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## The brochure, "Why You Shouldn't Eat Farmed Salmon"

From: VIVIAN KRAUSE <[vivian.krause@me.com](mailto:vivian.krause@me.com)>  
To: Peter Robinson <[probinson@davidsuzuki.org](mailto:probinson@davidsuzuki.org)>  
Date: March 23, 2011 7:54:37 AM

Mr. Robinson,

I have not received any response from you or your office with regards to my e-mail of March 14, below.

According to information from Internet Archives, one of the items that the David Suzuki Foundation removed on Feb. 3, 2010 was the brochure titled, "**Why You Shouldn't Eat Farmed Salmon.**"

In this regard, I would like to ask several questions:

- 1) Why did the David Suzuki Foundation remove this brochure, and why was this done on Feb. 3, 2010? Did that have anything to do with the open letter to David Suzuki, that I posted at my blog on that very day? For a link to that, please click [here](#).
- 2) What does it mean that this brochure - with David Suzuki's photo prominently on the front cover - is no longer being distributed by the David Suzuki Foundation? Has the position of the David Suzuki Foundation changed with regards to farmed salmon?
- 3) Was this brochure one of the "market intervention tools" funded by the David and Lucile Packard Foundation as part of its program for "Market Intervention Tools to Conserve Marine Fisheries?"

Once again, I appeal to you to please clarify the misinformation that your foundation has disseminated for years about farmed salmon and salmon farming. In particular, please clarify that contrary to your earlier claims and press releases - now removed - your research:

- Does NOT show that farmed salmon is high in PCBs and should be avoided
- Does NOT show that sea lice originating from salmon farms cause high levels of mortality among juvenile salmon in the wild, putting them at risk of extinction.

For your reference, below, here are links to the papers in which I have presented the analysis upon which I base my conclusion that claims that farmed salmon is "high" in PCBs, and claims that research shows that sea lice originating from salmon farms cause high levels of juvenile salmon mortality in the wild, are false:

- [Research on PCBs in Farmed Salmon: Science or Marketing?](#)
- [Sea Lice Research: Science or Marketing?](#)

As before, you can call me anytime at 604.618.8110. Please do not hesitate to give me a call.

Sincerely,  
Vivian Krause

Begin forwarded message:

**From:** VIVIAN KRAUSE <[vivian.krause@me.com](mailto:vivian.krause@me.com)>  
**Date:** March 14, 2011 3:50:42 PM  
**To:** Peter Robinson <[probinson@davidsuzuki.org](mailto:probinson@davidsuzuki.org)>  
**Subject:** **Misinformation from the David Suzuki Foundation about Farmed Salmon and Salmon Farming**

Mr. Robinson,

I did not receive any reply to the three e-mails that I sent you in late January, including the one below.

As I mentioned in January, I am going to be writing again about the salmon farming controversy and the information that the David Suzuki Foundation has provided for many years. As I've said before, I am concerned that much of this information is inaccurate, selective, out-of-date or incomplete and that on the whole, the portrayal of salmon farming by the David Suzuki Foundation has been misleading.

I am also concerned that your foundation has not answered any of my questions about the millions of dollars that you have received from U.S. foundations - the same ones that are heavily funding a marketing program that sways demand towards "wild" fish - much of which is Alaskan.

Recently, it has come to my attention that the David Suzuki Foundation seems to have removed a substantial amount of on-line information about farmed salmon and salmon farming on Feb. 3, 2010. That's the same day that I sent an open letter to David Suzuki. I would like to ask, is it true that the David Suzuki Foundation removed about 10 press releases and a further 10 or so web-pages about salmon farming on Feb. 3? If so, I would like to know why you didn't say so when we met a few weeks later, on Feb. 22.

I have submitted an op-ed for publication about my analysis of the so-called science that the David Suzuki Foundation has funded and publicized about PCBs in farmed salmon. Out of courtesy, I am sending you a copy of this in advance, for your review.

