2025 REPORT

STATE OF SALMON

British Columbia
& Yukon

PACIFIC SALMON FOUNDATION

Citation

Pacific Salmon Foundation (2025). State of Salmon 2025 Report.
Pacific Salmon Foundation, Vancouver, BC, Canada.
(doi.org/10.60740/stateofsalmon.2025)

Acknowledgements

We thank the Province of British Columbia and the Sitka Foundation for providing funding towards the development of this report. We are grateful for the ongoing work of staff at Fisheries and Oceans Canada and Secretariat Staff at the Pacific Salmon Commission to collect and share the data that we used. In particular, we thank Nicholas Brown, Charmaine Carr-Harris, Aaron Foos, Fiona Martens, and Teresa Wallace for providing data.

Project Management: Eileen Jones, Kathleen Belton

Writing: Stephanie Peacock, Eileen Jones, Kathleen Belton, Katrina Connors

Analysis: Stephanie Peacock, Eric Hertz, Bruno Carturan

Production Support: Kathleen Belton, Braela Kwan, Allison Colina, Chloe Fraser, Oscar Beardmore-Gray, Eric Hertz, Leah Honka, Marc Porter, Katy Bryan

Web and Print Design: Tactica Interactive

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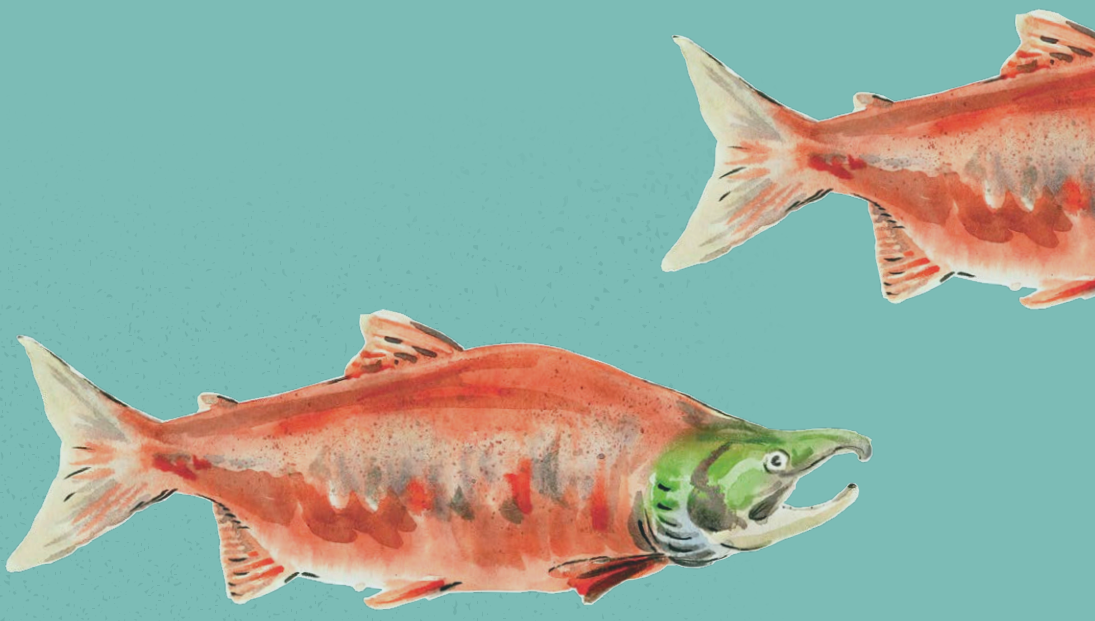
Pacific Salmon Foundation
#320–1385 West 8th Avenue
Vancouver, BC V6H 3V9
(604) 664-7664
psf.ca

PACIFIC SALMON FOUNDATION

STATE OF

SALMON

2025 REPORT



British Columbia
& Yukon

Salmon have seen recent gains in some regions, and while these successes are worth celebrating, the current state must be viewed in the context of decades-long declines and the widespread challenges that salmon face.

This is exactly the role of the State of Salmon Report: to critically examine the best available data across salmon species and regions throughout British Columbia and the Yukon and provide a summary that can spur discussion and inform action. Building on the inaugural 2024 Report, this year's edition updates results and highlights signs of recovery - and areas of conservation concern. In the past year, some salmon species have increased in abundance locally, especially in southern regions. However, two-thirds of regional salmon populations remain below their long-term average and the erosion of salmon returns over decades will not be quickly or easily reversed with a few good years.

Pink salmon are grabbing headlines for their burgeoning numbers throughout the North Pacific, which is good news for salmon-dependent communities and ecosystems. Pink salmon seem to respond better than other species to a warming ocean and are less exposed to climate changes in freshwater due to their short, marine-dominated lifecycle.

It's not just pink salmon showing signs of recovery. Sockeye had above-average spawners in more regions than any other species, and Chinook and coho are starting to bounce back in southern British Columbia after decades of low returns. These trends are encouraging, but not all populations within a region follow the broad-scale pattern. As abundances increase, a precautionary approach to expanding fisheries is required to avoid unintentionally pushing struggling populations closer to extinction.

In northern regions, particularly the Yukon, Northern Transboundary, and Haida Gwaii, salmon were predominantly below-average abundance and declining. In the Yukon River, for example, both Chinook and chum salmon are experiencing record-low numbers, leading to the closure of all fisheries in recent years. Concerningly, the monitoring of salmon has declined along with their numbers, leading to concerns that some populations may be disappearing, unrecorded.

The major factors that we see influencing salmon survival - climate change, habitat degradation, competition in the open ocean - continue to challenge their recovery. Although ocean conditions appear to be improving - both regionally in nearshore waters like the Strait of Georgia and more broadly throughout the North Pacific - pressures in the freshwater environment mean that high numbers of salmon returning to rivers doesn't necessarily translate to successful spawning. High flows, low flows, warm water, or fish passage impediments can result in many salmon dying before reaching their spawning grounds. Disasters such as the 2019 Big Bar landslide and the 2024 Chilcotin River landslide in the Fraser River basin underscore the fragility of salmon habitats. However, the return of salmon to the Chilcotin River mere weeks after the landslide completely cut off flows highlights their resilience. Indeed, a record-breaking return of early-migrating sockeye to the Fraser this year provides hope that salmon will persist despite these challenges.

Salmon have shown time and again that they can recover when we give them the chance. The expansion of sockeye in the Canadian portion of the Columbia River, half a century after it was dammed, is proof of that resilience. To protect and rebuild salmon for the future, we must restore and safeguard their habitats, adopt management practices that prioritize biodiversity, and strengthen monitoring to track our progress. The State of Salmon Report will return next year to see how far we've come.

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MESSAGE FROM THE CEO

This year's headline-making returns of Fraser River sockeye and pink salmon have strengthened our commitment to the *State of Salmon Report.*

Grounding these encouraging signs of recovery in the context of historical abundance allows us to celebrate the wins that salmon are achieving thanks to the dedicated salmon community, while keeping our focus on the long game of recovery across species and regions.

The collective of people working for salmon stands out in the State of Salmon 2025 Report. For example, Chinook and coho along east Vancouver Island are well-above their average abundances. PSF is proud to have supported local community and First Nations efforts with more than $2.3 million since 2021 towards habitat rehabilitation and stock enhancement projects in the East Vancouver Island and Mainland Inlets region. These projects, including a number of major estuary restoration initiatives and new spawning channels, are contributing to better conditions for salmon.

Collaborative efforts, such as those led by the Upper Fraser Fisheries Conservation Alliance and Fisheries and Oceans Canada, to address the devastating impacts of the Big Bar landslide are also showing results, with Fraser sockeye spawner abundance now eight per cent above the long-term average.

On the Central Coast where many populations are struggling, Chinook are above their long-term average this year, thanks to a decade-long recovery effort led by the Wuikinuxv First Nation and supported by many generous donors.

What's clear? Our collective efforts matter.

We should celebrate these salmon successes, but we know there's more work to do. **Two-thirds of regional salmon populations across BC and the Yukon are struggling.** We have the starting point to determine where to take action.

I would like to thank the PSF team for their dedication to data and making the State of Salmon Report a priority so all of us can understand how salmon are doing and use that knowledge to drive recovery and support resilience. I'd also like to thank the Sitka Foundation for their support of the State of Salmon 2025 Report — and their continued commitment to supporting salmon conservation.

Michael Meneer
President & CEO
Pacific Salmon Foundation

The Pacific Salmon Foundation's State of Salmon 2025 Report provides a data-driven overview of the state and trends for six species of Pacific salmon, including steelhead, throughout British Columbia and the Yukon.

Following our inaugural report in 2024, this year's update shares the latest results based on the best available data. For many regions, the status and trends of salmon did not change much in a year. Indeed, most regional salmon groups remain below their long-term average. But there are some notable changes, and we have refined the data and our approach to better understand those differences - and why they matter.

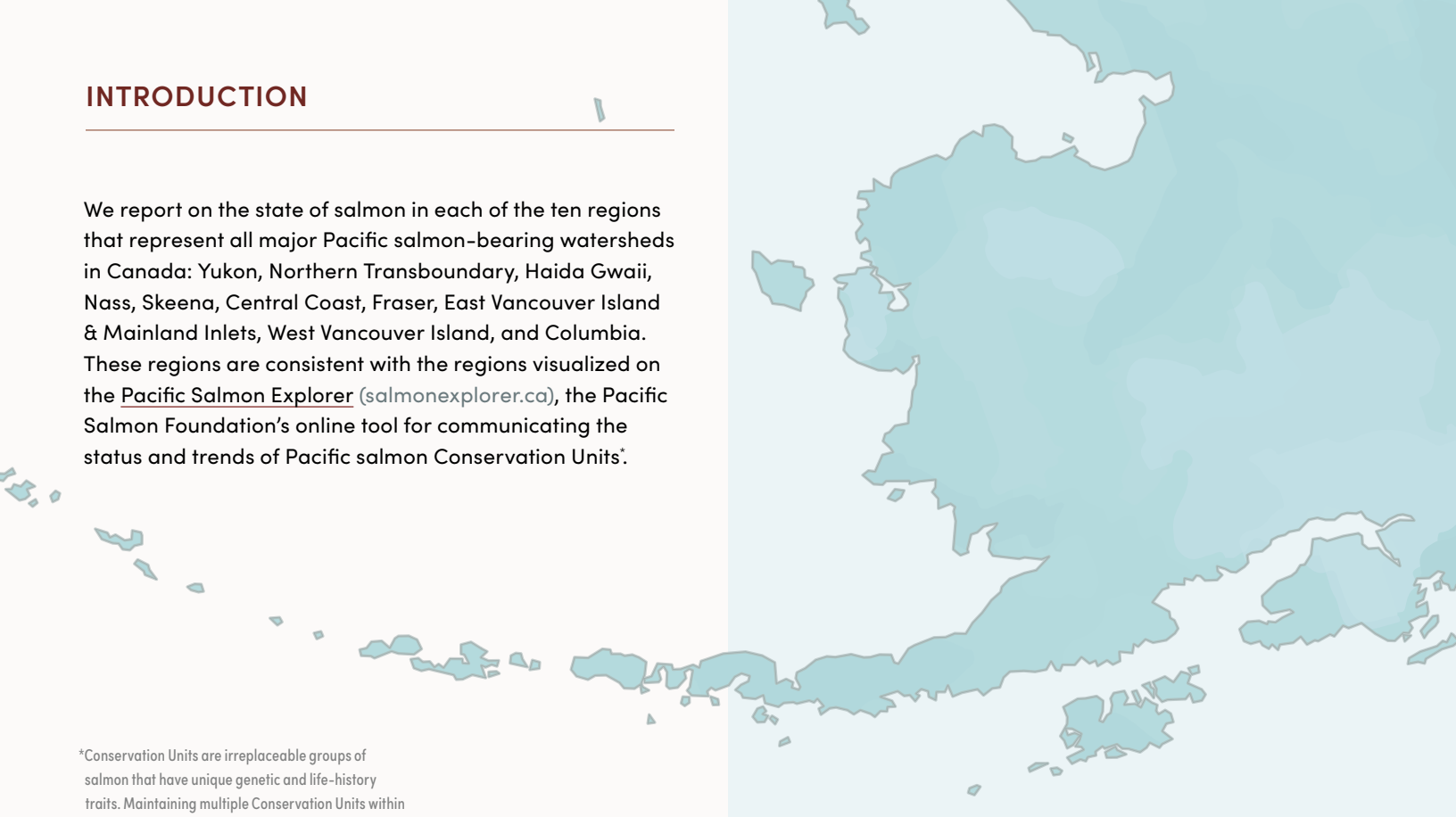
Despite widespread declines in salmon monitoring and persistent barriers to accessing data, we have included more regions and data than last year. We separated Vancouver Island & Mainland Inlets into distinct East and West regions to better reflect the unique ecology and biology of salmon in those regions.

We have also critically evaluated our data sources and improved information where possible, for example by adding new data on total abundance for groups like Fraser Chinook and West Vancouver Island sockeye. In some places, we saw data quality decline due to reduced monitoring and have done our best to ensure that our findings are robust, like on the Central Coast where fewer spawner surveys for Chinook salmon has led us to focus our reporting on a few, high-quality indicator populations. Despite - or because of - these changes, we have strengthened our commitment to reporting on what is driving observed patterns in abundance within regions and highlighting the diversity *within* each species.

This annual report is designed to improve our shared understanding and inform efforts to recover and sustain salmon and the ecosystems, cultures, and economies that depend on them. We hope the insights and findings in the 2025 report highlight recent success stories and inspire renewed commitment to building resilience for salmon in a changing world.

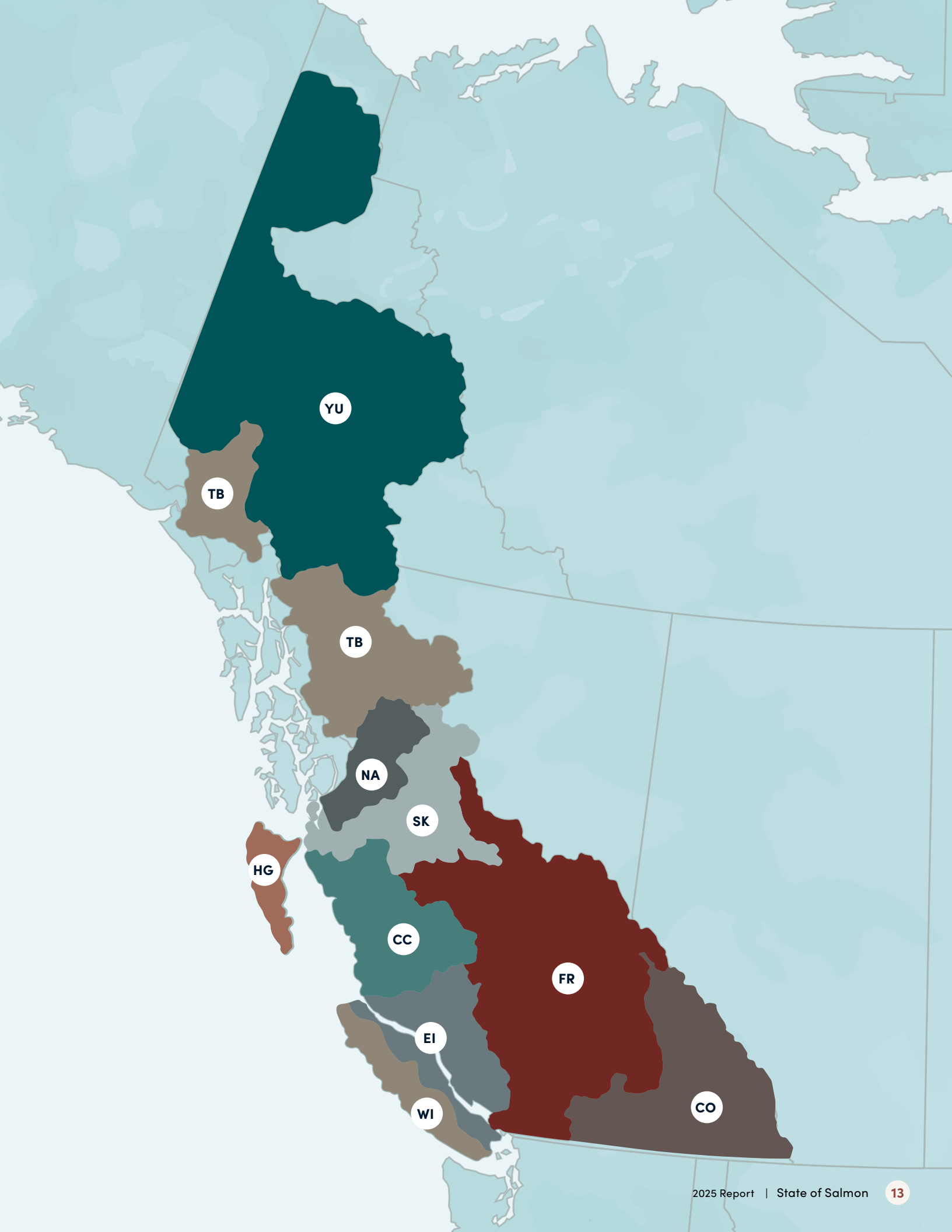
INTRODUCTION

We report on the state of salmon in each of the ten regions that represent all major Pacific salmon-bearing watersheds in Canada: Yukon, Northern Transboundary, Haida Gwaii, Nass, Skeena, Central Coast, Fraser, East Vancouver Island & Mainland Inlets, West Vancouver Island, and Columbia. These regions are consistent with the regions visualized on the Pacific Salmon Explorer (salmonexplorer.ca), the Pacific Salmon Foundation's online tool for communicating the status and trends of Pacific salmon Conservation Units*.



*Conservation Units are irreplaceable groups of salmon that have unique genetic and life-history traits. Maintaining multiple Conservation Units within a region strengthens the resilience of the species as a whole and helps salmon withstand and adapt to changing conditions.

YUKON - YU
NORTHERN TRANSBOUNDARY - TB
HAIDA GWAII - HG
NASS - NA
SKEENA - SK
CENTRAL COAST - CC
FRASER - FR
EAST VANCOUVER ISLAND & MAINLAND INLETS - EI
WEST VANCOUVER ISLAND - WI
COLUMBIA - CO


YU
TB
TB
NA
SK
HG
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FR
EI
CO
WI

Our Approach

There are different ways to measure the state of salmon, and each approach tells us something unique about how salmon are doing.

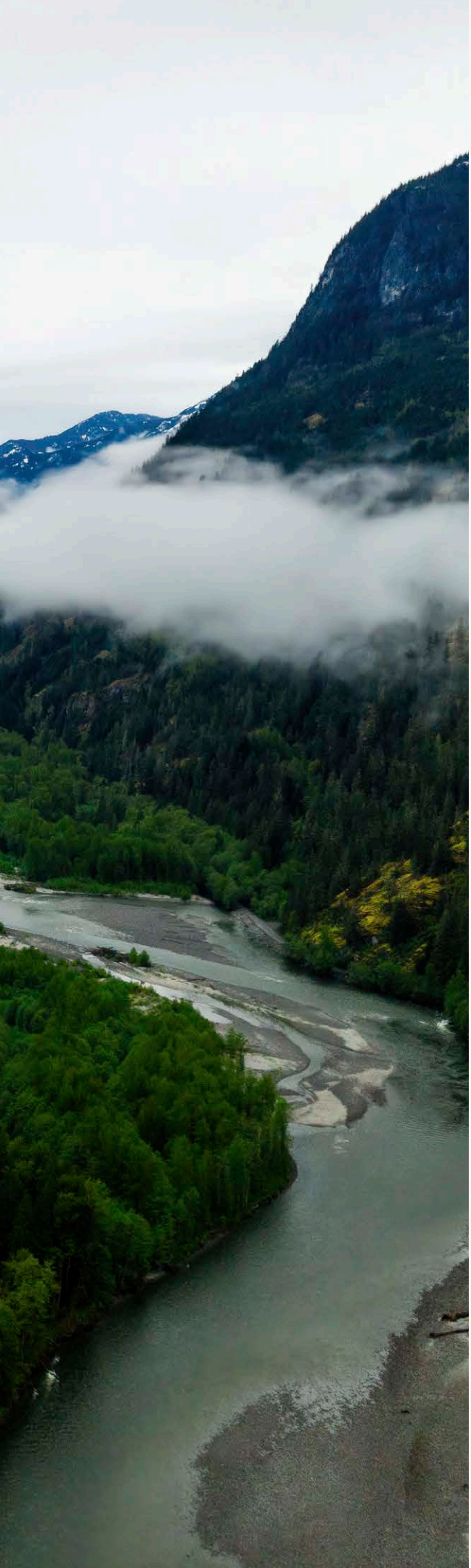
CURRENT STATE is the spawner abundance or total abundance over the most recent generation as a per cent anomaly from the long-term average and provides information on how abundant salmon are now relative to past years.

