

Press Update – 11 September 2012

News updates are now archived and available [online in full here!](#)

“Dirty Secrets”/“FishyLeaks: Toxic Toilets”/“Disease Risk”

Please find enclosed a press update (web-links are embedded in the headlines and the articles in full are enclosed below) including:

“[Scottish Salmon’s Toxic Toilets Named & Shamed!](#)” (FishyLeaks, 11 September)

“[Scottish fish farmers use record amounts of parasite pesticides: Farmers have been forced to increase amount of chemicals as the sea lice parasite becomes resistant to treatment](#)” (The Guardian, 11 September)

“[Chemicals to control salmon parasites: As salmon farming in Scotland increases so does the use of chemicals to kill parasites](#)” (The Guardian, 11 September)

“[Costing the Earth: Chinese salmon](#)” (BBC Radio, 11 September)

“[How can Scotland cope with China’s salmon demands?](#)” (BBC News, 10 September)

“[Scottish salmon farms producing £½bn of fish every year: Last year 158,018 tonnes of farmed salmon was produced in Scotland](#)” (The Scotsman, 10 September)

“[Films focus on fish farm foes](#)” (Chilliwack Progress, 10 September)

“[Fish fed poultry oil](#)” (Marlborough Express, 10 September)

“[Salmon farm impact study ‘inaccurate’](#)” (Nelson Mail, 10 September)

“[Dirty secrets down on the salmon farm](#)” (Sunday Times, 9 September)

“[Salmon farms ‘pollute’ coast](#)”/“[Salmon farms turn sea bed into graveyard](#)” (Sunday Times, 9 September)

“[The dirty 360](#)” (The Sunday Herald, 9 September)

“[Seabed salmon farm pollution: S&TA provide figures to negate challenge from SSPO](#)” (For Argyll, 7 September)

“[As Scottish salmon farms improve, critics look for new openings](#)” (Intrafish, 7 September)

“[Disease risk explored during salmon hearing](#)” (Marlborough Express, 7 September)

“[Fisheries ministers ponder considering national aquaculture regulation](#)” (The Canadian Press/The Province, 7 September)

“[CFIA doing monitoring, testing of farmed salmon](#)” (Nanaimo Daily News, 6 September)

[“Contradiction in King Salmon statements”](#) (Marlborough Express, 5 September)

[“Scottish salmon producers fight back”](#) (For Argyll, 5 September)

[“FoI discloses lead Salmon and Trout Association to identify worrying seabed pollution at Scottish salmon farms”](#) (For Argyll, 5 September)

[““Sustainable” salmon farms under fire”](#) (Fish News EU, 5 September)

[“Seabed pollution at almost two thirds of Scottish salmon farms is either ‘unsatisfactory’ or ‘borderline’, analysis of FOI information reveals”](#) (Salmon & Trout Association, 5 September)

[“N.S. aquaculture group heads to Ireland on organic fish farming trip”](#) (The Chronicle Herald, 5 September)

[“Salmon farmers are passionate about protecting the environment”](#) (The Vancouver Sun, 5 September)

[“Local company's product served at US Open”](#) (Campbell River Mirror, 4 September)

[“Sea lice still costing salmon industry a fortune”](#) (Seafood Source, 4 September)

[“Fishermen oppose Jordan Bay fish farm proposal”](#) (The Chronicle Herald, 4 September)

[“Record Algae Blooms Linked to Fish Farms”](#) (The Fish Site, 4 September)

[“The future of fishing”](#) (Irish Times, 4 September)

[“Peninsula bids to halt fish farms’ expansion”](#) (Irish Examiner, 3 September)

[“Farms will disrupt sounds character”](#) (Marlborough Express, 3 September)

[“Salmon farming research backed”](#) (Nelson Mail, 3 September)

[“Statutory Consultation Underway for Galway Bay Salmon Farm Licence”](#) (Afloat, 2 September)

[“Fisheries Minister misleading on aquaculture”](#) (The Telegram, 31 August)

[“Farmed salmon are a threat to B.C. wild salmon”](#) (The Vancouver Sun, 31 August)

[“Current salmon testing puts credibility at risk”](#) (Nanaimo Daily News, 31 August)

[“Reading the fish”](#) (Alexandra Morton, 31 August)

[“Alexandra Morton's Fight for BC's Iconic Salmon”](#) (The Tyee, 31 August)

[“More data needed’ in salmon farm bid”](#) (Marlborough Express, 31 August)

[“Sounds oxygen levels concern lecturer”](#) (Marlborough Express, 30 August)

[“Algal blooms cited”](#) (Marlborough Express, 30 August)

[“Impact of extra farms minor, says scientist”](#) (Marlborough Express, 30 August)

[“Aquaculture Tries to Fill World’s Insatiable Appetite for Seafood”](#) (Worldwatch Institute, 16 August)

Including from Professor Phil Thomas of the Scottish Salmon Producers Organisation in [The Guardian](#) (10 September):

"Are sea lice a problem? Yes. Because every salmon farmer in the world, indeed any farmer of any species, is always sensitive about the need to maintain low levels of parasites on their stock. It's exactly the same issue as ticks on cattle and sheep. The buildup of resistance as a general issue is a problem for all interests."

And Dr Richard Dixon of WWF Scotland:

"News that the use of some pesticides has jumped in recent years is a worry and urgently needs addressing. It is doubly concerning as the industry is still in the process of expanding. Expansion of the industry should be predicated on the reduction in chemicals released."

Read more via [“Chemicals to Control Salmon Parasites”](#) and read the data in full online now via [‘FishyLeaks’](#)

From Scott Landsburgh of the [Scottish Salmon Producers’ Organisation](#) (5 September):

“Numerous time-consuming Freedom of Information (FoI) requests and then taking raw data out of context to suit lobbying purposes is an abuse of tax payers’ money – this must stop!!”

From Charles Clover writing in [The Sunday Times](#) (9 September):

“Scottish salmon farmers should be told that in five years’ time sea cages will be banned....the time has come for the supermarkets and their customers to insist that Scottish salmon farmers clean up their disgusting mess.”

From the [Salmon & Trout Association Scotland](#) (5 September):

“This report is another damning indictment of the salmon farming industry,” said Hughie Campbell-Adamson, Chairman of S&TA Scotland. “It is symptomatic of a systemic failure to control seabed pollution and throws into doubt whether the current expansion plans of the Scottish salmon farming industry in open-cage systems can ever be environmentally sustainable.”

Guy Linley-Adams, Solicitor to the S&TA Aquaculture Campaign and author of the analysis, says: “These findings are yet further evidence that open-cage salmon farming as practised in Scotland is inherently unsustainable....Under the current regulatory regime, it appears that

the salmon farming industry is able to breach pollution guidelines with relative impunity. This cannot be allowed to continue.”

From Roc Sandford, owner of the island of Gometra in the Inner Hebrides, on [BBC News](#) (10 September):

"Thousands of people come from all over the world to look at this landscape. This is the one place in the world you shouldn't put a factory fish farm."

Listen to BBC's 'Costing the Earth' on 'Chinese Salmon' – [online here](#)

From fishermen in Eastern Canada in a press release and [The Chronicle Herald](#) (4 September):

“They don't care about our livelihoods or they would not risk putting us out of work. The only guarantee is that the present marine environment will be negatively changed forever as open net pen feedlots are allowed to expand,” notes John Acker, lobster fisherman from Jordan Bay.



“Our government promotes open pen aquaculture and fishermen pay the price. I look at things from the bottom up. The first fact about open net pen fish farming is the dumping of tonnes of fecal matter that destroys fish habitat. What other industry would be given permission to dispose of raw sewage in our coastal waters?” asks Francis Stewart, fishermen from Jordan Bay.

From Mary Ellen Walling of the BC Salmon Farmers Association in [The Vancouver Sun](#) (5 September):

“When salmon farmers in British Columbia say they produce a safe, healthy product in a sustainable way, they're stating facts supported by years of research.....On top of the good work they're doing on the farms, our members are working hard to educate people about aquaculture, and correct misinformed statements like those published in The Sun this week. Among the many sources, are bcsalmonfacts.ca. Salmon farmers are residents of coastal B.C. who share the passion for protecting our natural environment.”



From Ed Brown, menu consultant to the US Open, in the [Campbell River Mirror](#) (4 September):

“Skuna Bay provides consistently high standards for great salmon and after visiting the farms personally and observing how their salmon are craft raised with every detail considered before being sent to us in New York, I can see why they are able to achieve such consistently great quality,” Brown said. “We are proud to be serving Skuna Bay Salmon at this year’s US Open.”

From Bill Taylor of the Atlantic Salmon Federation in [The Telegram](#) (31 August):

“Mr. King failed to mention that ISA outbreaks have cost Canadian taxpayers close to \$100 million in compensation provided to fish farms in Eastern Canada since the first epidemic in 1996 in New Brunswick..... No true cost of growing salmon in open net pens exists because hidden costs are not taken into account, including sea lice treatment and research by industry and governments that cost millions annually, disease compensations in the millions, current subsidies by government and taxpayers and the loss in income from other industries, such as tourism, and commercial and recreational fisheries that are negatively impacted by open net pen aquaculture.”

Support Alexandra Morton’s testing for salmon diseases – please [donate online here now!](#)

Salmon Disease Testing Fund

Raised: \$28,235.00 Goal: \$100,000.00

Created by
Alexandra Morton
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Last fall we began testing salmon in BC for European viruses spreading worldwide in Atlantic salmon farms, which import millions of eggs into places like BC an... more

<http://www.gofundme.com/SalmonDiseaseTesti>

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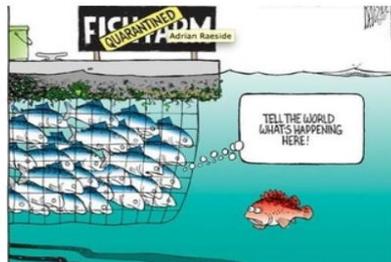
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Signatures
12,522 out of 15,000

Petitioning
 CEO - Safeway (+ 2 others)

Created By
 Alexandra Morton
 Sointula, Canada

Best fishes,

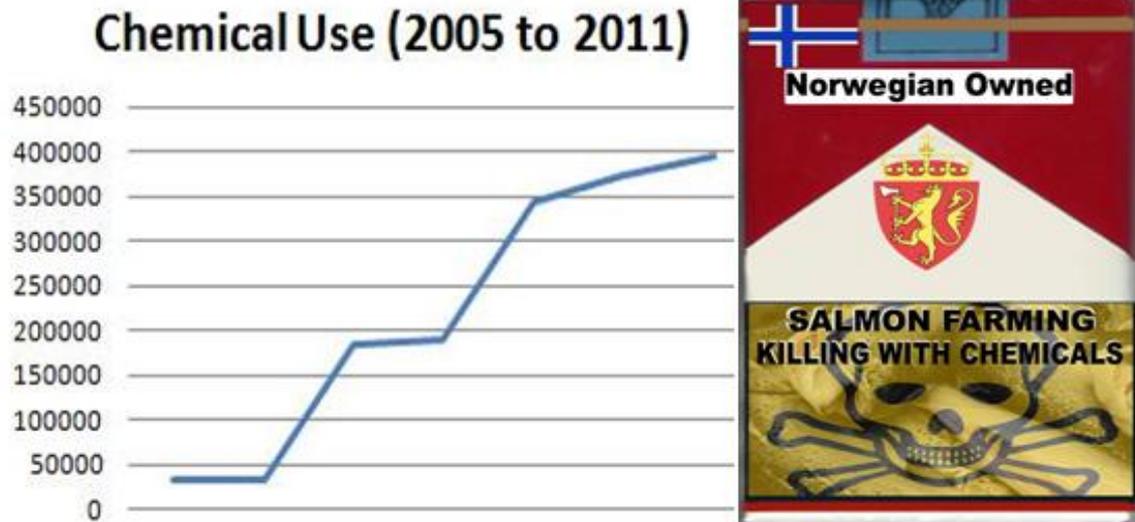
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Remember - News updates are now archived and available in full – [online here!](#)

FishyLeaks, 11 September 2012

Scottish Salmon's Toxic Toilets Named & Shamed! - Twelve-Fold Increase in Chemical Use Since 2005

The use of toxic chemicals on Scottish salmon farms more than doubled between 2008 and 2011 and has increased twelve-fold since 2005. Read more via [FishyLeaks](#) and exclusively in today's Guardian newspaper via "[Scottish fish farmers use record amounts of parasite pesticides](#)" and "[Chemicals to control salmon parasites](#)".



According to data obtained via Freedom of Information from the Scottish Environment Protection Agency (SEPA), the ‘Filthy Five’ users of toxic chemicals were [Marine Harvest](#), Scottish Salmon Company (Lighthouse Caledonia), Scottish Sea Farms (Leroy/SalMar), Hjaltland Seafarms (Grieg) and [Loch Duart](#). The ‘Dirty Dozen’ sites using Azamethiphos, Cypermethrin, Deltamethrin, Emamectin benzoate and Teflubenzuron are named for the first time – including Special Areas of Conservation such as Loch Roag and Loch Laxford.

Chemical resistance means that a cocktail of five toxic pesticides are now used to kill Scotland’s plague of ‘[super-lice](#)’. Almost twice every day for the last four years (2008-2011), chemicals known to be lethal to lobsters and other shellfish were used on salmon farms in Scotland. Chemicals were used 2,756 times including Emamectin (1,028); Deltamethrin (914); Azamethiphos (487); Cypermethrin (315) and Teflubenzuron (12).

Read in full via ‘[Dossier of Chemical Use on Scottish Salmon Farms 2008-2011](#)’

The news comes in the wake of a Veterinary Residues Committee [report](#) detailing contamination in Scottish farmed salmon with the toxic pesticide Emamectin. In June, officers from Marine Scotland were charged with carrying out a follow up investigation. Data obtained via FOI [reveals](#) that since 2005 Marine Harvest, Scottish Sea Farms, Skelda Salmon and the Scottish Salmon Company have all been involved in contamination cases.

“The Scottish Government has sanctioned the use of Scotland’s coastal waters as a dumping ground for the chemical wastes of Norwegian and Polish corporations,” said Don Staniford of the Global Alliance Against Industrial Aquaculture (GAAIA). “Scotland’s toxic salmon farms are now infested with resistant ‘super-lice’ and contaminated with chemicals. The drugs don’t work – just say no to chemically embalmed Scottish farmed salmon.”



GAAIA today filed a [complaint](#) with the OSPAR Commission regarding the UK's breach of [PARCOM Recommendation 94/6](#) on Best Environmental Practice for the Reduction of Inputs of Potentially Toxic Chemicals from Aquaculture Use. GAAIA has also written to the [European Commission](#) regarding a potential breach of the [EU Habitats Directive](#).

The alarming rise in chemical use from 2008 to 2011 is five times more than the percentage increase in salmon farming production: whilst [Scottish farmed salmon production](#) steadily increased by 22% between 2008 and 2011 (up from 128,606 tonnes to 157,385 tonnes) the use of toxic chemicals increased by a shocking 110% - more than doubling from 188076g to 394631g). Using data back to 2005 the increase in the use of chemicals is a staggering 1094% - a twelve-fold increase up from 33060g in 2005 to 394631g in 2011. That's over fifty times the percentage increase in Scottish farmed salmon production (which rose 21%)!

GAAIA also wrote to the [First Minister of Scotland](#), [SEPA](#) and [Scottish Natural Heritage](#) asking how much further the Scottish Government intends increasing the use of toxic chemicals. In May 2012, following a £80 investment by Norwegian-owned Marine Harvest, the First Minister of Scotland [reiterated](#) his pledge to increase Scottish salmon farming production by 50% on 2009 levels to 210,000 tonnes by 2020.

“The alarming increase in the use of toxic chemicals on Scottish salmon farms is surely a breach of the UK's international commitments under the OSPAR Commission and the EU Habitats Directive,” continued Staniford. “The First Minister of Scotland has lost his mind in a chemical fog. How else can you explain his warped view that the ‘[essence of Scotland](#)’ is allowing foreign multinationals like Norwegian-owned Marine Harvest to use Scottish waters as a toxic toilet?”

New scientific research presented at the Sea Lice 2012 conference in Norway in May revealed that Teflubenzuron kills lobsters (read in full [online here](#)). Scientific research has also shown that [Azamethiphos](#) and [Cypermethrin](#) are lethal to lobsters and [Emamectin benzoate](#) can induce premature moulting in lobsters. [Deltamethrin](#) is also lethal to both shrimp and lobsters.

So widespread is the use of toxic chemicals that [SEPA](#) have detected contamination of under salmon farms in lochs across Scotland. The Scottish Natural Heritage has also [expressed concern](#) that chemical use could spread to the nearby [Firth of Lorn Special Area of Conservation](#), protected under EU law because of the rarity of its reefs.



In July, [FishyLeaks](#) published data on [infectious diseases and mortalities](#). The Scottish Government have now delayed the launch of 'Scotland's Aquaculture Database' which was scheduled for launch on 30 July.

However, thanks to [FishyLeaks](#) the public can now see for the first time which companies are discharging potent poisons into Scotland's pristine waters.

Read all the data online via '[FishyLeaks](#)' including: '[Dossier of Chemical Use on Scottish Salmon Farms 2008-2011](#)'



For more information read the '[Media Backgrounder: Chemical Culture in Scotland](#)'

<http://www.gaaia.org/fishyleaks>

The Guardian, 11 September 2012

Scottish fish farmers use record amounts of parasite pesticides

Farmers have been forced to increase amount of chemicals as the sea lice parasite becomes resistant to treatment

[Severin Carrell](#), [Scotland](#) correspondent



Scottish salmon ready to be transferred to a new cage at a fish farm on Orkney in Scotland.
Photograph: Doug Houghton/Alamy

Scottish fish farmers have been forced to use record amounts of highly toxic pesticides to combat underwater parasites that prey on salmon, raising fears of significant damage to the marine environment.

Data released by the [Scottish Environment Protection Agency](#) (Sepa) shows a 110% increase in the use of chemicals to treat sea lice in the past four years, mainly because the parasite is becoming resistant to treatment. During that same period, however, salmon production has increased only by 22%, to 158,000 tonnes.

The agency said it was not carrying out any studies into the impact of the chemicals on the marine environment, but added that there was no evidence of any cumulative damage from increasing use of pesticides.