As before, I appeal to you to please clarify the misinformation that your foundation has disseminated for years about farmed salmon and salmon farming. In particular, please clarify that contrary to your earlier claims and press releases - now removed - your research:

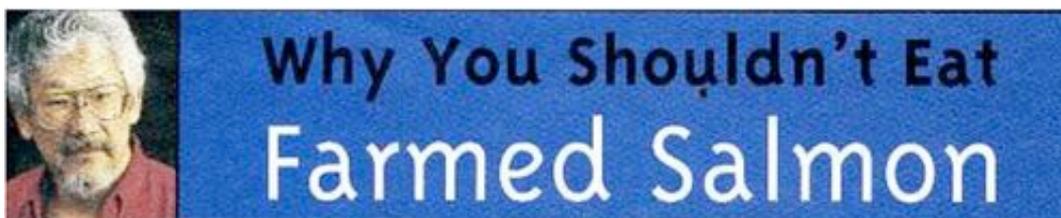
- Does NOT show that farmed salmon is high in PCBs and should be avoided
- Does NOT show that sea lice originating from salmon farms cause high levels of mortality among juvenile salmon in the wild, putting them at risk of extinction.

You may contact me at 604.618.8110. Please do not hesitate to give me a call.

Sincerely,

Vivian Krause

## Did David Suzuki Prevaricate About PCBs in Farmed Salmon? And if so, WHY?



"There is good science in the campaign of course. All campaigns at the David Suzuki Foundation begin with good science."

- Dr. David Suzuki

This post is based on a paper that I wrote in 2010, titled [Research on Contaminants in Farmed Salmon: Science or Marketing?](#)

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Canada has the largest coastline in the world and we're right next door to the world's largest seafood market: the United States. If there's one industry that Canada should be developing, it's aquaculture. Northern B.C. and Nova Scotia, the places where fish farming could provide hundreds of jobs, are some of the poorest parts of Canada.

Aquaculture avoids the worst risks of commercial fishing, such as over-fishing and by-catch. Yet, ironically, the biggest obstacle facing the aquaculture industry is opposition from environmentalists. In British Columbia, a "[war on fish farmers](#)" has been declared. More than 20,000 people signed a petition to close salmon farms.

"Don't buy farmed salmon ANYWHERE. [Phone your local hospitals](#) and find out if farmed salmon is served to patients," says a brochure from the David Suzuki Foundation.

"Its poison!" David Suzuki told a [conference](#) in Toronto. He wouldn't feed farmed salmon to a child, he said. In Australia, David Suzuki told an audience that farmed salmon is "full of toxic chemicals."

A few years ago, [Global Assessment of Organic Contaminants in Farmed Salmon](#), a study by Ronald Hites et al., triggered a worldwide scare about contaminants in farmed salmon. The Hites study found that levels of polychlorinated biphenyls (PCBs) were eight-fold higher in farmed Atlantic salmon than in Pacific salmon.

If the eight-fold difference had been between 0.5 parts per million (ppm) and 4.0 ppm, the findings would have been consequential to human health. However, the eight-fold difference was between 0.0366 ppm and 0.0048 ppm. Since the tolerable level for PCBs in fish is 2.0 ppm, the eight-fold difference is inconsequential. Nonetheless, in a newswire that dismayed scientists, the American Association for the Advancement of Science (AAAS) reported "[Farmed Salmon More Toxic Than Wild](#)." Following suit, the media reported the Hites study with alarming headlines worldwide.

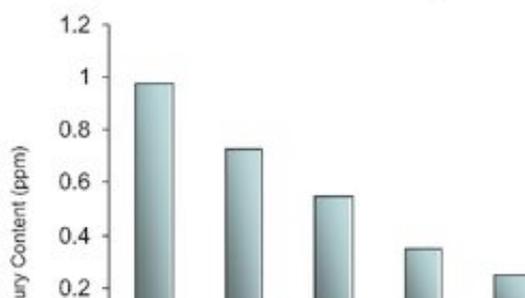
The same day that the Hites study was published, the Alaskan Governor issued a [press release](#). He said, "It is important to note that this study is not telling people not to eat fish. It is telling them to eat more wild Alaskan salmon."

David Carpenter, a co-author of the Hites study, [told the press](#), "We hope it does not turn people away from fish, we hope it turns people away from farmed salmon." Mr. Carpenter also [told the media](#) "women should avoid eating farmed salmon at all, from the day they are born through menopause." [He also said](#) "one should avoid farmed salmon like the plague," and "Our



Source: Finding Solutions, the newsletter of the David Suzuki Foundation, Summer 2001. [http://www.davidsuzuki.org/publications/downloads/2001/DSF\\_Summer\\_Final.pdf](http://www.davidsuzuki.org/publications/downloads/2001/DSF_Summer_Final.pdf)

