

An otter named Ollie. A photo by Mollie Naccarato, submitted to 2022 Ocean Exposures Photo Contest

Top Ten Wins for the Ocean in 2022

e spend so much time telling you about what's wrong with the ocean, we thought it was time to share some of the good news stories that our work and global allies have helped bring about!

Net pen farmed salmon were redlisted after several years of a controversial yellow listing from Monterey Bay Aquarium's Seafood Watch program. B.C. farmed product was placed in the 'red' or 'avoid' category, over concerns with chemical use, sea lice and disease. Living Oceans contributed to the assessment as a peer reviewer of the scientific reports underlying the listing. The red listing should mean that responsible grocers stop selling the fish...but will they?

Grocers made progress on seafood sustainability, clocking an average 22% improvement in living up to their

commitments to seafood sustainability, as assessed by SeaChoice's commitment tracking platform, Seafood Progress. New this year, Seafood Progress assessed the most popular seafood brands, resulting in new commitments to social sustainability and transparency.

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Living Oceans is working to ensure the long-term health of the ocean and coastal communities of Canada. We believe that people are part of the environment and that we can build sustainable communities by protecting coastal ecosystems today.

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Where Are The Watchdogs? **Accountability Needed for Canada's Seafood Sustainability!**



verfishing and unsustainable fish farming remain major threats to the health of our oceans. That's why Living Oceans, and our SeaChoice partners David Suzuki Foundation and Ecology Action Centre, continue to push those with the most influence - grocers and seafood companies to improve their sourcing practices; as well as watchdog eco-certifications that greenwash unsustainable fish farms and fisheries; and advocate for the federal government to implement boat-to-plate traceability and improve seafood labelling laws.

2022 SeaChoice Highlights

- **Shoppers** can check how committed your local grocery store is to sustainable seafood with our updated Seafood Progress website (seachoice.org). Plus, we added major seafood brands such as Highliner, Oceans and others to Seafood Progress for you to check just how sustainable your favourite fish sticks or canned tuna brand really is.
- · Canadians sent thousands of emails to grocers and seafood brands telling them to do more for our oceans. The good news is that grocers are listening and have made improvements (Yes, though much more is still be done!).
- · Over 40 global groups called out the the Aqauculture Stewardship Council's

(ASC) certification's "farm responsibly" label on net pen salmon as misleading. And the Make Stewardship Count coalition called out the Marine Stewardship Council (MSC) for their low bar for highimpact fisheries that will continue to be certified "sustainable".

· Seafood grocers, companies and experts joined forces to call on the federal government to improve traceability requirements. Following SeaChoice's testimony, the Standing Committee on Fisheries and Oceans released a report recommending Canada strengthen its seafood traceability and labelling regulations.

Head to seachoice.org to view your local grocery store's profile and to keep track of all things sustainable seafood in Canada.



Global Alliance Fights Big Salmon Down Under

The fight against open-net pen salmon farming is global. The mega net pen salmon farming industry has spread from Norway to North America to Chile and beyond, with a small number of multinational juggernauts eating smaller companies along the way. Everywhere the industry operates it's the same story: the privatization of public waters, environmental degradation, and disregard for local communities.

So how do we fight a global industry? Civil society groups from regions affected by industrial fish farms form a global resistance.

Living Oceans is one of the founding members of the Global Salmon Farming Resistance (GSFR) - an alliance of individuals, communities and organisations from countries all over the globe working towards an end to unsustainable ocean-based net pen salmon farming.

Last year, GSFR allies called for the Canadian government to continue the path of getting the net pens out of BC waters. There have been coordinated pushes in US, Chile and Scotland as well. Last month, camaraderie extended to down under.

Living Oceans joined forces with fellow GSFR groups in an open letter, published in major Australian newspapers, to all Tasmanians and their premier urging them to act now and get the net pens out before multi-national, Cooke Inc, takes over their last remaining Australian owned salmon producer. The public record for Cooke Inc. and their subsidiaries shows a long history of violations, environmental damage and a general disregard for regulations. With Washington State taking the courageous move to ban net pen salmon farming from their waters, the pressure to expand will likely be amplified in other regions where this company operates - including Tasmania (and Atlantic Canada).



