



**Pacific Wild**

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October 30, 2025

Integrated Herring Harvest Planning Committee (IHHPC)  
Att: Hong Tjhie  
Regional Herring Officer  
401 Burrard Street  
Vancouver, British Columbia V6C 3S4

**SUSPEND THE STRAIT OF GEORGIA HERRING FISHERIES**

Dear Hong Tjhie,

Pacific Wild Alliance respectfully submits the following comments regarding the *Draft 2025/2026 Integrated Fishery Management Plan (IFMP)* for Pacific herring.

Pacific herring (*Clupea pallasii*) represent a foundational species within British Columbia's coastal food web and are in urgent need of conservation and recovery measures. In light of their critical ecological, cultural, and economic importance, this submission advocates for the rapid implementation of an ecosystem-based approach to fisheries management for Pacific herring, coupled with the immediate suspension of commercial herring fisheries in the Strait of Georgia (SoG) to facilitate population recovery. We further call for a more comprehensive scientific understanding of herring population dynamics and distribution, to ensure that management decisions are informed by the best available knowledge and reflective of ecosystem complexity.

**Please note, recommendations in this submission are not intended to apply to Food, Social and Ceremonial Fisheries conducted by Indigenous People.**

Pacific herring play an irreplaceable ecological, cultural, and economic role in the SoG. Their seasonal spawning events sustain a diverse array of species, including Chinook and coho salmon, lingcod, Pacific halibut, marine mammals, and seabirds, many of which are of vital importance to First Nations, commercial, and recreational fisheries.<sup>1</sup> The recovery of herring populations in the SoG would directly support at-risk

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<sup>1</sup> Surma et al., 2018

Chinook salmon,<sup>2,3</sup> the primary prey of the endangered Southern Resident killer whales (SRKW). While Fisheries and Oceans Canada (DFO) has invested substantial resources in SRKW recovery initiatives, the protection and rebuilding of Pacific herring, an essential prey base, remain conspicuously absent from this strategy.<sup>4</sup>

Pacific herring populations in the SoG are experiencing a pronounced and ongoing decline. Over the past five decades, spawning activity has exhibited a south-to-north contraction, now threatening the few remaining spawning grounds north of Nanaimo.<sup>5</sup> The spawning window has likewise narrowed drastically, from approximately five months historically to only a few weeks in recent years, suggesting a loss of genetic diversity and population resilience.<sup>6,7,8</sup> DFO has not yet identified the primary drivers of this decline, and as a result, herring continue to be managed without a comprehensive understanding of the ecological and environmental factors influencing their abundance. Managing herring in the SoG without this foundational knowledge is both ecologically and ethically irresponsible and threatens the long-term sustainability of the fisheries, First Nations' access and rights, and the numerous species and livelihoods dependent upon herring for survival.

Furthermore, management decisions continue to rely on outdated baselines. Assertions that herring populations are at “historic highs” are based on data beginning in 1951, long after industrial exploitation had already depleted stocks. Traditional First Nations knowledge and archaeological evidence indicate that herring were once vastly more abundant along the Pacific coast.<sup>9</sup> Research on forage fish species reveals declines of up to 99% in some regions, underscoring that current biomass estimates are neither sustainable nor representative of pre-industrial abundance.<sup>10,11</sup>

From an economic perspective, herring provide far greater value when left in the ocean than when harvested. The tourism and fisheries sectors supported by herring-dependent species generate substantially higher and more sustainable economic returns than the commercial herring fishery.<sup>12,13</sup> Incorporating an ecosystem services framework into fisheries management allows for a more accurate accounting of herring's multifaceted value, beyond its landed price, to include its contributions to biodiversity, carbon storage, and the productivity of higher-value commercial species such as salmon, halibut, hake, and lingcod.<sup>14,15,16,17</sup> A cost-benefit analysis of Atlantic herring determined that the value of herring left in the water was approximately 66% greater than the commercial catch value, with rebuilt stocks providing over \$400 million in long-term ecosystem and economic

