

Date: 10th May 2011

Subject: Non-Disclosure of Disease Information by Cermaq

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Further to Cermaq's [2010 Annual Report](#) and my [letter to Geir Isaksen et al dated 23rd March regarding a lawsuit vs Cermaq's Canadian operator Mainstream Canada](#), could the Cermaq Board of Directors please address the issue of non-disclosure of disease information relating to Cermaq's operations in Chile and Canada in particular?

This letter outlines three issues relating to disease:

#1) The spread of ISA to Chile via infected eggs from Cermaq-owned AquaGen

#2) ISA risks in British Columbia

#3) Salmon Leukemia risks in British Columbia

In all cases, Cermaq's Board of Directors and Cermaq's Corporate Management Team have exhibited a woeful lack of transparency to both shareholders and investors and may be in breach of the disclosure and reporting requirements to the Oslo stock exchange.

Cermaq are guilty of covering up scientific evidence – backed by Norway's National Committee for the Investigation of Ethics in Research (Nasjonalt utvalg for gransking av redelighet i forskning) - proving a direct link between infected eggs from a Cermaq-owned company (AquaGen) in Norway and the spread of Infectious Salmon Anaemia (ISA) to Chile. Furthermore, Cermaq is now covering up disease risks in British Columbia which could lead to significant financial losses for shareholders, investors and the company itself as well as untold ecological losses, impacts on wild Pacific salmon and communities which depend upon healthy wild salmon populations.

Other companies such as Grieg Seafood and Marine Harvest, for example, have been transparent in reporting sea lice and kudoa for example. In 2009, for example, Grieg Seafood, reported “extraordinary high mortalities” in Shetland, Scotland, due to “a severe salmon lice incident” to the [Oslo Børs stock exchange](#). And [Marine Harvest's 2010 Annual Report](#) detailed losses due to the parasite kudoa in Canada.

Why has Cermaq not shown similar transparency with regard to the spread of ISA to Chile and the risks of ISA and Salmon Leukemia in British Columbia?

Please pass this letter onto all members of [Cermaq's Board of Directors](#) (I have attempted to find their email addresses but not all of them are accurate/direct).

Please pass this letter also onto Cermaq employee [Carl Seip Hanevold who is on the board of AquaGen](#) and [EWOS/Cermaq employee Dr. Siri Vike](#).

Please see below for more details and specific questions in relation to the three issues set out above.

Please also note the [shareholder resolution](#) to be discussed at the Cermaq AGM tomorrow (Wednesday 11th May) which calls for a CEO succession plan. Last year the Pure Salmon Campaign called for the [resignation of Cermaq CEO Geir Isaksen](#).

The continuing lack of transparency relating to disease disclosure serves only to advance the case for a change of leadership at the helm of Cermaq. And Cermaq is now supporting a lawsuit (via subsidiary Mainstream Canada) which argues in the '[Notice of Civil Claim](#)' against the fact that “[Salmon Farming Spreads Diseases](#)”.

Further information relating to the three issues highlighted in this letter would be much appreciated.

Yours sincerely,

Don Staniford

Global Co-ordinator for the Global Alliance Against Industrial Aquaculture

Disease Disclosure: Why is there no mention of.....?

#1) The spread of ISA to Chile via infected eggs from Cermaq-owned AquaGen

#2) ISA risks in British Columbia

#3) Salmon Leukemia risks in British Columbia

What [‘The Board’s Annual Report for 2010’](#) does not mention is interesting and raises various questions.

Cermaq openly concedes the risks posed by “fish health” and “fish health problems”. Yet there is no mention of the spread of ISA to Chile via infected eggs from Cermaq-owned AquaGen; ISA risks in British Columbia and Salmon Leukemia risks in British Columbia.

[‘The Board’s Annual Report for 2010’](#) – which you all signed off on (p64) - states that:

“The results we achieve provide an increased understanding of fish health and the prevention of fish diseases.”

And that:

“Mainstream demonstrates good operational performance in all regions, and has also had a year with fewer fish health problems than previous years” (p56).

