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28 May 2013

Dear Mr. Aarskog,

Disease Risks at Marine Harvest (& Cermaq)

Further to my letter of 4th June 2012 (read [online here](#)), could you please provide an update on disease risks at Marine Harvest including financial risks and liability associated with your [imminent takeover](#) of Cermaq?



Will Marine Harvest also be taking on Cermaq's liability for the spread of infectious diseases and viruses in Chile and Canada for example? Have you informed Marine Harvest shareholders, investors and the Norwegian Stock Exchange of the increased disease risks?



Read more via ["Marine Harmfest"](#), ["Dear Cermaq, Come Clean on Disease Risks!"](#) and ["Marine Harmfest Goes Mainstream"](#)

I reiterate questions from last year's [letter](#); namely:

- Why, for example, do you not state publicly that Marine Harvest Canada does NOT have problems associated with Infectious Salmon Anaemia (ISA), Heart & Skeletal Muscle Inflammation (HSMI), Pancreas Disease (PD) and Infectious Pancreatic Necrosis (IPN)?
- Surely Marine Harvest should disclose to shareholders, investors and the general public what diseases and viruses are affecting farmed salmon on sale for human consumption?
- What % of Marine Harvest farmed salmon sold for human consumption is disease-ridden? How many Marine Harvest farms are affected by infectious diseases? Is PD now a problem in Canada?
- Why does the Marine Harvest Board of Directors not disclose the risks from ISA, for example?



- Why has Marine Harvest not informed shareholders, investors and the Oslo Stock Exchange on the risks of ISA and HSMI in British Columbia? Why no public statements on ISA, HSMI, PD or IPN?
- What other 'exceptional items' are shareholders to expect in the future? For example, why has Marine Harvest not disclosed to shareholders, investors or the Oslo Stock Exchange the disease data released via the Canadian Government's inquiry into salmon (the '[Cohen Commission](#)')?
- Why does Marine Harvest continue to ignore the warnings from British Columbia?

A year on, the questions are piling up at Marine Harvest's door.



In terms of liability, what financial losses has Marine Harvest accounted for? For example, following the ISA outbreak in Chile there were losses of [\\$2 billion](#), a [threatened lawsuit](#) and a priceless loss of company reputation.



Read more via [“ISA: Diary of a Disease Disaster”](#) and [“Fish Farmageddon: The Infectious Salmon Aquacalypse”](#)

As I pointed out in a [letter to Cermaq](#) in March 2011 following their legal threat in the ‘Salmon Farming Kills’ lawsuit:

Cermaq would do well to read its own scientific papers and speak to its own researchers in regard to how salmon farming spreads diseases. A paper – “ISA in Chile: Evidence of Vertical Transmission” - with EWOS/Cermaq researcher Dr. Siri Vike as lead author shows the transfer of Infectious Salmon Anaemia (ISA) from Norway to Chile via infected eggs^{cv}. The 2009 paper – which lists Dr. Vike as working for EWOS (Cermaq) – suggested a “recent transmission from Norway to Chile”. One of the companies suspected of bringing the ISA virus to Chile is the Norwegian company AquaGen – and their shareholders include the Norwegian companies Marine Harvest and Cermaq^{cvi}. AquaGen’s board of directors includes an employee of Cermaq^{cvi}. Following the ISA outbreak in Chile, Aquagen set up the First Breeding and Genetics Centre (CRG) of roe for Chile and the world, CRG Comau. The new facilities, located in the municipality of Chaiten, Region of Los Lagos, required an investment of USD 12 million^{cvi}.