TRENDS measure the direction of change, either over the short-term (most recent three generations) or long-term (all available years). This is complementary information to the current state, and a species that has a declining trend may be a conservation concern even if the current state is above average.

Where possible, we report on these metrics using both spawner abundance and total abundance. Spawner abundance (also called "escapement") provides information on the number of salmon that "escape" fisheries and make it back to spawn. These salmon are available to meet ecological needs within watersheds and can reproduce and contribute to future generations. As such, understanding spawner abundance is important to salmon conservation.

Where data are available, we also report on total abundance, which is the sum of spawners, catch, and (in some cases) mortality of salmon after they have entered freshwater but prior to spawning. In some years, a substantial proportion of salmon that survive to maturity are caught in commercial fisheries. Tracking total abundance provides information on the survival and productivity of salmon as well as their ability to provide economic opportunities through fisheries. Often, the state and trends for spawner abundance are more optimistic than for total abundance because of widespread declines in commercial catches of Pacific salmon in Canada since the mid 1990s.

Our approach to assessing the State of Salmon is based in Western science and offers a data-driven perspective on broad-scale state and trends. For many regions and species, the scientific record is relatively short and may not adequately represent changes in abundance that have undoubtedly occurred over centuries of colonization, settlement, and human development. However, these data represent a type of information that can be relatively easily compiled, analysed, and compared across broad spatial scales. We encourage readers to seek out additional sources of information about salmon in their area, in particular from local First Nations who often have deep intergenerational knowledge and relationships with salmon.



BC & YUKON OVERVIEW

1

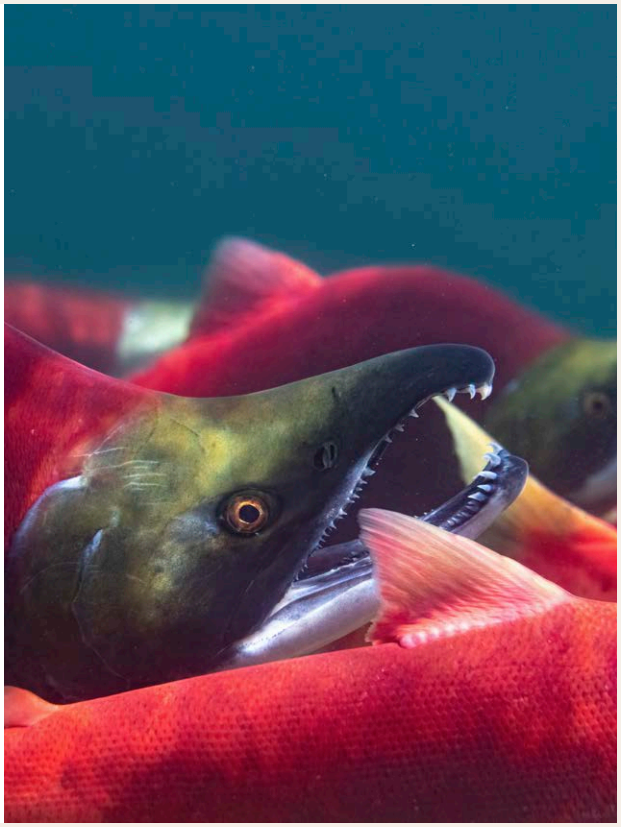
Although some regional salmon populations show signs of recovery, two-thirds remain below their long-term average.

Recent gains must be viewed in light of widespread, historical declines and the growing challenges salmon face due to climate change.

2

Increasing numbers of sockeye and Chinook are bringing renewed hope for some salmon-dependent communities and ecosystems.

After years of closures, sockeye fisheries are reopening in places like the Skeena, and recovery in the Columbia is surpassing expectations. Some Chinook returns to Vancouver Island and the Fraser are also showing promise, though not all populations in these regions are rebounding.



3

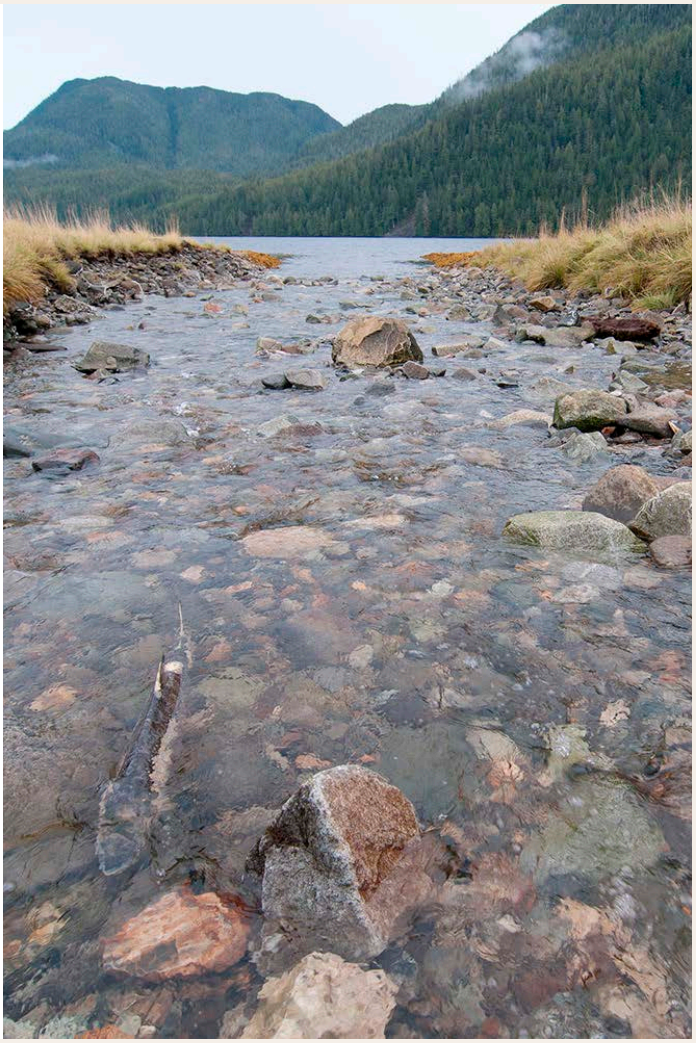
Pink salmon are proving their resilience, returning in large numbers across many regions.

These short-lived fish are thriving - thanks in part to favourable ocean conditions. While these increases are encouraging, the growing numbers of pink salmon and the fisheries that target them can also pose risks to other co-migrating species like sockeye.

4

While most salmon species seem to be struggling in northern and central regions, data gaps make it hard to know just how serious and widespread the declines are.

Reduced monitoring has created uncertainty in regions like the Central Coast, Haida Gwaii, and Northern Transboundary. Still, the available data point to conservation concerns and highlight an urgent need to protect these fish.



SPECIES AT A GLANCE

Chinook

Chinook are below average in northern regions, while southern regions have increased above average in recent years.

Pink

Pink salmon are well-above average in the Nass, Skeena, East Vancouver Island & Mainland Inlets and the Fraser, with the expectation of continued strong returns in 2025.

Chum

Chum salmon have experienced the most precipitous declines of any species with spawner abundance below the long-term average in all regions except the Nass.

Sockeye

Sockeye spawner abundance is above-average in two-thirds of regions, but the species faces a challenging road to recovery.

Coho

Coho are below the long-term average in many regions, but in the Nass and Fraser both spawner and total abundances are above average.

Steelhead

Steelhead have the lowest absolute abundance of all six species of Pacific salmon, and are below the long-term average spawner abundance in all regions assessed.

REGIONS AT A GLANCE

Yukon (YU)
Chinook and chum salmon have experienced precipitous declines in recent years.

Northern Transboundary (TB)
Most species are below average but recent increases in sockeye spawners are encouraging.

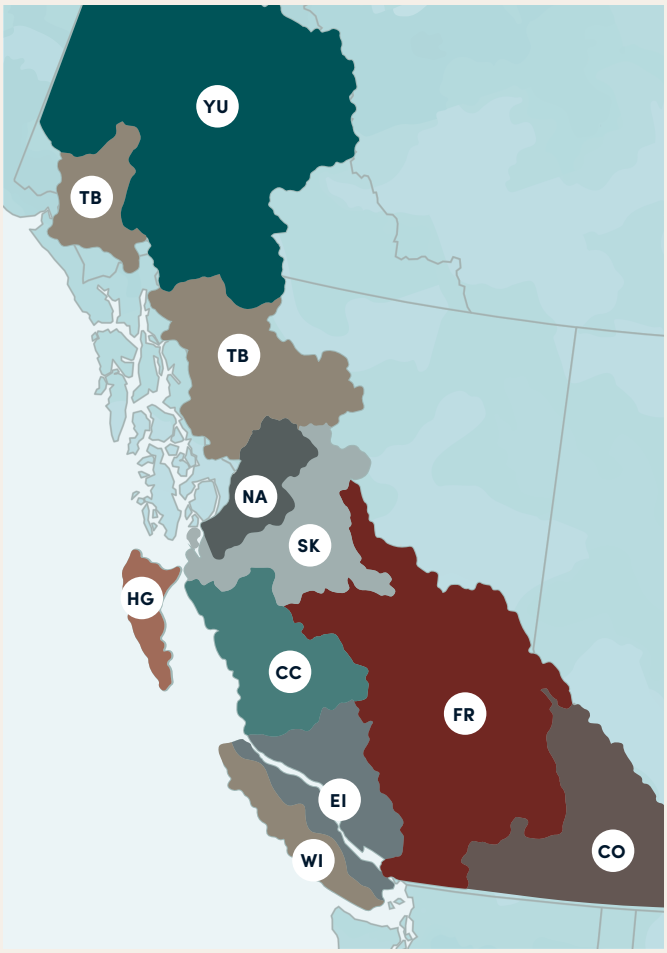
Haida Gwaii (HG)
All species are below average, with chum and coho salmon showing the most dramatic declines.

Nass (NA)
Chinook salmon and steelhead are still below average, while other species are showing strong returns.

Skeena (SK)
Chinook and chum salmon have declined dramatically, while pink and sockeye spawners are above average.

Central Coast (CC)
Chum & sockeye are struggling, though declines in monitoring create uncertainty around the current state of salmon in the region.

Fraser (FR)
Coho and pink salmon are seeing a resurgence and recent upticks in all species except steelhead provide hope.



East Vancouver Island & Mainland Inlets (EI)
Chinook, chum, coho, and pink are making a comeback - but the recovery isn't happening everywhere.

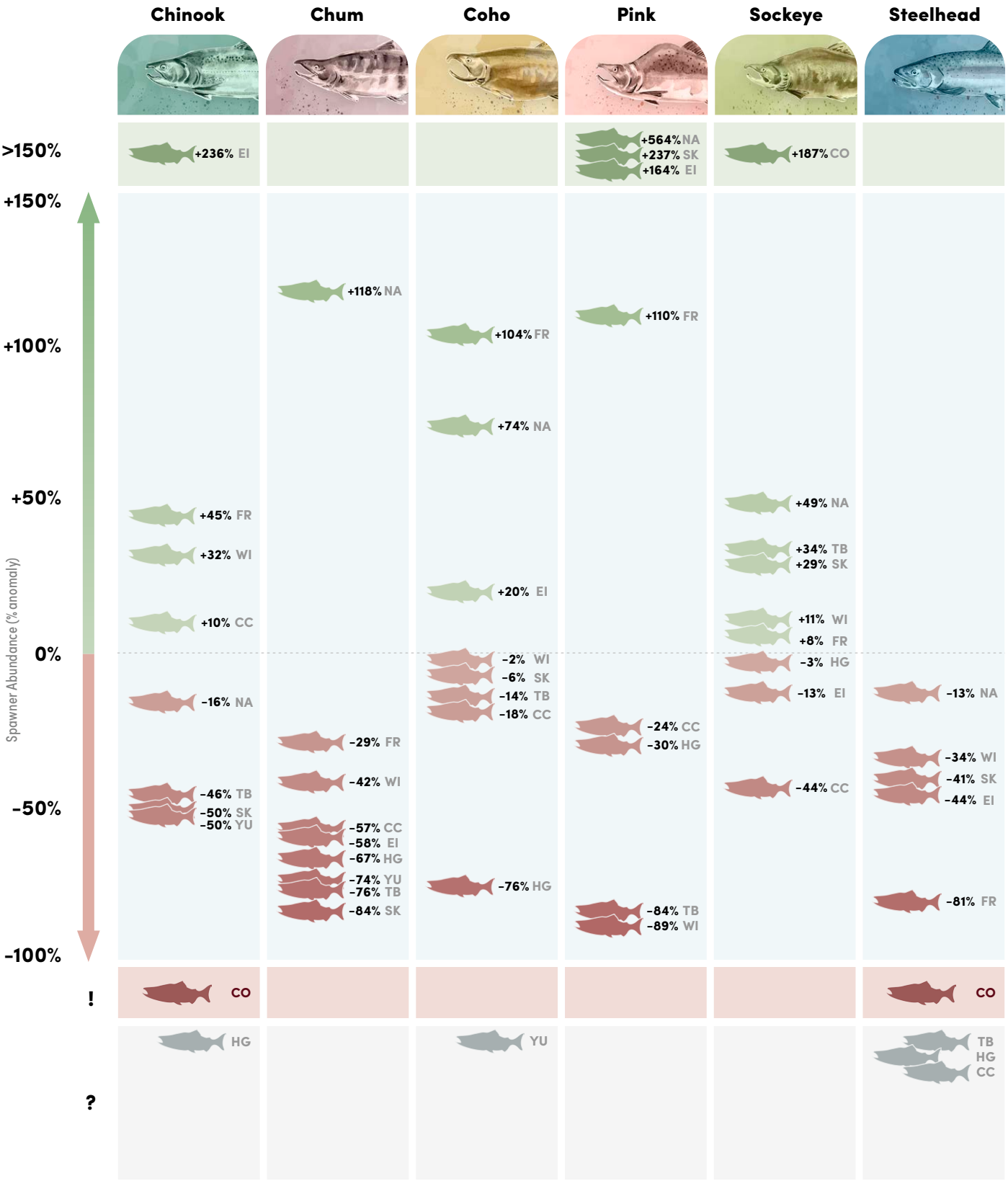
West Vancouver Island (WI)
Chinook and sockeye spawners are above average, but chum and coho salmon are at multi-decade lows.

Columbia (CO)
Sockeye are above average, while Chinook and steelhead face critically low population numbers.

CURRENT STATE

The following figures communicate the current state of salmon for each species across all regions of British Columbia and the Yukon. Each fish below shows the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average (horizontal line) for each region and species.

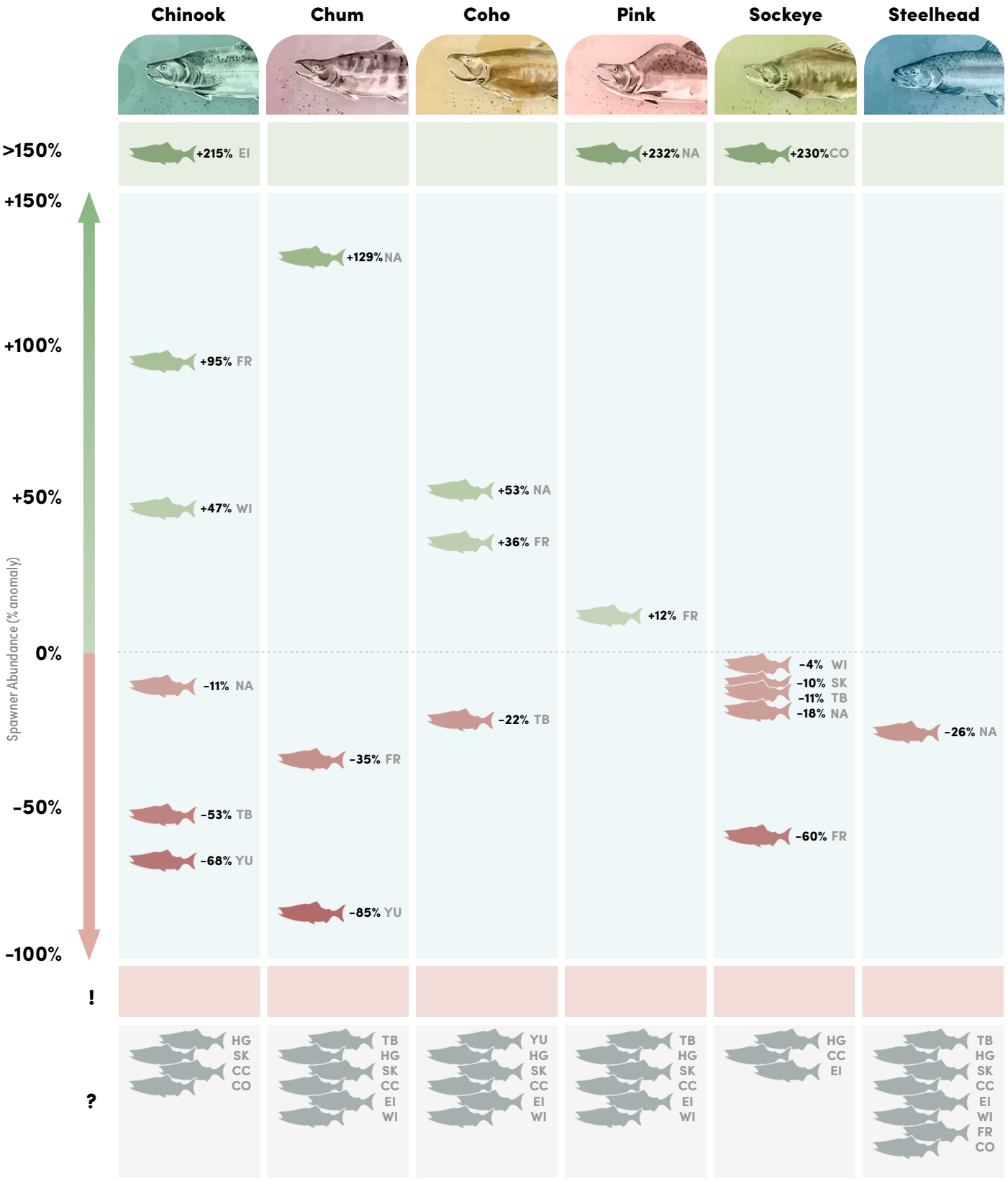
Spawner Abundance



Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

YU - YUKON
TB - NORTHERN TRANSBOUNDARY
HG - HAIDA GWAII
NA - NASS
SK - SKEENA
CC - CENTRAL COAST
FR - FRASER
EI - EAST VANCOUVER ISLAND & MAINLAND INLETS
WI - WEST VANCOUVER ISLAND
CO - COLUMBIA

Total Abundance



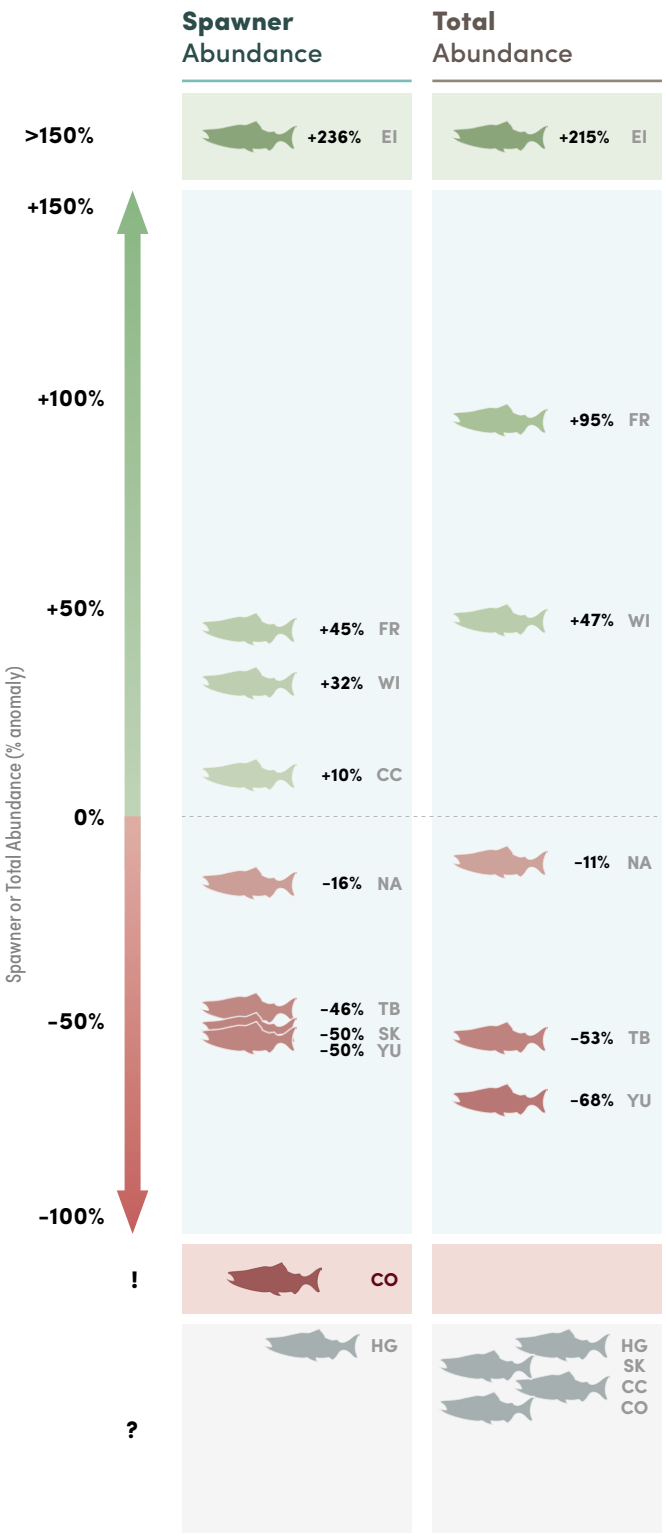
Chinook are below average in northern regions, while southern regions have increased above average in recent years.