Richard Dixon, director of the environment group WWF [Scotland](#) and a Sepa board member, said the figures were worrying. The Scottish government and salmon industry plan to [increase output by 50% by 2020](#), suggesting that there will be even greater use of toxic treatments against sea lice in future.

Urging the industry to cut chemical use, Dixon said: "News that the use of some pesticides has jumped in recent years is a worry and urgently needs addressing. It is doubly concerning as the industry is still in the process of expanding. Expansion of the industry should be predicated on the reduction in chemicals released."

Don Staniford, a campaigner who was given the data by Sepa, and who has previously been deported from Canada for his activities against its fish [farming](#) industry, said he believed the increase breached the UK's legal duties to protect the marine environment. "Instead of reducing chemical use, Sepa has shamefully sanctioned a doubling in the use of toxic chemicals which are known to kill lobsters and other shellfish," he said.

The chemicals used are highly toxic to many marine species, especially crustaceans. The treatments use organophosphates, which attack the nervous system of sea lice and [teflubenzuron](#), which interferes with their ability to grow shells. Marine scientists have shown the chemical is extremely threatening to young lobsters, crabs and prawns, Staniford said.

The salmon industry is expected to keep use of the toxins under strict control but has seen significant problems in Norway with the emergence of "superlice" resistant to normal treatments.

Ecologists and campaigners argue there is compelling evidence that some fish farms are failing to use chemicals safely. Sepa disclosed last week that while a large majority were satisfactory or excellent, [54 fish farms were rated as "poor" in 2011](#) – mostly for having too high chemical residues on the seabed, an increase on the [51 found to be poor or very poor in 2010](#).

The [Salmon and Trout Association](#), which represents anglers, said last week that its analysis of Sepa's seabed monitoring reports identified 137 cases since 2009 where salmon farms' environmental impact had been "unsatisfactory", with 64 rated as "borderline". It said other freedom of information requests had uncovered numerous cases where chemicals were used illegally.

The Scottish Salmon Producers Organisation (SSPO), the main industry body, has [disclosed consistent reports of significant sea lice problems](#). In west Shetland last February, sea lice infestation rates are 584% higher than the recommended levels and on average more than 250% higher.

While areas such as Orkney reported very low rates, in east Shetland, they were 222% above the threshold last spring. In northern Scotland, they were 150% higher both in mid-winter and in spring. In south western, Scotland, they were on average 79% higher last spring. Professor Phil Thomas, chairman of the SSPO, said the industry's critics were guilty of making simplistic "tabloid statements".

He added: "Are sea lice a problem? Yes. Because every salmon farmer in the world, indeed any farmer of any species, is always sensitive about the need to maintain low levels of parasites on their stock. It's exactly the same issue as ticks on cattle and sheep. The buildup of resistance as a general issue is a problem for all interests."

Sepa confirmed it had done no studies into the overall impact of these chemicals on the wider marine environment, or investigated whether the sharp increase was justified.

It insisted, however, that any adverse impacts from these chemicals were very localised and were very quickly dispersed in the sea. Sepa said it had a "robust" system of monitoring and enforcement to ensure breaches were minimal.

"Assessing medicinal use on a site specific basis is the most effective way of Sepa carrying out its duties, ensuring environmental protection and managing any impacts of the fish farming industry on Scotland's coastal ecosystems. In this way, we can ensure that each licensed fish farm is operating within the limits prescribed," a spokesman said.

"The effects of sea louse medicine residues on the environment are localised and relatively short lived."

<http://www.guardian.co.uk/environment/2012/sep/10/scottish-fish-farmers-parasite-pesticide?intcmp=239>

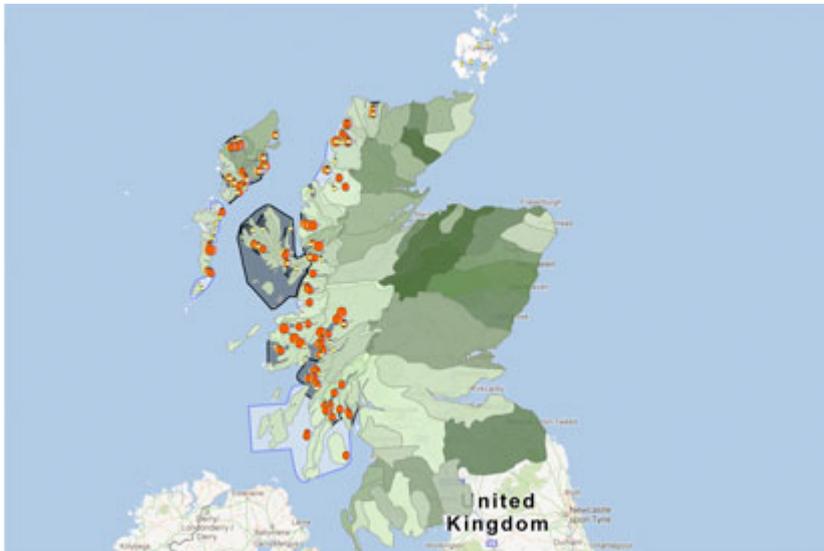
The Guardian, 11 September 2012

Chemicals to control salmon parasites

As salmon farming in Scotland increases so does the use of chemicals to kill parasites. Here's the data that explains the chemicals used and how the levels have dramatically changed

- [Get the data](#)

[Severin Carrell](#), [Scotland](#) correspondent



Scottish fish farms, click [here](#) to see the full interactive map.

For the first time, a full list of the chemicals used to control the sea lice parasite on every Scottish salmon farm has been disclosed after a [freedom of information](#) request to the [Scottish Environment Protection Agency](#) (SEPA).

The data, requested by the campaigner Don Staniford who runs the website [Fishyleaks](#), shows that overall use of pesticides by the salmon [farming](#) industry has increased each year, from 188kg in 2008 to 395kg last year – an increase of some 110%.

In that same period, salmon production increased more modestly, by some 22% to a forecast total of 157,000 tonnes last year.

Farmed salmon is now [Scotland](#)'s largest single food export, outstripping beef, dairy produce and wild-caught fish. Worth nearly £540m in 2010 to the producers, its global retail value is estimated to be well over £1bn, according to [these figures](#) from the [SSPO](#). The industry and

Scottish government hope to increase production by 50% by 2020, particularly to target new markets such as China.

Showing farm-by-farm usage, these figures are the voluntarily declared figures from each company: Sepa takes them on trust. These chemicals, designed to attack the parasite's nervous systems or shells, were used 2,756 times.

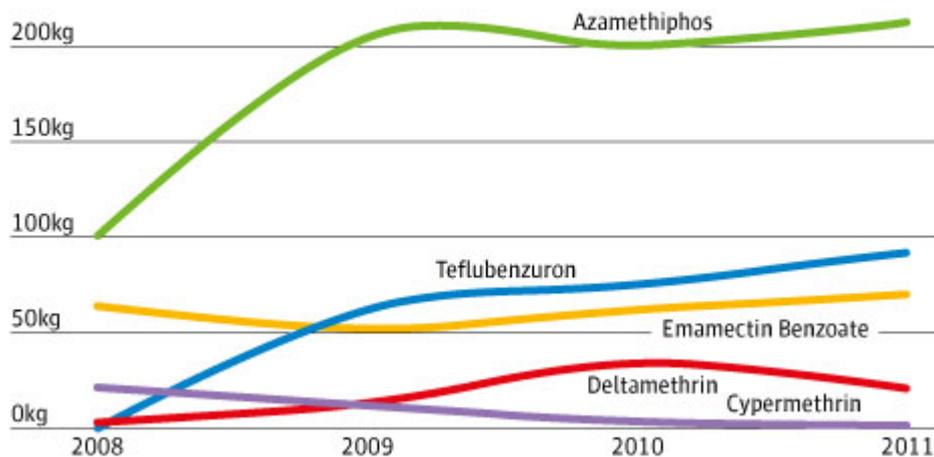
Environmentalists say the chief reason for the increased usage is to counter the increasing levels of resistance shown to these pesticides by sea lice, which damage farmed fish and threaten wild salmon and trout near fish-farms sites.

There is no direct link between salmon mortalities and chemical usage, but they do illustrate the sometimes high levels of wastage and loss. Deaths can occur for a variety of reasons, including natural events such as storms, to seal predation or very frequently diseases, and at various stages in a salmon's life.

Usage of some, such as the agricultural pesticide cypermethrin – best known as a sheep dip - has fallen sharply from 21kg in 2008 to under 1kg in 2011. Year on year use of the four other compounds, deltamethrin, emamectin, teflubenzuron and azamethiphos, has fluctuated but has increased over time.

The organophosphate azamethiphos, described by Sepa as needing "great care" by fish farms "because even a slight overdose can harm or kill the fish", now accounts for more than half of all chemical use by weight. Its usage had more than doubled since 2008, from 100kg to 211kg last year.

Use of chemicals in Scottish fish farms



The Scottish Salmon Producers Organisation and Sepa insist there is no evidence or grounds to believe that this sharp rise in pesticide use poses a danger to the overall marine environment.

"The effects of sea louse medicine residues on the environment are localised and relatively short lived. Therefore, assessing their impacts is best done on a local, site specific basis.

"Attempting to draw conclusions from national statistics on use and release of such substances, is a less efficient way of monitoring, because the gross mass of active ingredients discharged will vary considerably. This is due to a wide range of circumstances, not least because the dose rate, when using different medicines, is highly variable."

However, Sepa admitted it did no national or regional monitoring of overall chemicals use, to establish whether there could be cumulative effects or wider policy issues. It said:

There has been no need for Sepa to make such a comparison. Sepa has collected data on chemical use and has undertaken work to evaluate its potential impact. Sepa collects the data on a site by site basis and assesses use at that level. Sepa does not collect or aggregate this into national data for use by the agency because doing so provides no useful outputs. However, reporting of this nature is required to fulfill legislative requirements of Scotland, the UK and EU.

However, environmentalists and critics of fish farmers say there is substantial evidence that numerous fish farms are failing to use these chemicals safely and that Sepa's failure to do any Scotland-wide studies or to monitor overall pesticide use greatly weakens their position.

Guy Linley-Adams, a solicitor working for the Salmon & Trout Association aquaculture campaign, believes the underlying problem the industry faces with sea lice infestation is the critical issue.

It is a potential doomsday scenario for wild salmon is on the west coast. Scotland has an expanding salmon farming industry, increasingly unable to control the sea lice problem on its farmed fish, relying on chemical treatments to which the lice are becoming tolerant or resistant and still largely in denial about the impact they are having on the wider marine environment.

Here's a map of all the fish farms which have had negative environmental assessments from Sepa, and those with a clean bill of health between 2006 and 2009.

[View Larger Map](#) Scottish fish farms with negative environmental assessments from Sepa, and those with a clean bill of health, click [here](#) to see the full interactive map made by And that the map is made by [GreenInfo](#).

Here's all the data from Don Staniford's freedom for information request, please check out the data, use it in your interactives and let us know in the comments below.

Data summary

Chemicals to control salmon parasites on Scottish fish farms

	Click heading to sort				
Year	Teflubenzuron Use (g)	Deltamethrin use (g)	Emamectin Benzoate (g)	Azamethiphos (g)	Cypermethrin (g)

Chemicals to control salmon parasites on Scottish fish farms

Year	Click heading to sort				
	Teflubenzuron Use (g)	Deltamethrin use (g)	Emamectin Benzoate (g)	Azamethiphos (g)	Cypermethrin (g)
Source: Scottish Environment Protection Agency					
2008	0	2,894.61	63,540.96	100,187.06	21,453.44
2009	61,759.00	13,364.79	51,990.12	203,934.60	11,799.34
2010	75,000.00	34,061.67	61,715.48	199,745.00	3,235.70
2011	91,555.10	20,862.82	69,566.04	211,667.50	979.08
Grand Total	228,314.10	71,183.88	246,812.60	715,534.16	37,467.56

Download the data

- [DATA: download the full spreadsheet](#)

<http://www.guardian.co.uk/news/datablog/2012/sep/10/scottish-fishing-farm-chemicals?intcmp=239>

BBC Radio, 11 September 2012

Costing the Earth

Chinese Salmon



DURATION: 30 MINUTES

In January 2011 the Scottish Government announced a new deal to supply salmon to China. If only 1% of its population chose to eat it the Scottish industry would have to double in size. The target set is to increase the industry by 50% by 2020. Conor Woodman asks how this can be done without impacting on the environment.

Concerns about salmon farming include the spread of sea lice, escapes, pollution of the sea bed and the impact of sea lice treatment on other sea life. However it provides jobs, both directly and indirectly in areas often with fragile economies.

Conor visits the island of Gometra in the Inner Hebrides where a new fish farm is being proposed. The island has no electricity and only a few residents but is classed as 'very sensitive countryside'. It's one of five new fish farm sites applied for in the last 6 months. While the residents there oppose it, many of those on neighbouring Ulva hope the jobs will attract more young people to the area.

Conor speaks to the Scottish Association for Marine Science about how the industry is dealing with the environmental issues. He also hears about the new direction some of the industry is taking - Marine Harvest is moving out of traditional lochs to open sea locations which it hopes will lead to larger farms being permitted. He also speaks to a British company looking to introduce 'closed containment' systems by farming tanks of fish on land. Is this the new image of salmon farming in the UK and will these methods face issues of their own?

Producer: Anne-Marie Bullock

Conor meets people on Gometra who are fighting the proposed salmon farm



-
- **Other residents support the fish farm and welcome the jobs it would bring.**



Listen online via: <http://www.bbc.co.uk/programmes/b01mk3k1>

BBC News, 10 September 2012

How can Scotland cope with China's salmon demands?

By Anne-Marie Bullock Producer, Costing the Earth: Chinese Salmon



The Scottish salmon industry had a major boost after China opened its doors to imports - but with the government setting a target to increase salmon production by 50% by 2020, local communities are divided over whether the financial rewards outweigh environmental concerns.

"Thousands of people come from all over the world to look at this landscape. This is the one place in the world you shouldn't put a factory fish farm."

Roc Sandford is the owner of the island of Gometra in the Inner Hebrides - one of the wildest and undeveloped parts of the UK.

To get there you have to travel to Mull, summon the small foot ferry to the island of Ulva and then either commission a boat, walk a five mile causeway or, I suppose, swim. There are no roads so a quad bike is the fastest way to get across the island - and the handful of residents live without electricity.

Off the north shore of the island, in Loch Tuath, an application has been made for a fish farm by The Scottish Salmon Company.

"It's a wild landscape and to have something just popping out of the sea with the sheer size that it is, is just not we want here" says resident Rhoda Munro.



- [Costing the Earth: Scottish Salmon](#) presented by Conor Woodman, is broadcast on BBC Radio 4 Tuesday, 11 September at 15:30 and repeated Wednesday, 12 at 21:00.

The residents have started a petition which they say has been signed by people from over 40 countries and the Community Councils of both Mull and Iona have objected strongly to the farm.

They argue that it will be a navigational hazard, forcing their boats to detour into rougher waters and they are concerned about the impact on wildlife including seals as well as light pollution ruining their rare dark skies.

The Scottish Salmon Company, has declined to comment on the application. But on the neighbouring island of Ulva there is support as the farm will provide four full time jobs.

"The important thing for me is we get some more young families into this area because otherwise it dies out," says Lucy McKenzie who runs a B&B on Ulva.

"If we've no young families, the school closes and if that happens young people move away.

Emma McKie and Rebecca Munro run the Boathouse café on Ulva. They say the tourists who come into the café tell them they are not put off by the nearby fish farms but realise it is part of the life and economy.

"People appreciate that the people who live here have to make a living and you can't survive on the tourist industry six months a year."

"And they are fairly sympathetic to the landscape - they blend in fairly well."

Gometra is just one of the rumbling conflicts across Scotland. In the last six months there have been five applications for new fish farms in Scotland.

The Scottish government's National Marine Plan aims to expand salmon production sustainably by 4% a year from 154,000 tonnes in 2010 to 210,000 tonnes by 2020.



Roc Sandford says thousands of people come from all over the world to look at the "iconic" landscape.

But in January 2011 the Scottish and Chinese governments signed a deal to allow the export of Scottish salmon into the Asian giant's market for the first time. Previously Norway was the main exporter to China

Chinese Vice premier Li said even if only 1% of the people of China chose to eat Scottish salmon it would have to double production but that has rung alarm bells. Demand is also increasing from other Asian countries as well.

Salmon farms have traditionally involved large numbers of fish contained in nets in inshore waters raising a number of environmental issues.

Critics are concerned about the levels of sea lice at farms which can be passed on to passing wild fish and are particularly harmful to juvenile fish. They say escaped fish pass on genetic weakness to wild salmon if interbreeding occurs.

The Salmon and Trout Association's Guy Linley-Adams says they are not against salmon farming but object to "the inappropriate location of some fish farms where they have negative effect on wild fish populations."

There is also concern with the amount of allowed pollution of the sea bed under farms by faeces and waste food and the shooting of predator seals.

But the Scottish Salmon Producers Organisation says the Scottish Environment Protection Agency assesses farms before and during operation, and sets limits on the use of chemicals and allowed pollution.

It says farms are required to monitor sea lice and seals are discouraged by acoustic deterrents and nets. And action is being taken to reduce the number of fish escapes.

"We measure the ecological load an area can take and we offer licences only where we were convinced there is a proper balance between effects of fish farming and the ability of local environment to absorb the effects of farming," says Stewart Stevenson the Scottish Minister for Environment and Climate Change. "I think we've been successful in that and that's widely recognised."

Increasingly one way forward is being seen as locating salmon farms outside of lochs in the sea.

Applications are being seen for more dispersive 'open sea' sites out of lochs along the shoreline, which it is hoped could prove less of a threat to wild fish as they are away from the river mouths.



With many young men relying on the fishing industry for work - many in Ulva support the fish farms

"On the West coast where we've traditionally farmed, it's difficult to find suitable locations to give you a good size of farm," says Steve Bracken from one of the largest salmon producers, Marine Harvest which already has two open sea sites in Uist and Barra and three more potential sites.

"2,500 tonnes is the maximum amount of live fish you can hold on your farm at any one time. So by going further out into open water locations we hope we might see larger farms develop out there."