Read the full open letter and send your own to the Tasmanian premier at rec3forsafeseas.org.

Top Ten Wins for the Ocean in 2022

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Many strong wild salmon returns this summer and fall demonstrated the resilience of this fish. Alaska's Bristol Bay saw its largest returns in history, at over 78 million fish! All along our coastline, salmon returns exceeded pre-season forecasts except in the Fraser River, which came in 31% below forecast. This year's returning Fraser fish went to sea before most of the salmon farms closures on their migration route, that occurred in 2020.

An end to subsidizing overfishing is on the horizon after The World Trade Organization agreed to end subsidies to illegal, unregulated and unreported (IUU) fisheries, to fisheries on overfished stocks and to exercise care where stock status is unknown. Living Oceans helped amplify the #StopFundingOverfishing campaign that kept the spotlight on delegates.

Washington State banned net pen fish farms permanently from Puget Sound. Cooke Aquaculture was previously

banned from producing Atlantic salmon, but switched to steelhead production following a court challenge of the ban. As of December 14, 2022, Puget Sound will be fish farm free!

More B.C. netpen fish farms were "transitioned" when shishalh Nation announced that eight more salmon farms in Sechelt Inlet will close, bringing the total closed since 2019 to 40—all thanks to First Nations standing up for wild salmon. Our hope for the New Year is that Minister Murray stays the course, leaving Discovery Islands salmon farms closed when she revisits that decision (because of a Court order) and setting a firm schedule for the removal of the remaining ~70 farms.

Strong container spill response recommendations were made by a parliamentary committee holding hearings into the Zim Kingston container spill. It accepted many of Living Oceans' recommendations for spill prevention and response. The government responded by

providing more funding for the Ocean Protection Plan.

Over 53 tonnes of plastic have been cleared from Vancouver Island's coastline with your support and that of our dedicated, amazing, skilled, sensible and resilient volunteers!

Momentum grew behind the Fossil Fuel Non-Proliferation

Treaty, with 2 Nations, the European Parliament, the World Health Organization and well over a half-million individuals (and Living Oceans, of course!) calling for an end to all new fossil fuel exploitation, a fair phaseout and a just transition for workers

The fight against Big Salmon is growing globally. The Global Salmon Farming Resistance grew this year, supported by dedicated staff housed at Rewilding Argentina. Today, members from 13 salmon farming nations come together to share strategy and resources and to support one another's campaigns.

Washington State Decleares Itself Fish Farm Free

British Columbia Does Not

five-year campaign by our U.S. allies culminated in November in two stunning announcements: first, that Cooke Aquaculture would be denied leases to continue farming steelhead in Puget Sound; and next, that Washington would develop a state-wide policy prohibiting finfish farms in the ocean. In making her announcement, Commissioner Franz referred to science conducted here in British Columbia, including papers by researchers with the Strategic Salmon Health Initiative.

However thrilled we are for wild salmon and our colleagues south of the border, that hurts.

Living Oceans and many, many allies have been working toward that same goal since our founding in 1998. To hear that the state of scientific understanding of the impacts of salmon farms is clear enough for Washington State to act to protect wild salmon, while Fisheries and Oceans Canada (DFO) continues to obfuscate, is truly painful.

British Columbia is now the only place on the North American west coast to allow open-net pen salmon farms. California and Oregon tried it and banned it; Alaska never let them in. By the end of this year, the only salmon farms still operating on this coast will be ours. And despite the federal political commitment to transitioning the industry out of B.C., DFO's civil servants still seem intent on keeping them.

The fight to make BC fish farm free continues! Read on for the latest...