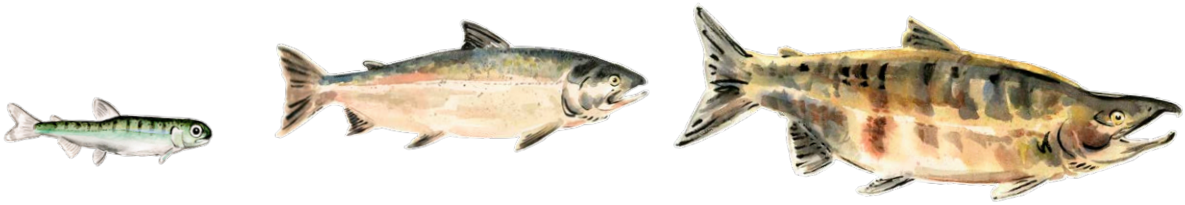
Yukon Chinook have been declining since the mid 1990s, but significant year-over-year reductions in total abundance since 2015 have prompted a recent moratorium on all fishing of Chinook in the mainstem Yukon River and Canadian tributaries for at least seven years (one full Chinook lifecycle)[1]. Similar declines are evident in the Northern Transboundary, Nass, and Skeena, with abundances declining from peaks in the late 1990s or early 2000s.

In contrast, many Chinook populations are thriving further south. In West Vancouver Island and East Vancouver Island & Mainland Inlets, both spawner and total abundances are well-above the long-term average. This rebound - also seen on the Central Coast - is driven in part by hatchery enhancement of wild populations. While hatcheries can support conservation and recovery, there is growing evidence that long-term reliance on them may hinder the recovery of self-sustaining wild salmon[2,3]. Still, strong ocean survival is benefiting both wild and hatchery Chinook in these southern regions and is an encouraging trend for salmon and the ecosystems they support.

Following an exceptionally high return of Chinook to the Fraser in 2023, last year saw a smaller - but still strong - run, with both spawner and total abundances of Fraser Chinook remaining well-above average. However, this increase is largely driven by ocean-type Chinook that migrate to sea early in their first year, while the proportion of Chinook that spend a year or more rearing in freshwater has been declining. This shift may reflect growing climate-change threats in freshwater habitats, including warmer river temperatures, droughts, and landslides. These conditions have a greater impact on salmon that spend more time rearing in freshwater.

In the Columbia, spawner abundance has been increasing since the early 2000s but remains critically low, with a whole-population abundance estimate of just 97 fish in 2023[4]. Their small population size means that Columbia Chinook face an imminent risk of extirpation with the Okanagan population of Columbia Chinook listed as Endangered[5] in 2017 by the Committee on the Status of Endangered Wildlife in Canada.





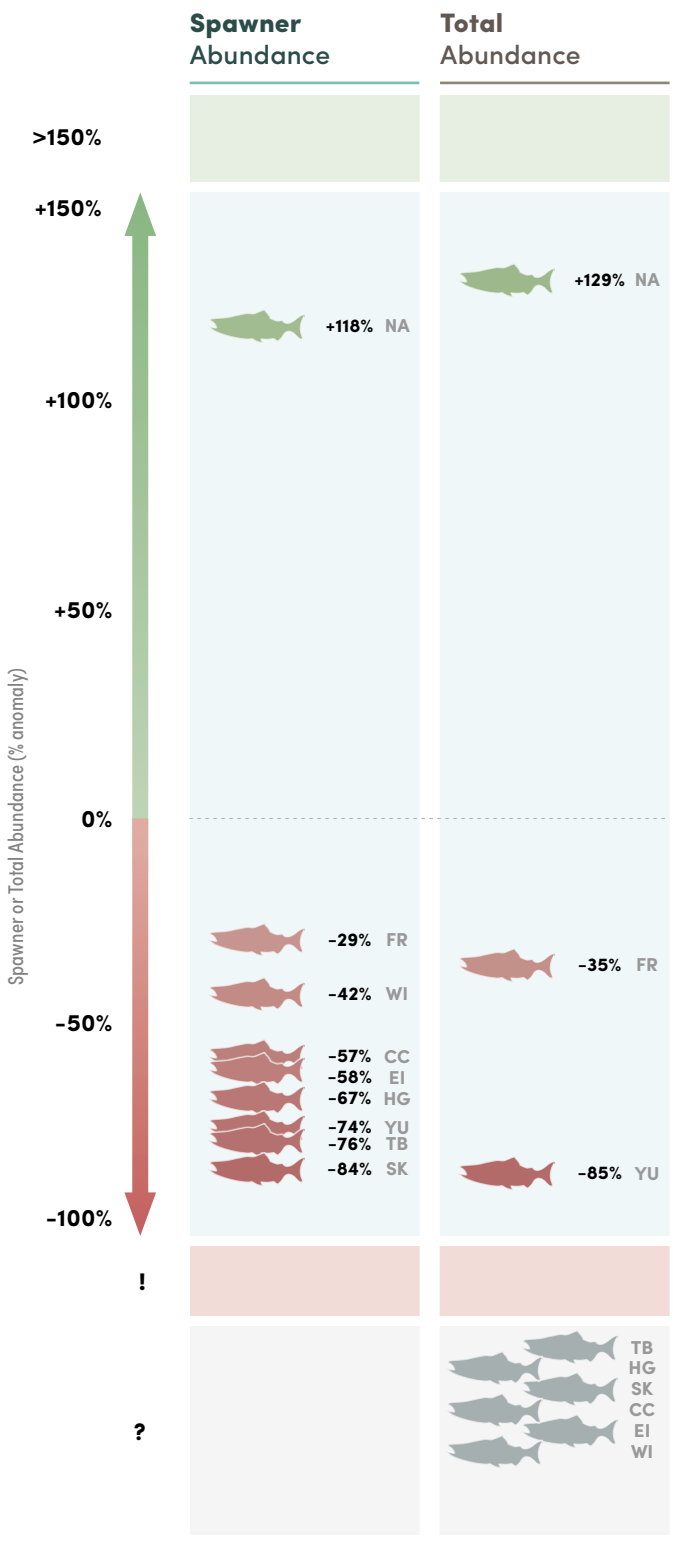
Chum salmon have experienced the most precipitous declines of any species with spawner abundance below the long-term average in all regions except the Nass.

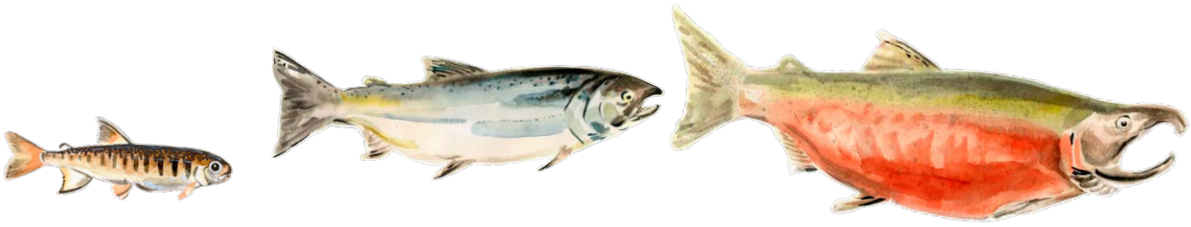
The largest declines are found in the northernmost regions including the Yukon, Northern Transboundary, Haida Gwaii, and Skeena.

In the Yukon, where dismal returns of Chinook have dominated headlines for years, returns of chum salmon have also plummeted to historic lows with fisheries closures along the Yukon in recent years. The current state and trends for Northern Transboundary chum salmon have been similar, although assessments for this vast region are based on a single fish wheel in the Taku River and may not be representative of all populations in the region.

While declines are less severe in other regions, the Nass stands out as the only region where chum salmon abundance is above average. There, chum salmon have rebounded from a low in 2011 to consistently above-average spawner and total abundances over the past five years.

Historically, chum salmon were a mainstay of commercial fisheries in Canada, providing the greatest annual catch by weight of any species[6]. It's not clear why chum salmon have experienced such dramatic declines. However, the crash is not isolated to Canadian rivers[7], suggesting that shifts in the broader North Pacific, for example due to climate change and competition at sea with increasing numbers of hatchery-produced salmon, may be contributing to their demise.





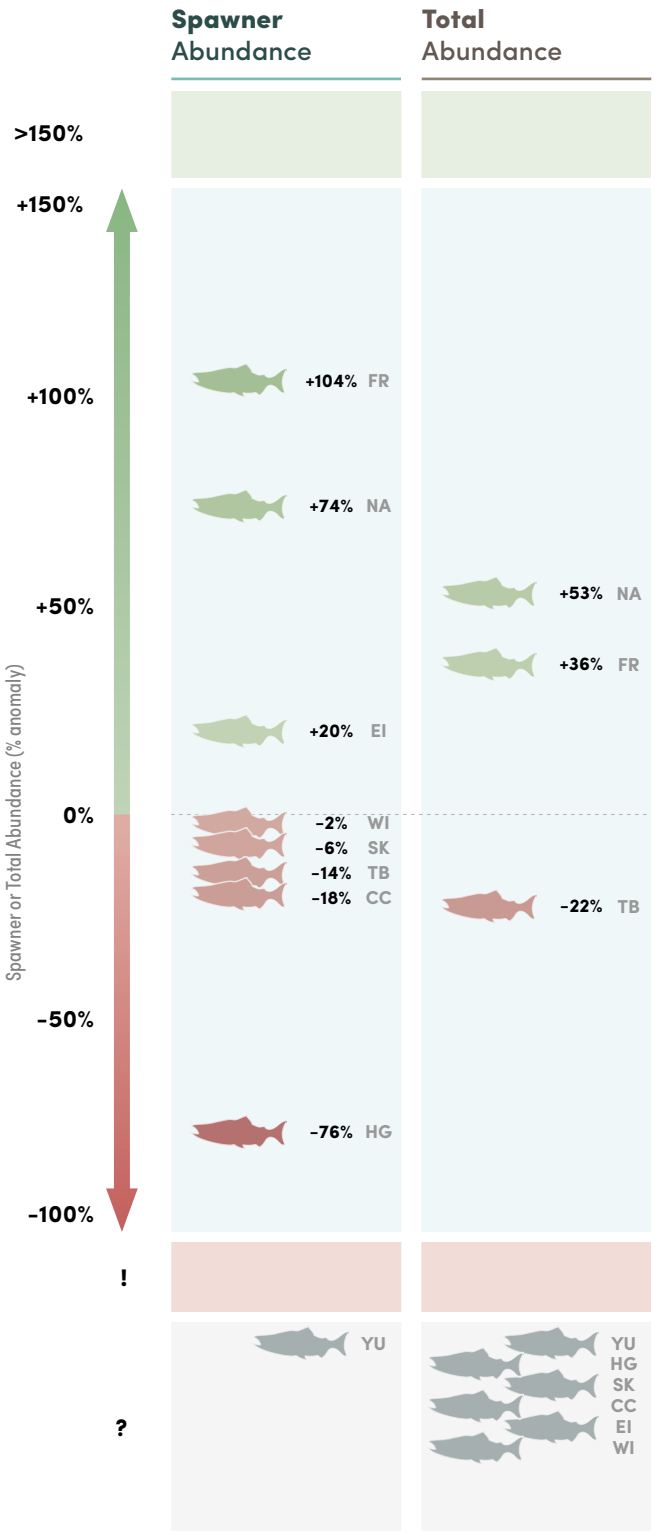
Coho are below the long-term average in many regions, but in the Nass and Fraser both spawner and total abundances are above average.

In all regions, coho spawners crashed in the late 1990s, reportedly due to poor ocean conditions and low smolt-to-adult survival[8]. By the early 2000s, following the cessation of fisheries, many populations had recovered to average spawner abundance, though total abundance and commercial catches have remained low relative to historical rates. In more recent years, coho abundance has diverged among regions, with current spawner abundance below the long-term average in the Northern Transboundary, Haida Gwaii, Skeena, Central Coast, and West Vancouver Island and above average in the Nass, East Vancouver Island & Mainland Inlets, and Fraser.

Increases in Fraser coho over the last generation have pushed spawner and total abundances to levels not seen since the late 1990s. Harvest reductions under Interior Fraser Coho recovery plans may be showing results, but simultaneous booms in Chinook and other species in the Strait of Georgia point to improved early marine conditions as another likely factor.

By contrast, in the Skeena and Central Coast, coho spawner abundance is below average and declining over both the short and long term. However, 2023 saw the largest annual coho spawner abundance in the Skeena since the 1960s, providing some hope that coho may also begin to recover further north.

The status of coho in the Yukon is "Unknown"; there is little information on Canadian-origin coho because they migrate and spawn late in the year, when ice covers the rivers and monitoring is impossible.

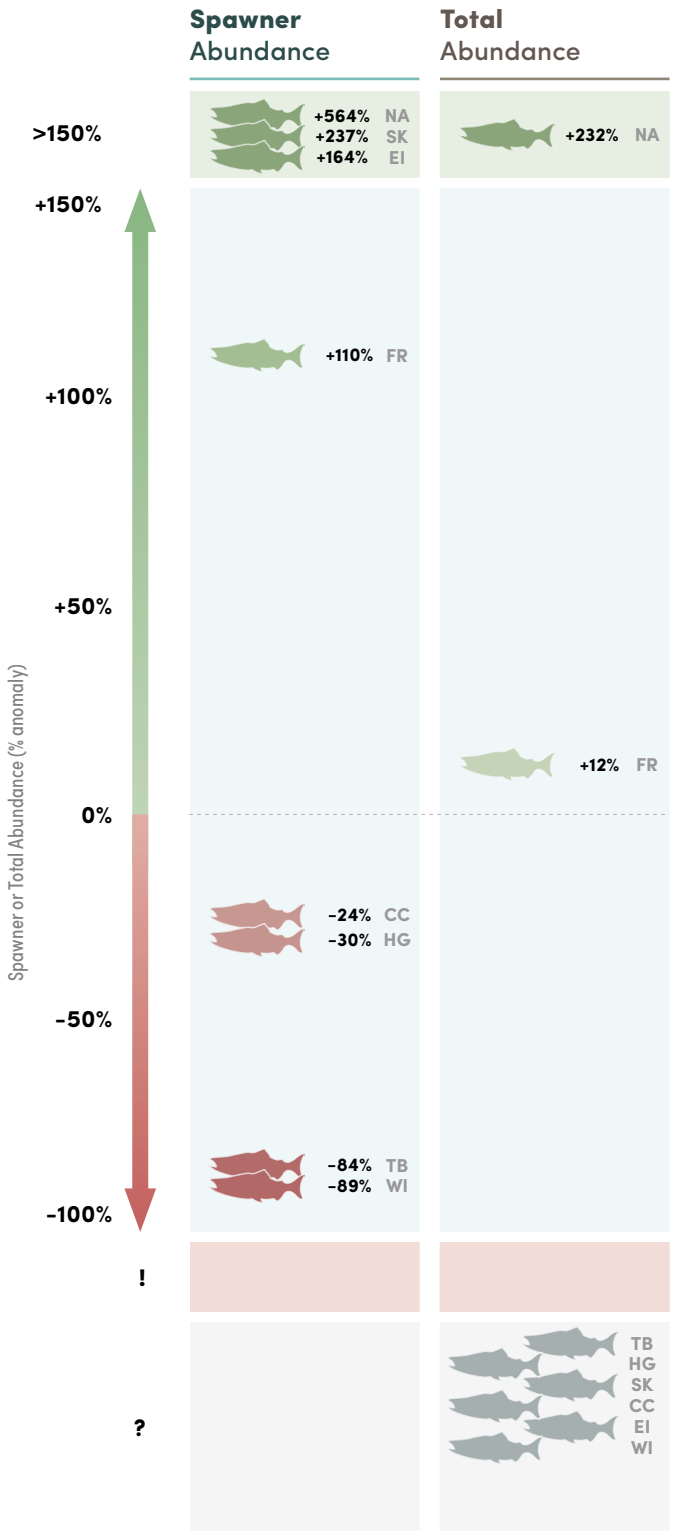


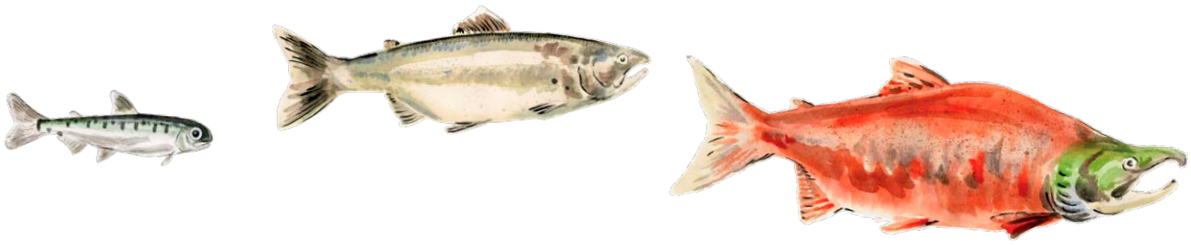
Pink salmon are well-above average in the Nass, Skeena, East Vancouver Island & Mainland Inlets, and the Fraser, with the expectation of continued strong returns in 2025.

Pink salmon have a short two-year lifecycle, and their abundance tends to fluctuate more than other species in response to changes in ocean conditions. The impressive returns of pink salmon in some regions are a likely result of favourable ocean conditions observed in recent years, as well as a strong parental generation. Pink salmon also spend the least time in freshwater of any species, minimizing their exposure to some of the climate changes that are adversely affecting other salmon species during their freshwater life stages.

This boom isn't being seen everywhere. In the Northern Transboundary, Haida Gwaii, and Central Coast regions, pink salmon spawner abundance remains below average. Spawner numbers are also low on West Vancouver Island - though historically, this area has supported only small pink salmon runs.

A large return of pink salmon is expected in the Fraser in 2025, but this has yet to show up in our data. Pink salmon return in significant numbers to the Fraser only every two years (in odd years) - in fact, most rivers tend to have a dominant pink salmon return in either even or odd years. This pattern reflects their precise two-year life cycle and may be reinforced by competition for resources between year classes.





Sockeye spawner abundance is above-average in two-thirds of regions, but the species faces a challenging road to recovery.

