



December 18, 2019

Hon. Bernadette Jordan
Minister of Fisheries, Oceans, and the Canadian Coast Guard
House of Commons,
Ottawa, Ontario
K1A 0A6

SUSPEND THE STRAIT OF GEORGIA HERRING FISHERIES

Dear Minister Jordan,

Pacific herring in British Columbia urgently need your help. Four of the five major B.C. populations have already collapsed, and the Strait of Georgia is the last manage open to commercial seine and gillnet fisheries.¹ From California to Alaska, herring are declining.²

In 2019, Fisheries and Oceans Canada (DFO) substantially overestimated the size of the Strait of Georgia herring population, and the population is predicted to decline further in 2020.³ According to the precautionary principle, the considerable uncertainty in herring population dynamics and changing environmental conditions require a reduction in fishing pressure. Nonetheless, DFO plans to open commercial roe fisheries in early March.

We, the undersigned, have legitimate concerns about the management of herring and are requesting an immediate suspension of the commercial herring fishery in the Strait of Georgia.

OUR REASONS TO SUSPEND THE FISHERY ARE AS FOLLOWS:

- Herring are the foundation of Canada's Pacific Coast. The small fish is a keystone species, converting the energy and nutrients from plankton into food for larger animals. Numerous species consume herring and herring eggs as a significant part of their diet, including Pacific salmon, humpback whales, seabirds, and terrestrial carnivores. Furthermore, herring have been essential to the diet and culture of First Nations peoples for millennia.⁴
- Your department's forecasts for B.C. herring have often been wrong.⁵ The Strait of Georgia herring population has been overfished in seven of the last 15 years, because of forecast errors. In 2019, overfishing occurred when DFO overestimated abundance by 30%.³ The forecasted biomass for 2020 is even smaller, which increases the risk of population collapse if overfishing occurs again.
- The claim that herring are at historic high numbers in the Strait of Georgia is based on an inaccurate historical baseline. DFO scientists compare population abundance to 1951 data, which obscures the magnitude of the decline. First Nations' traditional knowledge and archaeological data prove that herring were more abundant and widespread before the onset of reduction fisheries in the late 1800s.⁶ The Strait of Georgia population is now below 30% of the pre-fisheries biomass (the DFO's limit reference point) and, therefore, should not be fished.
- Herring are worth more in the water. The species that eat herring support lucrative ocean-based tourism and commercial and sport fisheries that generate more revenue and employ more people than the herring fishery.⁷ Closing the herring fishery would allow these industries to flourish.
- Rebuilding herring throughout the Salish Sea would provide food for at-risk Chinook salmon stocks. In 2018, your department committed \$61.5 million to target threats to the endangered Southern Resident orcas. A key component of that strategy is increasing the number of Chinook salmon, a species whose diet is 62% herring.⁸
- The roe fishery takes food from wild Pacific salmon to feed farmed Atlantic salmon. Herring roe, which is predominantly sold to Japanese markets, makes up 12% of the catch, on average; the remaining 88% is reduced into fish meal and oil. Herring meal and oil are used to manufacture animal feed and aquaculture pellets for B.C. salmon farms.⁹

As the Minister of Fisheries, Oceans, and the Coast Guard, it is your legal responsibility to sustain herring populations for First Nations, for the coastal ecosystem, and for all British Columbians, whose lives are inextricably tied to herring. There is substantial public support for suspending the fishery.

Minister Jordan, we support a ministerial order to suspend commercial herring fisheries in the Strait of Georgia.

