with a profit of 22.4 million kroner a year earlier. It had an operating loss in Chile of 380 million kroner, while profit in Norway more than doubled to 393 million kroner. It plans to harvest 313,000 metric tons this year, down from 327,000 tons last year.

The company's shares have more than tripled in value this year after plunging 70 percent last year.

Marine Harvest is seeking to grow "gradually" in Norway and to expand in Asia by marketing, sales and "other options," the chief executive said. The strategy doesn't include investing in more assets in Chile, she said.

"I believe in balanced growth -- say 5 percent year by year," she said. "If that was the increase over time I think this would be a well developed

market."

The company was formed in 2006 after Marine Harvest's fish- farming unit was merged with Norway's Pan Fish ASA and Fjord Seafood ASA, a transaction organized by the company's main owner, shipping billionaire John Fredriksen.

Michelet has an M.Sc.Pharmacy from University of Oslo and held positions including president of GE Healthcare AS (Norway) before joining Marine Harvest in March last year.

To contact the reporter on this story: Meera Bhatia in Oslo at mbhatia2@bloomberg.net.

Last Updated: August 20, 2009 02:33 EDT

20 Aug 2009: There's Abagold In Hermanus — Friday, 21 August 2009 9:49 AM

20 Aug 2009: There's Abagold In Hermanus

A NEW FORCE in the Cape fishing industry has quietly established itself in the holiday town of Hermanus in the form of perlemoen specialist, Abagold.

While not yet a fishing sector giant, Abagold – which only converted to a public company last year - has carved a lucrative niche in hatching, rearing, processing and exporting of local abalone (or perlemoen).

The abalone rearing industry has come to the fore of late with JSE-listed empowerment group Sekunjalo – which owns Premier Fishing – also making strong inroads into the sector. Prospects for 'abalone growers' have also been significantly enhanced by government's decision to preclude the harvesting of wild abalone.

Abagold, though, has a most interesting history.

The venture started way back in 1984 when a local veterinarian, Pierre Hugo, started researching the techniques and merits of breeding abalone in captivity.

Five years later Hugo was experimenting in the breeding of abalone on the Old Harbour at Hermanus and by 1991 he had set up a pilot hatchery.

By 1993 Hugo had received a permit to cultivate, harvest and sell abalone – which meant the fledgling operation could release 500 000 abalone larvae in the Old Harbour in Hermanus for re-seeding.

Naturally, word of Hugo's success got around the small town, and in 1995 the venture was incorporated into Hermanus Abalone.

Three years later the Sea View abalone farm with a 60 ton a year capacity was established in the New Harbour in Hermanus, which saw the cultivation of the first abalone pearls.

In 1999 the first 100kg of live farmed abalone was exported to the Far East, and three years later the fast growing business needed to raise R35 million through a public share issue and bank loans to fund the acquisition (and construction) of the Bergsig abalone farm in Hermanus.

Shortly after the first of 1 000 breeding tanks was placed in the Bergsig, Hermanus Abalone changed its name to Abagold (which admittedly sounds like an easier corporate brand to market internationally).

Three years ago Abagold made further inroads into the abalone sector by setting up the Abamax Abalone Farm in the New Harbour in Hermanus in conjunction with an empowerment partner. The company has since become the sole owner of the facility.

The last two years have seen matters develop a-pace at Abagold. The company created its own 'Pure Gold Abalone' brand and secured a lease for a 6.3 hectare site in Hermanus in partnership with the Overstrand Municipality and local communities for the development of a community seaweed project

There is not much financial information available on Abagold - presumably because the company is not keen for competitors to gain too much of an insight into the business.

What CBN could gauge, though, was that Abagold is a sizeable business with 230 employees. It is capable of producing more than 220 tonnes of dried abalone, which mostly makes its way to the Far East.

The interesting aspect of Abagold's business model is that the aquaculture cycle is a near five year process from larvae to plate. Abagold's product spends four years in the farm before being moved to land tanks, which requires the pumping of 6 million litres of seawater every hour.

From what CBN could garner, Abagold exported a not insubstantial 220 tons of abalone to the Far East in 2008, which generated turnover of almost R60 million.

The company is aiming to breach the 300 ton mark in the next two years – which, of course, may be challenging with the global economic slowdown putting a dampener on international spending on exotic seafoods like abalone and lobster.

It is interesting to note that in 2008 Premier Fishing signalled an intention (after a R40 million investment and the acquisition of Marine Growers in PE) to push production at its abalone aquaculture farm near Gansbaai to 300 tons a year. At that point Premier Fishing believed a 300 ton capacity could yield up to R17 million a year in profits.

For Abagold MD Christo du Plessis, though, the business aims to achieve sustainable wealth through balance. Writing on Abagold's website, he notes: "Responsible growth is vital, and we intend to do this by building on our established reputation and leveraging off our renowned brand, innovative production systems and well trained team."

He says over the past 13 years Abagold has built a brand that clients associate with quality and consistency.

"Through our experience gained over 20 years in serving the industry and market, we have obtained the knowledge and expertise to become a leader in integrated mariculture and we intend to keep this dominant position."

CBN, of course, wonders whether at this delicate point in the global (and local) economy a dominant position in the abalone sector can be put beyond doubt through further corporate action.

With a revitalised Sekunjalo pushing Premier Fishing for more growth it might perhaps not be completely a-miss to speculate that a merger between Abagold and Premier's abalone interests is something that could cross executives' minds.

http://www.cbn.co.za/dailynews/4002.html

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Thursday, 16 July 2009 12:00 AM

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