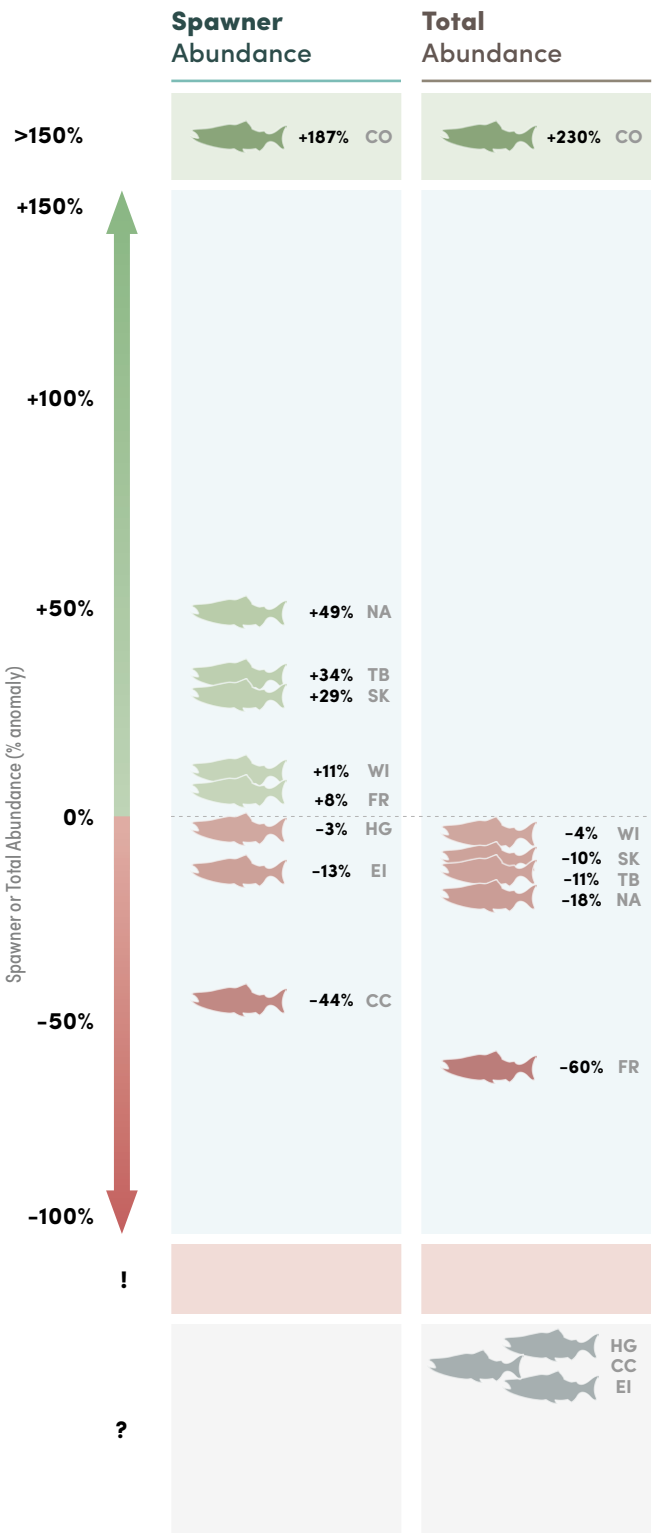
Columbia sockeye exemplify the resilience of salmon, having recovered to spawner and total abundance well-above the long-term average from near-extinction in the 1990s due to degradation of their freshwater habitats and the damming of the Columbia River[9].

In the Northern Transboundary, sockeye are the only species with above-average spawners, driven largely by increases in river-type and enhanced Tahltan lake-type populations[10]. Several unique groups of lake-type sockeye in the region, including Kuthai Lake and Neskatahin, are doing poorly[11] and total abundance for the region is still below the long-term average. These discrepancies highlight the need for salmon management to place greater emphasis on biodiversity conservation.

In the Nass and Skeena, sockeye are above the long-term average but total abundances have steadily declined from peaks in the 1990s. Enhancement of sockeye in the Skeena via artificial spawning channels created in two tributaries to Babine Lake (Fulton River and Pinkut Creek) has offset declines in abundance of wild populations, but at the cost of reduced biodiversity and resilience[12].

Sockeye are well-below the long-term average on the Central Coast, where historically two large lakes - Owikeno Lake and Long Lake - were one of the three largest salmon runs in British Columbia[13]. These populations have been all but decimated and all major commercial sockeye fisheries in the region have been curtailed.

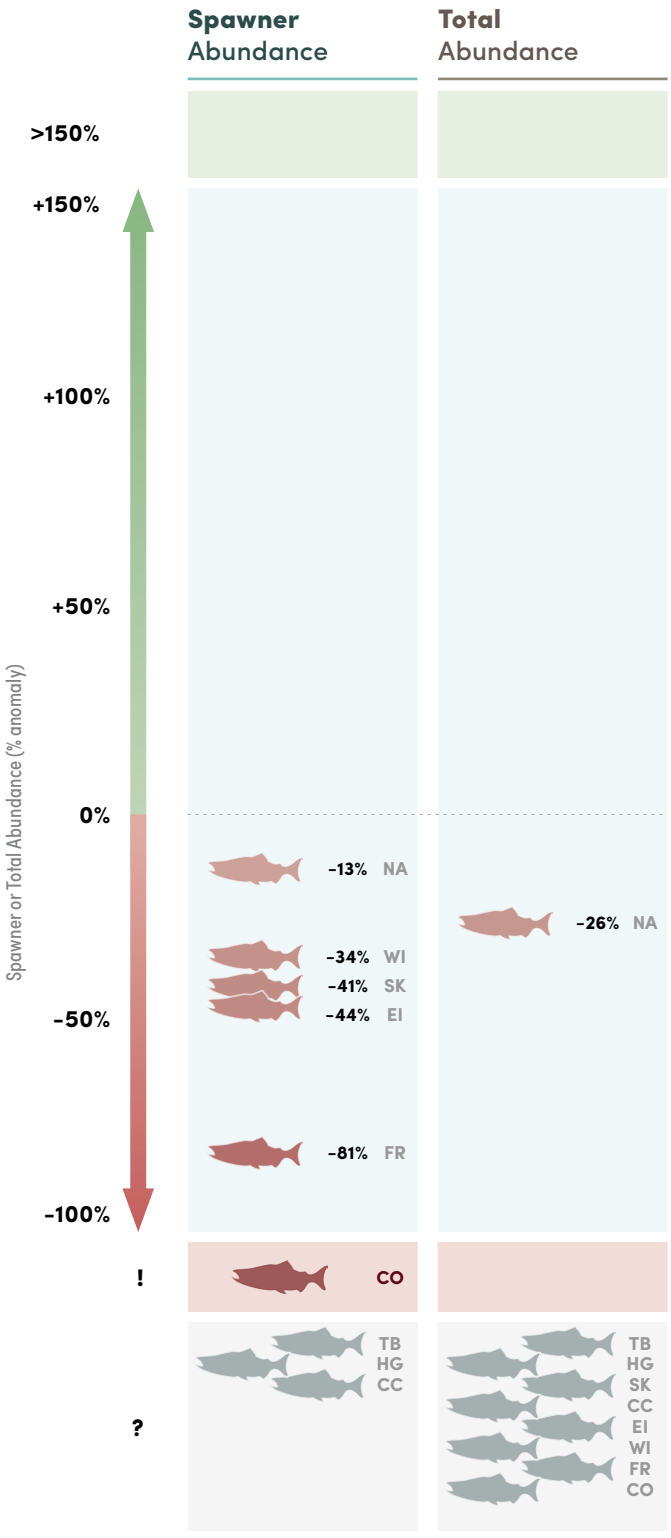
In the Fraser, spawner abundance has crept above the long-term average in 2023 but a poor return in 2024 put total abundance well-below the long-term average and below the 2009 levels that triggered a federal inquiry, known as the Cohen Commission[14]. An unexpected surge of sockeye in 2025 is not yet reflected in our data, but may offer a hopeful sign for Fraser sockeye. While these recent increases are encouraging, the potential for high levels of pre-spawn mortality as sockeye migrate to their spawning grounds (up to 90% in some years[15]) necessitates cautious optimism for 2025.



Steelhead have the lowest absolute abundance of all six species and are below the long-term average for spawner abundance in all regions assessed.

Many populations face an imminent risk of extinction, including in the Fraser where two populations are listed as Endangered[16] by the Committee on the Status of Endangered Wildlife in Canada. In the Columbia, only a handful of natural-origin spawners have been recorded in recent years, leading us to assess Columbia steelhead as "critically low".

In general, data on steelhead abundance are sparse and there were no abundance data for steelhead in the Northern Transboundary, Haida Gwaii, or Central Coast. With this dearth of information, many steelhead populations may be disappearing, unrecorded[17].



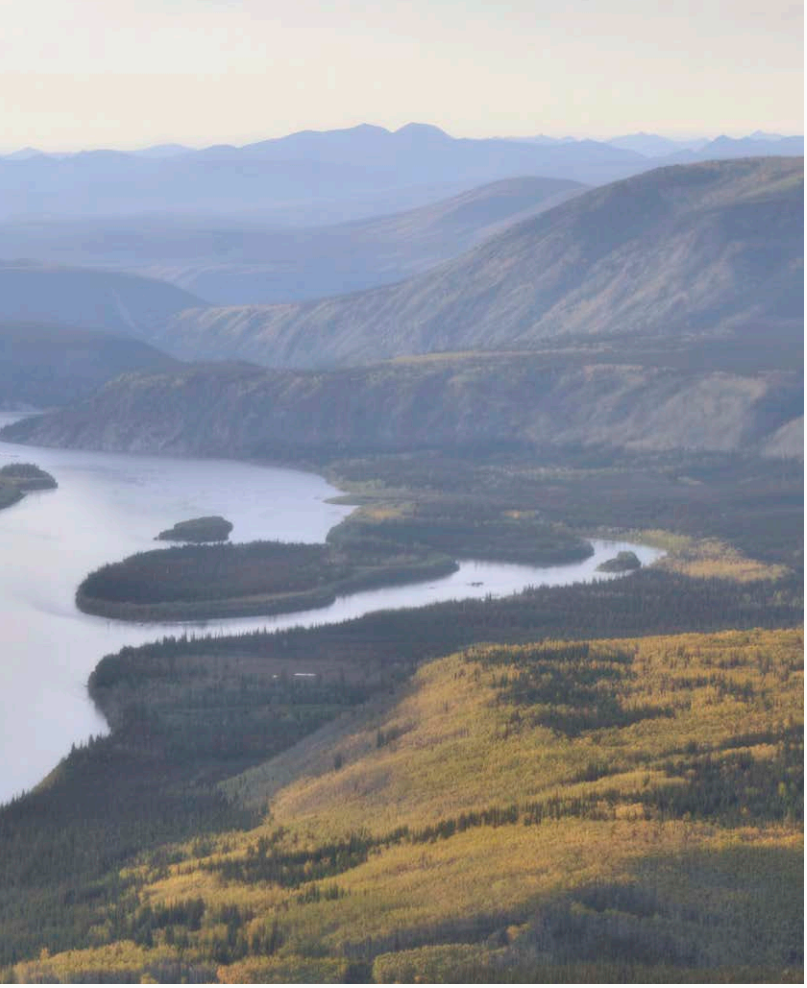
REGIONAL OVERVIEWS

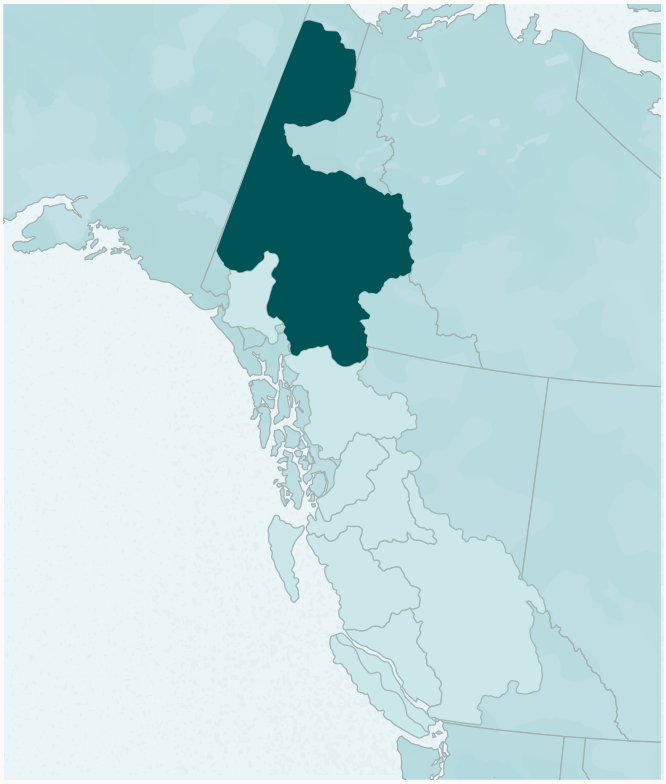
YUKON

Chinook and chum salmon have experienced precipitous declines in recent years.

Both spawner and total abundances are well-below the long-term average for Chinook and chum salmon. Chinook have been steadily declining since the 1980s, with more significant year-over-year reductions in total abundance since 2015. In an effort to help recovery, the Canadian federal government and State of Alaska have placed a moratorium on all fishing of Chinook in the mainstem Yukon River and Canadian tributaries until 2030[1]. Efforts are underway both within Canada and internationally to develop rebuilding strategies for Yukon Chinook. Returns of chum salmon have also recently plummeted to historic lows, causing fisheries closures[18] and putting further stress on salmon ecosystems along the Yukon River.

Coho salmon are also found in the Yukon River basin, however their Canadian distribution is limited to the Porcupine River and they are not found in the Canadian portion of the mainstem Yukon River. Coho are not routinely monitored in the Yukon, making it impossible to assess their status.





Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Notable Salmon-Bearing Rivers

Big Salmon River, Fishing Branch River, Kluane River, Pelly River, Yukon River.

Region Profile

The Yukon River flows from its headwaters in northwestern British Columbia, through the Yukon Territory, and into Alaska before emptying into the Bering Sea. Canadian-origin Yukon salmon are the longest migrating salmon in the world, some travelling over 3,000 kilometres between the ocean and their spawning grounds.

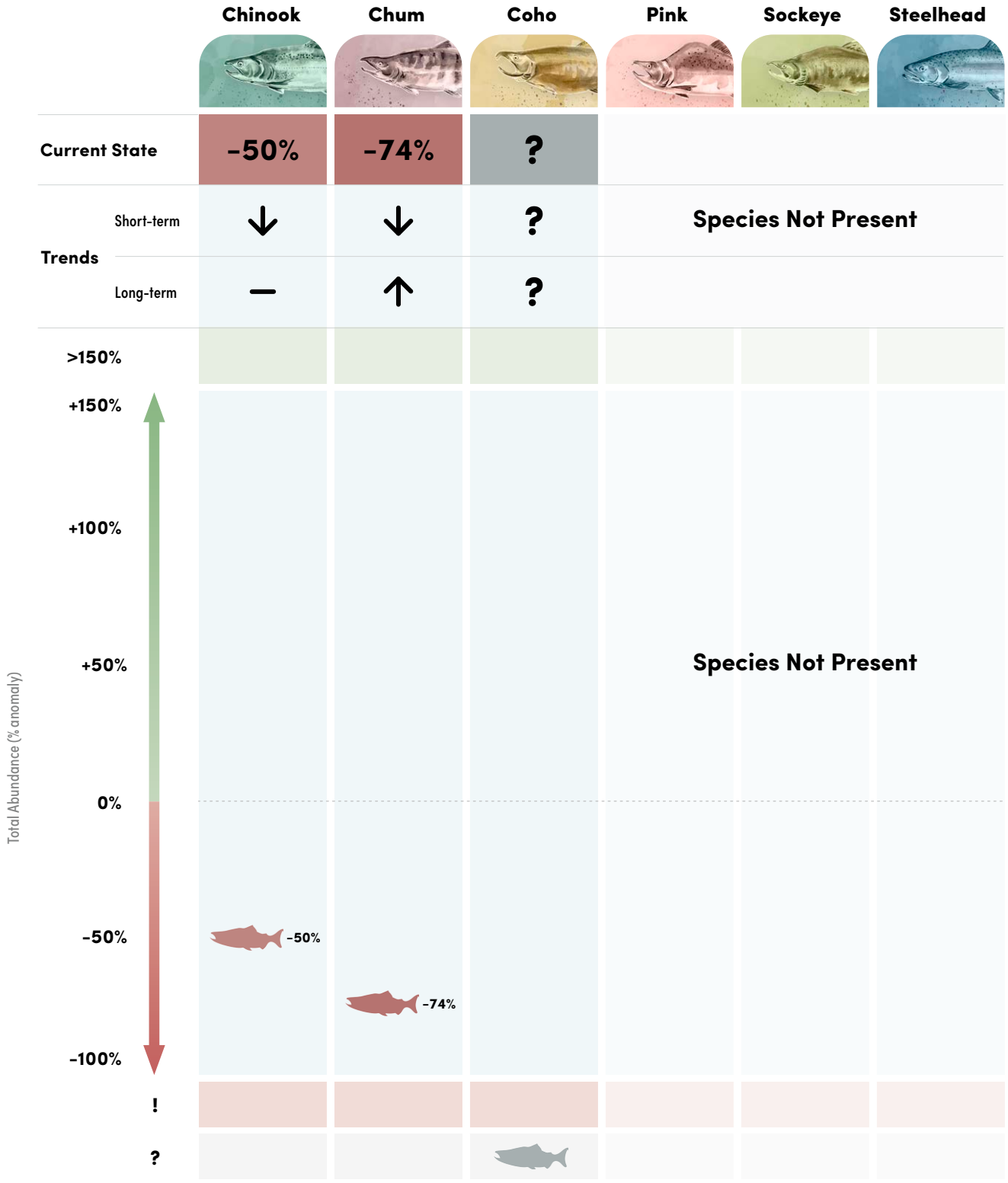
The Yukon River watershed is home to a rugged landscape and pristine wilderness, dominated by glaciers, mountains, plateaus, and river valleys. Despite its far northern location, the Yukon is warming three times faster than the global average[19], dramatically altering the landscape, melting glaciers and permafrost, rerouting rivers, increasing stream temperatures, and significantly impacting the locations and quality of salmon habitats. Climate change is also causing warmer water and a loss of sea ice in the Bering Sea. This has led to massive changes in the marine ecosystem that likely impact salmon survival, such as lower quality of food available to juvenile salmon during their early marine life stage[20].

Yukon Chinook have evolved to be some of the largest and oldest salmon in the world, allowing them to survive the harsh northern environment and epic migrations. Yukon Chinook can weigh up to 45 kilograms and live as long as eight years. However, returning Yukon Chinook are now smaller and younger (typically six years old), likely as a result of decades of selective fisheries that have preferentially harvested larger and older fish[21]. Since younger, smaller females typically produce fewer and smaller eggs, the reproductive potential of female Yukon Chinook has declined by an estimated 24-35 per cent since the 1970s[22].