Another possible development is "closed containment" systems where fish are grown in large tanks kept within the sea or on land and water is pumped in, filtered and recirculated.

The Salmon and Trout Association says this system would eradicate all their concerns.

Three possible onshore sites in Scotland have been identified by Andrew Robertson for his company Fish From. These are more expensive to set up but he does not think shoppers would be put off by this tank style system rather than having had them swimming in the sea.

"The quality of the product has to come highest in the list of people's beliefs," he argues, and points out there is a need for new production systems for the increasing world population.

"In the next 18 years the UN has identified there will be a huge shortfall in aquaculture produced food and unless it grows by 60million tonnes there is going to be a shortfall in nutrition. In 2050 when there are 9bn people on the planet there isn't going to be a way of feeding them without innovative ways of growing high quality nutrition."

Applications for inshore fish farms are still being made and the level of pollution that is deemed acceptable is still disputed. But for Tessa McGregor a biologist who lives on Ulva the dilemma is not just represented in Scotland but around the world.

"It's a balance with 7bn people... so this is a tiny microcosm of the tough decisions we're going to have to make worldwide. The world has changed, farming has changed, our carbon footprint, our expectations have changed and we've got to look at what is now sustainable globally."

[Costing the Earth: Chinese Salmon](#) is broadcast on BBC Radio 4 Tuesday, 11 September at 15:30 and repeated Wednesday, 12 at 21:00.

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The Scotsman, 10 September 2012

Scottish salmon farms producing £1½bn of fish every year

Last year 158,018 tonnes of farmed salmon was produced in Scotland

By JULIA HORTON

Scottish salmon farming industry production has leapt to a new seven-year high, official figures showed today.

Statistics published in the latest Scottish Fish Farm Survey revealed that last year 158,018 tonnes of farmed salmon was produced, more than in any year since 2004. That equates to more than 430 tonnes every day.

The latest rise boosted the value of Scottish farmed salmon to £584.7 million last year, equating to a year-on-year increase of 5.6 per cent.

Industry leaders predict that 2012 production will rise further to 158,026 tonnes, based on current stocks in Scottish waters.

The survey also revealed that the total number of staff employed at salmon farms dropped from 1,161 to 1,013 in the same seven-year period.

However, separate industry figures put the total number of jobs at more than 2,000, including workers in marketing and processing, with 272 new jobs created during 2011.

Scotland's newly appointed environment minister, Paul Wheelhouse, said: "Salmon is our largest food export and I welcome the continued growth in production and value in 2011.

"Fish farming is a key food sector for Scotland, providing an important contribution to the economy – particularly in remote and rural communities in the west coast and Northern Isles.

"The industry employs almost 1,500 people, while many more jobs are underpinned by aquaculture indirectly."

Scott Landsburgh, chief executive of industry body, the Scottish Salmon Producers' Organisation (SSPO), said: "The year-on-year increase in both the value and production of Scottish farmed salmon is great news for the remote rural communities in the Highlands and Islands, the Scottish economy as a whole and the many suppliers to the sector whose businesses are benefitting from the salmon industry's success."

<http://www.scotsman.com/news/scottish-news/top-stories/scottish-salmon-farms-producing-bn-of-fish-every-year-1-2517103>

Chilliwack Progress, 10 September 2012

Films focus on fish farm foes



Looks like neither the commercial fleet nor the recreational anglers will get a crack at the sockeye fishery in 2012.

By **Jennifer Feinberg - Chilliwack Progress**

A Film and Dialogue Series starts Tuesday night at the Stó:lō Resource Centre with a panel discussion about open-net fish farming and wild B.C. salmon.

The impetus for the new series arose partly out of growing community concern about the Kinder Morgan pipeline.

"The pipeline runs through eight reserves between Hope and Abbotsford," said event organizer Maretta Beger, lands officer for Sto:lo Nation Lands Department.

"That's what got me started. I wanted to inform the Sto:lo membership about potential impacts, and that led to other issues.

"The goal is to inform people about what's going on in their backyards."

A couple of short films by indie filmmaker Twyla Roscovich will tackle the reality of fish farming in coastal waters and its impact on wild stocks.

Then the main feature, *The Rise of the Salmon People*, by Jeremy Williams follows the 'Get Out Migration' rally held in Victoria last May and *The Paddle for Wild Salmon Journey* down the lower Fraser River in October with biologist Alexandra Morton.

A traditional welcome will be followed by a salmon and bannock meal by donation, served at 6 p.m, followed the film screenings, and panel discussion to follow at about 8:30 p.m.

Biologist Alexandra Morton and local activist Sheila Muxlow will be on-hand at the Sept. 11 event, to answer questions as panel members.

Audience members are welcome and encouraged to ask questions and provide input during the Q&A session.

It's a family and community event meant to bring Stó:lō and Stó:lō neighbours together to share First Nation culture, stories, history and create understanding and community connections.

For more details call Beger at 604-824-2451.

<http://www.theprogress.com/news/169246786.html>

The Marlborough Express, 10 September 2012

Fish fed poultry oil

Penny Wardle

The company that makes the feed pellets used at New Zealand King Salmon farms is replacing fish oil and meal with poultry and freezing industry waste.

Skretting Australia New Zealand account manager Ben Wybourne told an Environmental Protection Authority hearing in Blenheim last week that more than 80 per cent of the diet of New Zealand salmon was land-based.

An authority board of inquiry will decide whether King Salmon can build nine new fish farms in the Marlborough Sounds.

The blood, meat and feather meal used in its feeds were by-products of the Australian poultry, cattle, sheep and pig slaughter industries, Mr Wybourne said. Oil from poultry was increasingly taking the place of fish oil.

Skretting relied on the Peruvian anchovy industry as the source of its marine protein and oil. If this collapsed, as it had in the past, Skretting and other companies would be in trouble, Mr Wybourne said when questioned by Sustain Our Sounds lawyer Warwick Heal.

Sustain Our Sounds is opposing King Salmon's application to expand.

The absence of salmon diseases in New Zealand farmed salmon meant antibiotics were not used in feeds for this market, Mr Wybourne said. There was no need for lice treatments or drenches to treat internal parasites. The company did add antibiotics and vaccines to feed used in other countries.

The dried, cooked feeds made by Skretting were as unlikely to carry disease as cooked dry biscuits, Mr Wybourne said. The company met New Zealand import standards which guarded against disease.

Mr Wybourne told the hearing:

The chinook salmon farmed in New Zealand by King Salmon need 1.9kg of feed to produce a kilogram of fish.

King Salmon diets are 10 per cent fishmeal compared with 70 per cent in 1990.

3.5 tonnes of anchovy produce enough oil and meal to grow one tonne of king salmon.

The salmon produce more fish protein and oil than they consume.

Fish are fed astaxanthin, a pigment, to give their flesh its pink colour.

Processed salmon fillets retain about 42 per cent of the essential fatty acids fed to the fish.

Mr Wybourne said Skretting would benefit by increased sales if the King Salmon expansion went ahead. However, other competitors could tender to supply.

<http://www.stuff.co.nz/marlborough-express/7644194/Fish-fed-poultry-oil>

Nelson Mail, 10 September 2011

Salmon farm impact study 'inaccurate'

A study of social impacts if salmon farming expands in the Marlborough Sounds is selective and inaccurate, Pelorus Sound ecotourism operator Brian Plaisier says.

King Salmon consultant James Baines interviewed people who already had opinions on the company's plans to build nine new farms, Mr Plaisier told the Environmental Protection Authority hearing in Blenheim on Friday.

They included a salmon farm manager, a Conservation Department area manager and Sounds Advisory Group representatives.

Mr Baines said he was "not trying to survey people, but to gather information". He had targeted people who managed, worked on or lived near farms because one purpose of his study was to learn more about existing Sounds operations and community effects.

Mr Plaisier pointed to mistakes in Mr Baines' report, including using inaccurate information from other experts to conclude his Tui Nature Reserve overlooked mussel farms, and saying proposed new farms would not be visible at night from their home, when they would be seen from the tourist lodge alongside.

"Experts are using each other," Mr Plaisier said. "It's like a chain if one thing is wrongly done."

Judge Gordon Whiting said Mr Baines' evidence claimed to have considered expert reports on recreation, landscape, lighting and other effects. However, at Friday's hearing the consultant refused to answer questions on these issues, saying Mr Plaisier should have questioned experts in those areas.

Judge Whiting asked Mr Baines to change his statement to clarify that he did not "consider" these reports, which should be read parallel to his evidence.

Council lawyer Stephen Quinn pointed Mr Baines to a shift in the percentage of Marlborough people who saw marine farming as a threat to Sounds values, from 6 per cent in 2001 to 66 per cent this year.

Mr Baines said the survey showed more people were concerned about forestry and residential development than marine farming.

<http://www.stuff.co.nz/nelson-mail/news/7645835/Salmon-farm-impact-study-inaccurate>

The Sunday Times, 9 September 2012

Dirty secrets down on the salmon farm

**CHARLES
CLOVER**



51 9.9.12

You have to credit the people who sell Scottish farmed salmon. They deserve their awards — for marketing. They have managed to convince us that their product in the supermarket is just as good as the wild thing and comes from clear, unpolluted waters with tidal flows that produce strong and healthy fish.

All suggestions that salmon are kept like battery chickens in cages that foul the natural environment, have their flesh dyed, are prone to disease and are treated regularly with chemicals to remove parasites that have finished off wild sea trout and salmon — well, these slurs belong to the past. Tesco's website gives the common line taken by the supermarkets: "Farm assurance standards have been introduced to ensure the fish remain healthy and have minimal impact on the environment."

I must also tell you that the moon is made of cheese and that there is a small bar in Memphis, Tennessee, where a heavily disguised Elvis Presley sneaks in sometimes to sing. What persuaded us to believe the claims made for Scottish salmon? Business leaders, politicians and officials in Scotland have conspired to perpetuate the myth that salmon farming has no impact on the environment. Alex Salmond, the first minister, recently claimed salmon farming was capable of vast expansion to satisfy growing demand from China.

The reality about salmon farming's impact on the environment is rather different. Occasionally the mask slips, as it has with the disclosure under freedom of information rules of official figures

'THE WORST SALMON FARMS ARE KILLING ALL LIFE OTHER THAN MANURE WORMS'

showing that sea bed pollution is "unsatisfactory" at 16%-20% of all active Scottish salmon farms and "borderline" at 10%-12% more. The Scottish Environment Protection Agency (Sepa) has accepted that the figures published by the Salmon and Trout Association's lawyers are correct and that

"unsatisfactory" farms are killing all forms of life, other than marine manure worms, underneath the fish cages and sometimes far into the sea lochs where they are tethered.

The discovery that quite so many Scottish salmon farms are toxic with ordure affects their reputation all over the world. The two companies with the highest number of unsatisfactory reports were Wester Ross Fisheries — winner of an award for environmental stewardship from the Crown Estate last year — and Loch Duart, which bills itself as the "sustainable salmon company" and supplies Gordon Ramsay at Claridge's and Rick Stein's Seafood Restaurant in Padstow.

Nick Joy, managing director of Loch Duart, protests that the association's figures don't give the full picture: for instance, he fallows all his sites for one year in every three to reduce cumulative pollution and parasite problems. He is also reducing stocking levels at sites that fail Sepa's tests.

The Scottish Salmon Producers' Organisation pooh-poohs the figures. Scott Landsburgh, its chief executive, says: "Numerous time-consuming freedom of information requests and then taking raw data out of context to suit lobbying purposes is an abuse of taxpayers' money — this must stop!" The data reveal a truth he doesn't like, so he would like them suppressed by the Scottish state.

I am not against fish farming. But the reality is that if salmon farming were any other industry it would be required to use the best available technology to protect the environment. If it were pig farming, a comparable industry, farms would be issued with an enforcement notice and threatened with closure if their untreated effluent was found to be polluting watercourses. Open-cage salmon farming is highly polluting. And technology has moved on. Closed-containment production in tanks — floating and on land — has been tested and shown to be vastly more environmentally friendly.

A Norwegian firm, Niri Seafood, has installed tanks on land in Bantry Bay, southwest Ireland, which it says will produce salmon this year at a lower cost than sea cages. The world's largest salmon farmer, Marine Harvest, is planning a facility there too. Costs are lower because you don't need boats, or toxic chemicals to make the parasitic sea lice fall off (water is filtered as it enters the tanks to prevent infestation), and the salmon droppings can be siphoned off and used for fertiliser. Why does Scotland not spend some of the millions of pounds of EU money it receives for salmon farming on developing cleaner fish-farming technology? The only explanation can be that Scotland's salmon farmers see no need: their "light touch" regulatory system, and cronyism with ministers, has proved highly profitable.

It is now clear that these profits are made at untold cost to the marine environment. We knew whole river systems had been denuded of sea trout and salmon. We can now see that pollution exists on such a scale that shellfish, fish and other marine life are being poisoned. Expansion of the industry will only make these things worse. Scottish salmon farmers should be told that in five years' time sea cages will be banned. There should be a deadline, a road map and government help to get from here to there.

If Salmond is too beholden to vested interests to act, the time has come for the supermarkets and their customers to insist Scottish salmon farmers clean up their disgusting mess.

Online (subscription only) via

<https://acs.thesundaytimes.co.uk/?gotoUrl=http%3A%2F%2Fwww.thesundaytimes.co.uk%2Fsto%2Fcomment%2Fcolumns%2Fcharlesclover%2Farticle1121415.ece>

The Sunday Times, 9 September 2012



THE SUNDAY TIMES PART ONE: SPACE

Salmon farms 'pollute' coast

51 9.9.12

Mark Macaskill

DOZENS of salmon farms around the Scottish coastline have been dumping unacceptable levels of pollution into the sea, it has emerged.

The impact of Scotland's £500m aquaculture industry, which supplies many of Britain's top chefs including Rick Stein and Gordon Ramsay, is revealed in more than 300 seabed surveys which have been released by the Scottish Environment Protection Agency (Sepa).

The surveys, carried out over the past three years, cover more than 250 fish farms run by 23 companies. Some of the sites were surveyed more than once.

Officials at Sepa classified 137 of the surveys (44%) as unsatisfactory, indicating high levels of organic matter, such as fish faeces and uneaten food, on the sea bed.

Such waste, if allowed to accumulate, can disrupt biodiversity by killing off flora and fauna.

A further 64 sites (21%) were deemed as borderline — defined as close to having an unsustainable impact on the environment — and 106 of the sites (34%) were labelled satisfactory.

The surveys do not cover all of Scotland's 450 or so fish farms, but they suggest that seabed pollution is "unsatisfactory" at up to 20% of farms.

This is because only about 250 sites actively rear fish at any one time and, last year, 43 were found by Sepa to be breaching environmental guidelines. About 30 other farms are graded as "borderline", according to Sepa officials.

The findings have prompted fresh criticism of aquaculture as a "dirty industry" and

Continued on page 2 >>

►► Continued from page 1
renewed calls for chefs to boycott the product.

However, last week Stein and Ramsay declined to comment on the subject.

In December 2010, after a survey of a farm owned by Lakeland Marine Farms Ltd in Argyll, Sepa officials issued a warning that "measures should be taken to reduce the severe environmental impacts at this site".

The same year, Lighthouse Caledonia, now part of the Scottish Salmon Company, was warned that fish cages at its Strone Point farm, also in Argyll, were "significantly overstocked by 63%".

In 2009, a sea bed survey at the company's Ardyne fish farm prompted a Sepa official to say: "The deterioration of the sea bed at this site is some cause for concern."

Last year, the Scottish Salmon Company was told to reduce the tonnage of fish farmed at its Quarry Point site after a survey revealed "severe environmental degradation".

According to the Sepa documents, the firms with the poorest records included Wester Ross Fisheries. They show 70% of the company's reports were classed as unsatisfactory, 30% were borderline.

Of the surveys around sites run by Loch Duart — which, according to its website, supplies Rick Stein's Seafood Restaurant in Cornwall and Gordon Ramsay's Maze restaurant in London — 68% of them were classed as unsatisfactory, while 26% were borderline and 6% were satisfactory.

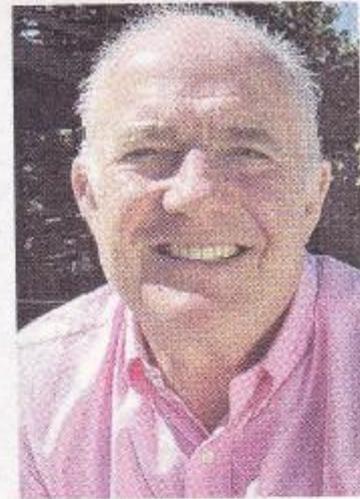
The documents show some companies have been asked to consider reducing the scale of their operation or introducing "fallow" periods to ease their environmental impact.

The Salmon and Trout Association (S&TA), which obtained details of the surveys under a freedom of information request, said the industry's expansion in Scotland was a cause for concern.

There is growing demand for farmed salmon, fuelling the growth of fish farms. Last year, the value of exports of Scottish salmon America reached £211m, an increase of 36%.

"This report is a damning indictment of the salmon farming industry and makes a mockery of its claims that it always operates in harmony with the wider environment," said Hughie Campbell-Adamson, chairman of the S&TA.

"It throws into doubt whether the current expansion



Loch Duart supplies Stein

plans in open-cage systems can ever be environmentally sustainable."

Scott Landsburgh, the chief executive of the Scottish Salmon Producers' Organisation, pointed out that 87% of Scotland's 451 fish farms had received "excellent" or "good" assessments from Sepa last year.

Nick Joy, the managing director of Loch Duart, admitted that some sites had "not been performing to our standards" but insisted the company was striving to improve.

Wester Ross Fisheries declined to comment.

Online (subscription only) via

https://acs.thesundaytimes.co.uk/?gotoUrl=http%3A%2F%2Fwww.thesundaytimes.co.uk%2Fsto%2Fnews%2Fuk_news%2Fscotland%2Farticle1122337.ece

Salmon farms turn sea bed into graveyard

Mark Macaskill

DOZENS of salmon farms around the Scottish coastline have been dumping unacceptable levels of pollutants into the sea.

The impact of Scotland's £500m aquaculture industry, which supplies many of Britain's top chefs, including Rick Stein and Gordon Ramsay, is revealed in the results of sea bed surveys released by the Scottish Environment Protection Agency (Sepa).

