Dear Ms. Postlethwaite,

Our organization is emailing you in support of Pacific Wild’s response to the DFO Draft 2018/2019 Integrated Fisheries Management Plan (IFMP) for Pacific herring (Clupea pallasii). After reviewing your draft, Pacific Wild brought up seven concerns about the 2019 management plan. Those concerns are below:

1. The ecosystem’s reliance on herring is not quantified. Herring form a foundation for the entire coastal ecosystem of British Columbia, supporting numerous economically, ecologically, and culturally significant species, from Pacific salmon to seabirds to humpback whales. These species provide important commercial and recreational fishing opportunities and support the substantial tourism industry in B.C. However, the Biological Synopsis in Section 2 of the IFMP inadequately addresses herring’s important ecological role as prey for these other species. As DFO managers, your role is not only to conserve herring stocks for future fishing opportunities, but to prevent negative impacts on the ecosystem. Without estimates of the quantity of herring required to support populations of other species, it is difficult to assess the effects of herring fisheries on the ecosystem. Therefore, the maximum harvest rates outlined in the IFMP cannot be considered “conservative,” as is stated on page 24.

2. Haida Gwaii and Central Coast populations are failing to recover from overfishing. In the last five years, First Nations have taken legal and direct actions to prevent the total depletion of herring populations in their territories. For example, members of the Heiltsuk nation occupied the DFO office on Denny Island in 2015 to protest the commercial roe fishery opening on the Central Coast. In the same year, the Haida nation won an injunction against the commercial roe fishery in Haida Gwaii due to the risk of irreparable harm. Despite the leadership of these nations, and a period of low fishing pressure, the Haida Gwaii and Central Coast stocks have not rebounded. In the Status of Pacific Herring (Clupea pallasii) in 2018 and Forecast for 2019 [Pre-approved Draft], DFO managers state that the Haida Gwaii and Central Coast stocks fell to low biomass and low productivity states rapidly, following a period of high biomass. These past failures to predict extreme fluctuations in herring stock abundance suggest that the high predicted abundance of Strait of Georgia herring for 2019 is no guarantee of that stock’s future biomass or stability.

3. The IFMP is using the wrong baseline for measuring herring population abundance. Comparing current population estimates to those from 1951 provides an incomplete picture of the decline of herring since commercial fishing began in 1876. It is well established that B.C. herring populations experienced high rates of exploitation until a coast-wide collapse in 1967. According to historical
records compiled by the SFU Herring School, patterns of spawning and abundance were already altered by 1910 ([http://www.pacificherring.org/timeline](http://www.pacificherring.org/timeline)). Archaeological and historical records could be integrated with Indigenous traditional ecological knowledge to generate better estimates of pre-1950s abundance (e.g. McKechnie et al. 2014), rather than using already-depleted populations as a baseline. In order to conserve remaining genetic and life-history diversity, DFO must estimate stock trajectories, set biological limit reference points (LRP) and provide harvest advice relative to historical population sizes.

4. Reducing the harvest rate is the best way to avoid over-harvest. According to the Management Strategy Evaluation conducted by DFO in 2018, the catch-at-age stock assessment models for herring overestimate spawning biomass, which leads to over-harvest. Since 1986, over-harvest has occurred “frequently” on the Central Coast (Status of Pacific Herring in 2018: page 10; Figure 11), and in the Strait of Georgia, harvest exceeded the intended 20% harvest rate in four of the last ten years (page 11; Figure 11). The Management Strategy Evaluation found that reducing the harvest rate from 20% to 10% was “the most effective means of mitigating stock assessment errors;” yet, the IFMP assigns a 20% harvest rate for the Strait of Georgia in 2019. To improve effectiveness--and public trust--in the herring management system, DFO managers must, at a minimum, implement the lessons of their internal evaluations.

5. The commercial herring fishery places too much pressure on the Strait of Georgia stock. According to the Status of Pacific Herring in 2018, Strait of Georgia herring have risen from 22% of the coast-wide catch in 1990 to 95% of the coast-wide catch in 2018 (page 4). In 1990, approximately 9,000 tonnes of Strait of Georgia herring were landed, compared to approximately 21,000 tonnes landed in 2018. In 2019, the Strait of Georgia stock will be the only one fished for roe. While the coast-wide catch has declined with herring abundance in the last thirty years, the quantity of fish taken from the Salish Sea has more than doubled. DFO is placing all of their herring eggs in one basket. This is dangerous, because the 2018 estimates of spawning biomass and natural mortality and the 2019 prediction for the Strait of Georgia are highly uncertain (Status of Pacific Herring in 2018, page 10; Figure 9d). Until there are enough data to determine whether the trajectory of the Strait of Georgia population has changed, this population should not be fished commercially.

6. The public comment period is inaccessible to the public. The short time frame allowed for public comment is inappropriately timed, occurring during a holiday period. As a result, there is minimal awareness and input from the general public. The timing of approval for the 2019 fisheries quotas so close to the opening date of the fisheries does not allow for public recourse. In addition, past and draft versions of the management plan should be posted on the DFO website for public download, instead of available only by emailed request.

7. Ultimately, we find that DFO is not operating according to their own precautionary principle. Until DFO can produce models that accurately reflect the dynamics of herring stocks, their response to environmental and anthropogenic factors, and the effects of declining coast-wide herring abundance on other important species, herring should not be fished commercially in B.C.

I look forward to seeing these points taken into consideration for BC's herring management.