YUKON

Tables and figures in this section show the current state and trends for each species of salmon in the Yukon. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



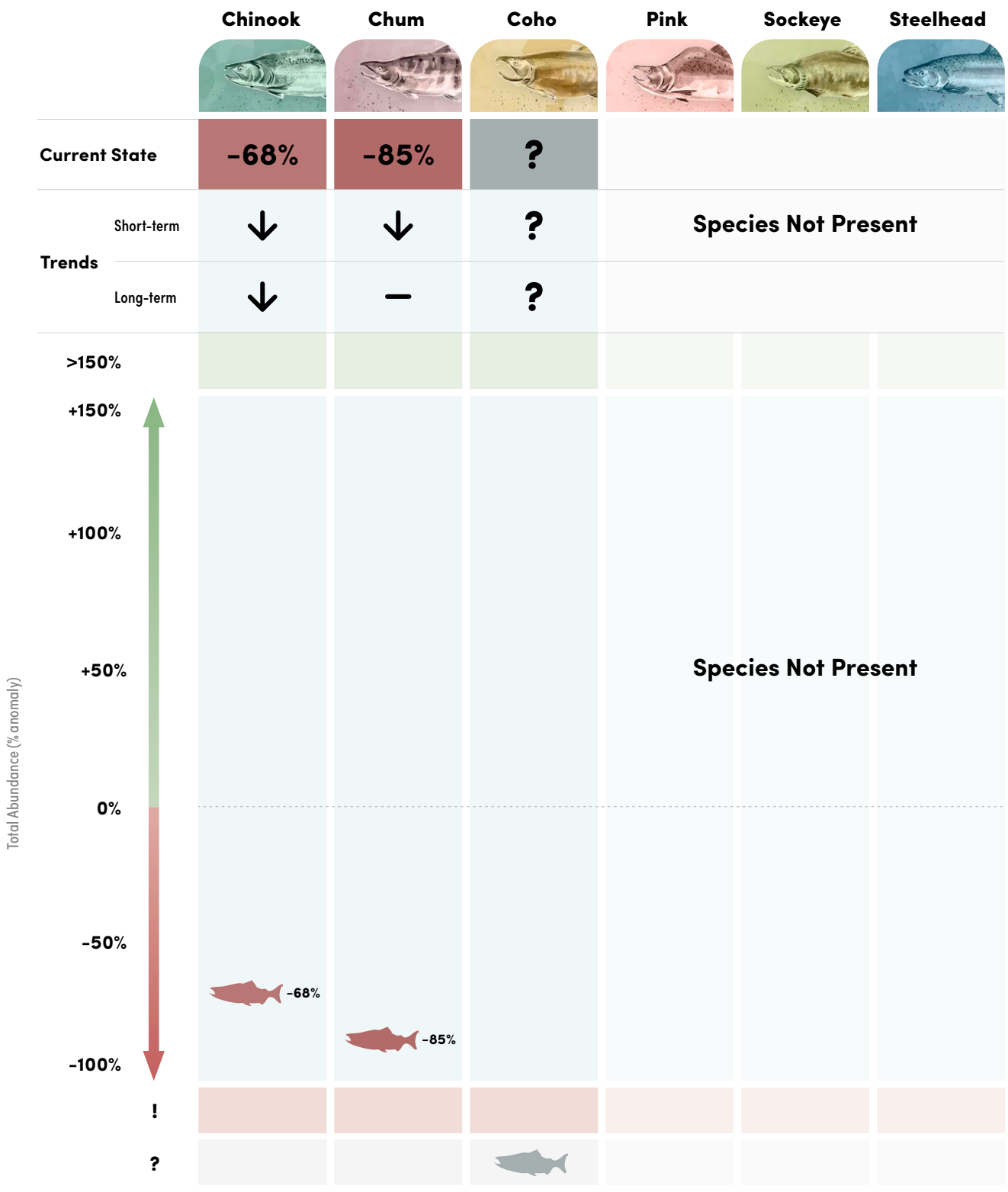
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

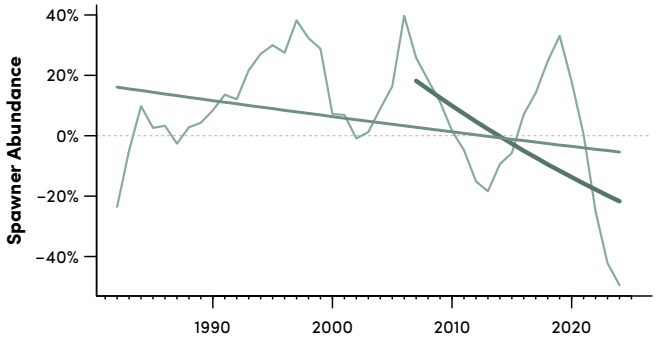


Chinook

The current state of spawner abundance and total abundance are both well-below the long-term average. Negative short-term trends in both highlight the current crisis hitting Yukon River Chinook. Chinook are long-lived, returning as old as seven years, meaning that declining trends can be slow to reverse.

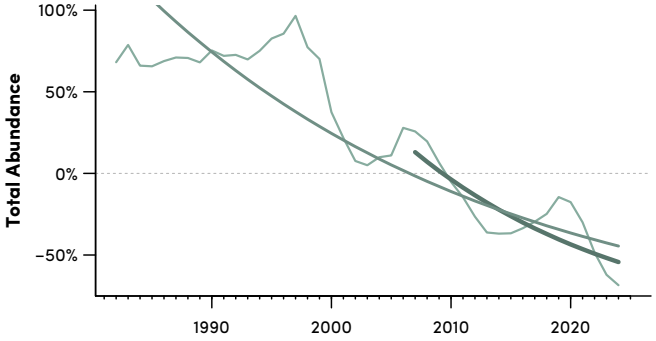
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-50%	↓	—	23,593 (2019–2024)	46,738 (1982–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-68%	↓	↓	30,415 (2019–2024)	96,469 (1982–2024)

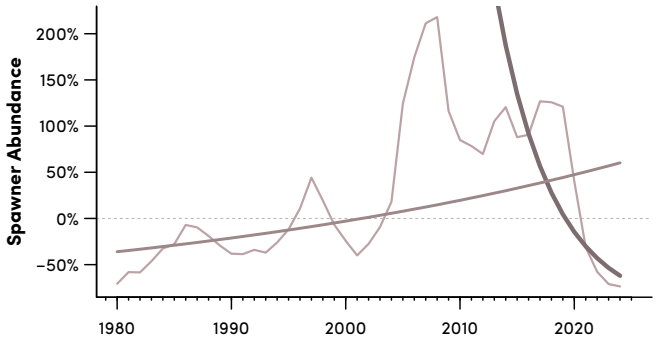


Chum

The current state of spawner abundance and total abundance are both well-below the long-term average. Relatively high abundance over past decades (2003-2018) combined with reduced catches led to a positive long-term trend in spawners, but the precipitous decline over the most recent generation is reflected by negative short-term trends in both spawner abundance and total abundance.

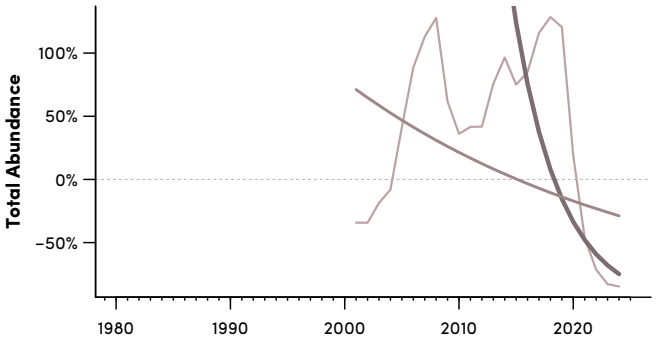
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-74%	↓	↑	20,672 (2021–2024)	78,297 (1980–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-85%	↓	—	21,005 (2021–2024)	136,947 (2001–2024)



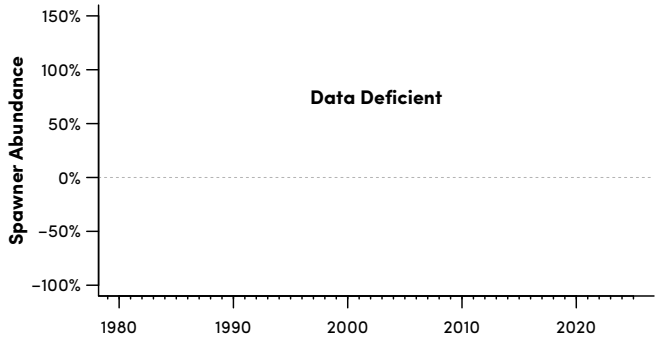
Short-Term Trends ——— Long-Term Trends ———

Coho

Canadian-origin coho salmon spawn in the Porcupine River, a tributary of the Yukon River that joins the mainstem in Alaska. There is little information on these coho because they migrate and spawn late in the year, when ice covers the rivers and monitoring is not possible.

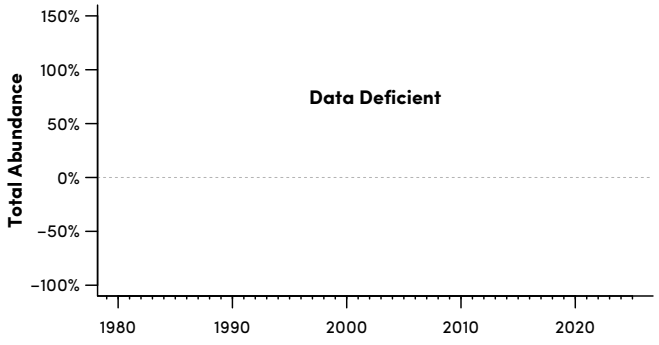
Spawner Abundance

Current State	Trends: Short-Term	Trends: Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



Total Abundance

Current State	Trends: Short-Term	Trends: Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



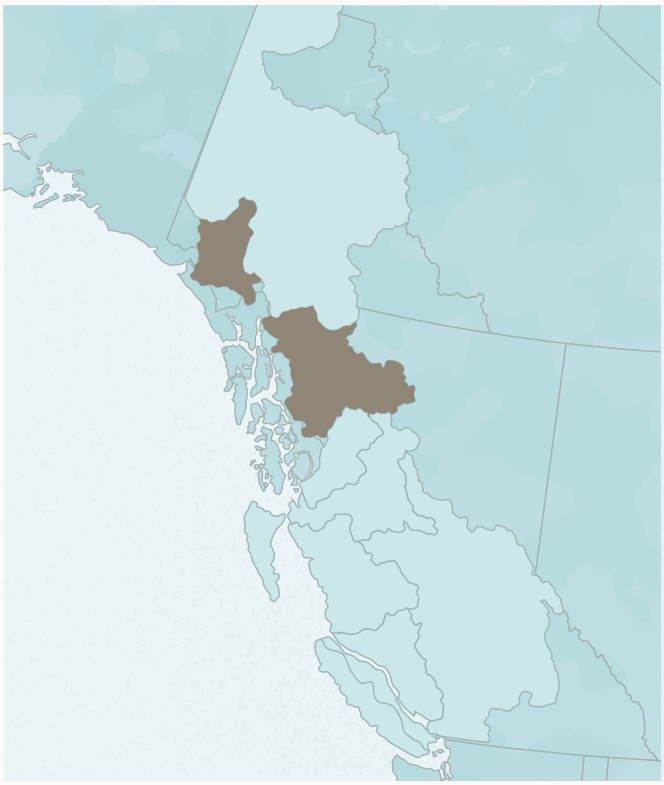
NORTHERN TRANSBOUNDARY

Most species are below average but recent increases in sockeye spawners are encouraging.

Chinook, chum, coho, and pink salmon are all below average spawner abundance, creating significant conservation concerns in the region. These species are experiencing significant downward trends over the short term, long term, or in some cases, both. Chinook, in particular, have seen a severe reduction in harvest opportunities, with poor ocean survival in recent years exacerbating a long-term decline[23].

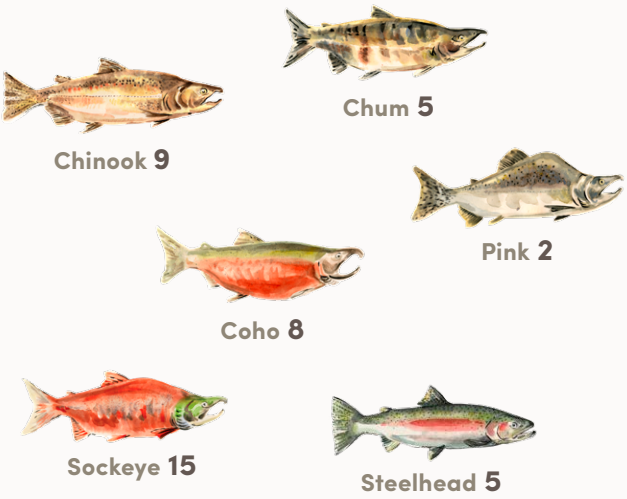
Although sockeye spawners are currently above the long-term average and have a positive short-term trend, there are some small lake-type sockeye populations that are struggling[11]. Total abundance is below average with short-term declines, reflecting curtailed sockeye fisheries and indicating that Northern Transboundary sockeye are still of conservation concern.

Data are sparse in the Northern Transboundary region, casting some uncertainty on these outcomes. For example, chum and pink salmon assessments for this vast region are based on a single fish wheel in the Taku River and may not be representative of all populations.



Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.



Notable Salmon-Bearing Rivers

Alsek River, Klukshu River, Stikine River, Taku River, Tahltan River.

Region Profile

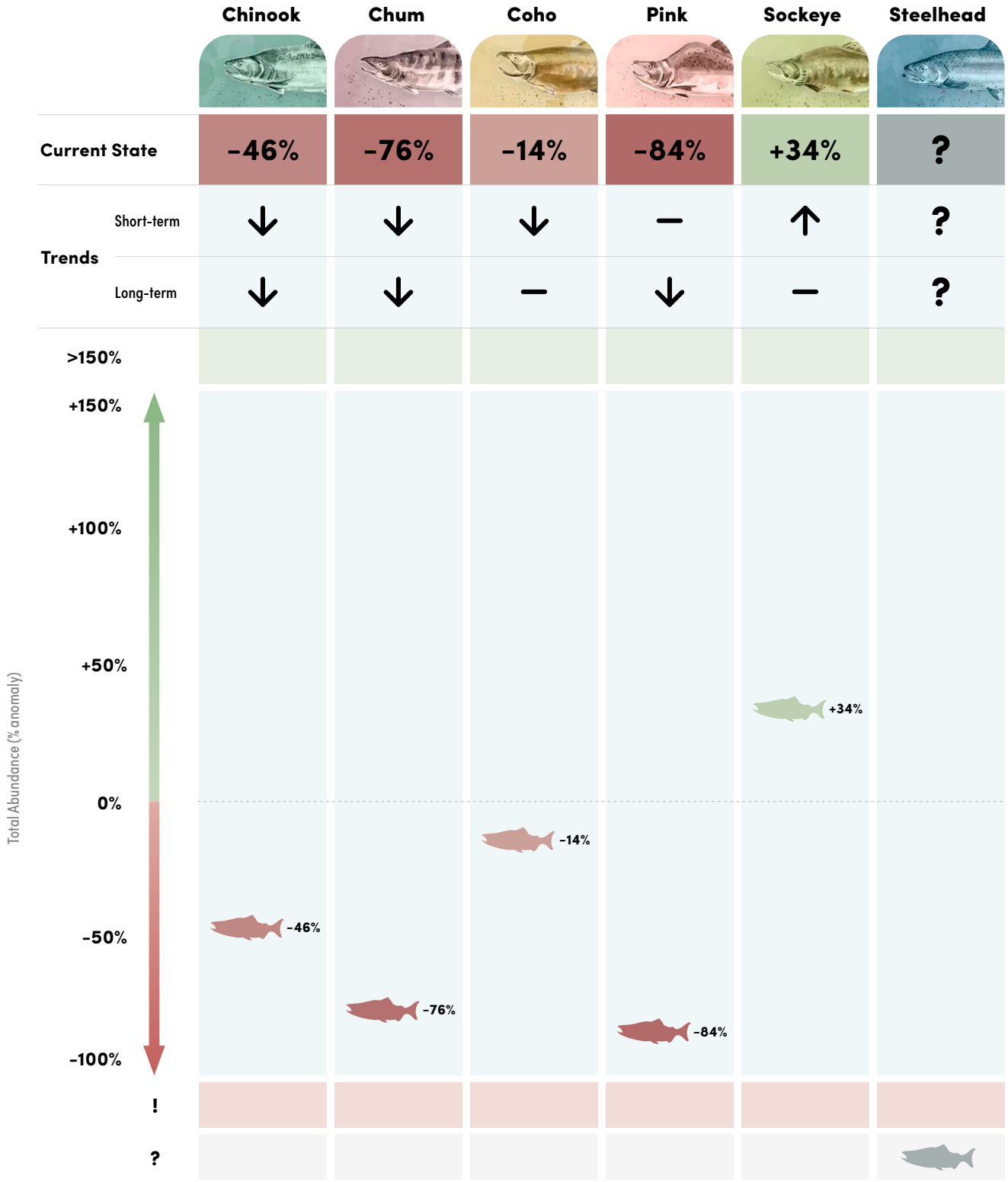
The Northern Transboundary Region comprises six river basins - the Alsek, Chilkat, Taku, Whiting, Stikine, and Unuk - that cover 110,000 square kilometres. These river basins provide a diversity of freshwater spawning and rearing habitats for all six species of salmon.

The rivers of the Northern Transboundary originate in Canada but enter the ocean in southeast Alaska. The transboundary nature of the region introduces several challenges for salmon conservation and requires international cooperation to ensure the sustainable management of salmon populations. Under the Pacific Salmon Treaty, an international agreement and cooperative fishery management process between Canada and the United States, the Transboundary Panel is responsible for the management, monitoring, and enhancement of salmon originating in the Alsek, Taku, and Stikine watersheds. However, the smaller Chilkat, Unuk, and Whiting watersheds are not within the scope of the Treaty, meaning that little salmon monitoring and assessment is carried out for these smaller, but important salmon-bearing watersheds.

NORTHERN TRANSBOUNDARY

Tables and figures in this section show the current state and trends for each species of salmon in the Northern Transboundary. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



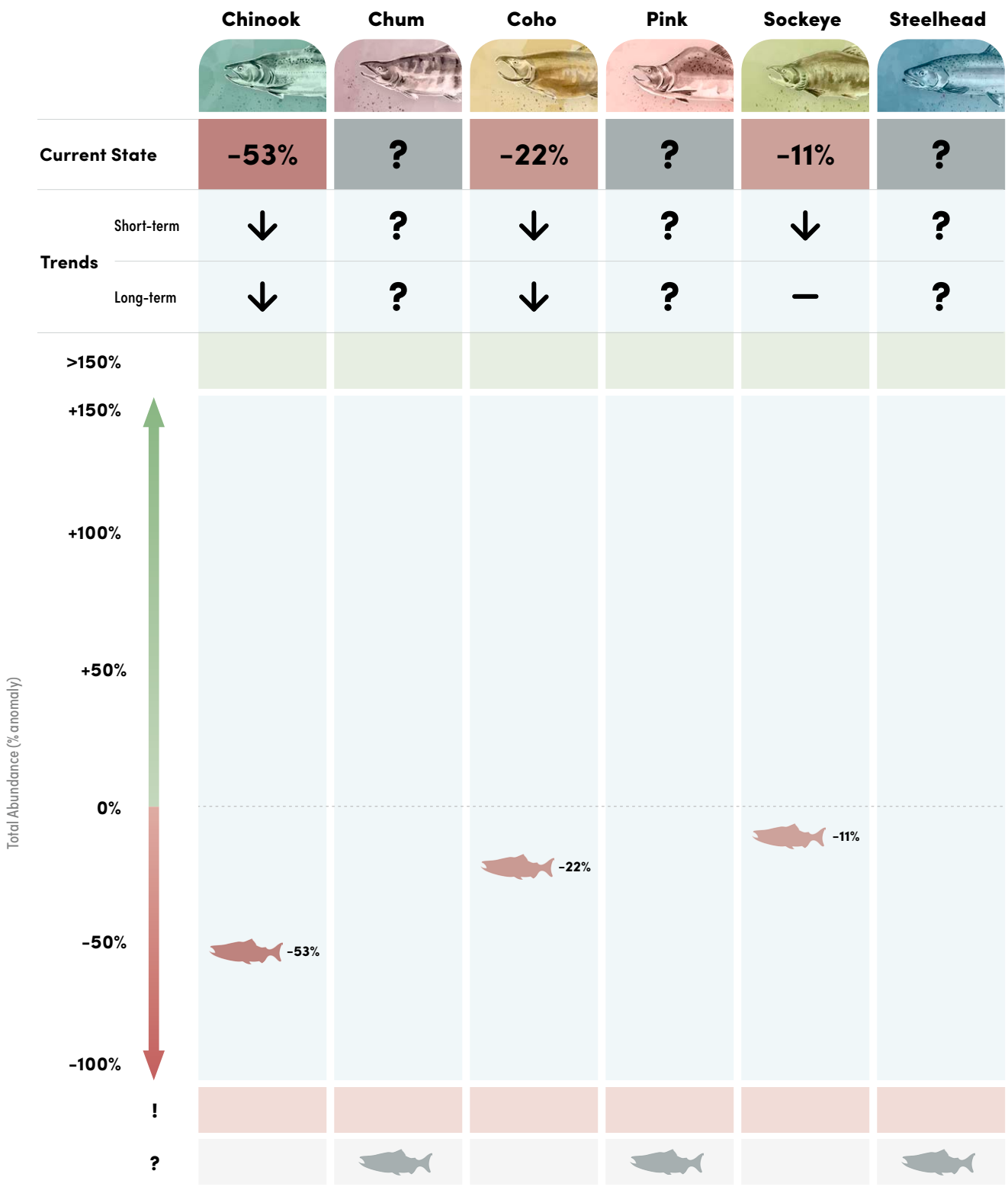
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

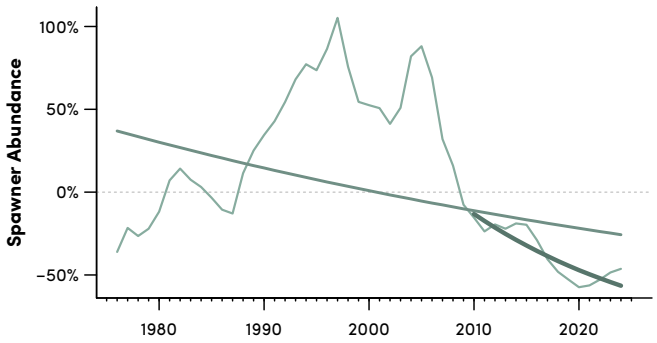


Chinook

The current state of spawner and total abundances are both well-below the long-term average. Short-term and long-term trends are both down, highlighting that abundances are both low and declining - a cause for concern.