The surveys, carried out over the past three years, cover more than 250 fish farms run by 23 companies. Some farms have been surveyed more than once. Sepa classed 137 of the surveys (44%) as unsatisfactory, indicating high levels of organic matter, such as fish faeces and uneaten food, on the sea bed.

Such waste can disrupt biodiversity by killing off flora and fauna. A further 64 (21%) of surveys were deemed borderline — defined as close to having an unsustainable impact on the environment — and 106 (34%) were satisfactory.

The findings have prompted fresh criticism of aquaculture as a "dirty industry" and renewed calls for chefs to boycott farmed fish. Stein and Ramsay declined to comment.

According to Sepa, the companies with the poorest records included Wester Ross Fisheries: 70% of its reports were classed unsatisfactory

and 30% were borderline. Of the surveys of sites run by Loch Duart — which, according to its website, supplies Stein's Seafood Restaurant in Padstow, Cornwall, and Ramsay's Maze in London — 68% were unsatisfactory.

The Salmon and Trout Association (STA), which obtained the surveys under freedom of information laws,


THE SUNDAY TIMES



said the industry's expansion in Scotland was a concern.

"This report is a damning indictment of the salmon farming industry and makes a mockery of its claims that it operates in harmony with the wider environment," said Hughie Campbell-Adamson, chairman of the STA.

Scott Landsburgh, chief executive of the Scottish Salmon Producers' Organisation, defended the industry and said 87% of Scotland's fish farms received "excellent" or "good" ratings from Sepa last year.

Dirty secrets down on the salmon farm. Charles Clover, page 25

Online via:

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The Sunday Herald, 9 September 2012

The dirty 360

BY ENVIRONMENT EDITOR ROB EDWARDS

MORE than 360 industrial sites across Scotland have been officially condemned by the Scottish government's green watchdog for failing to control pollution.

The Scottish Environment Protection Agency (Sepa) has named and shamed waste dumps, fish farms, sewage works, scrap yards and many others for breaking pollution rules with leaks, spills, smells and a host of other mishaps. Scores of companies have breached emission limits for two or three years running.

Among those criticised for their poor performances are the famous Scottish soup and jam company, Baxters, the Ineos petrochemical refinery at Grangemouth and the French-owned waste giant, Sita UK. Others include three well-known whisky distilleries Glenfarclas, Glengoyne and Whyte & Mackay three crematoria, an Edinburgh pharmaceutical factory and an organic brewery on the Black Isle.

This continuing catalogue of environmental recklessness shows that Sepa and the SNP government are asleep at the wheel, said the Green MSP, Patrick Harvie.

Scotland's air, water and land were being ruined by businesses cutting corners, he said. He warned the government not to cave in to companies with poor pollution records lobbying for weaker regulation.

Harvie said: The trouble is the Scottish government doesn't give two hoots about protecting the environment.

Sepa put its latest compliance assessment reports for 2011 online last week, rating 46 sites as very poor, 170 as poor and 146 as at risk 362 in all. Waste facilities make up the largest group, including 73 landfill sites, transfer and recycling plants plus 35 metal and vehicle recycling yards. They are criticised for failing to manage their businesses properly, resulting in pollution incidents, breaches of their licences and offensive odours. Effluent discharge limits are often exceeded, procedures ignored and records not kept.

The Chartered Institution of Wastes Management in Scotland, which represents professionals in the industry, praised Sepa's robust reporting. Chairman Duncan Simpson said: Where significant risk or actual harm has been identified, we would expect and support tough action by the regulator.

It is important to stress, however, that the compliance assessment looks at a wide range of management and operational areas, for example site security, audit procedures, and paperwork. A low score does not mean that environmental harm has occurred.

Aquaculture emerges as a major polluting industry, with 56 salmon farms around the west coast and islands rated as poor or at risk. Seabed contamination surveys for many are assessed by Sepa as unsatisfactory .

The Scottish Salmon Producers Organisation, which represents fish farmers, pointed out that 87% of the 415 farms assessed last year were rated excellent or good. The seabed area used for the whole of the salmon farming sector is equal to one good-sized livestock farm, said the organisation's chief executive, Scott Landsburgh. Any impacts are minute, local and temporary.

Read in full via: <http://www.waste-management-world.com/index/from-the-wires/wire-news-display/1739677869.html>

For Argyll, 7 September 2012

Seabed salmon farm pollution: S&TA provide figures to negate challenge from SSPO

The Salmon and Trout Association (S&TA) recently published a report on documents extracted from the Scottish Environmental Protection Agency under Freedom of Information.

The documents in question were the 'self-monitoring' reports from fish farms on organic seabed pollution at their establishments.

The disturbing findings from the S&TA's analytic study of these documents, by solicitor Guy Linley-Adams were published here in our report of 5th September.

The Scottish Salmon Producers Organisation (SSPO) responded later that day, claiming that the picture was very different – on evidence published on 4th September by SEPA.

We asked the S&TA to clarify the situation by disaggregating the annual figures for a three year period they had used in their study.

They promptly did so and that disaggregation supported the overall position they had found.

They also pointed out that the SSPO were not comparing like with like.

Where they had focused on self-monitoring reports on organic seabed pollution at salmon farm sites – whose results were of substantial concern, the SSPO was referring to SEPA's account of the way the farms had *complied* with the *process* of reporting . This is of course nothing to do with the content of the reports.

The S&TA report is here – with the additional disaggregation figures added as an update: [**FoI disclosures lead Salmon and Trout Association to identify worrying seabed pollution at Scottish Salmon farms**](#)

The SSPO fightback, with the S&TA's response added as an update, is here: [**Scottish Salmon Producers fight back**](#)

<http://forargyll.com/2012/09/seabed-salmon-farm-pollution-sta-provide-figures-to-negate-challenge-from-sspo/>

Intrafish, 7 September 2012



As Scottish salmon farms improve, critics look for new openings

A new report on the Scottish salmon farming sector shows strong environmental improvements, but anti-industry attacks continue to muddy the waters.

 Rijuta Dey

Published: 07 September 2012 03:16 PM

Updated: 07 September 2012 02:39 PM

It's not uncommon the salmon farming industry and the environmental community view things differently, but the latest review of salmon farms' environmental performance by the Scottish Environmental Protection Agency (SEPA), released Sept. 5, shows the bi-polar nature of the two sides in sharp relief -- and hints the improvements in the sector are increasingly forcing opponents to skew numbers in an attempt to push their agenda.

Associated Articles

- Disease, weather dampen Scottish Salmon Company's results
- Scottish Sea Farms opens £1.3M site
- Scottish salmon farmers: We have a right to protect our fish from seals

[The newly-released SEPA data on self-monitoring of Scotland's salmon farms](#), shows an overall improvement in compliance with thresholds for impacts on the seabed, the agency noted, with 400 farming sites classified as "excellent" or "good," and 43 deemed "poor" or "very poor" -- an improvement over the previous three-year report.

The Salmon & Trout Association (STA), a wild salmon advocacy group, interpreted things differently. Just a day after the new SEPA numbers were released, the group released its own report based on what it claims is similarly fresh data from the same site evaluations.

STA's study analyzed 311 self-monitoring reports between 2009-2012 and noted that of those reports, 137 (44 percent) were deemed to be "unsatisfactory," in terms of their seabed impact, while some 60 others were deemed "borderline."

STA Chairman Hughie Campbell-Adamson called the report "damning." In announcing its findings, the group went on to name Wester Ross Fisheries and Loch Duart Salmon, two Scottish companies lauded for their environmentally friendly production, as top environmental violators.

Officials at Wester Ross and Loch Duart declined to comment to **IntraFish** on the accusations.

The Scottish Salmon Producers' Association (SSPO), which represents 98 percent of the industry, blasted the new STA report.

"This is yet another misleading report from the Salmon & Trout Association, which takes raw data out of context and speculates on potential impacts to suit its own lobbying purposes," Scott Landsburgh, chief executive of the SSPO, told **IntraFish**, adding the attack was "their usual biased propaganda."

The selective three-year analysis contrasted starkly with the official SEPA data released this week, he said.

One salmon farmer contacted declined to comment, noting the accusations were simply recycled from earlier this spring.

Indeed, an analysis of SEPA data by STA earlier in the year made similar findings and led to similar accusations. That report focused more on sea lice and the effects of treatment of them.

With 87 percent of operators showing "excellent, good or broadly compliant" ratings in the most recent report, SEPA is satisfied with what it called a "slight overall improvement," but said its officers are continuing to prioritize improvements on non-compliant, poor-rated sites.

"SEPA is clearly aware of the environmental performance of salmon farms around the Scottish coast," Douglas Sinclair, aquaculture specialist for SEPA, told **IntraFish**.

The assessment of seabed impacts is one measure of this performance but is far from the whole picture. Last year, SEPA included fish farms in the Compliance Assessment Scheme as a means of better assessing the overall performance of this sector.

This assessment includes seabed impacts as well as a more inclusive evaluation of all elements of compliance with environmental licenses. This was the first year for which this assessment methodology had been applied to salmon farms.

During 2011, SEPA drew up an action plan for improving the 43 problem sites, including seeking changes in site management and a reduction in the maximum amount of fish that can be farmed in net pens.

SEPA said it will undertake further assessments on seabed impacts in 2013, to align with the growing cycle of salmon.

Meanwhile, STA continues to proudly receive mainstream press attention for its accusations (The group lists publications that have cited their salmon farming reports [on its website](#)), though allegedly this time around some larger national press outlets didn't take the bait, one salmon farmer told **IntraFish**.

[Click here](#) to see SEPA's official site-by-site rating.

SEPA report available [online here](#)

<http://www.intrafish.com/global/news/article1355499.ece>

The Marlborough Express, 7 September 2012

Disease risk explored during salmon hearing

Penny Wardle

The risk of salmon diseases entering New Zealand will increase if New Zealand King Salmon builds new farms in the Marlborough Sounds, fish parasite expert Ben Diggles said in Blenheim yesterday.

Dr Diggles said in New Zealand, the chinook salmon farmed by King Salmon were disease-free. This could change if a new disease crossed the border or a parasite changed hosts.

King Salmon stocked its farms at about 20 kilograms of fish per cubic metre, which meant farm space was about 2 per cent fish, Dr Diggles said. This was 5kg per cubic metre below the stocking at which fish could become susceptible to disease.

Questioned by Andrew Caddie, of the Kenepuru and Central Sounds Residents Association, Dr Diggles said King Salmon used antibiotics once, 10 years ago. If bacterial disease became a problem, fish would be vaccinated one by one.

Mr Caddie said the residents' association was sent a Primary Industries Ministry interim report on salmon deaths at King Salmon's Waihinu farm, after making an Official Information Act request. It had a lot of information deleted.

The ministry submitted in support of King Salmon's expansion plans.

Mr Caddie said he understood the ministry had sent information about unusual fatty deposits around fish hearts to Norway for analysis and a final report would not be published until results were available.

Biosecurity expert Barrie Forrest said the didemnum sea-squirt, a pest in the Marlborough Sounds, would probably spread to any new farms.

The discussion took place during the Environmental Protection Authority hearing of an application by King Salmon to develop nine new salmon farms in the Sounds. The hearing is expected to continue for another eight weeks.

<http://www.stuff.co.nz/marlborough-express/news/7630976/Disease-risk-explored-during-salmon-hearing>

The Canadian Press/The Province, 7 September 2012

Fisheries ministers ponder considering national aquaculture regulation



Canada's Fisheries Minister Keith Ashfield and provincial fisheries representatives are considering a national approach to aquaculture regulation.

Photograph by: Chris Wattie, Reuters , Vancouver Sun

VICTORIA — Provincial and territorial fisheries ministers say they're talking about developing an aquaculture regulatory program — something that was the sole responsibility of provincial governments until a landmark court decision in B.C. forced that province to turn responsibility over to Ottawa two years ago.

The issue was on the table at a meeting of the Canadian Council of Fisheries and Aquaculture in Victoria.

The federal government took control of regulating B.C.'s aquaculture industry in 2010 after a B.C. Supreme Court judge ruled the province had to relinquish jurisdiction to Ottawa because Ottawa has oversight of offshore fisheries.

The shift put the federal government in control of the cultivation of fish, enforcement of new Pacific aquaculture regulations and the conditions of licensing for fish farms.

B.C.'s salmon farm industry has been the subject of several ongoing lawsuits and criticism from First Nations and environment groups who blame open-ocean salmon farms for spreading disease they blame for collapsing wild salmon stocks in the Pacific.

The ministers also discussed the importance of fisheries science in assessing stocks and protecting fisheries.

<http://www.theprovince.com/news/Fisheries+ministers+ponder+considering+national+aquaculture/7206040/story.html>

Nanaimo Daily News, 6 September 2012

CFIA doing monitoring, testing of farmed salmon

Re: 'Current salmon testing puts credibility at risk' (Your Letters, Aug. 31)

Contrary to assertions made in the letter "Current salmon testing puts credibility at risk," the Canadian Food Inspection Agency's approach to salmon disease testing will provide Canadians with clear, unbiased information about the health of salmon in British Columbia.

The CFIA launched a comprehensive surveillance initiative in the spring to determine the status of certain diseases, including infectious salmon anaemia, in B.C. waters. This initiative is rigorous, science-based and transparent.

Infectious salmon anaemia is a reportable disease, which means that the CFIA must be immediately notified of all suspected cases. Any detection of the disease in farmed salmon would be managed through science-based control measures, which may include quarantine and humane destruction and disposal.

An assessment of the monitoring and testing undertaken by industry will be included in the CFIA's surveillance initiative. The CFIA is fulfilling all its responsibilities and will be reviewing all data. Additional testing of farmed fish will be undertaken if further information is needed to fully determine B.C.'s disease status.

We remain committed to keeping Canadians informed of our disease control measures and surveillance results.

Dr. Ian Alexander Executive Director Animal Health Directorate Canadian Food Inspection Agency

<http://www.canada.com/CFIA+doing+monitoring+testing+farmed+salmon/7200902/story.html>

Marlborough Express, 5 September 2012

Contradiction in King Salmon statements

Penny Wardle

Marlborough District Council lawyer Stephen Quinn highlighted contradictions in New Zealand King Salmon statements when he questioned one of the company's senior managers yesterday.

Mr Quinn was questioning operations and contracts manager Mark Gillard on why the company had not revealed the sites of nine new salmon farms it wanted to develop in the Marlborough Sounds until October last year. An Environmental Protection Authority board of inquiry in Blenheim is hearing NZ King Salmon's application to develop new fish farms in the Sounds.

Mr Gillard said King Salmon spent \$2.5 million investigating farm sites and did not want to risk others applying first. Also, there was a risk of sites being "spiked" by mooring applications, for example.

Mr Quinn said this appeared to contradict another claim by the company. It had said if its application was successful, this would not set a precedent for other companies wanting to farm fish in an area of the Sounds which was closed for aquaculture.

"You can't have it both ways," Mr Quinn said.

A decision to give the company what it wanted "by punching eight holes into the prohibited zone" must create a precedent.

Mr Gillard said other companies watching the King Salmon application with bated breath would have been scared off by seeing what the company was going through.

Mr Quinn asked if spending on public relations ahead of the hearing was part of consultation on the application to occupy publicly owned space for 35 years.

Mr Gillard understood the campaign was a response to attacks in the media and would not say whether that money could have been spent on fuller consultation.

Mr Quinn asked why King Salmon did not suggest to a council aquaculture working group that prohibited zones be opened up for fish-farming in next generation plans.

Mr Gillard said this was because the council plan review process was too slow and unhelpful. Given the council's track record, it could be 2017 until new plans came through.

Mr Quinn asked whether King Salmon had presented councillors with a neutral submission on its application to sign.

Mr Gillard replied that King Salmon chief executive Grant Rosewarne had met with councillors.

Board of inquiry member Helen Beaumont asked Mr Gillard why Cawthron modelled sediment buildup under salmon cages at maximum feed levels but pollution by nitrogen and phosphorus at much lower initial feed levels.

Mr Gillard said scientists had decided how the modelling was done.

Eighty-five per cent of King Salmon farms were in a coastal zone where aquaculture was allowed but half its production came from its Clay Point and Te Pangu farms in Tory Channel, in deep and high flow sites similar to those where the company wanted to develop new farms, Mr Gillard said.

<http://www.stuff.co.nz/marlborough-express/news/7615234/Contradiction-in-King-Salmon-statements>

For Argyll, 5 September 2012

Scottish Salmon Producers fight back

Updated below with Salmon and Trout Association response) Following the press release issued this morning by the Salmon and Trout Association - [FoI disclosures lead Salmon and Trout Association to identify worrying seabed pollution at Scottish salmon farms](#) - the Scottish Salmon Producers Organisation [SSPO] has advanced some statistics of its own.

The Salmon and Trout Association [S&TA] had used Freedom of Information legislation to get from the Scottish Environmental Protection Agency [SEPA] '311 reports of seabed self-monitoring by farms between 2009 and March 2012'.

Their analytic study of these reports, said S&TA, 'established that levels of seabed pollution at almost two thirds of Scottish marine salmon farms are either 'unsatisfactory' or 'borderline' – according to SEPA's own categorisation'.

Of the 311 reports, S&TA found that '137 (44%) were deemed by SEPA to be 'unsatisfactory' ('beyond the assimilative capacity of the local environment'), 64 (21%) were 'borderline' ('close to having an unsustainable impact') and only 106 (34%) were 'satisfactory'.

Scott Landsburgh, Chief Executive, Scottish Salmon Producers' Organisation (SSPO), now says:

'The selective three-year analysis from the pressure group S&TA is their usual biased propaganda contrasting starkly with the official 2011 data released yesterday by the Scottish Environmental Protection Agency (SEPA), the government agency with responsibility for protecting and improving Scotland's unique and beautiful environment, which shows that 87 per cent of the 450 fish farms that were assessed last year alone are either 'good' or 'excellent'.

'Numerous time-consuming Freedom of Information (FoI) requests and then taking raw data out of context to suit lobbying purposes is an abuse of tax payers' money – this must stop!!'

There are several issues here.

The S&TA statement is focused on the issue where, in footballing terms, the SSPO plays the man. We have not published further parts of the SSPO statement that were arguably subtly racist.