Your report - [‘The Board’s Annual Report for 2010’](#) - acknowledged that:

“However, over time the group must be able to sustain considerable cyclic fluctuations in profitability due to price volatility, as well as lower profits due to production-related challenges, such as substantial outbreaks of disease.” (p59)

And [‘The Board’s Annual Report for 2010’](#) stated that:

“At the beginning of 2010 the greatest risk exposure was related to developments in the fish health situation in Chile, where a deterioration of the biological situation could have considerable impact on results for both Mainstream and EWOS.... In the boards opinion the operational risk associated with Chile has been reduced. However the ISA (infectious salmon anaemia) related risk will continue to exist in Chile in the coming years.” (p62)

And that:

“Fish health in Cermaq’s farming operations has been good, with satisfactory biological results. There has been less disease than in previous years and only slight need for treatment

with antibiotics. Fish health in the company's activities in Chile is now at the same level as in our other operations." (p62)

'[The Board's Annual Report for 2010](#)' mentions 'ethics' (p61) and the "negative publicity because EWOS, via its sub-contractor GC Rieber Oils AS, purchased fish oil from West Sahara" (p61).

However, why does your report not mention the [spread of ISA to Chile via infected eggs](#) from the Cermaq-owned company AquaGen? The decision by Norway's National Committee for the Investigation of Ethics in Research (Nasjonalt utvalg for gransking av redelighet i forskning) to exonerate EWOS/Cermaq employee Dr. Siri Vike and Professor Are Nylund of the University of Bergen was made on [6th April 2011](#) – prior to the publication of the Cermaq 2010 Annual Report on [15th April 2011](#).

The case, [as reported by the University of Bergen](#), includes reference to Cermaq's CEO Geir Isaksen and EWOS/Cermaq employee Dr. Siri Vike:

"Dette kan dokumenteres fordi det finnes en oppsummering skrevet av Cermaqs konsernsjef Geir Isaksen 17. oktober 2008. Her er ingen slik kritikk referert, og hadde det vært tema ville det selvsagt vært et viktig oppfølgingspunkt, sier Vike."

You can download the decision by Norway's National Committee for the Investigation of Ethics in Research (Nasjonalt utvalg for gransking av redelighet i forskning) via: http://www.kyst.no/index.php?page_id=95&article_id=91275

There is more background information in my [letter to Geir Isaksen dated 23rd March](#). And further scientific papers on this issue will be published [according to EWOS/Cermaq researcher Dr. Siri Vike](#).

Nor is the scientific paper – "[ISA virus in Chile: evidence of vertical transmission](#)" (published in November 2008) - which prompted the complaint from AquaGen mentioned in [Cermaq's 2008 Annual Report](#) or [Cermaq's 2009 Annual Report](#).

Based upon the scientific evidence it seems clear that the spread of ISA from Norway to Chile was a self-inflicted wound – via the Cermaq-owned company AquaGen. And it would seem clear that Cermaq knew about the spread of ISA to Chile as early as 2008 – yet have failed to report this critical issue to shareholders, investors or the Oslo stock exchange.

Geir Isaksen, Cermaq's CEO, reported in your 2008 Annual Report under "[A Painful Year](#)" that:

"Cermaq has been through a painful year. The main reason is that a virus disease, infectious salmon anaemia (ISA), which causes immense mortality and reduced growth for Atlantic salmon, has spread to all the fish farming regions in Chile. In addition to the fact that we have lost a lot of fish, we have also had to cull large quantities of fish before it was ready for harvesting. For our Chilean fish farming company, Mainstream Chile, this has brought about an operating loss of NOK 332 million.... Knowledge will help us preventing ISA and other diseases to spread. I have no illusions about the fish farming industry ever to become totally sheltered from disease in the fish" (p12).

Surely shareholders ought to be made aware of the knowledge that ISA was spread to Chile from infected eggs from a company owned by Cermaq?

Cermaq's [2008 Annual Report](#) also addressed "Risk Factors" and stated:

"One important risk and uncertainty factor in the fish farming business is fish health. This is clearly demonstrated by the severe impact caused in Chile by the infectious salmon anaemia (ISA) virus, and in Norway, where several farms have suffered losses related to the pancreas disease (PD). Infectious diseases are complex risks as they can spread, both vertically from eggs and smolt and horizontally from other locations, or via external producers when in physical contact with the farming sites" (p18).

If Cermaq knew back in 2008/2009 that ISA was spread vertically via infected eggs from AquaGen (and certainly knew of the scientific work of EWOS/Cermaq employee Dr. Siri Vike) then why was this information not conveyed to shareholders and investors nor reported to the Oslo stock exchange?

Cermaq's [2010 Annual Report](#) (and [previous annual reports](#)) cites AquaGen only in relation to Cermaq's shareholding in the company:

"AquaGen AS is a breeding company that develops, produces and delivers genetic material to the global salmon farming industry. Cermaq holds 11 percent of the shares in AquaGen" (p11)

Surely Cermaq has a duty to its shareholders, investors and employees (including Dr. Siri Vike) to divulge more specific information in relation to this case (especially in view of the threats posed by lawsuits in Chile – as detailed in my [letter to Geir Isaksen et al dated 23rd March 2011](#)).