Norwegian-owned companies are clearly implicated in the spread of ISA in Chile – with media coverage on this issue in both Chile^{cix} and in Norway^{cx}. Fisheries Information Service, for example, reported in 2009^{cx} that:

“The Environmental Crimes Brigade (BRIDEMA) of the Police Investigations Unit is investigating the origin and spread of infectious salmon anaemia (ISA) virus at several farming centres in the country at the behest of the Public Ministry. So far, the authority visited the plants of Marine Harvest, Camanchaca and Invertec Pesquera Mar de Chiloe (Invermar), among others. The same questions are asked in every company: When and how did the disease spread? What measures were taken? What, in fact, failed?.....It is hoped the origin of the disease will be pinpointed and that those responsible for introducing it are sanctioned. Some versions indicate that the virus entered Chile through the import of contaminated Norwegian roe or from the mutation of the stock after years of presence in X Region waters”.

Views & News from Norway [reported](#) in August 2011:

Norwegian newspapers have been carrying stories this week about how researchers at the University of Bergen believe the dreaded ISA -virus (infectious salmon anemia) came to Chile via fertilized salmon eggs from Norway. The virus caused enormous losses for Chilean salmon producers, with around 80 percent of the business shut down at one point, according to newspaper *Dagens Næringsliv (DN)*.

Now the Chilean producers are recovering and one member of Chile’s congress, Marisol Turres, is seeking compensation from the Norwegian government and

Norwegian salmon industry players like Aqua Gen of Trondheim. It was identified in a recent New York Times story as being the largest Norwegian exporter of salmon eggs to Chile in 2006, the year before the illness broke out.

Aqua Gen boss Odd Magne Rødseth, however, claims Chilean politicians are exploiting the opportunity to blame Norway for their virus problems. He said his firm “along with other players n the Chilean business” are relying on conclusions from the Chilean fisheries authorities and international organizations, which claim the ISA-virus can’t be traced back to any particular land or source of infection.



Salmon producers are expected to face challenging times ahead as prices fall and production in Chile resumes. PHOTO: Marine Harvest

Read more via “[Good Times Over for Salmon Farmers](#)”

In July 2011 the New York Times [reported](#):

The New York Times Americas

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION

AFRICA AMERICAS ASIA PACIFIC EUROPE MIDDLE EAST

A N D
Reading on All Devices

Norwegians Concede a Role in Chilean Salmon Virus
By ALEXEI BARRIONUEVO
Published: July 27, 2011

SÃO PAULO, Brazil — A virus that has killed millions of salmon in Chile and ravaged the fish farming industry there was probably brought over from Norway, a major salmon producer has acknowledged.



Victor Ruiz Caballero/Reuters
Workers pack salmon pieces at a plant in Puerto Chacabuco in Chile in 2009.

Cermaq, a state-controlled Norwegian aquaculture company that has become one of the principal exporters of salmon from Chile, has endorsed a scientific study concluding that salmon eggs shipped from Norway to Chile are the “likely reason” for the outbreak of the virus in 2007, according to Lise Bergan, a company spokeswoman.

But, she argued, “the report didn’t pinpoint any company”

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The New York Times article named Marine Harvest and Aquagen (read in full online via [“Norwegians Concede a Role in Chilean Salmon Virus”](#)). As a press release from GAAIA dated 1 July 2011 stated:

“In April, Cermaq gave a [presentation](#) acknowledging publicly that ISA was spread to Chile from Norway via [vertical transmission](#) of infected eggs. The Norwegian company involved was identified as [Aquagen](#) – a company [part-owned by Cermaq](#) and Marine Harvest.”

ISA in Chile – R&D projects
Vertical transmission – from brood fish to juveniles?

- Yes

Arch Viral
DOI 10.1007/978-3-008-0251-2
ORIGINAL ARTICLE

1
2 **ISA virus in Chile: evidence of vertical transmission**
3 Siri Vike · Stian Nylund · Are Nylund

4 Received: 4 July 2008 / Accepted: 29 October 2008
5 © Springer-Verlag 2008

6 **Abstract** Infectious salmon anaemia virus (ISAV), genus
7 *Isavirus* (family *Orthomyxoviridae*), is present in all large
8 salmon (*Salmo salar*)-producing countries around the
9 North Atlantic. The target species for this virus are mem-
10 bers of the genus *Salmo*, but the virus may also replicate in
11 other salmonids introduced to the North Atlantic (*Oncorhynchus* spp.). Existing ISA virus isolates can be divided
12 into two major genotypes, based on phylogenetic analysis
of the NS gene. The NA genotype can be subdivided into
two sub-genotypes based on analysis of the NS gene.