The SSPO, while mentioning that the favourable official figures from SEPA which they quote are for 2012, slide over the fact that this does not invalidate the three year period – of unpublished reports which had to be obtained from SEPA under FoI – studied by S&TA.

S&TA have not disaggregated each of the three years of reports they have obtained – which we would ask that they now do.

However, since SSPO have not been able to declare the S&TA three year figures wrong, if the 2012 figures they quote are also correct – and there is no reason to assume anything else – then the picture can only be:

- that SSPO member farms made very substantial improvement in the 2011 session – for which they are to be congratulated;

- the figures for the 2009-10 and 2010-11 sessions which S&TA have but have not disaggregated, must be worryingly bad if the average percentages they quote for the three year period to March 2012 are accurate – and SSPO have not denied that they are. This deduction – that the two year period in question must statistically show bad performance figures – is circumstantially supported by the fact that this information had to be extracted from SEPA under FoI.

The outstanding issue is that the Salmon and Trout Association has been consistently arguing for salmon farms in this country to move to a closed container system, showing evidence from Canada of the substantial reduction such a system has brought to the seabed pollution resulting from open cages.

Why does the SSPO not simply move to this closed container system, which will be more expensive but if the Canadian farms cited can prosper while using it, a refusal to do so simply puts the highest achievable profit levels above a due care for environmental protection.

It does have to be said that SEPA may have the title of environmental protector but its performance in its appointed role has not been without well substantiated failures to live up to its name.

These failures cover a range of issues, one of which at least also relates to an inappropriately favourable treatment of fish farms which it permits to shoot seals, regardless now of whether they are breeding or lactating, instead of requiring them to do as they are supposed to do and install and maintain adequate predator nets,

[6th September update] Response from Salmon and Trout Association

Solicitor, Guy Linley-Adams, is the author of the Salmon and Trout Association's [S&TA] analytic study whose results are contested above by Scott Landsburgh of the Scottish Salmon Producers organisation.

He has done as we asked and disaggregated the figures for the three year period of self-monitoring seabed pollution studies S&TA obtained under FoI from SEPA.

We have added these to the original article on the S&TA report - [**FoI disclosures lead Salmon and Trout Association to identify worrying seabed pollution at Scottish salmon farms**](#) – in order to keep all related information together.

Mr Linley-Adams has also unequivocally rebutted the position put forward above by the SSPO. He has also responded to what he has, rightly, assumed was the tenour of the material we chose not to publish, mentioned above.

We are including this part of the S&TA response here, since this is where it belongs.

Mr Linley-Adams says and the italicised emphases are ours):

‘Scott Landsburgh is not comparing like with like. He appears to be looking at the overall regulatory *compliance* assessment that SEPA does for fish-farms (which looks at all the various Controlled Activities Regulations conditions – including: ‘Did they keep the right

records ?' 'Did they report self-monitoring on time ?' 'Did they breach their permitted biomass ?' etc etc).

S&TA's report has looked *exclusively* at the *impact of organic pollution from the farms on the sea bed*.

Finally, although I do not want to get involved in some petty little row and have very thick skin, if he is suggesting that my personal Englishness bars me from commenting, then perhaps you could remind Scott that I am a Scots-qualified solicitor working for a Scots-registered charity.

'I hold a UK passport and am British-born (as I think is Scott) but, frankly, it would not make any difference if I was from the Moon.

My Englishness or not has nothing to do with this issue at all.

In fact, I have a fair proportion of Dutch and Jewish blood (and, yes, I do support Spurs....). Of course, there is undeniably history and 'banter' between Scots and English – that is a fact of life and can even be fun when it is meant with no ill will (for example, at the rugby) – but someone's Englishness, or indeed any different ethnicity or origin, should never be a point of abuse, or be used in a way to try to deny someone's legitimate involvement in debate of public interest.

'If I were to suggest that Scott could not involve himself in any matters south of the border, just because he was a Scot, I would rightly be condemned.

'As a lawyer, I will – indeed, many solicitors would argue that I am duty bound to by my professional codes of conduct - defend the right of anyone – including myself – quite irrespective of race, colour, creed, disability, sexuality etc. to take part in public debate in the UK. He should be careful to ensure he does not fall foul of the law.'

<http://forargyll.com/2012/09/scottish-salmon-producers-fight-back/>

For Argyll, 5 September 2012

FoI disclosures lead Salmon and Trout Association to identify worrying seabed pollution at Scottish salmon farms

Additional material below) The Salmon and Trout Association (S&TA) has today [5th September] published a comprehensive analysis of reports obtained from the Scottish Environmental Protection Agency under Freedom of Information (FoI).

This has established that levels of seabed pollution at almost two thirds of Scottish marine salmon farms are either 'unsatisfactory' or 'borderline' – according to SEPA's own categorisation.

The study reviewed 311 reports of seabed self-monitoring by farms between 2009 and March 2012.

Of these 137 (44%) were deemed by SEPA to be ‘unsatisfactory’ (‘beyond the assimilative capacity of the local environment’), 64 (21%) were ‘borderline’ (‘close to having an unsustainable impact’) and only 106 (34%) were ‘satisfactory’.

Hughie Campbell-Adamson, Chairman of S&TA Scotland, says: ‘This report is another damning indictment of the salmon farming industry. It is symptomatic of a systemic failure to control seabed pollution and throws into doubt whether the current expansion plans of the Scottish salmon farming industry in open-cage systems can ever be environmentally sustainable’.

Guy Linley-Adams, Solicitor to the S&TA Aquaculture Campaign and author of the analysis, says: ‘These findings are yet further evidence that open-cage salmon farming as practised in Scotland is inherently unsustainable.’

‘They support the S&TA’s conviction that the way forward over the medium-term is to move to closed containment units, from which all waste can be collected and treated or re-used in the same way as any terrestrial intensive food animal production factory unit would be required to do.’

‘They also reinforce for the need for the forthcoming Aquaculture and Fisheries Bill to deliver a robust approach to regulating the industry as suggested by S&TA and many other bodies in their various consultation responses. Under the current regulatory regime, it appears that the salmon farming industry is able to breach pollution guidelines with relative impunity. This cannot be allowed to continue’.

Paul Knight, CEO at the S&TA, says: ‘This report makes a mockery of the industry’s claims on packaging, websites and elsewhere that it always operates in harmony with the wider environment’.

The two companies with the highest percentage of ‘unsatisfactory’ reports are Wester Ross Fisheries Ltd (70 % ‘unsatisfactory’, 30% ‘borderline’ and 0% ‘satisfactory’); and Loch Duart Ltd (68% ‘unsatisfactory’, 26% ‘borderline’ and 6% ‘satisfactory’). Both of these are based in the north-west Highlands.

Wester Ross Fisheries Ltd was the winner of the Crown Estate’s Stewardship Award at the Scottish Marine Aquaculture Awards in 2011.

Its website declares that ‘all of our operations.....minimise our impact on the environment ensuring that we are producing the finest quality Scottish salmon in harmony with our environment’.

Loch Duart Ltd markets itself as ‘the Sustainable Salmon Company’ and its website states: ‘Best practice’ is the principle applied to Loch Duart salmon at every stage of rearing, harvesting and supply – a sustainable and environmentally-responsible approach’.

The company’s website’s ‘Where to eat our salmon’ section includes Gordon Ramsay at Claridge’s and Rick Stein’s Seafood Restaurant in Padstow.

Background

The [Salmon & Trout Association](#) (S&TA) was established in 1903 to address the damage done to our rivers by the polluting effects of the Industrial Revolution. For 109 years, the S&TA has worked to protect fisheries, fish stocks and the wider aquatic environment on behalf of game angling and fisheries. S&TA has charitable status in both England and Scotland. S&TA's charitable objectives empower it to address all issues affecting fish and the aquatic environment, supported by strong scientific evidence from its scientific network. Its charitable status enable it to take the widest possible remit in protecting salmonid fish stocks, and the aquatic environment upon which they depend.

Note: Here is the full report on this matter from the Salmon and Trout Association: [S&TA Report organic pollution report August 2012](#)

Additional material added on 6th September

As a result of a response to this by Scott Landsburgh of the Scottish Salmon Producers Organisation, we asked the Salmon and Trout Assotition to clarify the position advanced in their study of the salmon farms' self-monitoring reports on organic pollution of the seabed.

We suggested that it would be helpful if they disaggregated the annual figures in the three years of data they report on in the summary above, which, as reported above, they extracted from SEPA under FOI.

The S&TA did so at once, through the author of the report above, solicitor, Guy Linley-Adams. His response is below and it does nothing to weaken the impact of what has been quoted above, from the analytic study of the FoI documents.

He says:

I have disaggregated the data into 2009, 2010 and 2011.

'The percentages are:

Year	No of surveys	Unsatisfactory	Borderline	Satisfactory
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2009	118	46%	23%	29% (2% others)
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2010	108	45%	17%	37% (1% other)
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2011	85	40%	22%	38%
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So the years show little difference, perhaps some evidence of a slight improvement in 2011, but this may just be the result of a number of farms moving to site specific AZEs, thereby improving compliance without necessarily making changes to on-farm fish biomass or feeding practices.

<http://forargyll.com/2012/09/foi-discosures-lead-salmon-and-trout-association-to-identify-worrying-seabed-pollution-at-scottish-salmon-farms/>

Fish News EU, 5 September 2012

“Sustainable” salmon farms under fire

AN ANGLING organisation has revealed today that levels of seabed pollution at almost two thirds of Scottish marine salmon farms are either “unsatisfactory” or “borderline” and that the two main culprits were two companies most lauded for their environmental stewardship.

The information was obtained from SEPA by the Salmon and Trout Association (S&TA), who reviewed 311 reports of seabed self-monitoring by farms between 2009 and March 2012. Of these 137 (44%) were deemed by SEPA to be “unsatisfactory” (“beyond the assimilative capacity of the local environment”), 64 (21%) were “borderline” (“close to having an unsustainable impact”) and only 106 (34%) were “satisfactory”.

The two companies with the highest percentage of “unsatisfactory” reports are Wester Ross Fisheries Ltd (70% “unsatisfactory”, 30% “borderline” and 0% “satisfactory”) and Loch Duart Ltd (68% “unsatisfactory”, 26% “borderline” and 6% “satisfactory”), both based in the north-west Highlands.

Wester Ross Fisheries Ltd was the winner of the Crown Estate’s Stewardship Award at the Scottish Marine Aquaculture Awards in 2011. Its website declares that “all of our operations...minimise our impact on the environment, ensuring that we are producing the finest quality Scottish salmon in harmony with our environment”.

Loch Duart Ltd markets itself as “the Sustainable Salmon Company” and its website states: “Best practice is the principle applied to Loch Duart salmon at every stage of rearing, harvesting and supply – a sustainable and environmentally-responsible approach.” The company’s website’s “Where to eat our salmon” section includes Gordon Ramsay at Claridge’s and Rick Stein’s Seafood Restaurant in Padstow.

Hughie Campbell-Adamson, Chairman of S&TA Scotland, said: “This report is another damning indictment of the salmon farming industry. It is symptomatic of a systemic failure to control seabed pollution and throws into doubt whether the current expansion plans of the Scottish salmon farming industry in open-cage systems can ever be environmentally sustainable”.

Guy Linley-Adams, Solicitor to the S&TA Aquaculture Campaign and author of the analysis, said:

“These findings are yet further evidence that open-cage salmon farming as practised in Scotland is inherently unsustainable. They support the S&TA’s conviction that the way forward over the medium-term is to move to closed containment units, from which all waste can be collected and treated or re-used in the same way as any terrestrial intensive food animal production factory unit would be required to do.

“They also reinforce the need for the forthcoming Aquaculture and Fisheries Bill to deliver a robust approach to regulating the industry as suggested by S&TA and many other bodies in their various consultation responses. Under the current regulatory regime, it appears that the

salmon farming industry is able to breach pollution guidelines with relative impunity. This cannot be allowed to continue”.

Paul Knight, CEO at the S&TA, added: “This report makes a mockery of the industry’s claims on packaging, websites and elsewhere that it always operates in harmony with the wider environment”.

http://www.fishnewseu.com/index.php?option=com_content&view=article&id=8876:sustainable-salmon-farms-under-fire&catid=45:scottish&Itemid=54

Salmon & Trout Association, 5 September 2012



Seabed pollution at almost two thirds of Scottish salmon farms is either ‘unsatisfactory’ or ‘borderline’, analysis of FOI information reveals

The Salmon and Trout Association (S&TA) has today published a comprehensive analysis of reports obtained from SEPA under FOI, establishing that levels of seabed pollution at almost two thirds of Scottish marine salmon farms are either ‘unsatisfactory’ or ‘borderline’, according to SEPA’s own categorisation.

The study reviewed 311 reports of seabed self-monitoring by farms between 2009 and March 2012. Of these 137 (44%) were deemed by SEPA to be “unsatisfactory” (“beyond the assimilative capacity of the local environment”), 64 (21%) were “borderline” (“close to having an unsustainable impact”) and only 106 (34%) were “satisfactory”.

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ENDS

Attached: [S&TA Organic Pollution Report August 2012 pdf](#)

Issued on behalf of the Salmon & Trout Association Scotland by Andrew Graham-Stewart (telephone 01863 766767 or 07812 981531).

For further information contact:

Guy Linley-Adams, Solicitor to the S&TA Aquaculture Campaign, on 07837 881219 or E: guy@linley-adams.co.uk

Note to Editors

The Salmon & Trout Association (S&TA) was established in 1903 to address the damage done to our rivers by the polluting effects of the Industrial Revolution. For 109 years, the S&TA has worked to protect fisheries, fish stocks and the wider aquatic environment on behalf of game angling and fisheries. S&TA has charitable status in both England and Scotland. S&TA's charitable objectives empower it to address all issues affecting fish and the aquatic environment, supported by strong scientific evidence from its scientific network. Its charitable status enable it to take the widest possible remit in protecting salmonid fish stocks, and the aquatic environment upon which they depend. www.salmon-trout.org

S&TA Scotland, Greathill House, Stirling FK7 9QS

http://www.salmon-trout.org/news_item.asp?news_id=227

The Chronicle Herald, 5 September 2012

N.S. aquaculture group heads to Ireland on organic fish farming trip

By [JOANN ALBERSTAT Business Reporter](#)



A 15-member group from Nova Scotia's aquaculture industry is travelling to Ireland to learn about organic fish farming. (RYAN TAPLIN / Staff)

A 15-member delegation from Nova Scotia's aquaculture industry is headed to Ireland to learn about organic fish farming.

The group, which leaves Saturday, will spend three days visiting aquaculture operations around the country and another two days taking part in training sessions with a company that specializes in organic certification.

“Ireland is a world leader in organic aquaculture production,” Bruce Hancock, executive director of the Aquaculture Association of Nova Scotia, said in an interview Wednesday.

“It’s not that Ireland has one or two companies that have this. A big part of their industry, from what I understand, has gone this route.”

Nine aquaculture operations across the province are taking part in the weeklong trip, including: Scotian Halibut Ltd., Cape North Mussels Ltd., North River Fish Farms, Snow Island Salmon, Cold Water Fisheries/Ocean Trout Farms Inc., Apaqtukewag Fishery, Atlantic Aqua Farms Partnership, Louisbourg Seafoods Ltd. and Premium Seafood Group.

Universite Sainte-Anne, the provincial Economic and Rural Development and Tourism Department, Enterprise Cape Breton Corp. and the aquaculture association will also be represented.

The \$55,000 cost of the trip is being shared by the province, Ottawa and the companies.

Hancock said the Irish visit builds on a cost-benefit study the association did two years ago that concluded there is potential for more organic fish farming in this province.

“Our members are small- and medium-sized operators,” said the executive director, part of the delegation. “It’s really important for them to try to differentiate themselves in the marketplace.”

Some members already use organic methods, including finfish and shellfish operations, he said.

While in Ireland, delegates will receive training about the organic standards adopted by the Canadian aquaculture industry earlier this year.

The workshop will be conducted by Global Trust Certification, an Irish firm that specializes in training and certifying companies to meet industry standards for organic production and environmental sustainability.

“A year or two ago, if you wanted to farm organically, you would have had to borrow somebody’s standards from another part of the world,” Hancock said. “Now we have Canadian standards that we can follow.”

He said he doesn’t expect all the companies taking part will become certified organic operations. But he does expect some will adopt the fish farming techniques they learn about in Ireland.

“I’m proud of our members, that they’re showing so much interest in this.”

(jalberstat@herald.ca)

<http://thechronicleherald.ca/business/132992-ns-aquaculture-group-heads-to-ireland-on-organic-fish-farming-trip>

The Vancouver Sun, 5 September 2012

Salmon farmers are passionate about protecting environment

Re: Farmed salmon are a threat to B.C. wild salmon, Letters, Aug. 31

When salmon farmers in British Columbia say they produce a safe, healthy product in a sustainable way, they're stating facts supported by years of research.

Elizabeth Fendley's letter unfortunately is an example of people repeating misinformation about our farmers and the excellent salmon they raise.

No growth hormones are used in the salmon farming and farm-raised salmon are among the best converters of feed in the world (about 1.2 kg of feed is used for 1 kg of salmon - far less than the nearly three kg stated in Fendley's letter).

Farm-raised salmon host no pathogens that are not already found in wild fish and there has been no colonization of our fish in B.C. rivers. These are just a few of the errors in her letter.

On top of the good work they're doing on the farms, our members are working hard to educate people about aquaculture, and correct misinformed statements like those published in The Sun this week. Among the many sources, are bcsalmonfacts.ca Salmon farmers are residents of coastal B.C. who share the passion for protecting our natural environment.

We are proud of what's been accomplished by working with scientists, First Nations, environmental groups and local communities - and we're excited about what's to come.

Mary Ellen Walling BC Salmon Farmers Association

<http://www.vancouversun.com/opinion/Salmon+farmers+passionate+about+protecting+environment/7191680/story.html>

Campbell River Mirror, 4 September 2012

Local company's product served at US Open

By Kristen Douglas

Competitors, staff, trainers, and guests at this year's US Tennis Open will get a little taste of Vancouver Island.

Grieg Seafood, a Campbell River-based fish farm company, is the exclusive salmon provider for the tournament thanks to its Skuna Bay Salmon product.

