Between 2012 and 2022, senior management at the Department of Fisheries and Oceans (DFO) kept a dark secret: a science paper authored by Dr. Kristi Miller-Saunders, which they refused to allow her to publish. The research for the paper was conducted under a joint industry-DFO research program, with the assistance of Creative Salmon. The company farms Chinook salmon in Clayoquot Sound. Creative didn’t like the results, which threatened the very existence of their operations. DFO didn’t like the results, which showed their policy of ignoring the presence of piscine orthoreovirus (PRV) in farmed salmon was playing Russian roulette with the lives of wild Chinook salmon. And so, DFO simply refused to release the research, even after a request was filed under Access to Information (ATIP).

DFO’s response to the ATIP request used nearly every argument provided by the Act to refuse production of the paper and related documents, including, drolly, paragraph 18(c) which allows institutions to refuse to release scientific or technical information stemming from government research that, if disclosed, could jeopardize government researchers’ chance to publish their findings first. The government researcher in question has consistently demanded the right to publish.

In December, 2021, Canada’s Information Commissioner dismissed every argument raised and went further: even if any of those arguments had been meritorious, she said, DFO would have been obliged to consider releasing the information because of the overwhelming public interest in protecting wild salmon.

On the question of public interest, DFO actually said this:
...none of the information withheld under section 20 could reasonably pertain to public health, safety or the protection of the environment. The information is scientific study of and measurements of jaundice in cultured (farmed) aquaculture salmon in a laboratory. These fish were grown and raised by [the third party], they are not wild salmon, never sold to the public and pose no threat to the environment.

This is what really happened: Creative Salmon wanted to know why its farmed stock were turning yellow and dying. It provided samples from its open netpen...continued on page 4
Fox Guarding the Net Pens

It shouldn’t come as news to readers that the Aquaculture Stewardship Council’s (ASC) label does not guarantee the salmon was “farmed responsibly” from egg to harvest.

Living Oceans and our SeaChoice partners have long called for ASC to close the loophole that allows auditors to exclude farm sites used between the hatchery and the final grow-out stage from compliance with their standard - meaning up to 14 months from the 3-year farmed salmon production cycle is never assessed for environmental impacts, such as sea lice outbreaks.

And it looks like the ASC has listened to us. Under their recent public consultation for their new Farm Standard, the ASC proposes closing the loophole by requiring that the complete farming production cycle shall comply with the standard.

But it also looks like they have been listening to the salmon farming industry too. The ASC proposes that the grow-out farm applying for ASC certification takes responsibility for auditing their “suppliers” of the early production cycle stages for compliance against the standard. As grow-out salmon farms are typically owned by the same company that also owns and operates the hatchery and early net pen sites, this will result in companies auditing themselves for ASC compliance for a substantial portion of the production cycle (from 12 to 30 months out of a 36-month farmed salmon production cycle) - and not a third-party accredited auditor.

‘Fox guarding the henhouse’ scenarios have no place in sustainability claims. Living Oceans is calling on the ASC to implement an impartial auditing process with third-party auditors.

Currently, the middle stage of the production cycle is excluded from auditing and compliance with the ASC Salmon Standard.

Spotlight on Big Brands’ Sustainable Seafood Commitments

From Captain Highliner’s fish sticks to Cloverleaf’s canned tuna. Soon shoppers will be able to view and track the seafood sustainability progress of, or lack thereof, the big seafood brands that fill up our freezers and pantry shelves.

For the last five years, SeaChoice’s Seafood Progress platform has shone a spotlight on major grocery stores’ sustainable seafood commitments by allowing shoppers to see whether their local store is ‘walking the talk’ when it comes to sourcing environmentally and socially responsible seafood for their fresh case. But with many big brands found in...continued on page 3
Companies, Supermarkets, Experts Call for Robust Seafood Traceability Standards

A group of 26 grocery chains, seafood industry stakeholders and experts have called on the federal government to commit to a timeline and plan to fulfill its mandate to implement boat-to-plate traceability for seafood sold in Canada. The call comes at a critical time as the House of Commons Standing Committee on Fisheries and Oceans is studying seafood traceability in Canada as a way to support the sustainability and long-term viability of Canada’s seafood supply chains while combatting fraud, human rights abuses and illegal fishing.