the possibility of natural reservoirs in this country, and the
close relationship between contemporary ISA virus strains
from farmed Atlantic salmon in Chile and Norway suggest
a recent transmission from Norway to Chile. Norway
export large amounts of Atlantic salmon embryos every
year to Chile; hence, the best explanation for the Norwe-
gian ISA virus in Chile is transmission via these embryos,
i.e. vertical or transgenerational transmission. This sup-
ports other studies showing that the ISA virus can be
transmitted vertically.

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cermaq

Read more via [“Salmon Farming Kills' lawsuit - "Cermaq in the Dock in Canada"”](#)

In January 2013, both [Marine Harvest](#) and [Cermaq](#) off-loaded their shareholding in Aquagen. However, prior to January 2013 did Marine Harvest use infected eggs in your Canadian operations? Are you worried that a similar situation to Chile is now developing in British Columbia? Now that ISA (and other infectious diseases) have been reported in British Columbia, Canada, what financial fallout will Marine Harvest suffer?



Chile's losses of \$2 billion could be a drop in the ocean compared to the financial consequences in British Columbia where wild salmon populations play such a significant part in the economy and culture.

Marine Harvest's management, board of directors, shareholders and investors should watch the documentary '[Salmon Confidential](#)' and then head directly to your insurance provider and increase your company liability insurance?



As Alexandra Morton [asked](#) in 2011: "Are the Norwegian fish farmers adequately insured to cover damages if we find out BC is an ISAV suspect area, no one told us and it spreads because you did nothing?"

Alexandra Morton [posted](#) on Facebook a few days ago (26 May 2013):



Alexandra Morton

Dear Norwegian Government:

<http://www.youtube.com/watch?v=EuoxLiUBdvg&feature=youtu.be>

This salmon feedlot near Kingcome Inlet is full of salmon from the Atlantic and they look sick. Even feedlot salmon don't general fin on the surface. If they are infectious, they have exposed every young salmon swimming out Wakeman and Kingcome and many of the young salmon swimming out of Knight Inlet and Tribune Channel. We have had it with suffering the degradation of our home, the wild salmon and our coastal economy so you can make money off sick looking fish. These do not appear wholesome to eat, and they do not belong where the people of this region depend on wild salmon. I would like some of these fish to test.



Farm salmon swimming abnormally

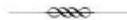
www.youtube.com

Farm salmon finning at the surface in the Sir Edmund salmon feedlot owned by Mainstream, which is largely owned by the Norwegian

Watch video [online here](#)

Alexandra Morton also [wrote](#) to you before last year's AGM warning Marine Harvest shareholders of the [disease risks](#) in British Columbia.

Dear Mr. Alf-Helge Aarskog, CEO Marine Harvest:



June 3, 2012



Marine Harvest

Dear Mr. Alf-Helge Aarskog, CEO Marine Harvest:

corporate@marineharvest.com

There are serious viral issues with salmon farming in British Columbia that are being suppressed here in Canada that your shareholders should be informed about.

We have found Norwegian *Piscine Reovirus* associated with HSMI, as well as, the Infectious Salmon Anemia virus mutations HPR5 and HPR7b in fresh Atlantic salmon purchased in British Columbia, Canada markets. Both of the HPR5 and HPR7b mutations of ISA virus have caused large mortalities in salmon. While the BC Salmon Farmers Association and Federal

Government Canada deny these viruses are present in BC - it is hard to explain their presence in fresh Atlantic salmon in the markets - someone's farms must be infected with ISAv and PRv. Are you informed about the potential risk of an ISAv outbreak in BC and the strong negative reaction that the people of British Columbia will have to this?