Skuna Salmon will be on the private catering menu for players, staff, VIPs, and sponsors, and will be offered through concessions and other food outlets at the tournament which began Aug. 27 and ends Sept. 9 in Flushing Meadows, NY.

“It’s incredibly exciting for us,” said Dave Mergle, director of Skuna Bay Salmon, from his home base in Coquitlam.

“The US Open is almost the pinnacle in terms of customer experience. They only select the best products for their guests over the two week period. For us to be chosen as the exclusive salmon is pretty thrilling for sure.”

But it almost didn’t happen.

Skuna Salmon, which has been gradually expanding across North America, arrived in New York City in June.

Mergle had the opportunity to meet with a top chef in the city, Ed Brown, who also happened to be a menu consultant to the US Open.

“We showed him the fish and he really loved it,” Mergle said.

“At that point they had already printed the menus for the Open but he was so impressed that he was intent on getting the Skuna Bay Salmon at the Open.

They actually re-printed all the menus so all the salmon that’s served is exclusively from Vancouver Island.”

Brown said the special way in which Skuna Salmon is packed and shipped caught his eye.

“Skuna Bay provides consistently high standards for great salmon and after visiting the farms personally and observing how their salmon are craft raised with every detail considered before being sent to us in New York, I can see why they are able to achieve such consistently great quality,” Brown said. “We are proud to be serving Skuna Bay Salmon at this year’s US Open.”

It’s attention to the details that sets Skuna Bay Salmon apart.

“We always harvest in small batches and we only have six people trained to select the fish, which have to meet a certain criteria,” Mergle said. “Then we hand clean each salmon and remove every innard possible.”

The salmon are then submerged in a sea-water bath to give the fish a nice sheen. Then the salmon are bellied-iced and packaged. The name of the farmer who selected the fish is stickered on the box, giving it the seal of approval. Mergle said after the fish are shipped, the only person that touches the fish is the chef that will be preparing it.

<http://www.campbellrivermirror.com/business/168525076.html>

Sea lice still costing salmon industry a fortune



By *Nicki Holmyard*, *SeafoodSource* contributing editor

Aquaculture now makes up more than 50 percent of world seafood consumption and this figure needs to increase even further in order to meet future demand from a population that is growing both in number and in buying power. A host of farmed species are now under production, but none are without their issues, and salmon seems to have more than its fair share.

Long the target of attack from environmental NGOs, the global salmon industry continues to strive to improve both its environmental credentials and the quality of production. However, a major issue remains in the form of sea lice (*Lepeophtheirus salmonis* and *Caligus* spp), which have a significant effect on many areas of production. Their economic impact has been estimated at EUR 0.1 — EUR 0.2 per kilogram of salmon produced, with total losses of around EUR 300 million per year.

Since the birth of the industry in the 1970s, chemotherapeutants have been the main method of control, but reduced efficacy is now a problem with many of these. In Chile, for example, the development of resistance to one treatment resulted in extensive mortalities, financial loss and increased incidence of additional diseases.

Research has been undertaken with “cleaner fish” such as wrasse for a number of years, but with limited enthusiasm from industry and concern from environmentalists about the capture of large numbers of wrasse from the wild. However, several recent multi-million Euro projects have shown that a biological approach using farmed wrasse could provide the answer to this significant problem.

To put the scale of future wrasse production in context, Scottish salmon producers estimate their need to be around 2 million fish per year and in 2010, just 5,000 were produced.

Alastair Barge, MD of Otter Ferry marine hatchery, which is well known for its halibut production, is undertaking a wrasse project in collaboration with the Scottish Salmon Company, Meridian Salmon Group and marine landlords The Crown Estate. He is concentrating on Ballan wrasse (*Labrus bergylta*), which grow to the most convenient size for use with adult salmon in sea pens, according to Barge. “There are many factors to consider, not least of which are the mesh size of the fish pen and the appetite of the wrasse for sea lice,” he said.

Otter Ferry currently has around 12,000 fish from a first trial production, which Alastair explained was just enough to “clean” one sea site. His aim is to scale production up to 200,000 fish per year, to provide one-tenth of industry’s requirements, but there are many challenges to overcome on the way.

Nutrition, temperature and gender balance are just three of the areas under scrutiny and project manager David Patterson explained that the latter is currently the most puzzling.

“These fish have a complex social hierarchy which we are trying to understand, and display behavior in which females can become dominant and switch gender. The trick is to get the numbers right in each tank but at present it is still trial and error,” he admitted. “We brought in three new brood males this year to ensure a good supply of fertilized eggs, but they have failed to impress our ladies so far and we don’t know why, but it is all part of the research process!”

Brood wrasse enjoy a varied diet of fresh fish, but juveniles are weaned within six weeks of hatching through copepods and artemia, onto a proprietary feed produced by Skretting and Biomar.

The fish need to be grown in a contained environment for 1.5 to 2 years until they reach 15 centimeters long, at which point they are large enough to be placed in salmon pens to start work. This final stage of the process is also the subject of much research, with protocols for deployment, removal and management of wrasse in the pens being developed.

For Barge, each milestone passed in the hatchery is another step towards resolving the sea lice issue. “I share a universal hope that cleaner fish may eventually provide salmon farmers with a vital new biological tool, and I am very pleased to be part of the development process,” he said.

<http://www.seafoodsource.com/newsarticledetail.aspx?id=17655>

The Chronicle Herald, 4 September 2012

Fishermen oppose Jordan Bay fish farm proposal

Brian Medel

A group of Shelburne County lobster fishermen say they’re rejecting a proposal to put two fish farms in Jordan Bay.

In a news release issued Tuesday, the group said they’re not waiting for Fisheries and Aquaculture Minister Sterling Belliveau to make a decision; they’re rejecting the plans put forward by Cooke Aquaculture Ltd.

Fisherman Ricky Hallett said he and others who fish the bay based their decision on details provided in a recent Fisheries and Oceans Canada report.

“It basically confirmed what fishermen have been telling the minister for almost two years now,” Hallett said. “Jordan Bay is too shallow and the currents are too weak for open-pen fish farming.”

Based on figures from the federal report, he said the proposed sites would become heavily polluted in about 15 months.

“Why the (provincial fisheries department) is still considering this proposal is a total mystery,” he said.

Currently, there are about 150 jobs in fishing and Irish moss harvesting in Jordan Bay, industries that depend on the bay remaining clean, said fisherman David Hallett.

“They don’t care about our livelihoods or they would not risk putting us out of work,” fisherman John Acker said of the provincial government.

On Tuesday, Brett Loney, spokesman for the provincial fisheries and aquaculture department, said the proposal put forward by Cooke is still being assessed and no decision had been made by the provincial government.

Kelly Cove Salmon Ltd., a division of Cooke Aquaculture, has applied for a 40-hectare, multi-cage site in the Blue Islands area of Jordan Bay. A similar 40-hectare, multi-cage site is being sought in another part of the bay.

The dimensions for each site would be 800 metres by 500 metres, according to documents submitted to government by Cooke.

The company’s stocking plans for the proposed sites show two scenarios, one with 550,000 fish and the other with 700,000. More than 20,000 fish would be placed in each of many cages to be anchored at the site.

No one from Cooke was available for comment Tuesday.

bmedel@herald.ca

<http://thechronicleherald.ca/business/132668-fishermen-oppose-jordan-bay-fish-farm-proposal>

Here’s the press release in full:

COMMUNITY REJECTS FISH FARM PROPOSAL BASED ON DFO SCIENCE

Sept. 4, 2012

JORDAN BAY, NS - Fishermen and residents of Jordan Bay, NS are not waiting for a decision from Fisheries and Aquaculture Minister Sterling Belliveau regarding a proposal for 2X100 acre fish farms for the area. The community has rejected the proposal outright.

"We based our decision on information provided by DFO in the Federal Screening Report done for Jordan Bay. It basically confirmed what fishermen have been telling the Minister for almost 2 years now - Jordan Bay is too shallow and the currents are too weak for open pen fish farming," says life-long lobster fisherman Ricky Hallett, " Based on DFO's figures, the sites would become heavily polluted in about 15 months making them neither economically or environmentally sustainable. Why the NSDFA is still considering this proposal is a total mystery."

Jordan Bay is a known lobster breeding area. For years, fishermen have been asking the Minister for answers regarding what impacts fish farm chemicals and raw sewage would have on the lobster fishery and irish moss harvest and the jobs they provide. The NSDFA has never answered a single question. Minister Belliveau, the MLA for Shelburne County, refused to meet with fishermen and residents of Jordan Bay to discuss the screening report.

“They don’t care about our livelihoods or they would not risk putting us out of work. The only guarantee is that the present marine environment will be negatively changed forever as open net pen feedlots are allowed to expand,” notes John Acker, lobster fisherman from Jordan Bay.

Open pen aquaculture is being imposed upon the Jordan Bay community, against the wishes of fishermen and residents. Other types of aquaculture, such as shellfish and closed-containment that are more environmentally friendly were never considered as options by the NSDFA, even though the community was open to these alternatives. The information provided by DFO in the screening report shows that large areas of the bays habitat would be destroyed by the waste from the open pens.

“Our government promotes open pen aquaculture and fishermen pay the price. I look at things from the bottom up. The first fact about open net pen fish farming is the dumping of tonnes of fecal matter that destroys fish habitat. What other industry would be given permission to dispose of raw sewage in our coastal waters?” asks Francis Stewart, fishermen from Jordan Bay.

The provincial government allows proponents, such as Cooke Aquaculture, to choose the location of industrial aquaculture sites. Even prime lobster fishing areas can be chosen.

Jordan Bay lobster fisherman David Hallett is gravely concerned with the threat that the pollution from industrial aquaculture sites poses to traditional fisheries jobs . "Right now we have 150 jobs that depend on the bay being clean and healthy - we want to protect what we have. Neither DFO or the NSDFA can tell us what would happen to the lobster fishery and irish moss harvest if tons of sewage and chemicals are dumped into a pristine habitat - why would any community accept such a low standard from government ? We expect the Minister of Fisheries to support the fishermen here and reject these lease proposals since DFO has now provided the science."

The Minister has dismissed concerns raised about disease outbreaks (ISA) that seem to plague the open pen industry, calling it "business as usual", despite the huge costs to taxpayers. The NSDFA also has not addressed the high levels of heavy metal contamination at a fish farm site in Port Mouton Bay, allowing the site to be restocked. Even sites in deeper water, such as in St. Mary's Bay, are polluted.

“Everybody in the government can’t be that stupid,” says Jordan Bay lobster fisherman William Acker. “Scientists tell us about the pollution under the cages, and the government pays no heed. The Cooke occupation of Jordan Bay will be no different than the mess in Shelburne Harbour. “

For more information please contact:
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Francis Stewart 902 656-3278

William Acker 902 875-1012
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David Hallett 902-656-3395

The Fish Site, 4 September 2012

Record Algae Blooms Linked to Fish Farms

IRELAND - Record toxic algae blooms continue to close shellfish harvesting in the south west of Ireland are caused in part by the waste from fish farms. The local action group set up to oppose the expansion of fish farming, Save Bantry Bay, has drawn attention to the fact that fish farms are responsible for far more nitrogen and phosphorous in our coastal waters than sewage from major towns.

Using statistics contained in the Environmental Impact Statement for the proposed Marine Harvest salmon farm in Shot Head Bantry Bay, SBB points out it will discharge the equivalent nutrients of a town ten times the size of Bantry itself.

Bantry, Glengarriff, Gearhies, Adrigole, Castletownbere, Ardgroom, Kilmakilloge and Dunmanus shellfisheries are all included in the most recent closure notices from the Marine Institute due to the danger of contaminated produce. Some of these closure orders have been in place for almost three months. Toxic algae blooms are fed by excessive nutrients entering the water.

The charge is supported by numerous scientific studies, including UNESCO reports which confirm that fish farms can make localised blooms worse. Unlike on land where controls would be required, these farms discharge the fish faeces directly into the open marine environment.

The Marine Institute has issued continual warnings this summer as there is a real risk to human health for those who harvest wild shellfish. Many visitors to these polluted areas are unaware of the problem as there may be no visible sign of the algae blooms.

In 2008, the harvesting of mussels in Bantry Bay by one company led to a product recall in three countries and severe illness in more than 300 people in France and America. Such situations can have a devastating effect on the reputation and profitability of seafood products as well as damaging Ireland's international 'green' image.

SBB supports fish farming but only in Closed Containment Systems. These systems allow total control of all inputs and outputs. All waste is collected and treated, and the sea does not become polluted. A scoping letter was recent issued by the operators of the first proposed commercial scale closed containment salmon farm in Europe which is proposed for Bantry Bay.

In a statement issued on the release of the last closure orders by the Marine Institute, SBB said "While fish farming is not the only cause of the record breaking blooms, the scientific evidence makes it clear that open pen fish farming in these Bays with their poor circulation of water must come to an end".

The question is, will Ireland's government take note and become the leader in the next generation of fish farming technologies or will the Department of Fisheries current proposals for more than 300 per cent expansion continue, fuelling further algae blooms with the risks to health and Ireland's reputation?

<http://www.thefishsite.com/fishnews/18125/record-algae-blooms-linked-to-fish-farms>

Irish Times, 4 September 2012

The future of fishing

Sir, – Richie Flynn of the IFA writes (August 31st) of an “inexplicable delay” in the State processing aquaculture license applications. The delay has been explained again and again to him by the Minister for the Marine, Simon Coveney.

Salmon farming is a highly polluting industry, with nitrogen and phosphate loads discharging directly into our western coastal bays.

The proposed salmon farm in Bantry Bay would have a discharge (nitrogen and phosphorous) equivalent to the sewage of a town 10 times the size of Bantry, in spite of the fact that a local authority-commissioned tidal study in 1989 showed that in Bantry Bay, “during prolonged periods of calm weather complete flushing would [take] at least 1-2 months”.

The “offshore super-salmon farm” proposed for Galway Bay would have a sewage equivalent of more than twice the population of Galway city.

Nutrient enrichment can fuel toxic algae blooms, which have cost the shellfish industry dearly and for which many bays are regularly closed to harvesting every summer.

Salmon farming near the rivers where our native salmon spawn damages their survival rates through sea lice infestations from the open pen cages.

The EU habitats directive requires baseline studies and environmental impact statements. Licensees can be granted only if the project will not have adverse impacts on protected species and habitats.

As the Minister told the Seanad in January, “the way in which we provided aquaculture licences in the past was not up to scratch. The European Commission took a case against Ireland and won it. We are now being forced to put in place a gold-plated licensing system.”

If Richie Flynn and the IFA wish to see aquaculture progress in a coherent and efficient manner, they should support the Environmental Protection Agency and Ireland's environmental NGOs, which are calling for a strategic environmental assessment of the Food Harvest 2020 plan to increase the already stressed farmed salmon production by an astonishing 300 per cent. – Yours, etc,

TONY LOWES,

Friends of the Irish Environment,

Kilcatherine,

Eyeries,

Co Cork.

<http://www.irishtimes.com/newspaper/letters/2012/0904/1224323573364.html>

Irish Examiner, 3 September 2012

Peninsula bids to halt fish farms' expansion

By Claire O'Sullivan

Up to 7,000 homes in the Beara Peninsula have been targeted by a voluntary group campaigning to prevent the expansion of Marine Harvest's fish farms in Bantry Bay.

In leaflets distributed by An Post, a Save Bantry Bay action committee has highlighted the problems of pollution in the bay through the poor circulation of water.

The group has claimed the projected waste from the fish farm would be equal to sewage from a town 10 times the size of Bantry.

Local resident Breda is quoted on the leaflet as saying it is "unbelievable that you can have what is essentially a floating battery farm and the Government will allow the waste to be dumped straight into the water. A farmer would never be allowed to do this on land."

The campaign also links the increased nutrients to algae blooms that have caused serious problems in the local shellfish industry in recent years.

Local fisherman Kieran is also quoted as pointing out that his family fished around Shot Head, the proposed location for the new farm, for three generations and that the project threatens local fishermen's viability through the loss of trawling grounds to a non-Irish corporation.

The group says research shows that wild salmon populations typically plummet to half their previous levels when salmon farms operate nearby.

The leaflet also quotes Chloe, who regularly visits Adrigole, as saying that if "fish farming goes on like this, an alternative holiday spot will be more attractive".

There has been sharp opposition in Bantry to plans to develop a 12-14 cage 3.5m organic salmon fish farm at waters near Traflask in Adrigole.

Save Bantry Bay has urged Marine Harvest and the Department of Agriculture to consider moving the operation into a closed container system such as that planned by Niri AS for Bantry.

Marine Harvest wants to develop the 100-acre fish farm at Shot Head, and has lodged an application for a foreshore and aquaculture licence with the Department of the Marine, where it is currently being examined.

A public consultation process was held in advance of the licence application. It is not known when the final decision will be reached.

David Millard, Bord Iascaigh Mhara regional development officer in West Cork, has steadfastly argued that Marine Harvest, which operates a fish farm in Beara, has "a good environmental and safety record" in West Cork.

"I understand why people might be worried but the application for aquaculture and foreshore licences are a strictly controlled process and Marine Harvest are following it to the letter of the law," said Mr Millard.

"The project will be regulated and monitored by the Marine Institute."

<http://www.irishexaminer.com/ireland/cwaugbkfgbgb/rss2/>

Marlborough Express, 3 September 2012

Farms will disrupt sounds character

The natural character of the Marlborough Sounds sites where New Zealand King Salmon plans to develop nine new fish farms should be valued from the seabed to the mountain tops, Department of Conservation official Andrew Baxter says.

"Environments from reefs to sand and mud have a part in forming an area's natural character," Mr Baxter said this morning.

He was giving evidence to the Environmental Protection Authority board of inquiry, supporting his stance that nine new fish farms in the Marlborough Sounds would disrupt the natural character of the Sounds.

NZ King Salmon has applied for consent to develop the new farms in areas prohibited under the Sounds management plan.

Mr Baxter said landscape architects described landscapes from the surface of the sea but the board should look at the bigger picture.

"The idea of the whole is greater than the sum of parts." The board had the difficult job of putting together a jigsaw of disciplines, including his area of marine ecology, he said.

Board commissioners Mark Farnsworth and Edward Ellison suggested this approach was a work in progress.

Mr Farnsworth asked whether it would be difficult to value underwater landscapes which could not be seen.