Moreover, in relation to the risks of ISA and Salmon Leukemia in British Columbia what steps has Cermaq taken to disclose disease information and fish health risks to shareholders, investors and the Oslo stock exchange?

'[The Board's Annual Report for 2010](#)' does reference wild salmon and British Columbia:

"...it is the board's opinion that the effect of the company's farming operations on wild salmon has been limited in 2010. Wild salmon has great commercial value in British Columbia, and the return of Sockeye Pacific salmon was at an all-time high in 2010. A year earlier, a special commission had been established to investigate the low return the previous year. This fluctuation illustrates that the variation in wild salmon stocks in British Columbia can be more complicated and have more complex causes than earlier supposed." (p62)

However, the report does not provide shareholders and investors with more details on the "special commission" – nor even name the "[Cohen Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River](#)".

In view of the potentially catastrophic consequences for wild Pacific salmon from the spread of infectious diseases such as ISA and [Salmon Leukemia](#) why has Cermaq, and the Board of Directors in particular, chose to ignore the Cohen Commission in your report?

The [Scientific American](#) reported just last week, for example, that:

“Since the mid-1990s, something began killing large numbers of returning sockeye on the Fraser—anywhere from 40 to 95 percent of fish in some years—before they could spawn. Now a study bolsters the hypothesis that a mysterious pathogen working in concert with other anthropogenic stressors may be the culprit.....Months after the study came out mid-January in *Science* the research continues to make waves on Canada's west coast as journalists and environmentalists speculate as to whether the genomic signature identified in the study might be evidence of an epidemic of salmon leukemia, known to have plagued salmon fish farms along British Columbia's coast”.

Cermaq’s Canadian subsidiary Mainstream Canada has been very active on this issue and, [in response to the above article](#), pointed out that between 2003 and 2009 there have been three cases of Salmon Leukemia (also known as marine anemia or plasmacytoid leukemia).

Indeed, there has been much discussion and debate on the issue of Salmon Leukemia and the link with salmon farming. The [Times Colonist](#) reported in January 2011 that:

“It is the virus situation that is the nightmare scenario: farmed Chinook salmon likely passed a salmon leukemia retrovirus to the farmed Atlantics and they infected the returning sockeye adults.”

Alexandra Morton (who you will remember attended the [Cermaq AGM in 2009](#) and gave a [video presentation warning of disease issues back in 2007](#)) also [reported in January 2011](#):

“In November, the Globe and Mail published a leaked memo to the Minister of Fisheries that suggested disease as a leading possibility for the 2009 Fraser sockeye decline, but DFO did not make this information public. Morton’s attempt to cross-examine on that document at the Cohen Commission was refused at the time. “We hope that Commissioner Cohen will now look into what else DFO knows about this situation and the possibility that DFO has been protecting the salmon farming industry, at the expense of the \$1 billion Fraser sockeye fishery,” says Morton.

“I will also raise questions at the Cohen Commission whether DFO has fully supported Dr. Miller in her pursuit of this critical work and whether Miller has been given full access to the farm salmon populations for testing?” Last month Morton’s lawyers asked for the Cohen Commission to hold a special portion of the hearing to look into whether this potential virus is impacting wild sockeye and whether this is a mutated form of salmon leukemia”.

[The Epoch Times](#) also reported in January 2011:

“The evolution of new viral strains is often associated with abnormal concentrations of animals or birds, like avian flu. We need to know, if this is indeed a virus, if it is related to the farm salmon disease, salmon leukemia, and if there is something we can do about it,” Morton said.

Morton cites DFO studies from the 1990s that documented salmon leukemia in Chinook salmon farms and found it could infect Atlantic and sockeye salmon.

“Did this virus start in the wild, become amplified in the farm Chinook, and mutate to infect

the millions of nearby introduced Atlantic salmon altering it to become unidentifiable?" Morton wonders."

In [March 2011](#), in an open letter to the Canadian Fisheries Minister Gail Shea, Alexandra Morton wrote:

"Known as Salmon Leukemia, Marine Anemia by fish farmers, this virus destroys fish immune systems and became epidemic in the salmon feedlots at the same time the Fraser sockeye began declining in the early 1990s. When your scientist found evidence it is killing and weakening our fish you failed to tell the public. In addition to this, you refuse to acknowledge the evidence that the lethal Atlantic salmon virus, ISAV, can be imported into BC in fish farm eggs. If you weaken our fish with Salmon Leukemia and then throw a new virus at them, we will have nothing left. Please note the recent scientific papers quoted below:

"Aquaculture can offer close to ideal environments for the spread of infectious diseases."