Alexandra Morton [wrote](#) once again to Marine Harvest in March 2013:

Dear Marine Harvest - Don't

March 5, 2013

Dear Marine Harvest

I have been informed that a large percentage of juvenile Atlantic salmon in your Dalrymple Hatchery, Sayward BC, are infected with the piscine reovirus. I understand that you intend to move these fish into ocean pens in the very near future where the virus will be loosed into the Pacific.



Read more via [“Dear Marine Harvest – Don’t”](#)

Sadly, Marine Harvest ignored the concerns and a [lawsuit](#) was filed earlier this month.

Marine Harvest facing lawsuit over alleged infected salmon



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Thursday, May 9, 2013 - 10:42 AM

By Nanette van Doorn
Campbell River

Alexandra Morton, an independent biologist, has launched a lawsuit against Marine Harvest and the Federal Minister of Fisheries. Together with Ecojustice Morton, a wild salmon activist, is alleging Marine Harvest put salmon smolts into their open pen fish farm in March that were infected with piscine reovirus or PRV.

“There is a sense of urgency about this because this virus is known to spread and once we let it spread too far there will be no recalling it, there will be no turning it off,” said Morton. “It will be in the ocean and spreading to salmon and possible other species as well like herring.”

Morton said that PRV causes a disease that affects the muscles and the heart of salmon to a degree that they become unable to swim upriver and spawn. She says Marine Harvest knowingly took Atlantic salmon smolts infected with PRV from the hatchery and put them in the ocean in violation of the Fisheries Act.

As the [lawsuit](#) filed by [Alexandra Morton](#) stated in the Notice of Application (read in full via [NOTICE OF APPLICATION FILED.pdf](#)).

Any License condition in an aquaculture License that purports to authorize the transfer of fish having diseases or disease agents that may be harmful to the protection and conservation of fish is *ultra vires*.

The License Condition unlawfully allows the transfer of fish having diseases or disease agents that may be harmful to the protection and conservation of fish, contrary to section 56 of the *Fishery (General) Regulations*.

The License Condition constitutes an unlawful exception to the legal prohibition, in section 56 of the *Fishery (General) Regulations*, against the transfer of fish having disease or disease agents that may be harmful to the protection and conservation of fish.

These transferred Atlantic salmon smolts were infected with a disease agent, known as Piscine Reovirus (“PRV”) that may be harmful to the protection and conservation of fish.

PRV may harm fish, and in particular PRV may be harmful to wild salmon.

PRV is waterborne and contagious and can be transmitted from farmed salmon to wild fish.

PRV is associated with, and thought, to cause Heart and Skeletal Muscle Inflammation (“HSMI”) in salmon.

The physical effects of HSMI on salmon reduce salmon’s ability to survive and to complete their life-cycle and particularly their ability to swim upstream.

In view of the financial risks – especially in relation to the financial fallout and exposure to the [lawsuit](#) – why has Marine Harvest not [notified](#) the Oslo Stock Exchange in line with the disclosure requirements pursuant to section 5-12 of the Norwegian Securities Trading Act?



The New York Times also [reported](#) earlier this month on the “uncomfortable truth” of ISA in British Columbia:

SEATTLE — Like mariners scanning the horizon from the crow’s nest, scientists have for years been on the lookout in the Pacific Northwest for signs that a dreaded salmon-killing disease, scourge to farmed salmon in other parts of the world, has arrived here, threatening some of the world’s richest wild salmon habitats. Most say there is no evidence.

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Elaine Thompson/Associated Press

A technician prepared salmon samples to be tested for viruses at a laboratory in Olympia, Wash.

Enlarge This Image



But for years, a biologist in Canada named Alexandra Morton — regarded by some as a visionary Cassandra, by others as a misguided prophet of doom — has said definitively and unquestionably that they are wrong. Wild Pacific salmon, she has said, are testing positive for a European strain of the virus that causes the disease, infectious salmon anemia, or I.S.A.