B.C.'s Salmon Farm "Transition" Plan Consultation Off the Rails

As recently as November 10, we met with the Fisheries and Oceans Canada's (DFO) Transition team that is charged with consulting on the Transition Plan for B.C.'s net pen industry. There, we learned that their plan is to transition "from open-net pens" to...open-net pens. So-called 'semi-closed' and 'hybrid' farming systems are under consideration for a new class of 'development' licence, that would give farms up to ten more years to kill wild salmon. Despite the fancy names, these systems rely on open-net pens to grow fish to market size.

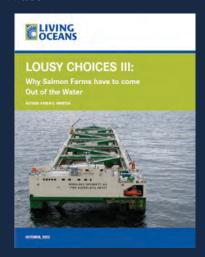
If you're wondering what good such productions systems would do for wild salmon...none. The question is irrelevant according to DFO, because (they say) there are no population-level impacts to wild salmon caused by salmon farms. It's really quite unsettling to sit in a room with people who continue to say this, despite the evidence to the contrary.

To put this in context, there are salmon runs on the west coast of Vancouver Island whose numbers are down to low double-digits; and populations in the Fraser River whose very survival depends on eliminating all sources of harm. The loss of a single smolt should be considered a 'population-level impact' in these at-risk populations.

Living Oceans and colleagues have prepared a letter to Minister Murray, urging her to put the consultations back on the rails by explaining to DFO staff that the industry must:

- return lice levels on juvenile wild salmon to background levels;
- ensure that no farm effluent enters the ocean;
- prevent escapes and 'trickle' losses of farmed stock; and
- reduce underwater noise to background levels.

We continue to work with the Transition Team to try to ensure that the mandate to "transition from open-net pens" is actually fulfilled. Lousy Choices III: Why Salmon Farms Have to Come Out of the Water



Living Oceans' latest report in the 'Lousy Choices' series takes a deep dive on aquaculture technology and the government policy that has been driving research and development in Norway. With price tags up to \$1 billion USD, Norwegian prototypes were designed to meet three objectives: reduce sea lice treatment costs, prevent escapes and improve farm fish welfare. Despite over a decade of highly incented experimentation, there is no system that grows fish to market size at commercial scale or density.

That is to say, any "new technology" to be used in the ocean still requires an open-net pen to grow the fish to market size.

The report examines a few of the prototypes in use worldwide, from massive steel cages to floating, full enclosures and juxtaposes them with the "cutting edge technology" proposed by Canadian salmon farmer Grieg Seafood: a net pen with a "tarp". But hey, the tarp goes up and down.

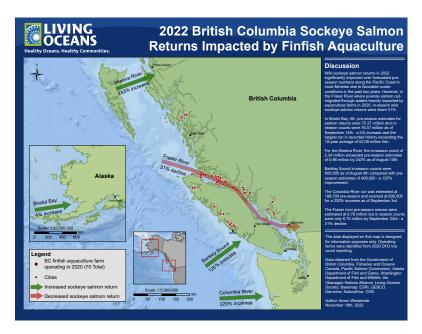
Read the full report at bit.ly/3FLOQtK

2022 Salmon Return Overview

almon returns were generally improved all along the west coast of North America, with returns exceeding forecasts by as much as 240%. In Alaska's Bristol Bay, sockeye returns broke the all-time record at over 78 million fish. Columbia River fish, spawning in the Okanagan, were also up 220% over forecast numbers. Favourable ocean conditions are thought to be responsible.

Unsurprisingly, returns on the Fraser River and most west coast Vancouver Island stocks did not fare so well. Only Barkley Sound, where there are no salmon farms, saw increased strength in returns. As at the end of September, the Fraser was reporting a 31% decrease from forecast numbers, a very poor showing for the dominant run of the 4-year cycle.