Sincerely,

*Pacific Wild
Conservancy Hornby Island
Sea Shepherd Conservation Society
Association for Denman Island Marine Stewards
Sea Legacy
Sitka Society for Conservation
Pacific Yellowfin Charters
Georgia Strait Alliance
Sierra Club B.C.
Living Oceans Society
The Wilderness Committee
BC Nature
Tourism Powell River
Powell River Outdoors
Wilderness Tourism Association
Discovery Islands Marine Tourism Group
The Sitka Foundation
Cascadia Research
World Fisheries Trust
Squamish Streamkeepers
SeaChange Marine Conservation Society
Victoria Natural History Society
Friends of Victoria Harbour Migratory Bird Sanctuary
Bowen Island Conservancy
Bowen Island Fish and Wildlife Club
Salt Spring Island Conservancy
Lasqueti Island Nature Conservancy
Friends of Cortes Island Society
Valdes Island Conservancy
Mayne Island Conservancy Society
Mitlenatch Island Stewardship Team
Cowichan Valley Naturalists' Society
Comox Valley Naturalist Society
Orca Network
Orca Awareness Month
Coastal Watershed Institute
Friends of the San Juans
Friends of Semiahmoo Bay Society
Little Campbell Watershed Society
Nature Nanaimo
Save French Creek Estuarylands
Arrowsmith Naturalists
Salt Spring Ocean Stewards
PNW Protectors
Nature Photography by Martin Ryer
Vancouver Island Photo Tours / Rolf Hicker Photography
Bold Point Centre
Blue Sphere Foundation
Blue Sphere Media*

*Hornby Island Diving Ltd.
Maple Leaf Adventures
Mothership Adventures Inc.
Prince of Whales Whale & Marine Wildlife Adventures
Nimmo Bay Wilderness Resort
Eagle Wing Whale & Wildlife Watching Tours
Five Star Whale Watching
All About Sailing
San Juan Excursions, Inc.
Spirit of Orca Whale Watching & Wildlife Tours
Orca Spirit Adventures
Ocean Ecoventures
Bluewater Adventures
Ocean Light II Adventures Ltd.
Seasmoke Whale Watching
Farewell Harbour Lodge and Alder Bay RV Park & Marina
Spirit of the West Adventures Ltd.
SpringTide Whale Watching & Eco Tours
Wild West Sport Fishing Ltd.
Hail Hunter Fishing Charters
Dr. Dana Lepofsky, Simon Fraser University
Dr. Abby Schwarz, Langara College
Susan Conrad, Wildly Inside author*

Cc:

*Hon. Justin Trudeau, Prime Minister of Canada
Hon. Jonathan Wilkinson, Minister of Environment and
Climate Change
Jagmeet Singh, Leader NDP and MP Burnaby South
Elizabeth May, MP Saanich—Gulf Islands
Gord Johns, MP Courtenay—Alberni
Paul Manly, MP Nanaimo—Ladysmith
Patrick Weiler, MP West Vancouver—Sunshine Coast—Sea
to Sky Country
Rachel Blaney, MP North Island—Powell River
Laurel Collins, MP Victoria

Hon. John Horgan, Premier of British Columbia
Hon. Lana Popham, B.C. Minister of Agriculture
Hon. Scott Fraser, B.C. Minister of Indigenous Relations and
Reconciliation
Adam Olsen, MLA Saanich North and the Islands

Rebecca Reid, DFO Pacific Regional Director General
Brenda Spence, DFO Regional Pelagics Coordinator
Victoria Postlethwaite, DFO Regional Herring Officer
James Meldrum, DFO Resource Manager*