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<sup>2</sup> Chamberlin et al., 2021

<sup>3</sup> Davis et al., 2020

<sup>4</sup> DFO, 2018

<sup>5</sup> Pacific Marine Conservation Caucus, 2025

<sup>6</sup> Okamoto et al., 2020

<sup>7</sup> Petrou et al., 2021

<sup>8</sup> Stier et al., 2020

<sup>9</sup> McKechnie et al., 2014

<sup>10</sup> Morin, Evans & Efford, 2023

<sup>11</sup> Efford et al., 2025

<sup>12</sup> Government of British Columbia, 2022

<sup>13</sup> DFO, 2023

<sup>14</sup> Pikitch et al., 2012

<sup>15</sup> Pikitch, et al., 2014

<sup>16</sup> Millennium Ecosystem Assessment, 2005

<sup>17</sup> Konar et al., 2019

benefits.<sup>18</sup> Applying this approach to Pacific herring clearly demonstrates that rebuilding rather than harvesting would yield far greater ecological and financial returns for British Columbia's coastal communities and enhance regional food security. If we want to rely on herring economically in the future, we need to act conservatively now, prioritizing recovery over short-term harvests to secure long-term economic and ecological benefits.

Nearly all of British Columbia's herring products are exported to Japan, China, and the United States,<sup>19</sup> providing minimal direct benefit to local communities. Consequently, the commercial herring fishery not only depletes a foundational species but also threatens food security by removing a key prey resource essential for First Nations subsistence (FSC), recreational, and commercial fisheries. In essence, this fishery fishes down the food web, undermining both the ecological stability and economic resilience of British Columbia's coastal ecosystems. Compounding these pressures, climate change is intensifying environmental stressors. Rising sea surface temperatures, ranging from 0.6 to 1.4°C across B.C. waters, and up to 2.2°C per century in the SoG,<sup>20</sup> are expected to significantly reduce egg and juvenile survival, further constraining population recovery.<sup>21</sup>

## Recommendations

1. **Suspend all commercial fishing for Pacific herring in the Strait of Georgia.**

Pacific Wild does not support the proposed harvest option for consideration for the SOG area including TAC's up to 14,385 tons, with the exception of allowing harvest to support FSC. We urge that an immediate suspension of the commercial Food and Bait, Special Use and Roe herring fisheries is necessary to allow for population recovery and to safeguard the ecosystem services on which coastal communities and wildlife depend.

2. **Develop a formal Recovery Plan for Herring in the Strait of Georgia.**

DFO should develop a comprehensive recovery plan modeled on the *Haida Gwaii 'íináng | iinang Pacific Herring: An Ecosystem Overview and Ecosystem-based Rebuilding Plan*. This plan must be co-developed with First Nations, independent scientists, government representatives, and conservation organizations to ensure that it is transparent, science-based, and inclusive. Importantly, the fishery should be paused while the plan is being developed to allow herring populations the best chance to recover.

3. **Accelerate the integration of an Ecosystem Approach to Fisheries Management (EAFM).**

Management frameworks must fully incorporate Indigenous Knowledge Systems, climate adaptation strategies, and recognition of herring's ecological role within the broader marine food web.

4. **Differentiate between migratory and resident herring populations.**

Substantial evidence suggests that both migratory and resident herring populations exist within the SoG, with some local populations likely extirpated. These distinct population structures cannot be

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<sup>18</sup> Gardner Pinfold Consulting, 2024

<sup>19</sup> DFO, 2025

<sup>20</sup> BCME, 2017

<sup>21</sup> Villalobos, Love & Brady, 2020

managed as a single stock unit without risking further loss of genetic and ecological diversity.<sup>22,23,24,25,26,27</sup>

Fisheries and Oceans Canada holds both a legal and ethical obligation to sustain Pacific herring for First Nations, for the integrity of coastal ecosystems, and for all British Columbians whose lives and livelihoods are intertwined with this foundational species. Public support for precautionary action is strong and growing. We therefore urge DFO to temporarily suspend commercial herring fisheries in the SoG and prioritize the long-term recovery of this species as a cornerstone of ecological resilience and coastal prosperity.