Mercury Content of Farmed Salmon Compared to Other Fish

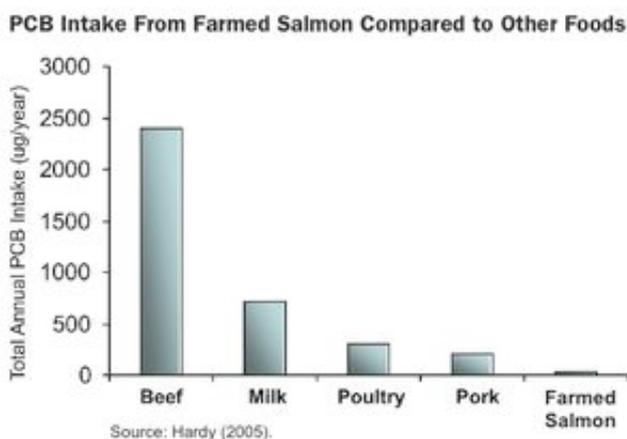
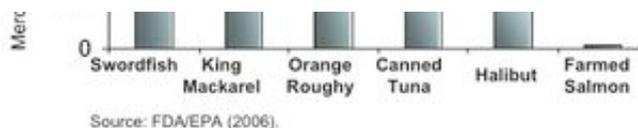


results indicate [elevated cancer risk](#) from one meal (of farmed salmon) or even less per month.”

The problem is, Mr. Carpenter’s claims are way out of line with the actual findings of the Hites study. Furthermore, [Agriculture Canada](#), the [U.S. Institute of Medicine](#) and the [U.K. authorities](#) advise eating salmon - farmed or wild - on a weekly basis.

"There are no consistent differences between wild and farmed fish both in terms of safety and nutritional contribution," [says the European Food safety Authority](#).

At Idaho University, Dr. Ronald Hardy estimated that the average yearly PCB intake is about 30 ug from farmed salmon, 200 ug from pork, 300 ug from poultry, 700 ug from milk, and 2,400 ug from beef. Evidently, farmed salmon is not a significant source of PCB exposure compared to other foods. Dr. Hardy concluded, “Even if Americans doubled their intake of farmed salmon, the contribution of this consumption on total yearly PCB intake would still be 40–80 times less than the amount from beef.



The Hites study was published in the prestigious journal *SCIENCE*, the flagship of the AAAS. At the time, the Editor-in-Chief of *SCIENCE* was Donald Kennedy, a former president of Stanford University, and a [trustee](#) of the David and Lucile Packard Foundation. The current Editor-in-Chief of *SCIENCE*, [Bruce Alberts](#), is a [trustee](#) of the Gordon and Betty Moore Foundation.

Since 2000, Packard and Moore have granted more than \$130-million to B.C. organizations, none of them favourable to salmon farming. Of that, at least, \$12-million went to the members of the Coastal Alliance for Aquaculture Reform which runs a demarketing campaign called [Farmed and Dangerous](#). This campaign against farmed salmon is based on research about PCBs and sea lice ([Krkosek et al. 2007](#)), conveniently published in the journal *SCIENCE*.

Packard has paid a staggering [\\$83 million](#) since 2000 for various projects to sway market share towards wild fish and away from the competition: imported, farmed fish. The [Marine Sciences web-portal](#) of the AAAS has been funded by Packard.

The Hites study and its publicity was paid for with \$5.5-million from the Pew Charitable Trusts; [\\$2.5 million](#) was granted to the State University of New York and [\\$2.5 million](#) to the Tides Center, part of the Tides USA network. Pew also granted [\\$140,000](#) to Mr. Carpenter and [\\$300,000](#) to Daniel Pauly at the University of British Columbia. For a study of its kind, a \$5.5 million budget was unusual. The \$440,000 for publicity was highly unusual.

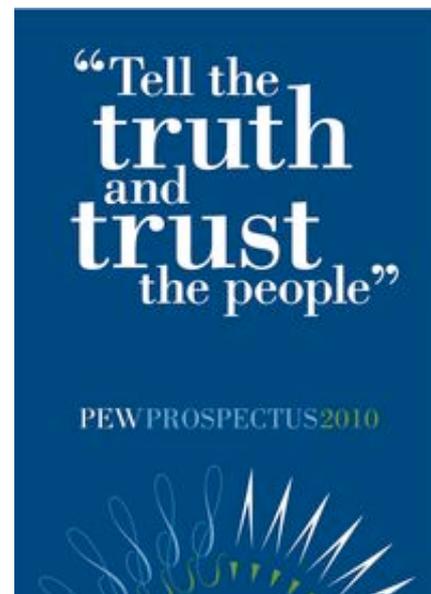
As per [Pew's specifications](#), the Hites study compared farmed Atlantic salmon and wild Pacific salmon. Because wild Atlantic salmon and farmed Pacific salmon were excluded, comparisons among the same species

of salmon were avoided. In essence, the study compared apples to oranges.