The sockeye that returned to the Fraser this year migrated out to sea in the spring of 2020, before then Minister Jordan closed the Discovery Islands farms. The salmon were subject to the full impact of the elevated



bacteria and virus levels around those farms, as well as to the sea lice breeding on the farms. The pattern of returns around the coast this year is not proof of the harm that salmon farms have been causing for 30 years, but it is most certainly correlative evidence of impacts. Taken together with the very high prevalence and intensity of sea lice infestation identified by Alex Morton's team

in 2020 (90% of sockeye were infested, with an average of nine lice per fish) and the findings of extremely elevated levels of bacteria in the Discovery Islands (12x background levels), these low returns to the Fraser suggest salmon farms may well have been having population-level impacts.

shíshálh Nation Closes Grieg's Sechelt Farms

media release from shishalh Nation earlier this month brought the stunning and welcome news that all of Grieg's Sunshine Coast salmon farms would be emptied of fish by the end of November and completely decommissioned by February of 2023. Living Oceans shared the news on social media with a hearty thanks to shishalh for standing up for wild salmon!

Added to earlier closures in the Discovery Islands, this means that juvenile fish migrating out of south coast rivers will not encounter salmon farm pathogens and parasites until they reach Johnstone Strait. This will be a benefit; by then they will be larger and more resilient. Unfortunately, Johnstone Strait is a difficult part of their journey, with its rapid currents and relatively

scarce food supply. It is made more difficult by farms like Shaw Point, a broodstock farm operated by Mowi that chronically exceeds the three lice per fish treatment trigger.

Grieg and Tlowitsis Nation have an application in to the Province and DFO for a new tenure in the Broughton and a licence for 4400MT of Atlantic salmon. The farm is to be called Ga-gump and the proposed location is just west of Turnour Island, in close proximity to Tsa-ya, Noo-la and Wa-kwa. We have submitted comments in opposition to the proposal and understand that it is located in shared or disputed territory with the Broughton Nations who have been working diligently to reduce salmon farm impacts to wild salmon. No decision has been issued on either the tenure or the licence.



Province-wide, out of some 109 active tenures, there are now 40 farms closed or scheduled for closure. Another four farms in the Broughton are scheduled for closure in 2023, unless the companies reach further agreement with the Nations under the Broughton Agreement.

Clear the Coast 2022

iving Oceans' volunteer crews removed over 7.3 metric tonnes of plastic debris from northern Vancouver Island beaches this year, in two expeditions in June and September (some of the debris was recycled before it could be weighed). The bulk of that debris came from Cox Island, the nearest of the Scott Islands and part of the marine National Wildlife Area established primarily to protect seabird colonies. We also worked on the Laura Creek area of the North Coast Trail, as well as our 'usual' beaches at Lowrie Bay, Sea Otter Cove and San Josef Bay.

The June expedition was a lightening-fast 'glamping trip': sharing helicopter time with the Cape Scott park operator, we dropped in a crew of six and all our supplies and set to work immediately. With only a couple of kilometers of hiking involved, in two days we had the beach scoured and lifts ready for the helicopter. Laura Creek was one of the worst-impacted stretches of the North Coast Trail and one that we hadn't cleared since 2019—we found it covered in cargo spilled from the Zim Kingston container ship, as well as the usual fishing and aquaculture debris.

We had planned our usual two-week boat trip into Sea Otter Cove for August, but had to cancel when our supply/transport boat blew its engine cooling-water pump two days out from Vancouver. We lost two weeks to repairs and returning home. All was not lost, however...



Volunteer David Jensen

Our newest partner in plastic cleanup, David Jensen, had planned to be out on his paddleboard for most of the summer, joining us when we arrived and staying on for the heli-lifts. As an experienced outdoorsman, used to working alone and living off the land, he was not to be deterred by the absence of the

entire crew and supply boat. He just carried on collecting and piling debris, confident that we'd figure something out.

David has recently started his own organization, aptly named Lonepaddle Conservationists Society and if you'd like to donate in appreciation of his awesome feat, you can find his website at lonepaddle.org.

We were able to secure two days of helicopter support which we put to maximum good use! On day one, we tackled two beaches on Cox Island; and on day two, hopscotched the crew among 13 lift sites prepared or identified by David during his solo expedition.