"The threat posed by viral pathogens is highlighted by the recent devastating effect of the infectious salmon anaemic virus (ISAV)"

"Sequence analyses of genes from Chilean ISAV isolates obtained in 2007 and 2008 suggest that these ISAV strains have a European origin and therefore must have been introduced to Chile via embryos (fertile eggs)".

"Potential immunosuppressive conditions need to be avoided"

Are your ministry and 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".

[The Globe & Mail](#) reported in March 2011 that:

"Of all the theories heard so far by the Cohen Commission, the most intriguing involves new research by a molecular scientist who is pointing to the possibility of an epidemic of salmon leukemia. Kristi Miller hasn't been called to testify on her research yet, but her work is already causing a buzz at the inquiry, in part because it seems an effort has been made to keep it under wraps. Dr. Miller has not been available for media interviews, even though she recently published a paper in the prestigious journal Science. Usually, Fisheries and Oceans Canada promotes interviews when one of their researchers gains an international profile for groundbreaking work. But when Dr. Miller's paper came out earlier this year, all requests for interviews were denied. She will be called before the Cohen Commission, probably toward the end of the summer, when the hearings begin digging into the possible role of disease in the decline of sockeye salmon in the Fraser River".

[The Tyee](#) also reported in March 2011:

"Kristina Miller along with Dr. Hicks recently published a study in Science Journal that has "fairly significant findings with regards to early entry spawning", according to lawyer Greg McDade during yesterdays cross examination. The retrovirus that has been hypothesized to be a hybrid of known strains of salmon leukemia or lymphoma, also what salmon farmers

refer to as “Salmon AIDS”, has been suggested to be one of the single most important factors in the loss of salmon populations.”.

The economic and ecological impact of Salmon Leukemia could be catastrophic. As the [Pacific Salmon Foundation](#) explained in April 2011:

“Devastating Pacific salmon losses over the last decade have provoked wide-spread public concern, and more recently the Cohen Commission to investigate possible causes. As a "keystone species" in British Columbia, Pacific salmon support more than 130 other species as a vital nutrient source. To the people of British Columbia, they are an economic driver creating more than two billion dollars in recreational fishing spin-offs and serving as cultural cornerstones to the First Nations and many fishing communities that dot the West Coast. Their disappearance would cause a negative cascading effect for our environment, economy and culture. Now a new theory has emerged hypothesizing that wild salmon are suffering from a viral infection that could be linked to genes associated with leukemia and lymphoma”

[Scientific American](#) also reported last week that:

“The possibility of a disease affecting these fish has been on the table long before this paper came out and the usual suspect has been fish farms," says John Reynolds, a salmon conservation scientist at Simon Fraser University in Burnaby, British Columbia. "My impression is that the hard evidence isn't there yet to either implicate fish farms or to let them off the hook.”

In view of the significant economic losses, potential lawsuits and ecological implications of Salmon Leukemia I would have thought that this was an issue worthy of consideration by Cermaq.

Cermaq’s Board of Directors did make an encouraging statement on disease issues in last year’s [Board’s Annual Report for 2009](#):

“Through modern methods based on RNA recognition from viruses and bacteria, we can now establish whether carriers of the most significant fish diseases are found in our fish groups and take the necessary precautionary measures to prevent infection and the outbreak of serious fish diseases” (p51)

However, you reported that there were no “significant disease problems” in Canada:

“Mainstream Scotland experienced an increase of Pancreas Disease (PD) in the beginning of the year, but otherwise Mainstream has not, with the exception of Chile, had significant disease problems in 2009.” (p53)

Do you not consider that Salmon Leukemia or ISA in British Columbia is a “significant disease problem”?

Cermaq’s [2010 Annual Report](#) acknowledges that:

“Fish health is one of the biggest risk factor within fish farming, and covers both infectious diseases and production related damages. Over the last years has Mainstream dedicated research programs on preventive fish health work, and several new routines have been

implemented. Mainstream have also strengthened the work with central coordination of best practice within preventive fish health work and procedures. Much of this work is based on knowledge acquired during the ISA epidemic in Chile.” (p26)

And:

“Experience from the ISA crisis in Chile have made us work more systematically with **preventive health measures** in all three countries. Screening programs for monitoring relevant pathogens, vaccines, functional feeds, stress mapping, less use of antibiotic, improving water quality and more knowledge are key elements in our approach to ensure better fish health and welfare. This has given us more tools to better forecast disease events and knowledge to lower the risk for disease outbreaks.” (p27)

Yet if Cermaq is now better at forecasting disease events why does ‘[The Board’s Annual Report for 2010](#)’ not address the issue of Salmon Leukemia and ISA in British Columbia?

