

DEPLETED CHINOOK SALMON STOCKS

Executive Summary

Chinook salmon stocks are threatened and endangered in BC. Catches have to be reduced and populations have to be protected in order to rebuild their stocks to a healthy population status.

INTRODUCTION

Salmon is critical to our environment, economy, and communities in British Columbia (BC). Salmon are foundation species because of their large biomass and impact on ecosystems (Raincoast Conservation Foundation, 2022). However, many species of salmon are overexploited due to their economic importance.

PROBLEM

Of the 12 Chinook salmon population that are assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 4 are endangered, 3 are threatened, 1 is of special concern, 1 is not at risk and 3 populations are data deficient (Committee on the Status of Endangered Wildlife, 2020). Although more than half of the assessed Chinook salmon populations are endangered and threatened in COSEWIC, Chinook salmon is not part of the Species at Risk Act (SARA). By listing a species on SARA, it would halt the entire harvest of Chinook salmon.

Chinook is an important food source for southern and northern resident killer whales, who eat 55lbs of salmon everyday (Read, 2021), which covers 90% of their diet (Georgia Strait Alliance, 2022). The decline in Chinook salmon population is affecting southern resident killer whales, which are already endangered and are now faced with a lack of food availability (Georgia Strait Alliance, 2022).

Since 1950, 1/3 of the salmon population in the Skeena watershed has been lost already (Price et al., 2017). In 2017, there was only a 20% Chinook salmon return compared to the average return between 2000–2016 (Georgia Strait Alliance, 2022).

Tiffany Mak

 tiffanywymak

 tiffanymak@gmail.com

Whale watching tourism is also affected because killer whales are spending more time hunting in the ocean so whale watchers are less likely to see whales (Read, 2021). Catch per unit effort (CPUE) for Chinook salmon in Albion, BC have also decreased significantly from historical data, where CPUE averaged 200 in 1981–2016, while CPUE was recorded to be just above 0 in 2017 (Georgia Strait Alliance, 2022).

RECOMMENDATIONS

LIST IN SPECIES AT RISK ACT

- Chinook salmon needs to be listed in SARA before the population declines past a point of no return and creates irreversible damage for other species (ex. southern resident killer whales). If it is not possible to list Chinook salmon in SARA, catch quotas for Chinook salmon need to be greatly reduced.

MORE DATA

- There needs to be more data on salmon stocks in BC. Around 80% of streams have not been monitored and updated since 2018 (Page, 2021). Currently, there are 3 Chinook salmon species populations that are data deficient. We need more data to understand the status of all Chinook salmon populations in BC.

HABITAT PROTECTION

- Protect estuaries, especially eelgrass habitat, in the Fraser River because Chinook salmon rear there (Chalifour et al., 2019). It is also important to reduce human impacts on salmon populations and their ability to access spawning grounds (ex. Deforestation, development) (Chalifour et al., 2019).

CONCLUSION

There is urgent need to protect Chinook salmon because their health impacts communities livelihoods, other organisms, and our economy.

References

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