

# Relieve pressures on BC's herring stocks!



## Summary

BC's herring populations have been on a delicate road to recovery, however increasing anthropogenic and climatic threats call for an immediate action on policy to relieve pressures on their stocks.

## Threats to Stocks

After BC's herring stocks collapse in the 1980's, its population has been struggling to recover from overfishing pressures<sup>1,5</sup>. Although new management was introduced after the collapse, herring now face anthropogenic threats including 1) habitat degradation and 2) overfishing as well as 3) climate change, which do not guarantee stable herring stocks in years to come<sup>3</sup>.

## Herring Importance

BC's Pacific herring (*Clupea pallasii*) is a keystone species whose annual spawning congregations are crucial for ecosystem functioning. Countless direct and indirect interactions exist between predators including Chinook, Cod, seabirds, and marine mammals who depend on herring<sup>3</sup> (Fig.1). Not only are herring populations of biological importance, but to British Columbia, they are a huge source of economic revenue, and to First Nations they are an integral part of their culture and food security<sup>2</sup>. **Policy regarding this delicate and important stock must take a precautionary approach in order to ensure long term herring abundance in BC.**

## Goals

- ☑ Protect current Pacific herring stocks to obtain healthy future populations.
- ☑ Ensure BC's First Nations maintain their cultural food security in herring stocks.
- ☑ Ensure BC's iconic wildlife lives in functional and resilient ecosystems in the face of climate change.

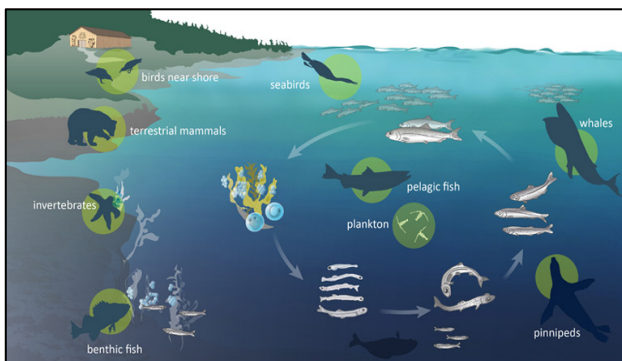


Figure 1. The importance of marine and terrestrial species interactions in relation to BC's herring<sup>3</sup>.

## Recommendations

1

### Commercial fishing

Roe and herring fishing jeopardizing population resilience



Close all 5 herring fisheries areas off the coast of BC year round

2

### Climate change

Affecting herring biology and food source



Reduce greenhouse gas emissions of tankers

3

### Habitat degradation

Delicate spawning habitats are subject to coastal urbanization and marine pollution



Divert tanker traffic from critical habitats during spawning season

**Herring are economically, culturally and biologically important to BC – a future stock collapse would have countless consequences impacting BC's people and ecosystems.**



Pacific herring, BC<sup>7</sup>. (Tavish Campbell)

**"It's just a matter of time before the Strait of Georgia herring collapses and all those boats are forced to wait at the dock"**

- Ian McAllister, Pacific Wild



A seiner with herring in its net.<sup>4</sup> (Ian McAllister)

## Conclusions

- ◆ Roe and herring abundance will continue to fluctuate over the years due to various unpredictable biological factors, the small scale population trend measures are not indicators of the population being risk-free.<sup>4</sup>
- ◆ Climate change is beyond fisheries management control, and it is having unpredictable impacts on herring biology and population trends: **Why is this not being considered in the fishery's management?**
- ◆ As a result, an extremely precautionary approach must be taken in order to protect the herring stock.

## References:

<sup>1</sup><https://www.prpeak.com/news/fisheries-and-oceans-canada-seeks-herring-input-1.23107114>

<sup>2</sup><http://www.fao.org/fishery/species/2078/en>

<sup>3</sup><http://www.pacificherring.org/facts>

<sup>4</sup>Ian McAllister, Pacific Wild

<sup>5</sup>Hay et al., 2019

<sup>6</sup><https://www.cbc.ca/news/canada/british-columbia/bc-herring-fishery-ends-for-another-season-controversy-over-catch-continues-1.5084581>

<sup>7</sup>Tavish Campbell, <https://www.wcel.org>

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