The evening campfire in between those two days was a short and subdued fire for sure. But the night sky was so compelling, it was hard to leave the comfort of a reclaimed tailgate cover (courtesy of the Zim Kingston spill, it made a surprisingly comfortable





fireside sit-upon), so a certain amount of stargazing and story-telling did take place before a night unfortunately punctuated by frequently-distressed geese. We theorized a wolf was on the prowl.

We are deeply indebted to all of our supporters who've donated to Clear the Coast; and to B.C. Parks, the Shaw Family Foundation and the Canadian Wildlife Service of Environment and Climate Change Canada, all of whom provided support for this year's operation. We also thank Dan Carter of Port Hardy, whose trucking services have expanded to include bed and board for our volunteers as well as connections to whatever we need whenever we need it. Thanks to Lee Sichello for opening his home to volunteers as well as volunteering himself; to Christoff for

supporting David and Jasper; and to Janet Lawson and our longtime volunteers Eric Grantner, Charles Lam, Brenda Stewart, Bruce Joiner and Leo Routledge for the hard work, high spirits and humour you bring to our expeditions.



Ocean Exposures Photo Contest 2022

every year, we invite the public to unleash their inner shutterbugs and let their creativity shine by sharing their favorite ocean photos with us. Your beautiful snapshots helps us showcase the beauty of the ocean as we advocate for its protection and this year's photographs by our Sea Huggers do not disappoint!

We had so many amazing entries this year and truly thank each of you that submitted your awe-inspiring ocean photos.

Congratulations to the winners of this year's Ocean Exposures Photo Contest!

Visit livingoceans.org/oecontest to view the full winner's gallery.



First Place, Coastal Wildlife. "Pacific White-sided Dolphins". Photographer: Anthony Bucci



First Place, Work or Play on the Ocean. "Yes you can! Yes you can!". Photographer: Charles Lam



First Place, Below the Surface. "Getting lost in the eyes of a Giant Pacific Octopus". Photographer: Mollie Naccarato



Sea Hugger's Choice Winner. "Low Tide & West Coast Fog. Cape Scott Prov. Park, V.I.". Photographer: Jan Heerwagen



Lessons Were Learned from the Zim Kingston Spill!

Wristen and fellow members of our Marine Debris Working Group testified before a parliamentary committee studying the response to the Zim Kingston spill. The House Standing Committee on Fisheries and Oceans tabled its report in October, making 29 sweeping recommendations for improvement to spill response capability—and 27 of them responded directly to our testimony!

We testified to the problems we encountered in attempting to provide responsible, knowledgeable response to the spill in coordination with Incident Command and the polluter's local contractors. Karen went further, examining the international protocols governing marine container transport and suggested that work at the International Maritime Organization and United Nations Environment Program would be needed to ensure that prevention of spills becomes the first pillar of our response program. She told the Committee,

"we really have no idea what to expect from the missing sunken containers. Two of them are known to contain a chemical that is acutely toxic to aquatic organisms, and we



Photo Credit: Canadian Coast Guard

have no idea where they are or what condition the cargo is in, and 102 of the containers are simply mysteries. We're told that the manifest, which is not made public, describes the cargo only in the most general sense. We have no means of assessing the size or nature of the risk that has been consigned to the ocean. How, then, are we to begin to hold the polluter to account for the risk or to plan and pay for a response when those sunken containers break up and release their content?"

In its final remarks, the Committee concluded,

"the federal government, provinces, and

coastal communities are currently not operationally prepared to effectively manage marine cargo container spills, including releases of HNS [Hazardous and Noxious Substances]. Salvage capability required to mitigate the long-term environmental impacts of marine debris is still lacking. At present, there is no capability to track floating containers and recover sunken ones. In addition, marine emergency towing and firefighting capability is still deficient."

The Committee's report can be found at: https://www.ourcommons.ca/ DocumentViewer/en/44-1/FOPO/report-6/.

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