Had the Hites study compared wild vs. farmed Atlantic salmon, or wild vs. farmed Pacific king ("chinook") salmon, it would likely have found higher levels of contaminants in the wild fish, a conclusion precisely ***the opposite*** of what was spread around the world in scary headlines.

The Pew Charitable Trusts states that it holds itself to the highest standards of integrity, transparency and effectiveness. And yet, when asked how the Tides spent that \$2.5 million, Pew staff refused to say, citing the advice of its legal department.

"Tell the truth," says the cover of Pew's annual report for 2010. That same year, I appealed to the Pew Charitable Trusts, in an open letter, to please clear up the confusion and controversy stemming from flagrantly unsubstantiated claims about PCBs in farmed salmon, made by Pew-funded scientists on the basis of Pew's \$5.5 million dollar study. The CEO of the Pew Charitable Trusts replied indifferently, "it is important to note that this research is rigorously peer-reviewed and published in prestigious journals such as *SCIENCE*. It was therefore hard to understand the claim in your open letter that the findings are "flagrantly unsubstantiated." Too hard to admit maybe, but surely the CEO of a \$4.5 billion dollar foundation should know when a food contains merely 3 percent of the acceptable level of an omnipresent contaminant like PCBs, there is no basis to say that that particular food should be avoided because of PCBs.



In the London Times, Magnus Linklater called the Hites study "a sorry saga of flawed science, selective research and hidden commercial bias." "That it was allowed into the pages of the apparently respectable journal *SCIENCE* is inexplicable," wrote Linklater.

Sandy Szwarc wrote in a newsletter of the Competitive Enterprise Institute, "An ulterior motive may be at work.... Facing competition from aquaculture, the wild salmon industries of California, British Columbia, and Alaska have allied themselves with environmental groups to promote wild salmon as the healthier and environmentally-friendly choice."

Facing stiff competition from farmed salmon, the value of Alaskan salmon collapsed over the 1990s from a peak of \$1.2-billion to only \$125-million. Since 2002, Alaskan salmon prices have tripled. This remarkable improvement was due in part to Alaska's \$50 million Salmon Revitalization program. However, much of that money went to 2,600 fishers and 63 municipalities. That won't have done much to improve salmon prices.

After Alaskan salmon prices improved, the Alaska Seafood Marketing Institute reported, "The infusion of dollars wasn't the sole driver; we need to be honest here. It wasn't the only thing that changed market conditions. There was some bad press for farmed salmon and there was the health issue and people wanting more seafood in their diets. All these things kind of came together like the perfect storm."



a small study isn't representative of either farmed or wild salmon. This raises what I believe is a fair question: why did David Suzuki falsely report that he had uncovered the "fact" that B.C. farmed salmon is heavily contaminated with PCBs and other toxins? Was this an honest error? Or did David Suzuki prevaricate about PCBs in farmed salmon? And if so, *why*?

The Suzuki study came on the heels of [market research by SeaWeb](#), conducted in the spring of 2001. A few months later, Pew made the first of several grants for the Hites study and on the very same day, Pew granted [\\$181,000](#) to the David Suzuki Foundation.

David Suzuki's research about contaminants in farmed salmon was [funded by the Lazar Foundation](#), a pro-Alaskan foundation based in Portland, Oregon. And yet, the [Lazar Foundation says](#) that it is focused on Washington, Oregon, Idaho and Alaska - not British Columbia. Lazar also [explicitly states](#) that it does not fund work on "toxics" so why did the Lazar Foundation pay for a study of contaminants in farmed salmon? Lazar also paid the David Suzuki Foundation [\\$12,500](#) for "legal action challenging the expansion" of salmon farming in B.C. Lazar also funded [market research by SeaWeb](#) about farmed vs. wild salmon.



[SeaWeb's market research](#) found that the most compelling reason why people might avoid a certain fish is fear of contaminants. Sadly, [the least important factor](#) was whether the species is over-fished.

SeaWeb and Environmental Defense have been saying that the maximum number of safe meals of farmed salmon is [half a meal per month](#) for adults and older children and for younger children, [zero meals](#). Who's going to feed their child half a meal because half is safe and half isn't?