Sincerely,  
Sydney Dixon

A handwritten signature in black ink, appearing to read 'Sydney Dixon', with a stylized, cursive script.

Marine Specialist

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<sup>22</sup> Benson, Cox, & Cleary, 2015

<sup>23</sup> Okamoto et al., 2020

<sup>24</sup> Stier et al., 2020

<sup>25</sup> Rogers et al., 2018

<sup>26</sup> Pitcher et al., 2017

<sup>27</sup> Petrou et al., 2021

## References

- Benson, A.J., Cox, S.P. & Cleary, J.S. (2015). Evaluating the conservation risks of aggregate harvest management in a spatially-structured herring fishery. *Fisheries Research*, 167: 101-113.  
<https://doi.org/10.1016/j.fishres.2015.02.003>
- British Columbia Ministry of Environment and Climate Change Strategy [BCME]. (2017). *Change in sea surface temperature in B.C. (1935–2014)*. Environmental Reporting BC. Retrieved from  
<https://www.env.gov.bc.ca/soe/indicators/climate-change/sea-surface-temperature.html>
- Chamberlin, J., Petrou, E., Duguid, W., Barsh, R., Juanes, F., Qualley, J., & Hauser, L. (2021). Phenological diversity of a prey species supports life-stage specific foraging opportunity for a mobile consumer. *ICES Journal of Marine Science*, 78(9), 3089–3100. <https://doi.org/10.1093/icesjms/fsab176>
- Davis, M. J., Chamberlin, J. W., Gardner, J. R., Connelly, K. A., Gamble, M. M., Beckman, B. R., & Beauchamp, D. A. (2020). Variable prey consumption leads to distinct regional differences in Chinook salmon growth during the early marine critical period. *Marine Ecology Progress Series*, 640, 147–169.  
<https://doi.org/10.3354/meps13279>
- Efford, M., Taft, S., Morin, J., George, M., Speller, C., & Christensen, V. (2025). Unsettling the record: Modelling the devastating cumulative effects of selected environmental stressors and loss of human life caused by colonization in Burrard Inlet, Canada. *Philosophical Transactions of the Royal Society B*, 380(20240040).  
<https://doi.org/10.1098/rstb.2024.0040>
- Fisheries and Oceans Canada [DFO]. (2018). *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada*. Species at Risk Act Recovery Strategy Series. Ottawa, Ontario.
- Fisheries and Oceans Canada [DFO]. (2025). *Pacific Region Integrated Fisheries Management Plan, Pacific Herring, November 7, 2025 to November 6, 2026*. TBD.
- Fisheries and Oceans Canada [DFO]. (2023). *Seafisheries landings - 2023 provisional statistics*. Government of Canada. Retrieved from  
<https://www.dfo-mpo.gc.ca/stats/commercial/land-debarq/sea-maritimes/s2023pv-eng.htm>
- Gardner Pinfold Consulting. (2024, May). *Overlooked & undervalued: The economic case for rebuilding forage fish*. Oceans North. <https://oceansnorth.org/>
- Government of British Columbia. (2022). *Coastal marine strategy: Policy intentions paper*.  
<https://engage.gov.bc.ca/coastalmarinestrategy>
- Konar, M., Qiu, S., Tougher, B., Vause, J., Tlusty, M., Fitzsimmons, K., Barrows, R., & Cao, L. (2019). Illustrating the hidden economic, social and ecological values of global forage fish resources. *Resources, Conservation and Recycling*, 151, 104456. <https://doi.org/10.1016/j.resconrec.2019.104456>