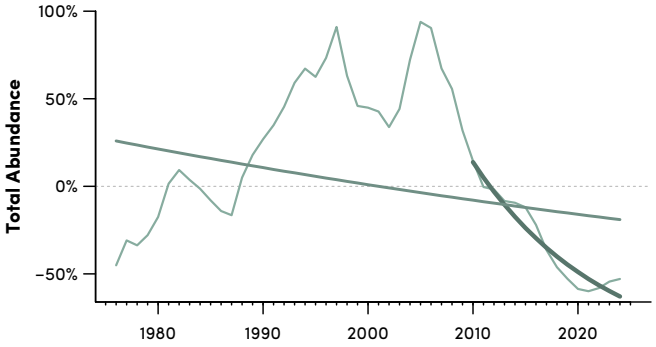
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-46%	↓	↓	**29,921** (2020–2024)	**55,702** (1976–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-53%	↓	↓	**32,247** (2020–2024)	**68,481** (1976–2024)

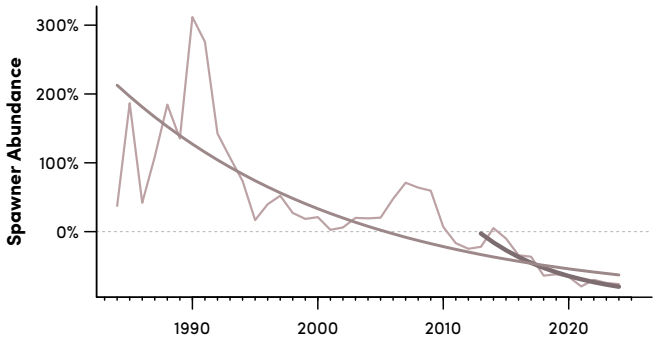


Chum

All three metrics concur that chum salmon spawners in the region are of conservation concern. Data on chum abundance for this expansive region are limited to a single fish wheel on the Taku River, and more monitoring of catch and of other rivers would shed light on the pervasiveness of these declines.

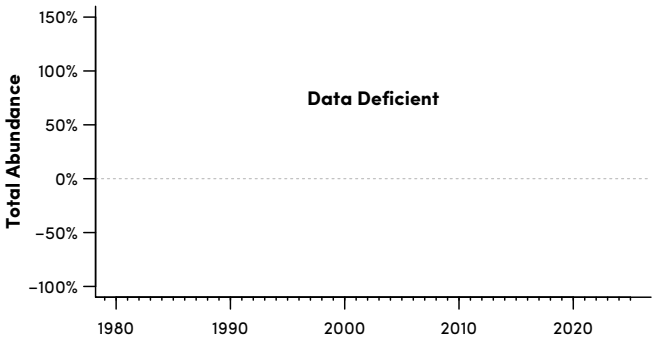
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-76%	↓	↓	**55** (2021–2024)	**230** (1984–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



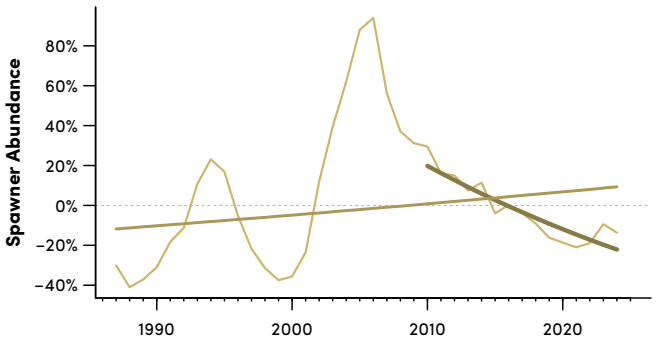
Short-Term Trends — Long-Term Trends —

Coho

The current state of spawner and total abundances are both below the long-term average. Short-term trends are both down, highlighting that abundances are both low and declining - a cause for concern. Relatively high spawner abundance in the mid 2000s means that the long-term trend (1987-2024) in spawners is stable, though total abundance has declined over the long-term.

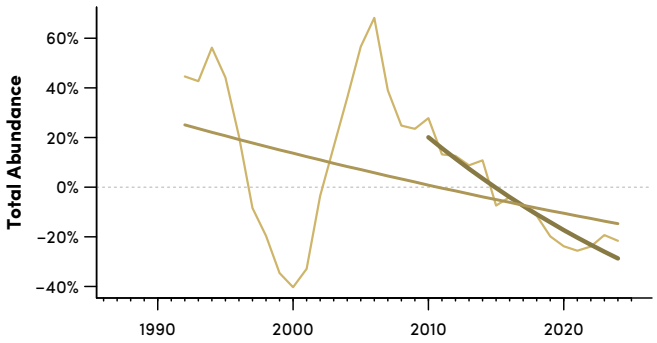
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-14%	↓	—	68,447 (2020–2024)	79,287 (1987–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-22%	↓	↓	88,863 (2020–2024)	113,408 (1992–2024)

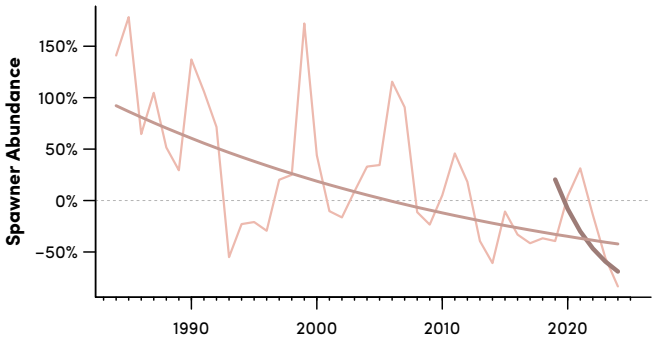


Pink

The current state of spawners is below the long-term average with a negative long-term trend. Spawner abundance has stabilized since 2010, leading to a stable short-term trend over the most recent three generations. Data on pink salmon abundance for this expansive region are limited to a single fish wheel on the Taku River, and more monitoring of catch and of other rivers is needed to fully understand the state of pink salmon in the region.

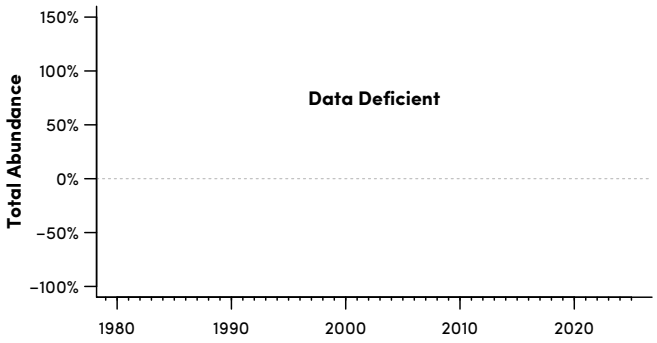
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-84%	—	↓	1,420 (2023–2024)	8,609 (1984–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

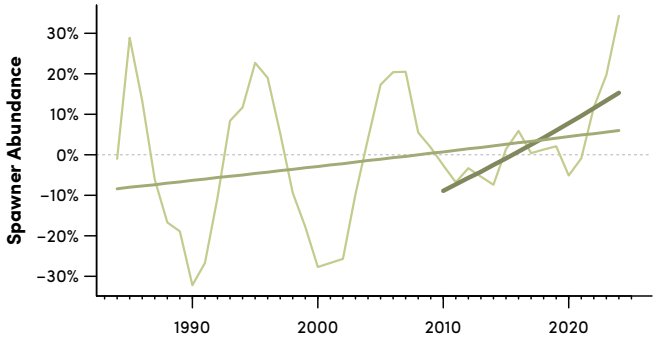


Sockeye

The current state of spawners is above the long-term average with a positive short-term trend that seems to be driven by high survival of river-type sockeye and hatchery-enhanced Tahltan Lake sockeye in the Stikine River basin. Total abundance remains below average with short-term declines - highlighting reduced fisheries compared to the early 2000s. Long-term trends in both spawner and total abundances are stable, although abundance has cycled through time with peaks occurring every 10 years since the time series began in 1984.

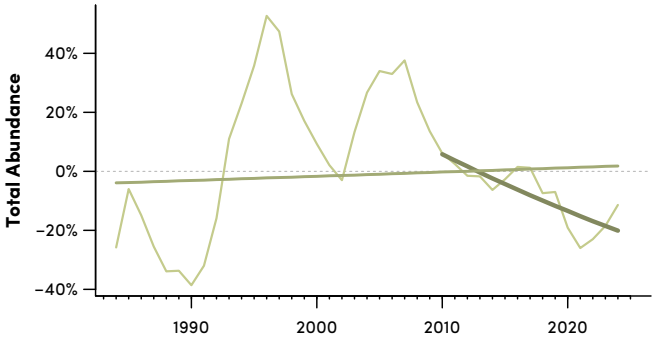
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+34%	↑	—	187,383 (2020–2024)	139,553 (1984–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
−11%	↓	—	281,941 (2020–2024)	318,359 (1984–2024)

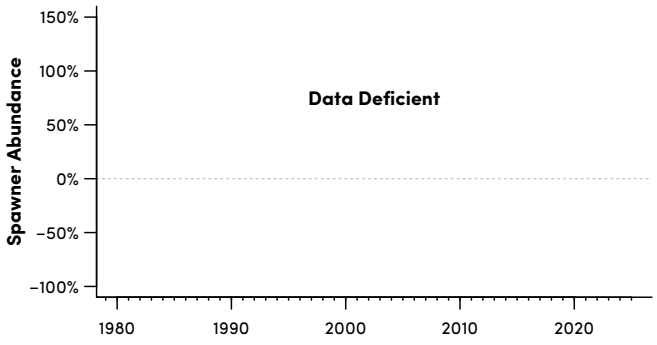


Steelhead

There are no reliable data to assess the state of steelhead in the region. Steelhead are captured in the fish wheel on the Taku River, but data are sparse and absolute abundance is low, making it an unreliable indicator of steelhead abundance in the region.

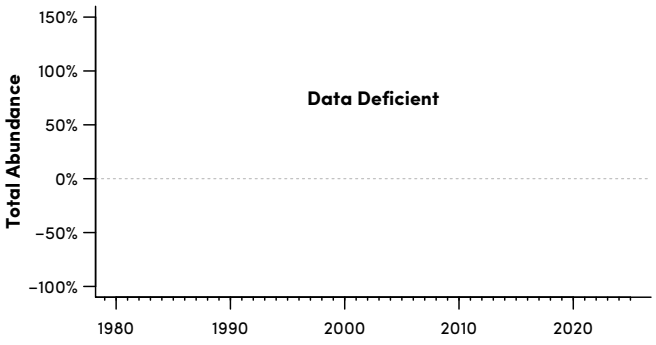
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



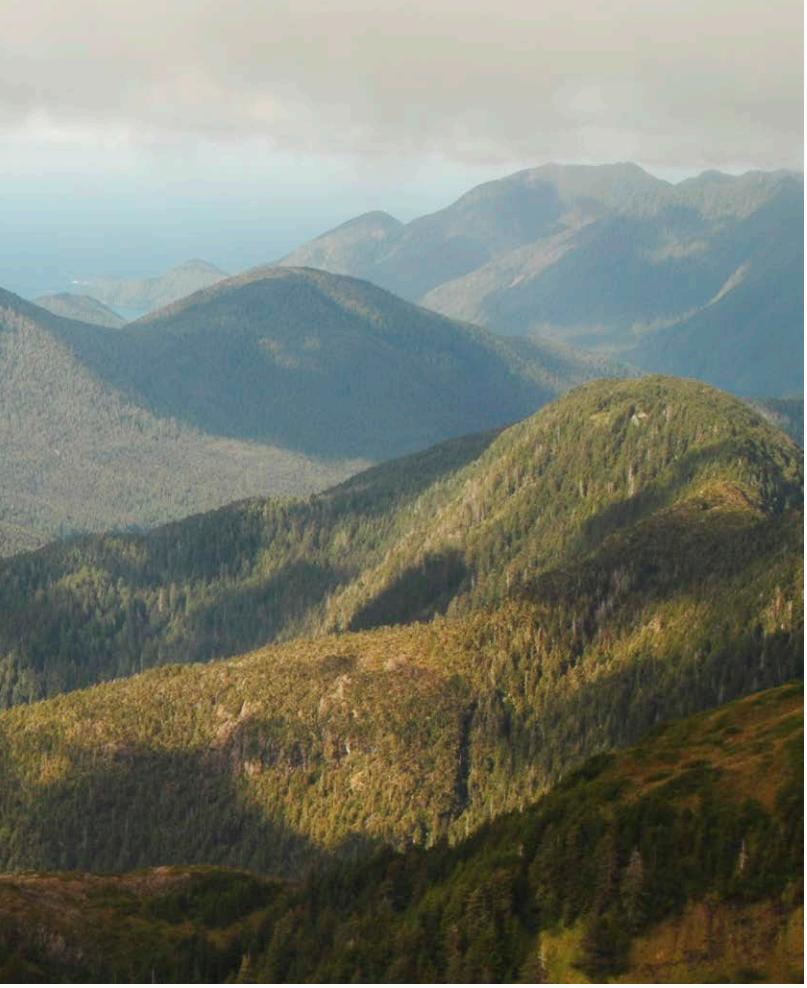
HAIDA GWAII

All species are below average, with chum and coho salmon showing the most dramatic declines.

The outlook for salmon on Haida Gwaii is bleak. All species for which we have reliable data are currently below the long-term average, with short-term and long-term trends either stable or declining. The current state for Chinook and steelhead are unknown due to a lack of recent data for both species.

Chum salmon have been declining steadily for decades and coho salmon have seen very low numbers of spawners over the past three years of data (2021-2023). For all species, reduced monitoring in Haida Gwaii since the 1980s means that this assessment may not even be capturing the full picture of salmon declines, including the loss of critical genetic diversity.

Unlike other regions where pink salmon have been doing relatively well, pink salmon are well-below the long-term average in Haida Gwaii and have a negative long-term trend. Pink salmon are currently doing worse than any other species in Haida Gwaii. However, pink salmon abundance tends to fluctuate widely and Haida Gwaii pink salmon had above-average spawner abundance as recently as 2020. In 2024, there were reportedly stronger returns of pinks to the Yakoun River and smaller pink salmon systems throughout Haida Gwaii, but this is not yet reflected in our data. Concerns remain, however, as pink salmon in smaller rivers have faced high levels of pre-spawn mortality due to low water levels and warm stream temperatures - a phenomenon also seen on the Central Coast[24].



Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Chinook **2**

Chum **5**

Coho **3**

Pink **6**

Sockeye **13**

Steelhead **1**

Notable Salmon-Bearing Rivers

Copper Creek, Deena Creek, Naden River, Pallant Creek, Yakoun River.

Region Profile

Haida Gwaii is an isolated archipelago of more than 200 islands covering 10,180 square kilometres. Hecate Strait separates Haida Gwaii from mainland British Columbia by about 100 kilometres. Salmon-bearing watersheds on Haida Gwaii range from small streams scattered along the coastline to larger well-known salmon rivers such as the Yakoun and Tlell Rivers. Often called the "Galapagos of the North," it is home to ecologically diverse temperate rainforest and freshwater wetlands which supports a diversity of spawning and rearing habitats for all species of Pacific salmon and steelhead.

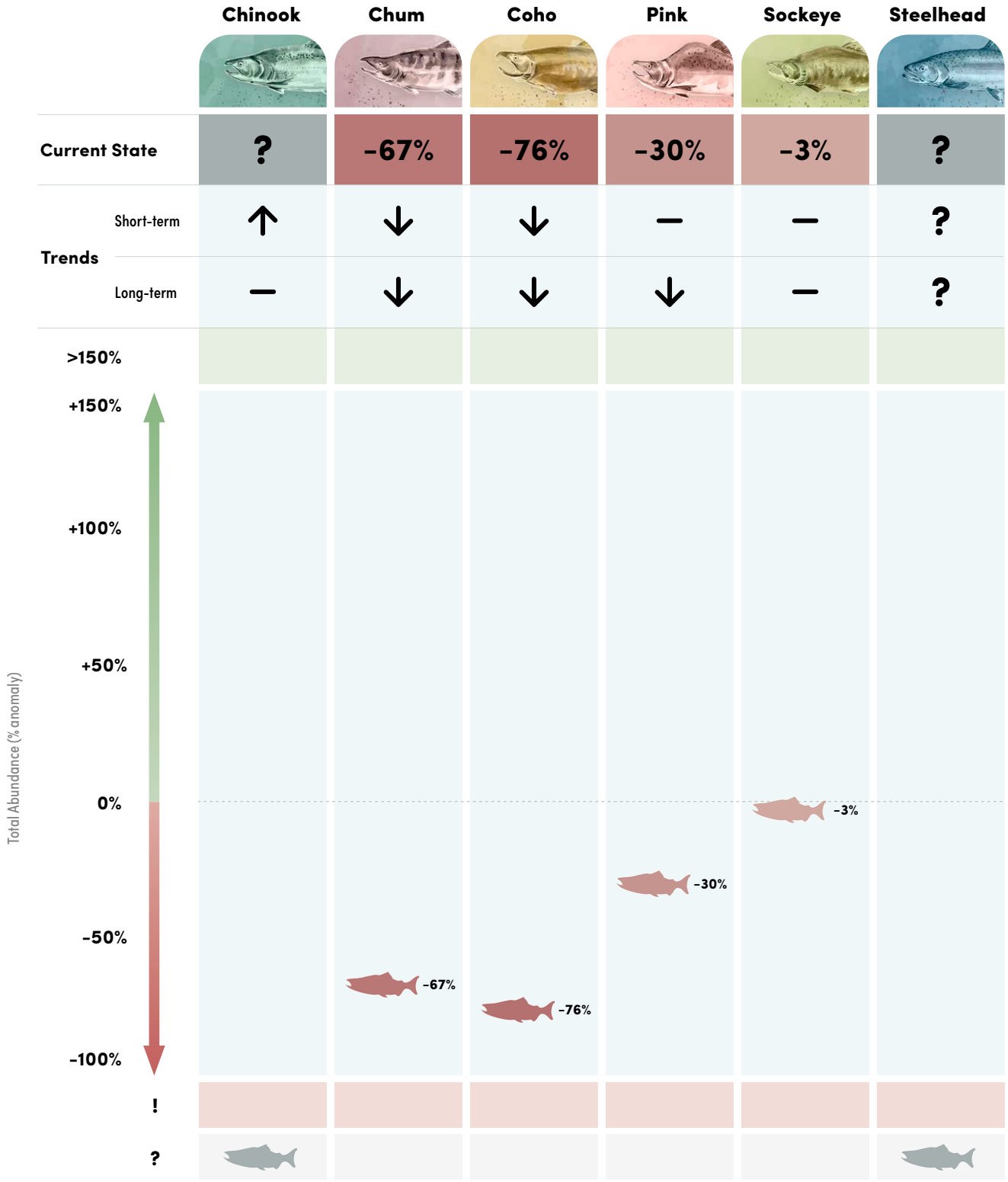
Decades of industrial logging have profoundly impacted the structure and function of salmon ecosystems across Haida Gwaii. Although the legacy of logging will take decades to repair, steps have been made to protect and restore Haida Gwaii's ecosystems[25]. In 1993, the Gwaii Haanas National Park Reserve and Haida Heritage Site was established to protect 1,500 square kilometres of the archipelago and, since 2012, logging rates have been significantly reduced under co-management by the Haida Nation and the provincial government.