The letter signatories, including Living Oceans and our SeaChoice partners, highlighted their concern that no timeline or plan is in place to implement a better traceability system, despite the boat-to-plate initiative being announced more than two years ago. Read the letter at seachoice.org

supermarket freezers and shelf stable aisles, SeaChoice is set to launch a new section of the website for shoppers to check and watchdog these brands too. Stay tuned at seachoice.org
operations in Clayoquot Sound to Dr. Miller-Saunders, who then took them to the lab to analyze the disease and screen for related pathogens. Her research results documented the first known detection of PRV in British Columbia and provided evidence that this virus is strongly associated with a disease in Chinook salmon called jaundice-anemia.

So, while it’s technically true that “these fish”—the ones Dr. Miller-Saunders studied—“pose no threat to the environment” because they were of course frozen in the Molecular Genetics Lab, the argument rather insulted the intelligence of the Information Commissioner, not to mention all of the Canadian public and the scientific community in general. The Information Commissioner wasted no time dismissing the argument.

The argument advanced by DFO is instructive of the approach that aquaculture ‘regulators’ have been using for three decades to shield the industry from unwelcome scrutiny. They didn’t actually lie; they just failed to connect the dots between the fish in the lab and their cohort of infected fish in Clayoquot Sound, which were continuing to spew PRV into the marine environment in exactly the places where wild Chinook salmon spend the first year or so of their life at sea.

By 2019, Clayoquot Action’s “Clayoquot Salmon Investigation” project (CSI) would find 100% of Creative’s salmon feedlots infected with PRV. In that same year, returns of wild Chinook to the unlogged watershed of the Megin River numbered 10 fish.

Between 2016 and 2018, while Dr. Miller-Saunders’ paper lay safely buried, DFO created and reaffirmed its policy on PRV four times—twice in response to Court orders—and each time, it denied evidence that PRV causes disease in wild Pacific salmon. By 2017, published research had identified PRV as the causative agent in another disease of wild and farmed salmon, called Heart and Skeletal Muscle Inflammation (HSMI). DFO dealt with that by re-defining the disease so that it could only be diagnosed if the industry self-reported that their fish were lethargic and feeding poorly. Industry does not so report. And no other jurisdiction in the world requires salmon farmers to corroborate a diagnosis of HSMI by voluntarily reporting these clinical signs of disease.

The handy thing about redefining a disease to require evidence of clinical symptoms is that a wild fish will never be diagnosed with HSMI. If a wild fish is lethargic and off its feed, it will either die or be eaten. The odds of catching one that is displaying suitable signs of sickness are astronomically against success.

 Everywhere else in the world, HSMI is diagnosed in the lab, by studying the heart and skeletal muscles for its signature lesions. Using this definition, it is clear from lab tests conducted by DFO itself that sockeye salmon are susceptible to the disease. Coho, pink and chum salmon have not been tested—perhaps because coho elsewhere in the world have been confirmed to contract another disease from PRV, called Erythrocytic inclusion body syndrome (EIBS). It would not suit DFO’s research agenda to look to closely at the other species of salmonids.

While DFO regulators have been busy obfuscating and denying, science has moved on. It’s now beyond doubt that Chinook on the west coast of Vancouver Island are picking up PRV near the farms; and its prevalence is highly correlated with the disastrous returns to many west coast rivers. A bacterium amplified by the farms, called Tenacibaculum maritimum, is similarly highly correlated with reduced fitness and poor returns of Chinook, coho and sockeye. These are what scientists call “population-level impacts”, meaning they negatively impact both the abundance and genetic diversity of the population.

And yet, DFO regulators are advising the Minister to re-issue salmon farm licences for terms of 1-6 years when they expire this June. They continue to insist that the risk...continued on page 5
...continued from page 4 assessment they conducted on these pathogens, that conclude there is no more than a minimal risk of harm, do not need to be revised. They have not worked with DFO stock assessment personnel to investigate links between depressed returns of salmon and farm-origin impacts. They have not assessed at all the impact of the massive sea lice infestations documented by both Cedar Coast and Salmon Coast field stations. They have, they say, no evidence that any impacts to wild salmon are a result of anything about salmon farms that they can manage.

And just to make sure that nothing about their state of blissful ignorance ever changes, DFO just de-funded Dr. Kristi Miller-Saunders’ lab. For over fifteen years, Dr. Miller has led the molecular genetics work at DFO, applying genetic analysis to the diagnostic challenges posed by wild fish declines and making world-leading discoveries. Her team’s work should be celebrated and supported for its internationally recognized significance. Instead, DFO used the bluntest weapon in its arsenal against her: they eliminated her funding.