The virus, which has struck farmed salmon populations in Chile, among other places, is not harmful to humans who eat the fish, but could potentially pose grave threats in a part of the world where salmon plays a huge role in local economies and ecosystems. If the virus, which is in the influenza family, mutates into a virulent Pacific strain in the crowded fish farms in British Columbia, where wild and farmed salmon are sometimes in proximity, fish populations on both sides of the farm/wild divide, Ms. Morton believes, could be devastated.

“It’s an uncomfortable truth,” she said.

Please also read a [letter](#) sent to Cermaq’s CEO earlier this month outlining further disease risks (read more via “[Dear Cermaq, Come Clean on Disease Risks!](#)”). The [letter](#) included:

“In advance of [Tuesday’s AGM](#), could you please provide details of Cermaq’s current disease risks? Why have you not notified [shareholders](#) including the Norwegian Government and Marine Harvest, financial investors, the news media and the Oslo Stock Exchange of the disease risks in British Columbia in particular? Surely the [disclosure of disease risks and notification of information](#) is subject of the disclosure requirements pursuant to section 5-12 of the Norwegian Securities Trading Act?”



“Why is Cermaq still ignoring disease risks associated with Infectious Salmon Anaemia and Piscine Reovirus/HSMI in particular?” continues the letter. “Whether the hostile takeover is successful or not, how does Cermaq view the financial risks of the [recently filed lawsuit](#) in British Columbia against Marine Harvest by [Alexandra Morton](#)?”



The screenshot shows the Ecojustice website header with the tagline "Canada's leading charity using the law to protect the environment." Below the header is a navigation menu with categories: Clean Water, Natural Spaces, Healthy Communities, Climate Protection, and Public. The breadcrumb trail reads: "You are here: Home » Blog » Viruses on fish farms + wild salmon = bad news". The article title is "Viruses on fish farms + wild salmon = bad news", posted by Kimberly Shearon on May 16, 2013. The author is Margot Venton, a staff lawyer. The article text states that Pacific salmon are an iconic West Coast species and that a recent conclusion by Justice Bruce Cohen indicates that disease poses a serious risk to wild salmon. It also mentions that Ecojustice, on behalf of biologist Alexandra Morton, has launched a lawsuit seeking a Federal Court order declaring the transfer of farmed Atlantic salmon carrying disease into waters shared with wild fish as unlawful.



“In view of the financial risks – especially in relation to the financial fallout and exposure to the [lawsuit in British Columbia](#) – why has Cermaq not [notified](#) the Oslo Stock Exchange in line with the disclosure requirements pursuant to section 5-12 of the Norwegian Securities Trading Act?”



"This just says you won't reveal anything about our nondisclosure agreement."

The [letter](#) concluded:

“Shareholders deserve to hear the truth, the whole truth and nothing but the truth about Cermaq’s salmon farming operations. It may make for uncomfortable reading for investors but as Cermaq’s CEO surely it is incumbent of you to be wholly transparent. Please therefore adopt a policy of full disclosure in relation to Cermaq’s disease risks and financial exposure to ongoing lawsuits. If nothing else, Marine Harvest ought to be aware of the significant risks before their hostile takeover gets even nastier for the environment and for everyone concerned.”



In Scotland, Marine Harvest is also experiencing huge problems with [Amoebic Gill Disease](#).



Scotland

Adverse effects from the presence of gill amoeba

- Reduced seawater growth and increased mortality
- Accelerated harvest has reversed planned volume increase for 2013

Costs relating to the gill amoeba likely to be high going forward

- Technical team cannot rule out recurring issues

Outlook

Cost increases expected going forward

- Feed costs rising
- Gill amoeba in Scotland

Read more via “[Gill Diseases: Scottish Salmon's Dirty Big Secret](#)” (November 2012)

Infectious diseases have also led to an increase in toxic chemicals. For more details watch “[Marine Harvest’s Bad Case of Chemical Use](#)”



Finally, do you support Cermaq’s [ongoing lawsuit](#) Vs GAAIA? The Norwegian broadcaster TV2 [reported](#) last year that the salmon farming industry in Norway had discussed the lawsuit and how to respond. Did Marine Harvest participate in those discussions and endorse the legal action taken? Will you take over the lawsuit following your takeover of Cermaq?