Mr Baxter said this way of looking at landscapes was not new but it was early days for integrating it into planning. There was enough information around, often gathered as part of marine farming applications, to accurately describe marine environments, he said.

Mr Baxter acknowledged that dredging for scallops had already damaged relatively flat areas no deeper than 60 metres. The sites applied for by King Salmon were mostly in deep water with a sloping seabed.

<http://www.stuff.co.nz/marlborough-express/news/7602922/Farms-will-disrupt-sounds-character>

Nelson Mail, 3 September 2012

Salmon farming research backed

Penny Wardle

New Zealand King Salmon has backed its application to build nine new salmon farms in the Marlborough Sounds with thorough and methodical research, said marine biologist Rob Davidson.

He told an Environmental Protection Authority hearing in Blenheim that development placed pressure on the environment, but saying no to everything was not the answer.

Information supporting King Salmon's expansion plans gave him confidence this could be done with no risk to significant Sounds species.

King Salmon measures environmental effects using a scale from one for near-pristine to seven for very degraded. New sites would be farmed to a maximum of five, where the number of worms under the farms peaked.

Last week, lawyer Julian Ironside, who acts for Pelorus Wildlife Sanctuaries, which opposes the expansion, suggested three would be a better maximum for these quite pristine sites.

But Mr Davidson said farming to this level was achievable, but not economically viable or appropriate. The mud and shell habitat under proposed farms was common in the Sounds and not threatened or unusual.

King Salmon expert Nigel Keeley of research company Cawthron said farming to even four on this scale would cut fish production by 40 to 50 per cent.

Questioned by King Salmon lawyer James Gardner-Hopkins, Mr Keeley said eight of the sites applied for were in high flow areas where waste would quickly flush away.

Questioned by board member Edward Ellison, Mr Keeley agreed the seabed beneath existing King Salmon farms rotated every three years and did not fully recover in that time. Sites could be more impacted each time the farm returned, which might not be sustainable.

In response to Sustain Our Sounds lawyer Warwick Heal, Mr Keeley agreed that he co-wrote a report advising against rotation and fallowing.

Mr Heal asked whether Mr Keeley was aware that in Tasmania, pollution from a salmon farm was not allowed to accumulate more than 35 metres from its boundary compared with the up to 900m footprint King Salmon was applying for.

Board member Helen Beaumont said that under draft conditions proposed by King Salmon, if a farm breached standards it must comply within 24 months. What would Mr Keeley think of this being changed to 80 per cent of samples complying in 24 months?

This provided the flexibility needed because farms could not immediately drop stock and also provide certainty they would not be managed beyond compliance, then flipped back on time for monitoring, Ms Beaumont said.

Mr Keeley said this would not work because samples were taken only once a year. However, he supported an immediate response to fix problems.

<http://www.stuff.co.nz/nelson-mail/news/7601214/Salmon-farming-research-backed>

Afloat, 2 September 2012

Statutory Consultation Underway for Galway Bay Salmon Farm Licence

Bord Iascaigh Mhara (BIM) has begun the process of statutory consultation as the next step in its licence application for the controversial proposed deep-sea fish farm in Galway Bay.

As previously reported on Afloat.ie at the end of June, Ireland's fisheries board had announced a "significant delay" of four to six weeks before publishing the licence application.

But in a recent statement, BIM announced that it received permission some weeks ago from the Department of Agriculture, Food and the marine to begin the statutory consultation process, in which it is sharing the licence application and Environmental Impact Statement "with a list of State bodies for their appraisal and feedback".

The statutory consultation will continue till Tuesday 2 October 2012, and BIM promises that all feedback will be made available to the public via the BIM website "to further assist them in their assessment of the Environmental Impact Statement when it goes to full public consultation".

The 15,000-tonne organic salmon farm would be located off Inis Oírr in the Aran Islands on a 500-hectare site, and would be one of the largest of its kind in Europe, projected to be worth €03 million annually for the economy.

BIM intends to franchise the licence, should it be approved, to a third party "who agrees to a legally binding contract to farm the Atlantic salmon to the highest organic and environmental standards". Approval of the project could also see the creation of as many as 500 jobs, some 20% more than previously estimated.

The news comes after the ministerial approval of salmon farm licence assignments from five separate operators in nearby Connemara, designed to "consolidate and revitalise" aquaculture in the region.

But the Aran Islands scheme has faced opposition from local anglers who fear that the fish farm could have a detrimental effect on wild salmon numbers.

Explaining BIM's plans for the consultation process, the statement added: "Previously, both statutory and public consultation would have been carried out in parallel. However, Ireland has recently (June 2012) ratified the Aarhus Convention. The convention lays down rules to promote citizens involvement and to improve public consultation in the making of decisions with potential environmental impact by the state.

"Given the recent ratification of the Convention and for a number of other legal and technical reasons, the Minister for Agriculture, Food and the Marine, Simon Coveney TD, has signed a new Statutory Instrument (SI No 301 of 2012), bringing into law new periods of public consultation for fish farm licence applications. In this instance the Department of Agriculture, Food and the Marine have instructed BIM to carry out statutory consultation in full before proceeding with public consultation.

"BIM believes that this approach will help to further inform the public during their period of consultation."

<http://afloat.ie/port-news/fishing/item/19787-statutory-consultation-underway-for-galway-bay-salmon-farm-licence>

The Telegram, 31 August 2012

Fisheries Minister misleading on aquaculture

This letter is in response to the letter to the editor by Fisheries and Aquaculture Minister Darin King, which appeared in The Telegram on Aug. 16, headlined "Anti-aquaculture group doing the misleading.

"Firstly, the Atlantic Salmon Federation (ASF) is very pro-aquaculture but we insist that it be done sustainably. The open net pen aquaculture industry is not environmentally sustainable, therefore ASF, in partnership with the Conservation Fund Freshwater Institute, is investing in developing the technology to grow salmon in land-based freshwater closed containment facilities.

Mr. King failed to mention that ISA outbreaks have cost Canadian taxpayers close to \$100 million in compensation provided to fish farms in Eastern Canada since the first epidemic in

1996 in New Brunswick.

Muddying the waters

Mr. King's insistence that the strain is not the same strain as that found in N.B. seems to be an attempt to deflect the reader's attention from the actual point. ISA outbreaks, whatever the strain, are linked to salmon aquaculture operations and not epidemics occurring in the wild.

Outbreaks tend to occur when fish are stressed, conditions that usually occur in aquaculture open net pens due to overcrowding, poor water quality, excessive handling, blood water, introductions from other sites, secondary infections and compromised immune systems.

The minister said the Butter Cove incident of ISA was handled well.

This is disturbing since it took more than a month to remove the farmed salmon from the water — lots of time to spread the virus.

This shows lack of government oversight and lack of emergency planning by industry. The auditor general of Newfoundland pointed out these types of problems in several assessments of salmon aquaculture practices.

False statement

The minister actually states that, "The negative environmental impact of land-based fish farming is significantly higher."

This is not true. The latest technology uses greater than 99 per cent water recirculation and waste reuse, unlike the open net pens where all waste and chemicals go untreated into the surrounding ocean environment.

Land-based salmon farming does not use harsh chemicals, vaccines or antibiotics, and there are no escapes.

Our demonstration project had excellent water quality, no disease or parasites, and the salmon were marketed nine months sooner than net pen industry salmon. Taste tests have received rave reviews from chefs and consumers who recognize the need for product that environmentally aware people are demanding these days.

As far as economic sustainability, we project operational costs to be comparable to the net pen industry and we are working at reducing startup costs.

We believe that the overall cost of doing business will be comparable to net pens, but with a healthier, better-tasting and environmentally sustainable product. Entrepreneurs who are currently getting into the business on a commercial scale of 2,000 to 3,000 metric tonnes will

determine the true economics.

No true cost of growing salmon in open net pens exists because hidden costs are not taken into account, including sea lice treatment and research by industry and governments that cost millions annually, disease compensations in the millions, current subsidies by government and taxpayers and the loss in income from other industries, such as tourism, and commercial and recreational fisheries that are negatively impacted by open net pen aquaculture.

Closed containment aquaculture has no such hidden costs.

In October, ASF and the Conservation Fund Freshwater Institute will host a workshop in St. Andrews, N.B. on land-based, closed containment salmon farming, focusing on the latest technological advances, government perspectives, and pilot and commercial scale project updates.

I hope that the minister and his staff will attend so they can see and learn first-hand the latest technology and advancements in land based, closed containment salmon farming.

Bill Taylor is president and CEO of the Atlantic Salmon Federation.

<http://www.thetelegram.com/Opinion/Letters-to-the-editor/2012-08-31/article-3064860/Fisheries-minister-misleading-on-aquaculture/1>

The Vancouver Sun, 31 August 2012

Farmed salmon are a threat to B.C. wild salmon

Re: B.C. farmed salmon on menu at U.S. Open tournament, Aug. 29

Skuna Bay's director, Stewart Hawthorn, asserts that farmed Atlantic salmon pose no risk to resident salmon species, a claim which has been proven dangerously wrong in Norway, New Zealand and Canada.

Farmed fish from ocean pens require the importation of three to six pounds of feed to produce a pound of salable fish.

They are plumped up with growth hormones and antibiotics which are detectable in their meat.

Their nets catch and drown marine mammals.

They carry sea lice and several other deadly pathogens which have been found to spread to migrating natural stocks.

Escapement continues to be a problem and once free these fish out-pre-date native salmon and have in fact established themselves in local habitats, to the exclusion of B.C. salmon species.

These are scientific facts, verified by many credible sources.

No amount of personal care, hand processing, or fancy packaging will make farmed salmon an ecologically friendly choice.

It is irresponsible in the extreme to propose otherwise.

Elizabeth Fendley Vancouver

<http://www.vancouver.sun.com/Farmed+salmon+threat+wild+salmon/7171724/story.html>

Nanaimo Daily News, 31 August 2012

Current salmon testing puts credibility at risk

I try to avoid the back and forth of too many letters, but the CFIA letter calling my words "untrue" requires clarity.

The issue is who is testing farm salmon for European diseases.

When the CFIA announced their surveillance plan for the salmon flu - Infectious Salmon Anemia virus (ISAv) - they did not include farm salmon.

This virus is known to occur in the Atlantic. The positive test results I have received suggest that European ISA virus has reached B.C. and it is well documented that it did spread to Chile in Atlantic farm salmon eggs.

Since most of the farm salmon in B.C. are Atlantic salmon, they must be tested. However, the CFIA is not going to do that.

When I pointed this out the CFIA called my words "untrue" - because the province of B.C. is monitoring farm salmon for this virus. That may well be, but ISA virus is a federally reportable disease and thus it falls under the jurisdiction of the federal CFIA, not the province.

The provincial fish farm veterinarian, Dr. Gary Marty, noted the classic lesions associated with ISA virus over 1000 times in his disease records submitted to the Cohen Commission. This is what prompted me to test for the virus. Dr. Marty's records included private reports to the individual salmon farming companies: Marine Harvest, Grieg and Mainstream.

It appears Dr. Marty does work for the province, but also for the companies and both sets of records include numerous references to the ISA virus and other EU viruses. It appears these reports were invoiced directly to the companies. Is this a conflict of interest? CFIA, Dr. Kim Klotins testified that if ISA virus is confirmed in B.C. it could shut down trade of B.C. salmon.

B.C. Minister of Agriculture, Don McRae said the U.S. and Asian legislators were pushing to close their borders when the ISA reports became public.

This is an international situation, with Canada's credibility as a trade partner and the health of wild salmon at stake.

To regain public trust, testing for this virus should be completely independent from the industry and vets who may work for the industry.

Why would the CFIA give up jurisdiction over ISA virus to the provincial veterinarian?

Alexandra Morton, Echo Bay

<http://www2.canada.com/nanaimodailynews/news/opinion/story.html?id=95834645-af1b-42ac-b185-1888d3d52d53>

Alexandra Morton, 31 August 2012

Reading the fish

As we examine salmon coast-wide and deep into the interior of BC, I can see each fish has a story. The marks on its body, the size of its spleen, the condition of its heart, the colours in its eyes. I don't know what these signs mean yet, but as test results come back we will start piecing things together.

We went back to Boston Bar where Roy Campbell and his daughter Tamara very kindly let us come with them again to their fishing spot. We trained Tamara, who was very quickly helping us remember all the data to be taken from each fish. Tamara wants to continue this work, keeping a close eye on the salmon in her region of the Fraser River.



Boston Bar is located after a number of very strong rapids, including the famous Hells Gate. I am interested to know if the salmon heart virus, piscine reovirus, which we have found in nearly 100% of some groups of Atlantic farm salmon we have tested, is in fish before and after Hells Gate. The labs report that the sequence data they are getting from our samples suggests this is a Norwegian virus. Norwegians that I have spoken with suspect a fish with this virus cannot swim up a river. Interestingly, the hearts of salmon right after Hells Gate are soft - a possible sign of this virus, but the fish much further up the river have firm hearts.



You can see in this picture from Boston Bar that the heart (with the white tissue at one end) is sagging, pinched inwards. Whereas the heart below from Scotch Creek is firm:



Does this mean the Boston Bar fish has piscine reovirus? We don't know, it could be that all fish that have just swum through these rapids have softened heart muscle for a period of time. Or it could be that all the fish we are looking at with soft hearts will not live to reach their spawning grounds. We will let you know the results.

The spleen is the other organ of intense interest. In the Boston Bar picture above you can see the spleen is like a dark red, little flag with very sharp, crisp edges. But this spleen below from Adams Lake has rounded edges, and appears swollen.



Some spleens are mottled with white fatty-looking material adhered to them:



The most beautiful part of these fish, each caught for food, or dead on the riverside is their eyes:



We note if the eyes are bulging at all from the head:

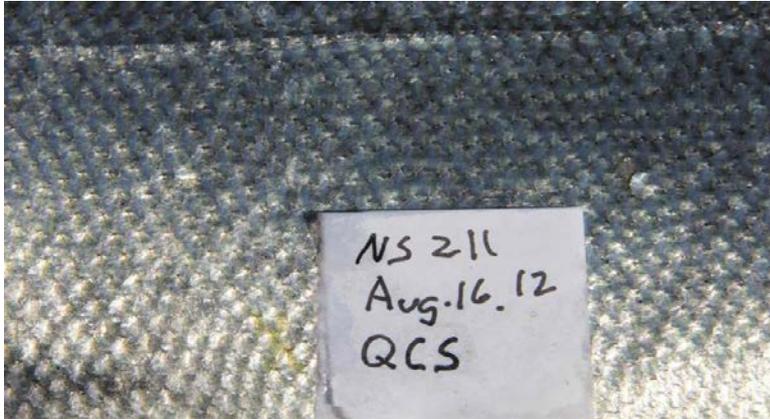


or have touches of red visible:

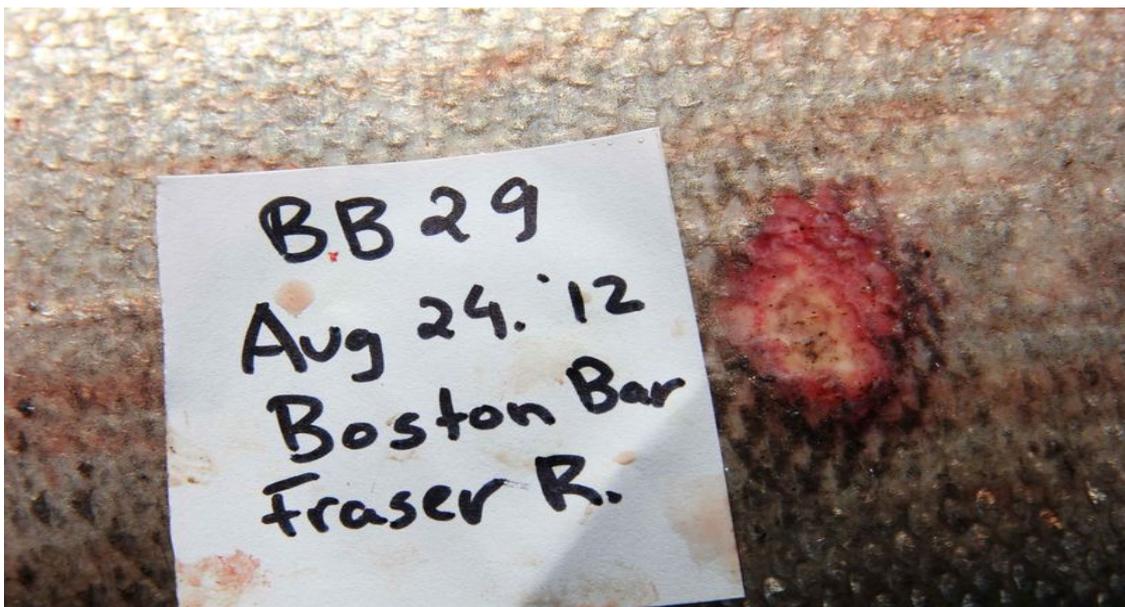


These are from salmon that died before spawning in Scotch Creek. We don't know what this means, but we are noting it.

We have seen a large range of skin conditions from perfect, such as this chinook caught by arguably the best sportfisherman in Sointula, Randy Erickson



To open sores that could be wounds from the rapids:



To rash-like appearance:



And this:



Gills are another organ with a lot of information about the fish. We went to Osoyoos Lake when we heard about the [die-off](#) there and found their gills were ivory white!



some were tipped with a yellow growth that seemed to erode away the gills:



This growth has been noted as a symptom of [Columnaris](#), which is believed to be the cause of these sockeye dying. Our work will inform us as to whether there was additional stress on the fish due to the European viruses we are looking for.



The sockeye at Scotch creek also have some yellow on their gills (above)



As did some of the fish at Boston Bar.

Osoyoos Lake is part of the Columbia River system, the other places we have sampled are in the Fraser River. We are highly vigilant in cleaning our tools nightly.

Another characteristic we are tracking is red-speckling of the belly:



and redness at the base of the fins:



As I said, every salmon has a story. They have all made a remarkable journey and some are worse for the wear, others are silver-clad and the picture of health. This is work and I am so thankful for all the help we have received.