"The avoidance of modest fish consumption due to confusion regarding risks and benefits could result in thousands of deaths every year due to cardiovascular disease, and the suboptimal neurodevelopment in young children," [Harvard scientists warn](#).

At the University of British Columbia, [scientists found](#) that Vancouver-born infants of well-educated mothers are deficient in omega-3 fatty acids. The infants' eyesight was compromised, their brain development may have been adversely affected. This situation is not helped by the fact that Canada's most trusted environmentalist has been giving pregnant women faulty advice to avoid farmed salmon. The truth is, farmed salmon is higher in omega-3 fatty acids than any other fish.

The Packard foundation paid the David Suzuki Foundation [\\$762,600](#) for Pacific Salmon Forests, a project which produced a brochure titled, "[Why You Shouldn't Eat Farmed Salmon](#)."

In a series of open letters since 2007, David Suzuki has been asked whether the bad press that his foundation has generated about salmon farming is part of a "demarketing" campaign to prop up demand for Alaskan salmon. He hasn't replied but 20 press releases and negative articles about farmed salmon have been quietly removed from his foundation's web-site. Nevertheless, the campaign against farmed salmon rages on.

In 2010, the Moore foundation paid the David Suzuki Foundation [\\$329,525](#) for "salmon market standards."

Begin forwarded message:

**From:** VIVIAN KRAUSE <vivian.krause@me.com>  
**Date:** January 21, 2011 7:08:26 AM  
**To:** Peter Robinson <probinson@davidsuzuki.org>  
**Subject:** The brochure, "Why You Shouldn't Eat Farmed Salmon."

Mr. Robertson,

As I mentioned yesterday in an e-mail, I am going to be writing again about the salmon farming controversy. I am doing this, still, as a concerned member of the public.

As you know from our meeting last spring, I have concerns about the inaccurate information that the David Suzuki Foundation has provided to the public about farmed salmon, and I have questions about the American funding that the David Suzuki Foundation has received over the years. In this regard, I would like to re-iterate several of the questions that I tried to ask you last year, and that I have been trying to ask Dr. Suzuki since the spring of 2007.

In light of the above, I would like to inquire about the origins of the funding for the brochure, *Why You Shouldn't Eat Farmed Salmon?* which was produced as part of the Pacific Salmon Forests project. Was this covered by the \$762,600 that the David and Lucile Packard Foundation paid to the David Suzuki Foundation specifically for this project, over 2000 and 2001? Was this brochure one of the "market intervention tools," funded by the Packard Foundation?

Below, I have presented the information and analysis on which my question is based. If I have presented anything that is factually incorrect, or if I have missed any important points, please let me know.

Sincerely,

Vivian Krause

**About the brochure, "Why You Shouldn't Eat Farmed Salmon," and the Pacific Salmon Forest Project:**

Between May of 2002 and the spring of 2010, the David Suzuki Foundation distributed a brochure titled, "*Why You Shouldn't Eat Farmed Salmon.*" This brochure was produced as part of the Pacific Salmon Forests project.

According to U.S. tax returns, between 2000 and 2003, American foundations paid **\$US 2.8 million** to the David Suzuki Foundation for the Pacific Salmon Forests project, including:

- \$762,600 from the David and Lucile Packard Foundation, California (CA)
  - [\\$US 362,600 in 2000](#)
  - [\\$US 400,000 in 2001](#)
- \$ 815,000 from the William and Flora Hewlett Foundation, Menlo Park, CA
  - [\\$US 315,000 in 1999](#)
  - [\\$US 250,000 in 2000](#)
  - [\\$US 250,000 in 2001](#)
- \$ 1,080,000 from the Lannan Foundation, based in New Mexico
  - [\\$US 330,000 in 2000](#)

- [\\$US 250,000 in 2001](#)
- [\\$US 250,000 in 2002](#)
- [\\$US 250,000 in 2003](#)
- \$ 180,000 from the Richard and Rhoda Goldman Fund, San Francisco, CA
  - [\\$US 150,000](#) (1999 - 2001) and [\\$US 30,000](#) in 2002
- [\\$US 20,000](#) from the Marisla Foundation, based in Laguna Beach, CA

The \$US 762,600 from the David and Lucile Packard Foundation was provided as part of the Marine Fisheries program. This program has a strategy titled [Market Intervention Tools](#) to Conserve Marine Fisheries.