- McKechnie, D. Lepofsky, M.L. Moss, V.L. Butler, T.J. Orchard, G. Coupland, F. Foster, M. Caldwell, K. Lertzman, K. (2014). Archaeological data provide alternative hypotheses on Pacific herring (*Clupea pallasii*) distribution, abundance, and variability. *PNAS*, 111(9): E807-E816.  
<https://doi.org/10.1073/pnas.1316072111>
- Millennium Ecosystem Assessment. (2005). *Ecosystems and human well-being: Wetlands and water synthesis*. World Resources Institute.
- Morin, J., Evans, A.B., & Efford, M. (2023). The Rise of Vancouver and the Collapse of Forage Fish: A Story of Urbanization and the Destruction of an Aquatic Ecosystem on the Salish Sea (1885–1920 CE). *Human Ecology*, 51(2): 303–322. DOI:10.1007/s10745-023-00398-w
- Okamoto D.K., Hessing-Lewis M., Samhouri J.F., Shelton A.O., Stier A., Levin P.S., Salomon A.K., (2020). Spatial variation in exploited metapopulations obscures risk of collapse. *Ecological Applications*, 30: 1–16.  
<https://doi.org/10.1002/eap.2051>
- Pacific Marine Conservation Caucus. (2025, November 26). *MCC response to draft 2024/2025 Pacific herring Food & Bait and Special Use Commercial Fishing Plans, and the full Integrated Fisheries Management Plan*. Pacific Marine Conservation Caucus.
- Petrou E.L., Fuentes-Pardo A.P., Rogers L.A., Orobko M., Tarpey C., Jiménez-Hidalgo I., Moss M.L., Yang D., Pitcher T.J., Sandell T., Lowry D., Ruzzante D.E., Hauser L. (2021). Functional genetic diversity in an exploited marine species and its relevance to fisheries management. *Proc Biol Sci*, 24: 288(1945):20202398. doi: 10.1098/rspb.2020.2398
- Pikitch, E. K., Boersma, P. D., Boyd, I. L., Conover, D. O., Cury, P., Essington, T., Heppell, S. S., Houde, E. D., Mangel, M., Pauly, D., Plagányi, É., Sainsbury, K., & Steneck, R. S. (2012). *Little fish, big impact: Managing a crucial link in ocean food webs* (108 pp.). Lenfest Ocean Program.
- Pikitch, E. K., Rountos, K. J., Essington, T. E., Santora, C., Pauly, D., Watson, R., Munch, S. B. (2014). The global contribution of forage fish to marine fisheries and ecosystems. *Fish and Fisheries*, 15(1), 43–64.  
<https://doi.org/10.1111/faf.12004>
- Pitcher, T., Lam, M., & Kaiser, M., & White, A.S.J. (2017). “Hard of Herring”. Pages 112-119 in Tortell, P., Young, M. & Nemetz, P. (eds) *Reflections Of Canada: Illuminating Our Opportunities and Challenges at 150+ years*. 309pp. Peter Wall Institute of Advanced Studies, Vancouver, Canada.
- Rogers, L.A., Salomon, A.K., Connors, B., & Krkošek, M. (2018). Collapse, Tipping Points, and Spatial Demographic Structure Arising from the Adopted Migrant Life History. *The American Naturalist*, 192(1).  
<https://doi.org/10.1086/697488>
- Stier, A. C., A. Olaf Shelton, J. F. Samhouri, B. E. Feist, and P. S. Levin. (2020). Fishing, environment, and the erosion of a population portfolio. *Ecosphere*, 11(11):e03283. <https://doi.org/10.1002/ecs2.3283>

- Surma, S., Pitcher, T. J., Kumar, R., Varkey, D., Pakhomov, E. A., & Lam, M. E. (2018). Herring supports Northeast Pacific predators and fisheries: Insights from ecosystem modelling and management strategy evaluation. *PLoS ONE*, 13(7), e0196307. <https://doi.org/10.1371/journal.pone.0196307>
- Villalobos, C., , Love, B.A., & Brady, O.M. (2020). Ocean Acidification and Ocean Warming Effects on Pacific Herring (*Clupea pallasii*) Early Life Stages. *Frontiers in Marine Science*, 7: 597899.  
DOI=10.3389/fmars.2020.597899