Cermaq’s [2010 Annual Report](#) does provide details of ISA, Pancreas Disease and other ‘inflammatory type’ diseases in Norway:

“The number of ‘inflammatory type’ diseases (PD, CMS, HSMI, ISA) in Norway has increased from less than 100 affected sites in 2001 to over 500 affected sites in 2009.” (p13)

Yet there is no mention of ‘inflammatory type’ diseases in British Columbia. Why the non-disclosure in Canada especially since “[reams of data](#)” detailing 10 years of salmon farming disease information (including many farms operated by Cermaq) was delivered to the Cohen Commission in January 2011 (following a ruling [by Justice Cohen in December 2010 ordering the release](#))?

And why is there no reference to the disease data already published by the Ministry of Agriculture via the [BC Salmon Farmers Fish Health Database](#)? You will note here that [Zone 2-3](#) is the Clayoquot Sound UNESCO Biosphere Reserve area where Cermaq is the sole operator farming Atlantic salmon. Further details on disease issues at Cermaq’s farms in British Columbia were outlined in my [letter to Geir Isaksen et al dated 23rd March regarding a lawsuit vs Cermaq’s Canadian operator Mainstream Canada](#).

In relation to ISA, in particular, I refer you to my recent letters (8th May and 23rd March – enclosed in full below) to the Canadian Fisheries Minister Gail Shea which included:

“Thirty-five suspected cases of ISA in BC?

The Globe & Mail reported last week (4th May) in an article – “[Cohen called on to release information on salmon virus](#)” - that:

“Mr. McDade wrote that in combing through that vast volume of material, Ms. Morton came across “indications” a disease known as infectious salmon anemia virus, or ISA, may have been detected in fish samples tested by provincial government labs.

The suggestion is the symptoms of the disease were detected, but not the disease itself, which has never been reported on the West Coast. ISA can be lethal to Atlantic salmon, but Pacific

salmon have proved immune to it in tests. The concern is that if the disease were present, it could change and begin to kill Pacific stocks.....

“There are approximately 35 indications of the existence of ISA identified in these records to date,” he wrote. “Of great biological concern is that some of these diagnoses are in Pacific salmon, suggesting potential spread of a novel and virulent virus into native populations may be underway into the North Pacific.”

Is it correct that “there are approximately 35 indications of the existence of ISA” in BC? If so, when were these 35 suspected cases reported, where are they located and which companies are responsible? When were you notified about the existence of ISA in BC and what actions did you take?”

Why has the Cermaq Board of Directors not made shareholders and investors aware of the risks posed by ISA in British Columbia? If there are 35 suspected cases of ISA in British Columbia then Cermaq, [as BC's second largest operator with 24% of sites](#), must surely be implicated. How many Cermaq-owned sites in British Columbia have been affected by ISA and why has Cermaq failed to disclose disease risks shareholders, investors and the Oslo stock exchange?

Cermaq's [2010 Annual Report](#) does mention a class action lawsuit on sea lice in British Columbia:

“A class action in British Columbia regarding the rights of First Nations related to fish farming in their territories is still in process. The industry is not a part in the court case whereas the outcome might affect our activity.” (p26)

But why does Cermaq not mention the ongoing [lawsuit involving Mainstream Canada](#) (which is scheduled for trial in the Supreme Court of British Columbia in January 2012 and has significant financial implications for Cermaq) and the Mainstream Canada's '[Notice of Civil Claim](#)' which argues against the fact that “Salmon Farming Spreads Diseases”?

Further information on many of the issues raised above is detailed in my [letter to Geir Isaksen et al dated 23rd March 2011](#).

Finally, in view of the inherent disease risks in British Columbia, it is worrying that Cermaq is now expanding with an application for a [new site at Plover Point in the Clayoquot Sound UNESCO Biosphere Reserve](#). Lest Cermaq's Board of Directors forget that Cermaq has had a litany of problems in the [Clayoquot Sound UNESCO Biosphere Reserve](#) – which have been reported in the Norwegian newspaper [Dagbladet](#) and will surely be the subject of the [“Salmon Farming Kills” lawsuit](#). Cermaq seems to be ignoring its own advice in Cermaq's [2010 Annual Report](#); namely:

“However, rapid growth increases the risk of new outbreaks of disease.” (p64)