**Salmon Farming: Salmon Aquaculture Index, 2022**

* Percentage of British Columbians opposed to open netpen salmon farming: 75%
* Number of First Nations opposed to open netpen salmon farming: 102
* Number of First Nations having agreements with salmon farm industry: 13
* Number of DFO-issued aquaculture licences expiring June 30, 2022: 106
* Number expiring in August and September, 2022: 3
* Number of those licences permanently retired by 2022 in the Broughton Archipelago: 14
* Number of those licences permanently retired in the Discovery Islands: 19
* Number of those licences voluntarily surrendered at the request of a First Nation: 2
* Number of licences up for re-issuance: 79
* Number of licences likely to be renewed: 79

Don't fret; this isn’t because Minister Murray has given up on transition. It’s because a salmon farm is required to have a valid licence while it’s being decommissioned; and because these remaining 79 farms are operated under agreements with the Nations in whose territory they operate. The Minister needs time to consult with them about alternative economic development opportunities. She needs time to consult with the Province and the communities most affected by salmon farm closure, to prevent massive job loss on the North Island. The commitment was, after all, to “transition”.

Meanwhile, the returns of salmon to rivers in the southern region of BC have plummeted such to historic lows that the survival of many populations is in question. The tension is palpable, between doing what is right for wild salmon and generations to come; and doing what is needed for the more immediate concerns of current workers and communities. There is no time to waste.

It remains our hope that licences will be placed on annual renewals, as was done in the Discovery Islands following the Cohen Commission, while DFO ‘studied’ the impacts. This time around, there is no need to study impacts of farms on wild salmon: there is more than enough evidence to invoke the precautionary principle and shut them all down. This time, the purpose of annual renewals would be to signal clearly to the industry that the government means what it said; and to workers and communities that it’s time to embrace alternatives.
So much of our lives here in British Columbia unfolds by the seashore—our economy, our recreation, the seafoods we eat—that you’d expect it to be a central focus of government’s laws and policies. While it’s certainly not unregulated, our shoreline has never been the strategic lens through which those regulations were conceived and enacted. That’s apparently about to change.

Following a couple of years of encouragement from the ENGO community, the Province has initiated an engagement process for the creation of a Coastal Marine Strategy. It’s intended to be high-level, but to set and commit to clear direction for the management of the coastline.

There are so many issues in need of management! Our seashores are complex and highly dynamic environments and historically, human interventions have paid little heed to their role in the health of both land and ocean. Today, the looming certainty of sea level rise makes it imperative that we undertake the hard conversations about how we’re going to alter our relationship with the water’s edge for the long-term benefit of coastal communities and ocean life.

In keeping with its commitment to indigenous reconciliation, the first step in the Province’s Coastal Marine Strategy process was to engage interested First Nations in gathering information about coast-wide trends, existing policies and opportunities for alignment with other initiatives. The Strategy will be co-led and developed by the Nations, together with our newest Ministry: Land, Water and Resource Stewardship (regrettably already nicknamed, “Landwars”).

An Intentions Paper will be developed, outlining potential short- and long-term solutions and actions that could improve stewardship of coastal and marine ecosystems, coastal community well-being, foster a sustainable marine economy and advance reconciliation with indigenous people. The Paper is expected to be ready for public consultation this summer.

Based on feedback received from the Intentions Paper, the Ministry will draft the Coastal Marine Strategy and open it to another round of public consultation before finalizing and implementing it. The plan is ambitious: in theory, this whole process will be completed in 18 months.

This process is long overdue. All of the Atlantic provinces have coastal strategies or laws that serve to integrate the various programs and jurisdictions that impact the coast. Here in B.C., the patchwork of federal, provincial, regional and local government authorities lacks any comprehensive vision for what we want to achieve on our coasts or how we’re going to work together to get there. A Coastal Marine Strategy could provide direction for the co-operative exercise of jurisdiction over land use, water quality protection, habitat restoration, coastal infrastructure and more.

The creation of the new Ministry may be a signal that the Province is committed to developing this Strategy in a holistic manner, at long last integrating concepts of land and water use and protection. The appointment of Josie Osborne as Minister is also a good signal. Ms. Osborne holds a degree in marine biology and a Masters in Resource Management. A former mayor of Tofino, she is widely viewed as a champion for the environment.

Follow this newsletter for more on the Strategy once the Intentions Paper is released. We’ll let you know how and where to have your say as this critical policy develops.
At Living Oceans, we’ve always been as comfortable in gumboots on the ground as we are in suits in Ottawa. In March, we had the chance to wear both in a single week!

On March 28, we flew with West Coast Helicopters over ‘our’ beaches: from San Josef Bay north to Cape Scott; then out to the nearest of the Scott Islands, Lanz and Cox; and finally, along sections of the North Coast Trail. Our objective: to spot debris from the Zim Kingston container spill and plan our approach to Clear the Coast 2022.