Recreational and commercial fisheries in the region typically intercept salmon on their migrations to other spawning areas. Although the numbers of salmon that actually spawn on Haida Gwaii are relatively small, salmon are a mainstay of cultures and communities in this remote island region. Most streams have a strong return of pink salmon during even calendar years only. Sockeye populations are smaller and are mainly harvested in First Nations Food, Social, and Ceremonial fisheries.

HAIDA GWAII

Tables and figures in this section show the current state and trends for each species of salmon in Haida Gwaii. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



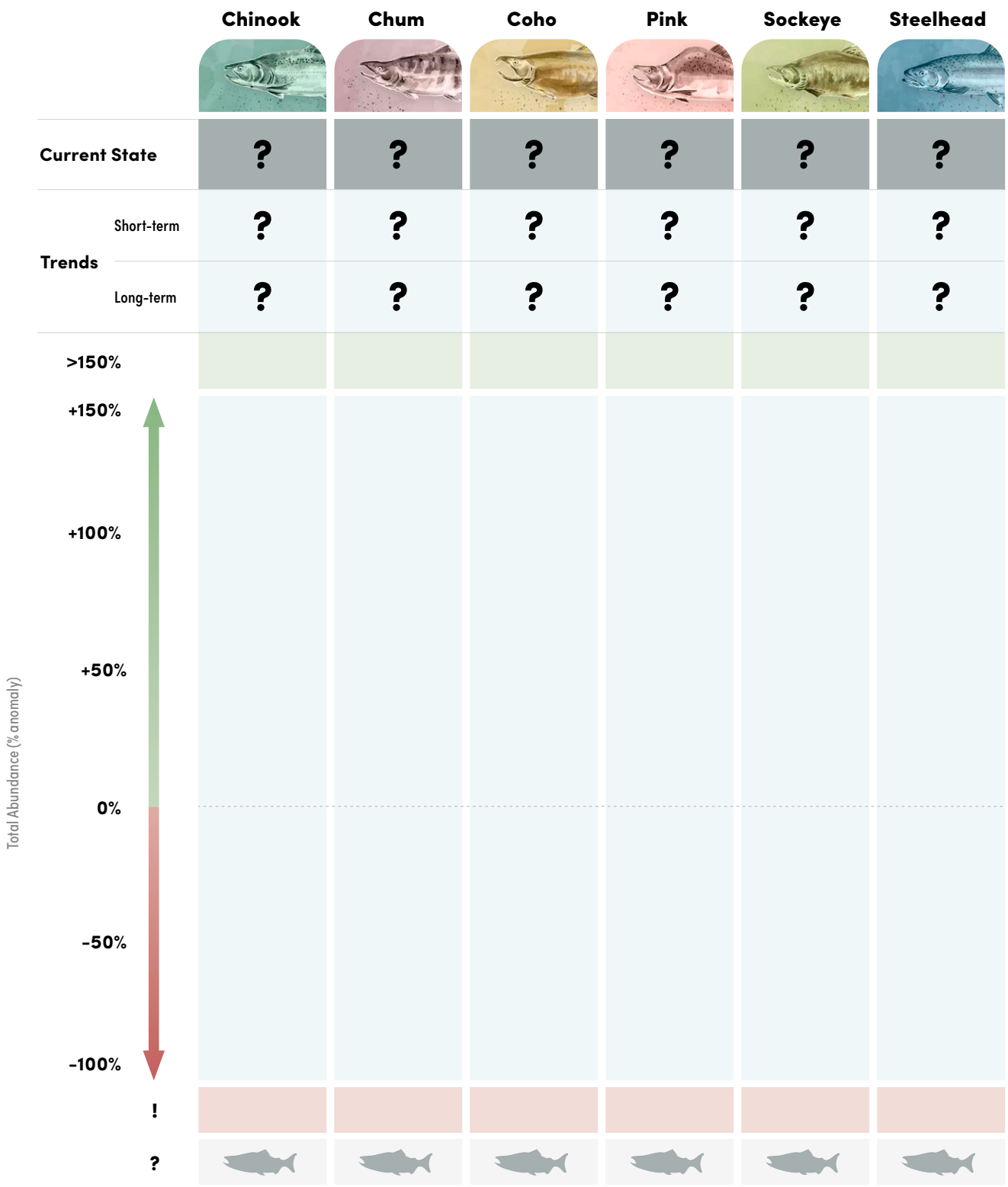
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

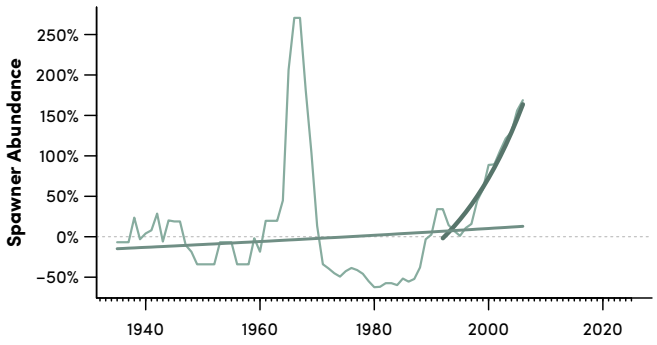


Chinook

The current state is unknown due to a lack of available data in recent years. The long-term trend from 1935–2006 is stable and the short-term trend from 1992–2006 is increasing sharply.

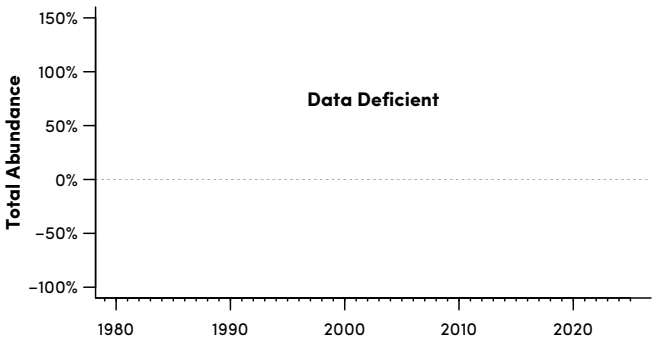
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	↑	—	?	1,609 (1935–2006)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

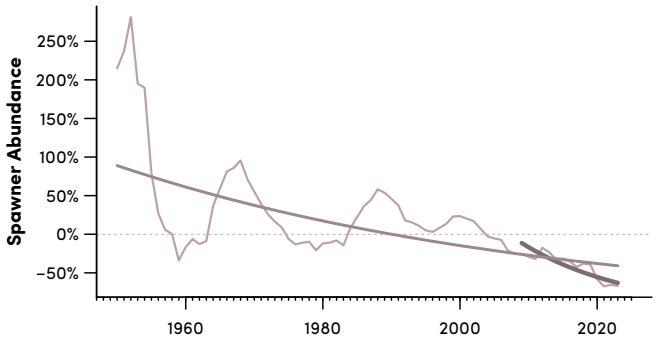


Chum

All three metrics concur that chum salmon spawners in the region are of conservation concern.

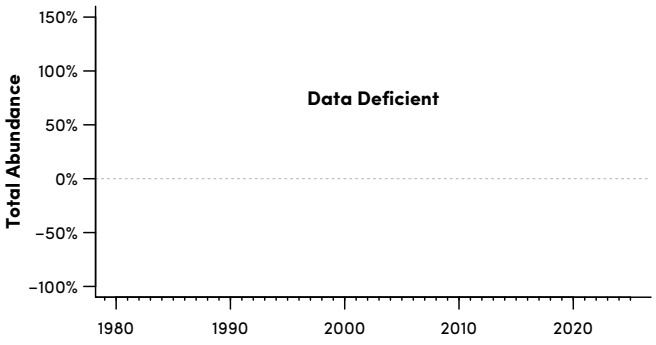
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-67%	↓	↓	79,087 (2019–2023)	238,595 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



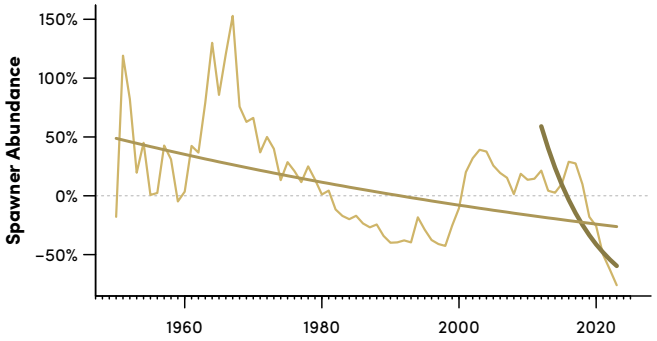
Short-Term Trends — Long-Term Trends ——

Coho

The current state is below the long-term average, with the last three years (2021–2023) being the lowest on record since the time series began in 1950. The recent, sharp decline is reflected in a negative short-term trend, while a less-steep but declining long-term trend points to a sustained downward trajectory.

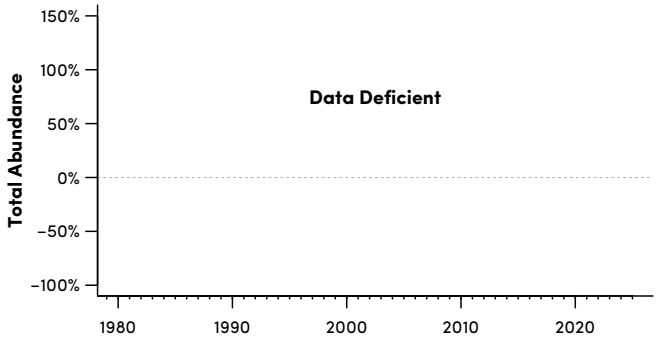
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-76%	↓	↓	17,171 (2020–2023)	71,550 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

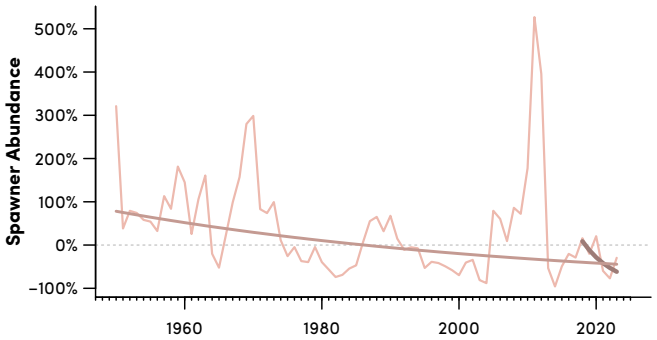


Pink

The current state is well-below the long-term average with a negative long-term trend. However, pink salmon abundance tends to fluctuate more widely than other species, and there was above-average spawner abundance as recently as 2020. A stable short-term trend is a result of swings in abundance from year to year.

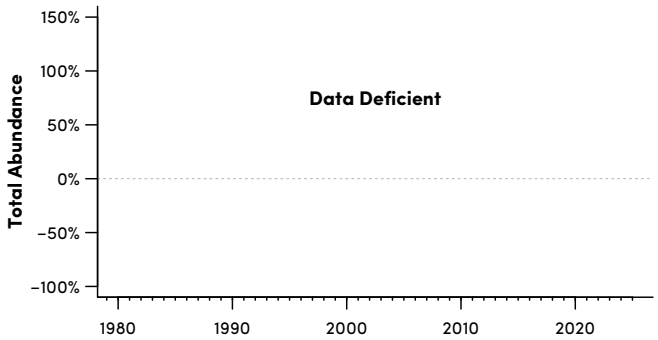
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-30%	—	↓	77,535 (2022–2023)	109,980 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



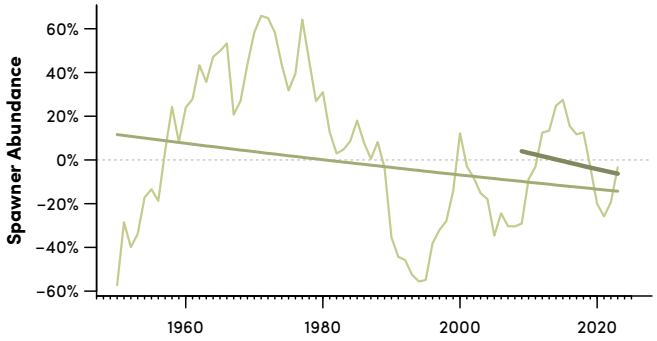
HAIDA GWAII

Sockeye

The current state is below the long-term average with a negative long-term trend. Although the short-term trend is stable, the last two years of data (2022–2023) show a promising uptick in spawner abundance following a sustained decline since 2015.

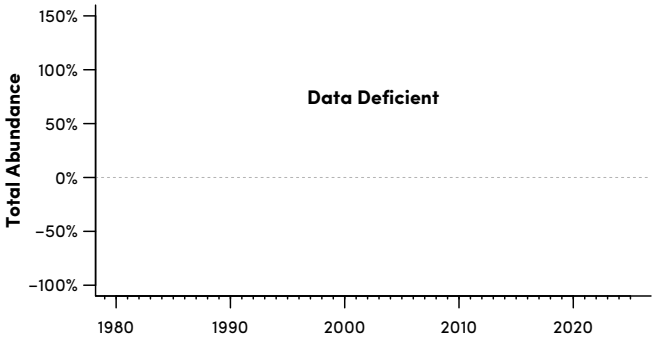
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-3%	—	—	25,788 (2019–2023)	26,694 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

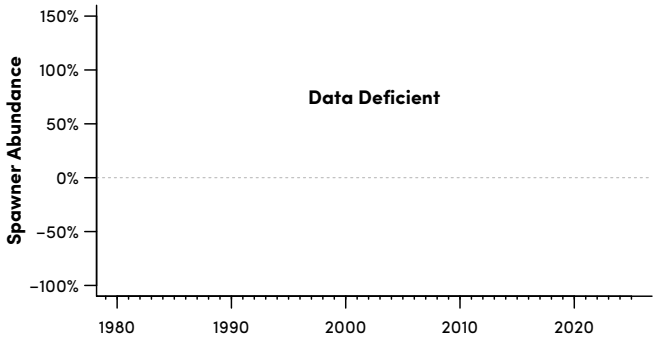


Steelhead

There are no data available on steelhead abundance in the region.

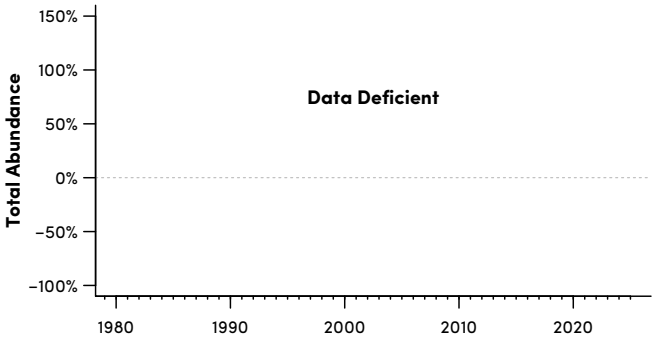
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



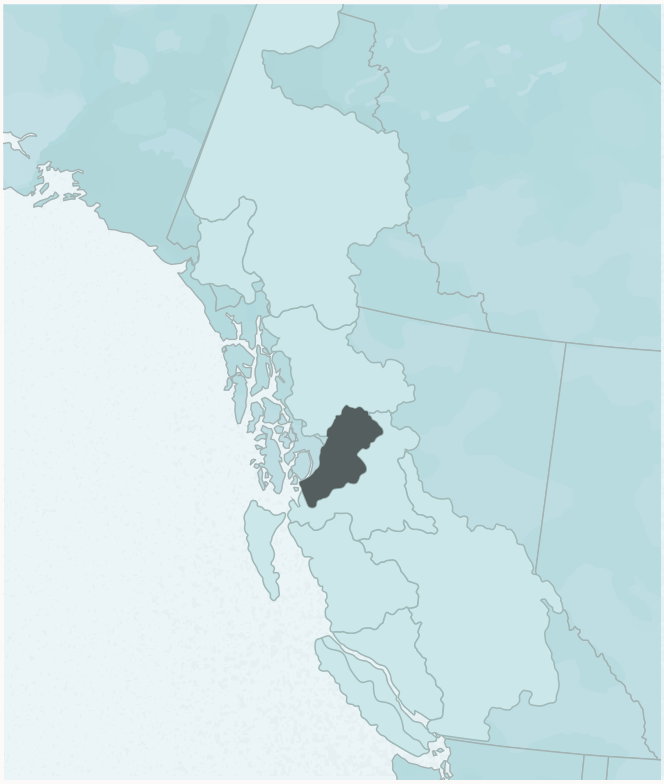
NASS

Chinook salmon and steelhead are still below average, while other species are showing strong returns.

Nass salmon currently have one of the most positive outlooks of all regions. All species except steelhead have increased in both spawner and total abundance over the last generation, with commercial and Nisga'a First Nation Food, Social, and Ceremonial harvest above average in 2024. Pink and chum salmon in particular saw record-high returns in 2024.

Although sockeye spawner abundance is above the long-term average, total abundance remains below average. The largest population - Meziadin Lake - has shown encouraging signs of recovery after failing to meet its spawning goal[26] for five consecutive years (2016-2020). This recent improvement offers hope for the revitalization and long-term sustainability of sockeye fisheries in the region.

Chinook have below-average spawner and total abundance, having failed to recover from a crash in 2010 that is reflected in a negative short-term trend over the past three generations.



Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Chinook **2**

Chum **3**

Coho **3**

Pink **3**

Sockeye **10**

Steelhead **2**

Notable Salmon-Bearing Rivers

Cranberry River, Damdochax Creek, Meziadin River, Khutzeymateen River, Kwinageese River.

Region Profile

The Nass is British Columbia's third-largest river basin, with a drainage area of 20,700 square kilometres. The region supports all species of salmon and steelhead, and is the northernmost river basin that lies entirely in Canada.

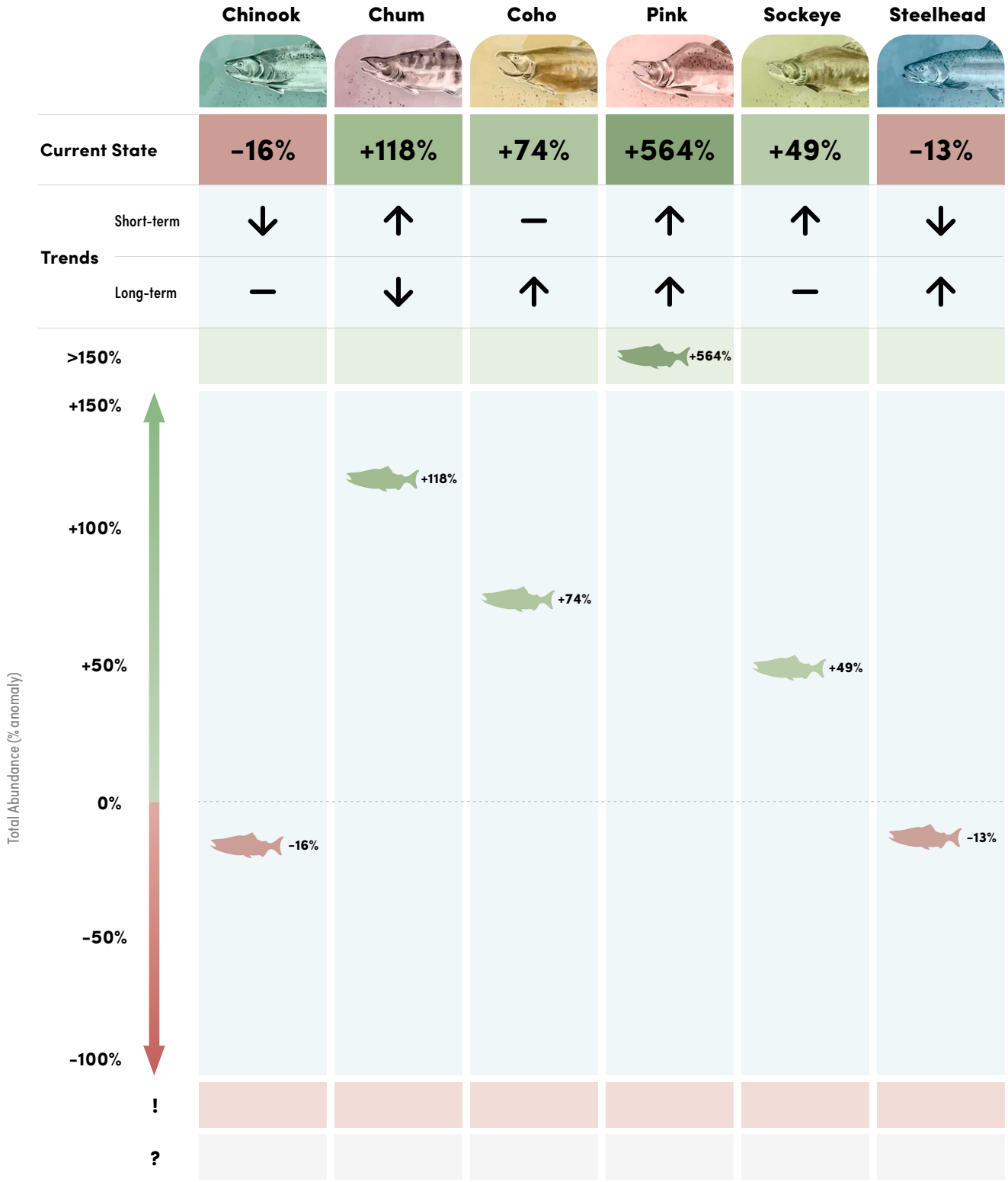
Under the Nisga'a Final Agreement of 1992, the Nisga'a Fish and Wildlife Department is responsible for salmon monitoring and management throughout much of the watershed. The Nisga'a operate two fishwheels, along with a video counter at the outlet of Meziadin Lake, which are used for biological sampling and developing spawner estimates for many Nass salmon populations[27]. There is also a counting fence at Ksi Tsoohl Tsap that supports the only coded-wire tag indicator program on a wild coho population in the province.