SUPPORTING INFORMATION

1. In the last twenty years, herring fisheries off Haida Gwaii, the Central Coast, and the West Coast of Vancouver Island have been closed many times (DFO 2018b). Despite years of little fishing, these populations have not recovered (DFO 2018a). In 2019, the Prince Rupert herring fishery was also closed, leaving the Strait of Georgia as the last of the five major populations to be targeted by a commercial roe fishery (DFO 2018b).
2. In 2018, the roe fishery in Sitka Sound closed early after failing to catch the full quota. In December 2018, the Sitka Tribe sued the Alaska Department of Fish and Game for mismanagement of the herring fishery in Sitka Sound—the case goes to trial in January 2020 (Rose 2018). In 2019, that fishery was completely closed, because herring were too small and sparse (Rose 2019). The California Department of Fish and Wildlife closed the 2019 commercial herring fishery in San Francisco Bay: the return was the second smallest on record (Bland 2019).
3. The 2019 forecast for the Strait of Georgia herring biomass was 122,291 metric tonnes (DFO 2018a). Applying a 20% harvest rate to the forecast, the fisheries quota was set at 28,430 tonnes (DFO 2018b). However, only 85,700 tonnes of herring returned to the Strait of Georgia, and the total catch (21,419 tonnes) was 25% of the total population biomass (i.e. an overharvest, DFO 2019). Just 54,200 tonnes are predicted to return in 2020, which is less than the population biomass in the early 1950s, the late 1970s, and throughout the 1990s (DFO 2019).
4. Archaeological records from up to 10,700 years ago show that herring were more abundant and widespread than they are today. At 171 Indigenous village sites stretching from Puget Sound into southeastern Alaska, herring bones made up almost half of all fish bones, on average, and were found at 99% of sites (McKechnie *et al.* 2014). In some parts of the B.C. coast, like southwestern Vancouver Island and the Gulf Islands, herring were a more important food source for First Nations than Pacific salmon.
5. In 2016, DFO committed to a review of their Pacific herring management framework. The Management Strategy Evaluation found that DFO populations models can over-predict the number of fish. When quotas are set based on overestimates, herring populations are overfished (i.e. the actual harvest rate exceeds the recommended harvest rate of 20% of the population). Herring were overfished in the Strait of Georgia in 2005, 2006, 2013, 2014, 2015, 2017 and 2019 (DFO 2018a, DFO 2019).
6. The current management system uses 1951 data as a population baseline, which conceals the decline caused by early fisheries and limits the scope of recovery for B.C. herring populations. The B.C. commercial herring fishery began in 1876 and caught huge quantities of herring in the first half of the 20th century. By 1910, government officials noted that herring were less common in areas where they had been abundant (McKechnie *et al.* 2014). In 1962, the B.C. catch peaked at 215,547 tonnes—four times the predicted size of the Strait of Georgia population in 2020 (estimated at 54,242 tonnes; Herring School 2015, DFO 2019). In 1967, populations collapsed coastwide (Herring School 2015).
7. In 2016, B.C. commercial fisheries for salmon, halibut, and hake were worth \$62.9 million, \$64 million, and \$18.3 million in landed value, respectively (\$145.2 million combined; DFO 2016). The B.C. whale watching industry generates approximately \$250 million per year (McGillivray 2018). In comparison, the 2016 landed value of the commercial herring fishery was just \$15.6 million (DFO 2016). Based on data from BC Stats and Statistics Canada, the sport fishing industry employed 9,000 people in 2016, who earned \$236.5 million (AgriService BC 2018). The herring fishery generated an estimated 356 full-time equivalent jobs (Cashion 2019).
8. Washington State's Southern Resident Orca Task Force identified loss of forage fish as one factor contributing to Chinook salmon declines (Southern Resident Orca Task Force 2018). For Fisheries and Oceans Canada, increasing the availability of Chinook salmon, the preferred prey of the Southern Resident orcas, is one of three priority actions for protecting the whales (DFO 2018c). Adult Pacific herring contribute approximately 62% to the diet of adult Chinook salmon in offshore areas, like La Pérouse Bank, which is one of two new areas of critical habitat for Southern Resident orcas (DFO 2013, DFO 2018d).
9. After processing to remove the roe from female herring, the carcasses of male and female herring are sold to reduction companies. The roe makes up 12% of the total catch on average (V. Postlethwaite, DFO Regional Herring Officer and Lead Special Use Herring Resource Manager, *pers. comm.*). The carcasses are reduced into meal and oil, which are used to manufacture aquaculture pellets, among other products, according to Canadian Fishing Company Vice President, Rob Morley (Bland 2016, Pynn 2017). A typical aquaculture feed used to feed Atlantic salmon in B.C. fish farms contains 5% herring meal and 2% herring oil (McGrath, Pelletier, and Tyedmers 2015).

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