On March 31, we testified before the House of Commons Standing Committee on Fisheries and Oceans (FOPO), which is undertaking a study on Canada’s preparedness for dealing with container spills. Spoiler alert: we’re not.

The Zim Kingston lost 109 containers overboard in October, 2021, when the ship encountered extremely heavy seas off southern Vancouver Island and fire broke out in several of the containers on board. Only 4 of the lost containers have so far grounded on shore on Vancouver Island’s northwest coast; remnants of the debris they released still litters shorelines throughout the area we surveyed. The rest of the containers are sitting in no more than about 100 meters of water on the continental shelf. So it came as a bit of a surprise to hear Coast Guard tell FOPO that they’re preparing the “after action” report.

To be fair, the ship owner has already sonar-scanned Constance Bank Anchorage is planning a second scan in the Cape Flattery area. Clearly, the focus here is on hazards to navigation, not on the potential for containers to break open anywhere from Port Renfrew to Haida Gwaii, spewing their contents all over our beaches.

Coast Guard advised FOPO, “With regard to containers, if they’ve been identified as a hazard, whether that be to navigation or to the marine environment, yes the shipowner is liable.” Of course the containers are a hazard to the marine environment! They will eventually break up and release their contents, which will inevitably include plastics and expanded polystyrene foam packing. But Coast Guard didn’t seem to think that a hazard has been identified.

Our helicopter survey spotted large, easily identified items from the Zim spill everywhere we went. We landed on Cox Island to ground-truth what we were seeing from the air and in about 15 minutes of searching, the team uncovered six items from the spill on a beach no more than 100 meters long. That was enough to tell us that a proper cleanup will find hundreds more items lodged among the logs and rocks.

What was perhaps more disturbing about our survey findings was that some of the debris we found may relate to a spill that happened far out at sea in 2020, several hundred miles northwest of Hawaii. That debris is being tracked by researchers at the University of Washington, who modelled landfalls all along the west coast beginning, they predicted, in February of 2022. Spot on, it seems. This raises certain questions about how to hold ship owners to account for cleanup of their debris: by this summer, we will be picking up the debris from at least two known spills in addition to the usual array of post-industrial plastics and consumer goods. There is no mechanism for us to claim the cost of cleanup from the ship’s owners or from our own government. Once again, the ocean has been treated as a dump and it’s left to organizations like Living Oceans and our caring donors and...continued on page 8
volunteers to ensure our shorelines are cleaned.

This is why our submissions to FOPO concentrated on the two, game-changing improvements the government could make. First, impose a levy on every container that enters Canada’s ports. There are millions of them moved every day, so even a small levy could create an impressive fund. Then, use that fund to create and staff a marine response organization devoted to shoreline cleanup. Charge the organization with the responsibility to recruit, train and drill shoreline response personnel; to inventory the scant resources available on our coasts to deal with the transport of personnel and debris; to make geographic response plans in concert with the First Nations and other communities on the coast; and to make funding available to groups like ours who will encounter the fallout from container ship spills in the course of our annual work to protect marine life.

Speaking of which...this year, we need to get started early. We’re thinking of a June cleanup on the North Coast Trail, followed by a July expedition to Sea Otter Cove, from which we’ll helicopter crews out to Lanz and Cox Islands. This is going to require a lot of hands on deck, so if you’ve been thinking about volunteering, now’s the time to get in touch! Send your availability and a short bio explaining your backcountry skills to info@livingoceans.org.

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Ways to Donate

1. Donate directly to Living Oceans, if you do not require a tax receipt.

   **By cheque:** Please make cheque payable to Living Oceans Society and mail to:
   
   Living Oceans Society
   Suite #7-650 Clyde Ave, West Van, BC V7T 1E2

2. Donate to the Canadian Coastal Research Society if you would like a tax receipt (minimum $25).

   **By cheque or credit card:** please fill out this form. Cheques must be payable to CANADIAN COASTAL RESEARCH SOCIETY. Please note if you would like to make a one-time or monthly donation. Monthly donors will receive annual tax receipts.

3. Online: You can donate directly to Living Oceans or to the Canadian Coastal Research Society using your credit card or Paypal on our web site.

   Canadian Coastal Research Society is a registered Canadian charity, no. 82128 1433 RR0001. Canadian Coastal Research Society and Living Oceans collaborate on charitable projects. You will be directed to the Canadian Coastal Research Society web site if you want to make a charitable donation.

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