Everywhere we go, we hear that people have been advised not to work with me, that I am a "fear-mongerer" that I am not adhering to First Nation protocol. If some are afraid of speaking openly and frankly about the condition of the salmon of this coast, I can't help them. But I can say most of the people on the grounds with these salmon, want to know. We hear again and again that samples have been sent to DFO and no one ever gets back to them. Anissa and I have been following the whisperings of the salmon people. Everywhere we go people tell us about another place we should test, and give us contacts. We get our fish from fishermen, the samples are offered freely. We have not gone where people want us to keep out. Everyone has said *We want to know everything possible about the salmon swimming past our village* whether it is Sointula, Lillooet, Boston Bar, Cheam, etc. People are not afraid of knowledge, they can handle it.

Thank you Anissa for all the roadside repairs, keeping our wheels turning and doing ALL the driving as I enter data and make contact with the next location:



Here are some photos of the last 1000 km: [online here](#)

If you want to participate in growing this network of people on the grounds, watching over wild salmon you can:

[donate](#) much - needed funds

Alert us to salmon you feel should be tested for the European viruses at:
deptwildsalmon@gmail.com

I am working towards building a community of people who want wild salmon, especially the people we are meeting throughout BC who are on the grounds with enormous knowledge about the salmon they eat, protect, count and simply care about. Our first mission is tracking the viruses government says are not here. After that we want to work towards bringing together the brilliance of genomic profiling and the hard-won on-the-grounds knowledge to learn to work WITH wild salmon for the benefit of all.

http://alexandramorton.typepad.com/alexandra_morton/2012/08/reading-the-fish.html

The Tyee, 31 August 2012

Alexandra Morton's Fight for BC's Iconic Salmon

Her crusade is 'fueled by love.' Second in a series on People's Order of BC winners voted by Tyee readers.

By Amanda Sage



[Editor's note: This article is adapted from a longer piece written by Amanda Sage as part of her Kick Ass Canadians series, which you can find here.]

Every year of her youth in Lakeville, Connecticut, Dr. Alexandra Morton watched *The Wizard of Oz* with her four siblings. Every time, she was terrified, watching as Dorothy went through so many struggles. But at the end, there was always relief. Dorothy realized she had possessed the power to fix her problem every step of the way; all she had to do was click those slippers...

Now, as a biologist living in Echo Bay, British Columbia, Alex sees *The Wizard of Oz* as a keen parallel to our current situation with local salmon farming practices, which appear to be depleting sockeye in the Fraser River and serving as a breeding ground for lice, viruses and bacteria in our waters. "*The Wizard of Oz* is really poignant because, although we've been

going down a destructive path, biologists have enormous knowledge of how our planet works and can provide alternatives to farming," she says. "We have the power to put those alternatives into effect."

For example, getting fish farms out of the ocean and introducing hydroponic alternatives that don't interfere with wildlife and make better use of the ocean protein that feeds farm salmon. "Wild salmon have proven to be resilient," says Alex. "We should find ways of working within their natural habits to figure out how we can bring them back to abundance, while safely farming fish without altering the wild salmon. The sooner we start working with these natural systems, the better."

A Canadian citizen since 1997, Alex has spent nearly 30 years in coastal B.C., raising her children and devoting herself to the region's ecosystem. It's that dedication and conviction that earned her The Tyee's People's Order of British Columbia award last fall.

Call of the whales

In 1979, having studied marine mammals in captivity in the U.S., Alex leapt at the chance to participate in wild whale research conducted by Fisheries and Oceans Canada (DFO). After getting word about the opportunity, Alex and two friends made a beeline for Alert Bay with an old inflatable boat.

As they waited at the dock, the very killer whales Alex was seeking swam up. "I dropped my hydrophones overboard and instantly heard the same calls as the ones made by the whales in captivity," she says. "But now these calls were just rolling on and on through the mountainous landscape under the sea. It was pretty wonderful."

In that moment, Alex knew she'd found not only the whales' true home, but also her own. She returned to Alert Bay the next year, where she found the whales and her future husband, Robin Morton. Robin, "a very cute Canadian filmmaker," was filming the whales and needed a scientist to interview. They soon began collaborating and "I was married, pregnant and living on a boat within a year," says Alex.

In Oct. 1984, a pod of whales led the Mortons into a cluster of islands called the Broughton Archipelago in Echo Bay, and the couple decided to make it their home. The Mortons enjoyed a few short years together before their fortune took a sad turn. In the summer of 1986, Robin drowned filming whales.

Then, in 1987, the first salmon farm showed up in Echo Bay.

Defending wild salmon

It was the older fishermen in the area who were the first to wave warning flags about the farms. "They were saying to me, 'They're putting them all in the wrong places... They're

putting them exactly where the salmon like to hold," says Alex. As the only person in Echo Bay with a word processor, she agreed to write a letter to DFO on the fishermen's behalf.

Over the next 10 years, as the concerns and evident problems associated with the salmon farms grew, she went on to send 10,000 pages of letters. "I was convinced for a long time that if I just lined up my words in the right order, [the government] would understand that there was a problem here on a lot of levels, but that it was solvable," says Alex.

In response to her letters, the government repeatedly stated that there was "no evidence" of the problems she reported. So when sea lice became an issue in 2001, Alex took it upon herself to do the research and provide the evidence. With the help of experts in Norway and Scotland, she became well versed on the subject; her work on the impact of farm lice on wild salmon has since been published worldwide.

With support from several environmental organizations, Alex was able to prompt salmon farmers to change their practices to reduce the lice population, protecting "perhaps a billion young wild salmon," she says. But Alex wasn't able to move the farms away from the wild salmon migration routes, because the farmers argued that medicating farmed salmon would protect wild fish from the lice.

This logic, Alex says, is a fallacy. "Trying to get away with breaking the natural laws by putting a feed lot in the ocean isn't going to work. The pathogens will always take advantage of this kind of feedlot situation, and while the farm fish are getting drugged to prevent them from dying, wild fish get no protection and die. Meanwhile, sea lice become resistant to the drugs, so larger quantities of more toxic chemicals are required for the farm fish. It's a losing battle, and one we've lost with every parasite we have attempted to control with drugs."

Alex explains that adult wild Pacific salmon die in the river after they spawn. The common rationale among scientists is that this behaviour breaks the cycle of disease; when the parents die, so do most of the diseases they carry, leaving the youngsters free to swim to sea with the majority of pathogens gone. But the farms hold salmon on the migration route, so when the adults come home, they spread lice, viruses and bacteria to farm salmon, which breed these pathogens all winter and then infect the new crop of salmon in the spring at extremely high levels.

"That is the fundamental problem with salmon farming," says Alex. "It breaks the natural laws that hold disease in checks and balance."

Rallying the public

After feeling helpless for too long, Alex describes "a really wonderful coming together" of herself and a number of environmental organizations in 2001, including the David Suzuki Foundation and Living Oceans Society. Together, they formed the Coastal Alliance for Aquaculture Reform (CAAR).

In 2005, when the fish farm companies and environmental organizations wanted to triple the size of the feedlots in the area, Alex and her lawyer petitioned the B.C. Supreme Court. The result was a ruling that the provincial government of B.C. could no longer regulate salmon farming and was thereby denied the right to grant expansion of the farm sites.

In spring of 2010, Alex organized a 500 kilometre walk from Echo Bay to Victoria with the goal of giving the public an opportunity to stand up for wild salmon and ask that salmon farming "Get Out" of the ocean. The Get Out Migration started with about 10 people. By the time they reached the B.C. Legislature their numbers had grown into the thousands.

That show of support buoyed Alex and proved to her that her efforts weren't in vain. "I'm quite convinced that if enough people stand up and say, 'We don't want this in our waters,' it wouldn't happen," says Alex.

In Oct. 2010, Alex and friends organized a seven-day canoe paddle down the lower Fraser River with 100 people. The Cohen Inquiry was getting underway to investigate the decline of sockeye salmon in the Fraser River; Alex and the canoeists arrived in Vancouver on the Inquiry's opening day to request that all fish farmers be required to submit their disease records.

"The paddle was really an incredible event," says Alex. "[As with the walk], I was surrounded by the best of humanity." It became a largely First Nations event, with Aboriginal communities offering band halls as sleeping areas and welcoming the paddlers with drum ceremonies and full regalia. In spite of the chilly October weather, "everyone was just so deeply happy to be part of something like this."

They got their message across. Justice Cohen agreed to their request.

Protecting the home front

In the end, close to one million documents were submitted to the Inquiry on a range of issues. As a participant in the process, Alex had full access to the files and began reading. She testified in Aug. 2011 about the precarious situation for sockeye salmon in the Fraser River, and later blogged about the "depressing experience" of being attacked on the stand by fish farm industry lawyers. But she held her ground and made her case that B.C.'s wild salmon run a grave risk from disease and parasites spreading from fish farms.

A few months later, Alex's words on the stand were validated when researchers announced they'd discovered the infectious salmon anemia virus in Fraser River sockeye. The New York Times reported that "such a virus could have a deep impact on the survival of salmon in the Pacific Northwest."

The Cohen Commission's final report is due at the end of Sept. 2012.

In spring of 2012, Alex took on another battle, this time against a proposed bill that would make it illegal for journalists to report on the outbreak of agricultural diseases, including in salmon farms. After public outcry, the bill was scuttled.

Answering the call

There's a long road ahead for Alex. All her work is volunteer-based, and she's supported by contributions from friends. Legal and research costs have been funded through the "thousands of small donations" she's received at salmonaresacred.org and raincoastresearch.org, but she's under pressure to find further support. Still, she wouldn't dream of stopping until her home is safe.

"I deeply, deeply love this place," she says of Canada's west coast. "It's really where I belong. It's given me a real sense of home, and it's been incredibly generous to me and I'm trying to be generous back. A lot of people ask what's behind my motivation; it's love. When somebody really falls in love with something, it's one of those things that doesn't actually need any fuel."

The other reason Alex will not give up is that she knows it isn't too late. She admits that we don't yet see "how far how far off the cliff we've gone." But while "we've boxed ourselves into this," she says we've also developed the science to fix it. "It's like in *The Wizard of Oz*. With her slippers, her red, beautiful ruby slippers, Dorothy had the power all along. She went through living hell, but she didn't know that she just had to click those heels together. I feel like we're in such a similar place right now. We don't realize that we as individual human beings on this planet have the power."

<http://thetyee.ca/News/2012/08/31/Alexandra-Morton-Fight/>

The Marlborough Express, 31 August 2012

‘More data needed’ in salmon farm bid

Penny Wardle

New Zealand King Salmon should not be allowed to build new salmon farms in the Marlborough Sounds until it has better information about effects on the environment, scientists told an Environmental Protection Authority hearing in Blenheim yesterday.

Conservation Department expert Peter Longdill was surprised that King Salmon did not test existing water quality as a baseline for future monitoring, before applying to expand its fish-farming business. National Institute of Water and Atmosphere (Niwa) scientist Niall Broekhuizen said the company should collect data for at least a year.

Research company Cawthron used computer models to predict where nitrogen excreted by farmed fish would end up and its possible effects.

Dr Longdill said Cawthron ticked the first box of predicting water movement but its model looked only at the drift of nitrogen rather than its effects.

A food-web type model would be more useful, he said. That would anticipate chemical and ecological changes including the transformation of fish waste to nitrogen, its uptake by algae and the consumption of algae by other organisms.

Dr Longdill said it would be better to base a consent on nitrogen released in feed and by fish rather than on the amount of feed added to water, if an equation could be developed. That was in answer to a question from Helen Beaumont who is a member of the board of inquiry that will decide whether King Salmon can build its farms and will set conditions of consent.

Dr Broekhuizen said draft conditions of consent were too vague.

"I do not understand what data are to be generated with what frequency, what locations, with what purpose, what statistical analysis is to be adopted, the subsequent decision-making process and how recommendations would be used," Dr Broekhuizen said. His peer review report was produced at the request of the board.

"I don't see there will be only one threshold but a number, just as there is increasing danger as you approach a cliff," Dr Broekhuizen said.

King Salmon might enter litigation to delay action if triggers were met, he said. To avoid this, conditions should require fish to be moved or a portion harvested within weeks or months if effects were greater than allowed.

Sustain Our Sounds expert Neil Hartstein said using food-web models was best international practice. Environmental red flags should be identified before the application was approved, he said.

Australian and New Zealand Guidelines for Fresh and Marine Water Quality were available and could have been used, Dr Hartstein.

<http://www.stuff.co.nz/marlborough-express/news/7585563/More-data-needed-in-salmon-farm-bid>

The Marlborough Express, 30 August 2012

Sounds oxygen levels concern lecturer

Penny Wardle



Ian Henderson

Extra fish New Zealand King Salmon wants to farm in the Marlborough Sounds expansion plans would create the same amount of nitrogen as 50,000 dairy cows, says Massey University ecology lecturer Ian Henderson.

The effect would be the same as pumping their manure to nine points in the Sounds, he said.

Dr Henderson, who owns a property at Te Rua in Tory Channel, was giving evidence at an Environmental Protection Authority hearing in Blenheim today. He objects to plans by King Salmon to build nine new salmon farms in the Sounds including one more in the channel.

The effect of the one farm the company planned to build near his property would be the same as pouring 10 200-litre drums of concentrated liquid ammonia into Tory Channel, he said

Mark Farnsworth who is a member of the board of inquiry hearing the application from King Salmon, asked Dr Henderson whether the comparison with cows was emotive or scientific.

Both examples were about the same nitrogen and ammonia Dr Henderson said. He did accept the example was emotive in that it was easy for people to picture.

Dr Henderson said the suggested process of monitoring the seabed and water column and changing farm management when readings hit specified levels would not be straightforward. It was difficult to undo damage once it was done, he said.

The Marlborough Sounds was already experiencing eutrophication, where oxygen levels fell and algal blooms increased. Once a system became eutrophic it was hard to flip it back again which had already happened at estuaries and on the coast, Dr Henderson said.

<http://www.stuff.co.nz/marlborough-express/news/7581318/Sounds-oxygen-levels-concern-lecturer>

The Marlborough Express, 30 August 2012

Algal blooms cited

Cathie Bell

Algal blooms overseas have been caused by fish farms, an expert appearing for NZ King Salmon conceded yesterday.

Lincoln MacKenzie, a Cawthron Institute scientist, told the Environmental Protection Authority board of inquiry hearing in Blenheim that international research indicated algal blooms had been caused by some fish farms in Finland and Asia.

However, those were "extreme examples" and were nothing like the circumstances in the Marlborough Sounds, he said.

"In the history of this industry, even when we were farming in unsuitable areas, there is no evidence of salmon farms being involved in exacerbating harmful algal blooms."

It is day three of the hearings, at the FloorPride Marlborough Civic Theatre in Blenheim.

Mr MacKenzie was under pressure from questioning by Conservation Department lawyer Shona Bradley and Sustain our Sounds lawyer Warwick Heal.

He said algal blooms were mainly caused by oceanographic forces impacting on coastal waters.

There were some examples of human activity causing them, such as the heavy runoff from the dairy industry on Lake Ellesmere in Canterbury.

"I've trawled heavily through the international research and was surprised how little association there is between marine farming and anthropogenic bloom [caused by human activity]."

Under questioning from Ms Bradley, he said there was an "extreme example" from Finland, where there were fish farms in small, confined bays with very shallow waters.

"These situations are completely different from the types of environment we're talking about here in the Marlborough Sounds."

Mr Heal asked Mr MacKenzie several questions about the number of algal species, and the risks of proceeding when not everything was known about their behaviour under all conditions. Mr MacKenzie conceded that Mr Heal was right, that there was a remote possibility that a new algal species could bloom and wipe out the mussel industry.

There were tens of thousands of algae species and not everything was known about them.

However, he didn't think it was likely to happen. "You're drawing a long bow there."

<http://www.stuff.co.nz/marlborough-express/news/7577029/Algal-blooms-cited>

The Marlborough Express, 30 August 2012

Impact of extra farms minor, says scientist

Cathie Bell



Dr Paul Gillespie

A Cawthron Institute scientist appearing for New Zealand King Salmon yesterday told the hearing considering whether to allow the company to expand its farms that his personal opinion was that there should be no marine farming in the Marlborough Sounds.

Professionally, he believed the effects of extra salmon farms on the water column would be minor, and he was confident that monitoring systems could be set up to mitigate any effects from additional salmon farms in the Sounds.

Paul Gillespie was questioned by Sustain Our Sounds lawyer Warwick Heal about Cawthron's role in the application, and whether the company supported King Salmon's proposal.

Dr Gillespie said he did not accept any suggestion that Cawthron was pushing the company's proposal.

Cawthron scientists had assessed the application according to science. Scientists' personal views, which they kept separate from their professional views, could be totally different.

He had worked in circumstances where that was the case, and he had to be very careful.

Mr Heal asked Dr Gillespie for his personal view on the King Salmon application, and he said on a personal basis in this case, he had some bias.

"My personal opinion, I'm a reactionary. I don't like to see any development in any sort of natural environment. I'm a keen fisherman, I spend a lot of my time on the water. I have a place in the Sounds. I don't like to see any development, mussels or salmon. I like to see it wide open. That's just me.

"My professional experience and professional opinion is in my two briefings of evidence."

Mr Heal questioned him about "commissioned science", where the result could be biased in favour of the people paying the bills.

Dr Gillespie said that was not his experience, and did not happen if the work was done professionally.

"All Cawthron Institute staff have this approach. We are scientists, primarily interested in science, whatever the evidence may present."

<http://www.stuff.co.nz/marlborough-express/news/7577089/Impact-of-extra-farms-minor-says-scientist>

Worldwatch Institute, 16 August 2012

Aquaculture Tries to Fill World's Insatiable Appetite for Seafood

Danielle Nierenberg and Katie Spoden

Total global fish production, including both wild capture fish and aquaculture, reached an all-time high of 154 million tons in 2011.¹ Wild capture was 90.4 million tons that year, up 2 percent from 2010.² This followed a 1.6-percent decline from 2009 to 2010.³ The 2011 global capture figure nearly matched the 2007 total of 90.3 million tons, which broke a four-year pattern of declining global wild capture.⁴ Since the late 1980s, however, wild capture production has essentially stagnated.⁵

Aquaculture, in contrast, has been expanding steadily for the last 25 years and saw its largest increase in 2010, when it grew 8.7 percent to 59.9 million tons.⁶ In 2011 production rose again by 6.2 percent, to 63.6 million tons.⁷ (See Figure 1.)