Are you aware that if Cermaq wins a [permanent injunction](#) against GAAIA that the statement “salmon farming spreads disease” – a statement backed up by Cermaq’s own scientific research and a statement admitted by Marine Harvest in various publications – will be prohibited? Indeed, Marine Harvest would be forced to remove all references to “salmon

farming spreads disease” from your annual reports, quarterly reports and web-site. Marine Harvest’s [2012 Annual Report](#), for example, details infectious diseases killing farmed salmon:



CAUSES OF MORTALITY

INFECTIOUS

	FISH NUMBERS	BIOMASS
1	Amoebic gill disease (AGD)	Amoebic gill disease (AGD)
2	Heart and skeletal muscle inflammation (HSMI)	Heart and skeletal muscle inflammation (HSMI)
3	Infectious pancreatic necrosis (IPN)	Cardiomyopathy syndrome (CMS)
4	Pancreas disease (PD)	Pancreas disease (PD)

Marine Harvest’s [2013 Salmon Farming Industry Handbook](#) also details infectious diseases affecting farmed salmon – with Pancreas Disease identified as a “contagious virus”:



8.2 Most important health risks

Infectious Pancreatic Necrosis (IPN)

IPN is caused by the IPN virus and is widely reported. It is a contagious virus that can cause mortality if not managed appropriately. IPN can affect Atlantic salmon fry, smolts and larger fish post-transfer. Available vaccines can protect against IPN and good results are obtained by optimizing husbandry and biosecurity measures. In addition, promising results are now seen by selection of families less susceptible for the disease (QTL-based selection).

Pancreas Disease (PD)

PD is caused by the Salmonid Alphavirus and is present in Europe. It is a contagious virus that can cause reduced appetite, muscle and pancreas lesions, lethargy, and if not appropriately managed, elevated mortality. PD only affects Atlantic salmon in seawater and control is achieved mainly by management and mitigation practices. Combined with these measures, vaccination is used where PD represents a risk and which provides an additional level of protection.

Heart and Skeletal Muscle Inflammation (HSMI)

HSMI is currently reported in Norway and Scotland. Symptoms of HSMI are reduced appetite, abnormal behaviour and in most cases low mortality. HSMI generally affects fish the first year in seawater and control is achieved mainly by good husbandry and management practices.

Infectious Salmon Anaemia (ISA)

ISA is caused by the ISA virus and is widely reported. It is a contagious disease that causes lethargy, anaemia and may lead to significant mortality in seawater, if not appropriately managed. Control of an ISA outbreak is achieved through culling / harvesting of affected fish in addition to other biosecurity and mitigation measures. Vaccines are available and in use where ISA is regarded to represent a significant risk.

Salmonid Rickettsial Septicaemia (SRS)

SRS is caused by an intracellular bacterium. It occurs mainly in Chile, but is also observed, to a much lesser extent, in Norway and the UK. It causes lethargy, less appetite and can result in elevated mortality. SRS is controlled by vaccination, but medicinal intervention (licensed antibiotics) may also be required.

Gill Disease (GD)

GD is a general term used to describe gill conditions occurring in seawater. The changes may be caused by different infectious agents; amoeba, virus or bacteria, as well as environmental factors including algae or jelly-fish blooms. Little is known about the cause of many of the gill conditions and to what extent infectious or environmental factors are primary or secondary causes of disease.

Sea lice

Sea lice, of which there are several species, are natural occurring seawater parasites. They can infect the salmon skin and if not controlled, they can cause lesions, secondary infection and mortality. Sea lice are controlled through good husbandry and management practices and the use of licensed medicines and cleaner fish (different wrasse species, eating parasites off the salmon skin)

Marine Harvest's [2012 Annual Report](#) also detailed how mortality rates were increasing in Scotland, Ireland, Canada and Chile due to the spread of sea lice infestation and infectious diseases:

In 2012, the average monthly mortality rates in the group were 0.76% and 0.72% in terms of biomass and fish numbers respectively (see table). There is a wide spread in the reported mortality rates between business units due to different local disease challenges. Marine Harvest Ireland was the most challenged unit in 2012 due to Amoebic Gill Disease (AGD).

////////////////////////////////////

MORTALITY

	BIOMASS LOST		NUMBER OF FISH LOST	
	2011	2012	2011	2012
Norway	0.79%	0.70%	1.06%	0.76%
Scotland	0.45%	0.77%	0.94%	0.92%
Ireland	1.47%	3.59%	3.10%	N/A
Faroes	0.24%	0.31%	0.34%	0.40%
Canada	0.52%	0.76%	0.59%	0.88%
Chile	0.19%	0.31%	0.14%	0.25%
MH Group	0.67%	0.76%	0.95%	0.72%

The table shows average monthly mortality based on lost biomass and numbers in % of the opening balance. The average monthly losses in numbers have been reduced from 0.95% in 2011 to 0.72% in 2012, while the average monthly losses based on biomass have increased from 0.67% to 0.76% because the fish that died had higher average weight.

In fact, sea lice infestation rates are spreading in Chile, Scotland and Ireland:



**AVERAGE MONTHLY % OF SITES ABOVE
NATIONAL TRIGGER LEVELS PER BU PER YEAR**

BU/YEAR	2010	2011	2012
Norway	15.2	7.5	8.3
Scotland	9.8	11.7	15.1
Ireland	6.2	13	19.9
Faroes	6.2	15.8	7.6
Canada	5.5	1.5	5.5
Chile	4.8	14.1	23.7
MHG average	8.2	11.9	12.2

Just last week, the Chilean Government [reported](#) how Cermaq's sea lice problems were increasing to such an extent that 13 of their sites were infected "with a high spread of caligus (sea lice)".

Sea lice presence in salmon farms increases



CHILE

Thursday, May 23, 2013, 22:30 (GMT + 9)

The National Fisheries and Aquaculture Service (Sernapesca) has confirmed the existence of 79 Atlantic salmon (*Salmo salar*) and rainbow trout (*Oncorhynchus mykiss*) farming centres with a high spread of caligus (sea lice).

Under the Specific Health Programme of Caligidosis Surveillance and Control (PSVEC Caligidosis), these centres had an average weekly load that is higher than nine caligus parasites per specimen.

Out of that total, 13 centres were farming rainbow trout and the remaining ones were farming Atlantic salmon.

Out of all the centres reported to have high spread of sea lice (CAD), seven were undergoing a harvest process while the rest were going through the fattening period.

Among the companies that had a higher amount of CAD are Mainstream, with 13 of its centres that have been reported; Multiexport, with 13 centres; Australis Mar, with nine centres; and AquaChile, with nine centres, among others.

The report issued by Sernapesca reads that 72 centres were in the fattening process and only 7 were undergoing the harvesting phase:

- AquaChile: Betecoi, Chidhuapi, El Pino, Fresia Weste, James 1 and Lagreze Norte;
- Australis Mar: Humos 3.

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

If Cermaq wins the lawsuit then Marine Harvest itself – whether they merge with Cermaq or not - would be in danger of breaching the permanent injunction (read more via "[Norway Tightens Noose on Free Speech!](#)" and "[Censorship Like A Cancer Grows](#)").



It is hard to escape the conclusion that Marine Harvest stinks.



Surely it's time to ring in the changes and come clean on the extent of disease risks?



Yours sincerely,

Don Staniford
[Global Alliance Against Industrial Aquaculture](#)

Cc:

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