The Gitanyow Fisheries Authority are also monitoring several salmon systems in the region, including the Bear River and the Meziadin River. Meziadin Lake hosts a large, naturally productive sockeye population, which accounts for 70-80 per cent of all Nass sockeye[26]. However, more than 250 other populations of spawning salmon contribute to high levels of biodiversity in the region.

NASS

Tables and figures in this section show the current state and trends for each species of salmon in Nass. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



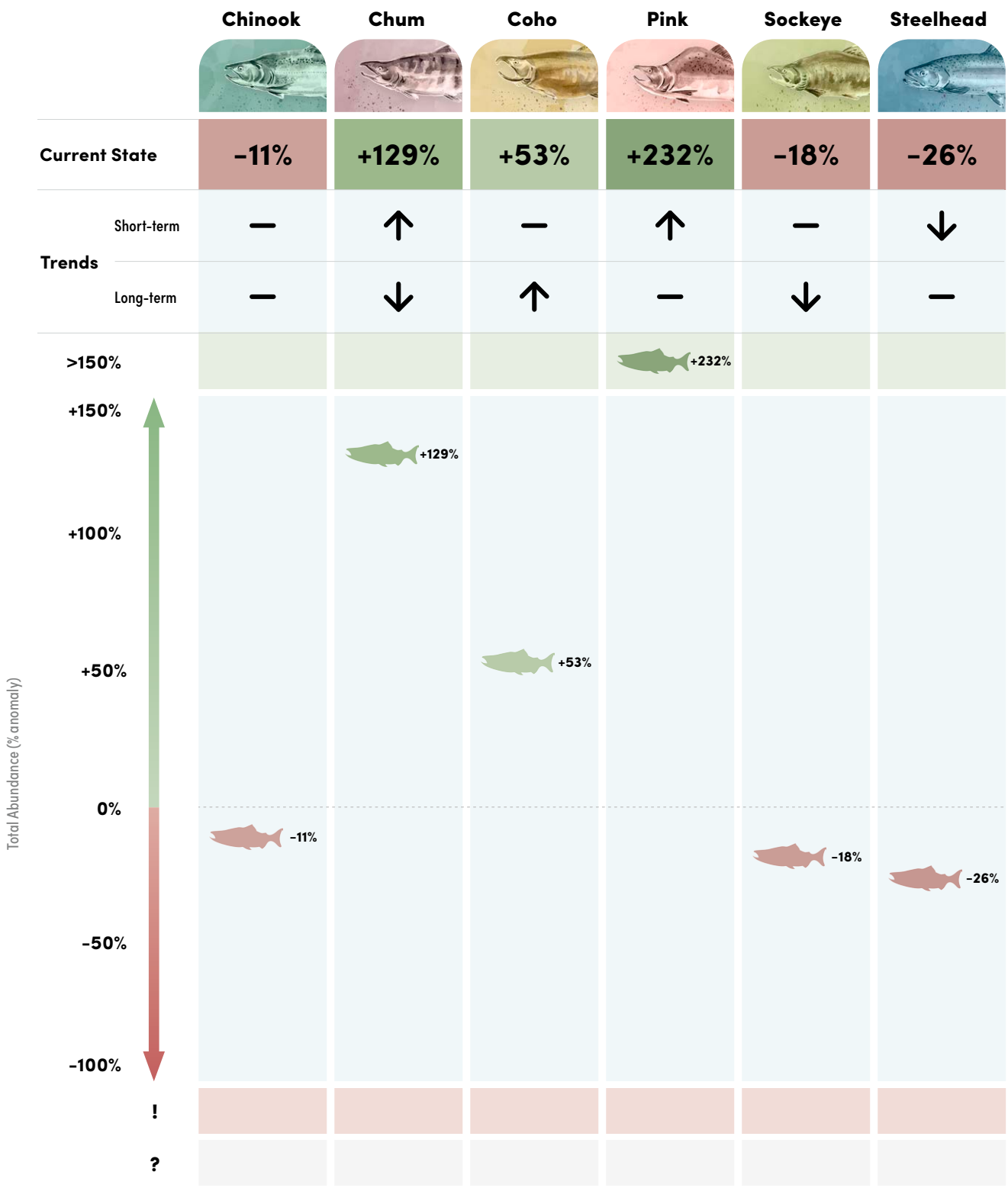
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

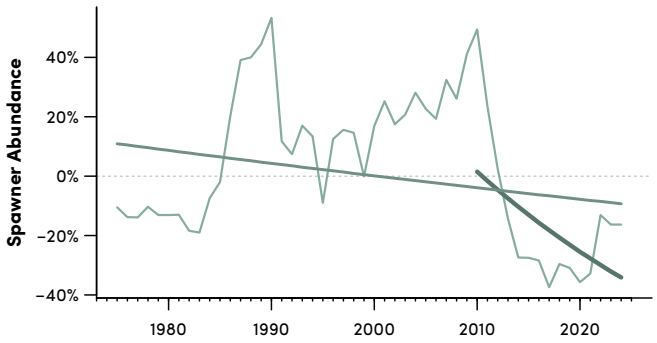


Chinook

The current states of spawner abundance and total abundance are both below the long-term average, but similar to 2023. The short-term trend in spawner abundance is negative, meaning that spawner abundance is both low and declining - a cause for concern. Stable long-term trends are the result of relatively high abundance from the mid 1980s to 2010.

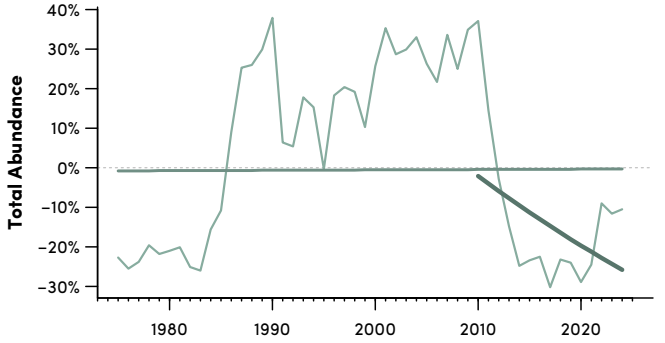
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-16%	↓	—	13,941 (2020–2024)	16,649 (1975–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-11%	—	—	20,676 (2020–2024)	23,113 (1975–2024)

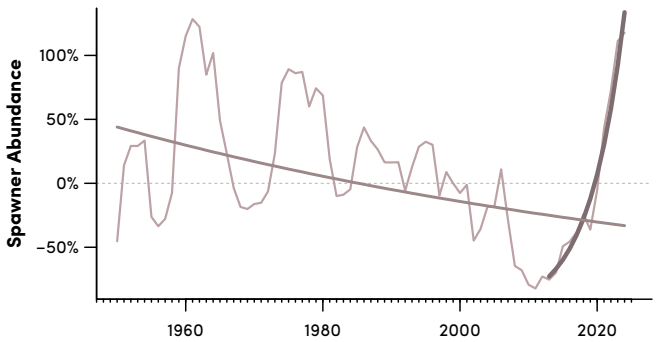


Chum

The current state is well-above the long-term average, with a sharp turnaround from last year. After relatively low abundance since the early 2000s, sharp positive short-term trends and a doubling of both spawner and total abundance from 2023 to 2024 provide hope for this struggling species.

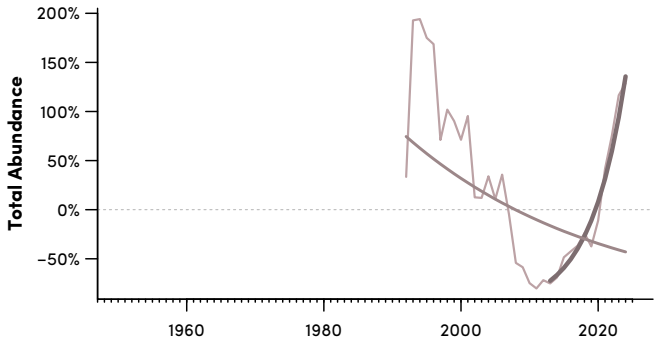
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+118%	↑	↓	92,250 (2021–2024)	42,379 (1950–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+129%	↑	↓	114,895 (2021–2024)	50,241 (1992–2024)



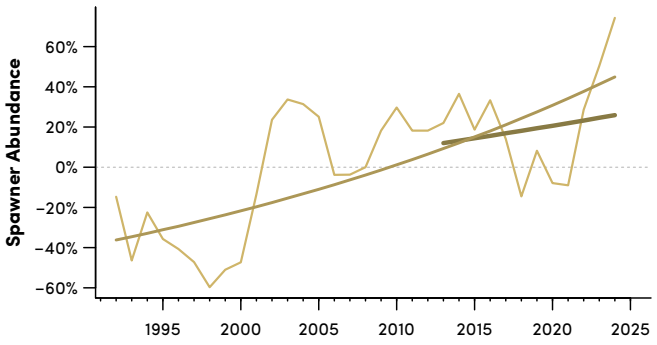
Short-Term Trends — Long-Term Trends —

Coho

The current state is above the long-term average for both spawner abundance and total abundance. Coho have experienced positive long-term trends from historic low abundances in the late 1990s - contrary to trends in many other species and regions. Increases appear to have slowed recently, with stable short-term trends in spawner abundance and total abundance.

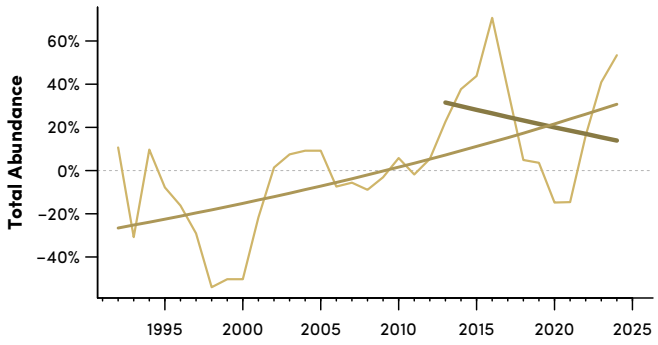
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+74%	—	↑	**222,713** (2021–2024)	**127,772** (1992–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+53%	—	↑	**422,409** (2021–2024)	**275,431** (1992–2024)

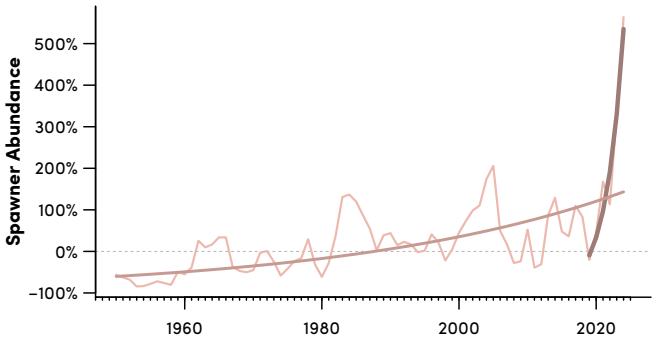


Pink

The current state of spawner abundance is well-above the long-term average with positive short- and long-term trends. Total abundance is also up more than three times over the last generation, leading to a positive short-term trend and a current state that is over double the long-term average.

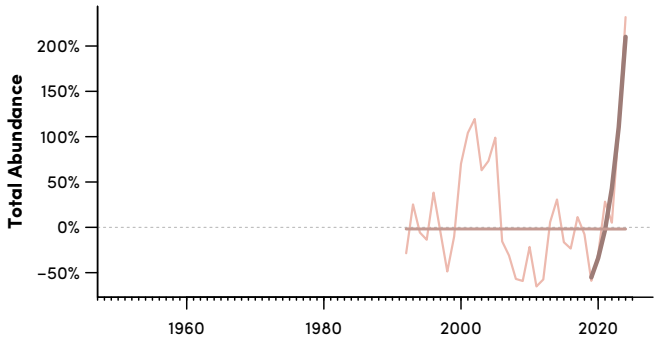
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+564%	↑	↑	**1,572,554** (2023–2024)	**236,898** (1950–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+232%	↑	—	**1,821,191** (2023–2024)	**548,719** (1992–2024)

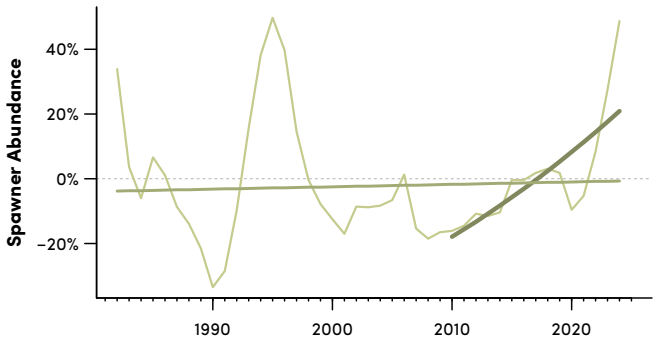


Sockeye

The current state of spawner abundance is above the long-term average, though total abundance is below average suggesting declining catch from a peak in the early 2000s. Indeed, total abundance shows a negative long-term trend, but the short-term trend has stabilized and there is promise for revitalising sockeye fisheries. Spawners have a positive short-term trend due to, at least in part, reduced exploitation rates in recent years allowing more salmon to reach the spawning grounds.

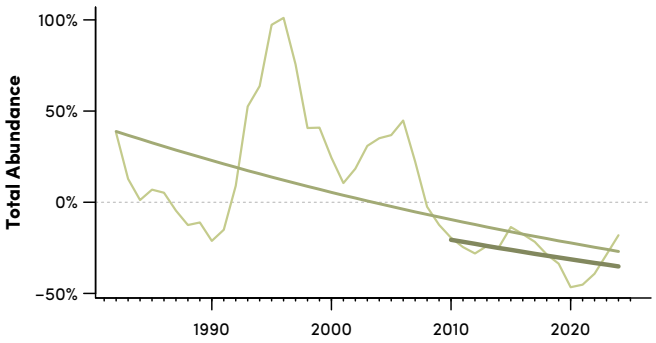
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+49%	↑	—	388,585 (2020–2024)	261,344 (1982–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
−18%	—	↓	546,804 (2020–2024)	667,258 (1982–2024)

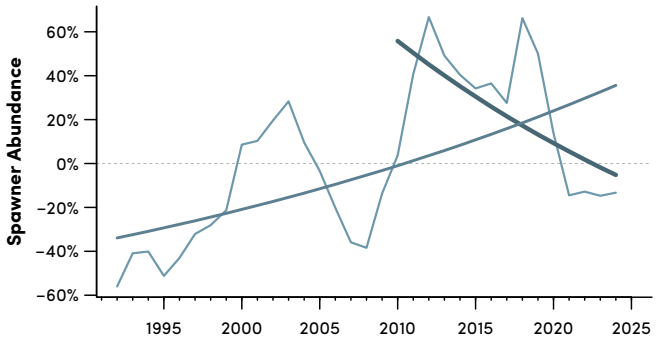


Steelhead

The current states of spawner abundance and total abundance are both below the long-term average. The current states are affected by low abundances in 2020 and 2021 that are part of the most recent five-year generation, but returns to near-average spawner and total abundance in 2024 are encouraging.

Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
−13%	↓	↑	9,849 (2020–2024)	11,358 (1992–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
−26%	↓	—	13,206 (2020–2024)	17,832 (1992–2024)

SKEENA

Chinook and chum salmon have declined dramatically, while pink and sockeye spawners are above average.

Skeena chum salmon are a significant conservation concern and show no sign of recovery with negative short- and long-term trends. Although Chinook numbers have increased slightly in recent years, 2024 is the 13th consecutive year that Skeena Chinook remain below their long-term average. Over the past 20 years, the number of Chinook returning to spawn has steadily declined with each generation. Coho and steelhead are also below average with negative short-term trends.

Sockeye spawner abundance is currently above the long-term average, but total abundance has remained below average since the mid 2000s. Sockeye enhancement via artificial spawning channels in two tributaries to Babine Lake has led to a century-long erosion of sockeye biodiversity in the region[12]. The enhanced Babine population now comprises more than 90 per cent of all sockeye returns to the Skeena, with collateral impacts on less abundant populations that are caught in fisheries targeting the enhanced Babine population. While 2024 saw a strong return of enhanced sockeye that is not yet reflected in our data, lower survival of wild populations and potential pre-spawn mortality mean that large returns don't necessarily translate into successful recovery for wild salmon.

Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Chinook **11**

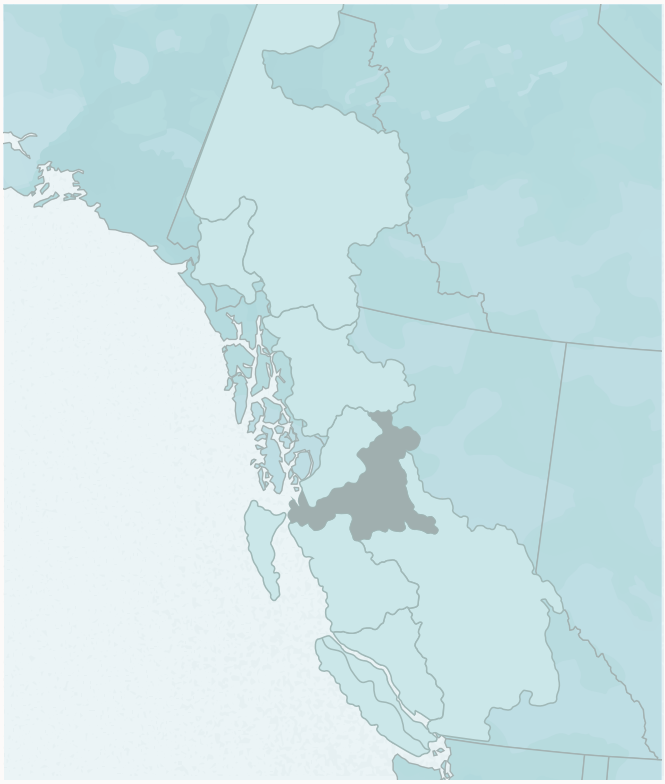
Chum **4**

Pink **5**

Coho **4**

Sockeye **31**

Steelhead **11**



Region Profile

The Skeena is one of British Columbia's largest salmon-bearing watersheds, second only to the Fraser, and drains an area of 54,432 square kilometres. With its headwaters in British Columbia's northern interior, the 580-kilometre-long river flows southwest to enter the ocean just south of Prince Rupert.

The Skeena River watershed is one of the most productive salmon watersheds in Canada. All six species of Pacific salmon spawn and rear in a diversity of habitats found throughout the watershed, including the Skeena River Estuary and the lower mainstem Skeena River. Salmon habitat is relatively pristine but faces increasing pressures from industrial development, particularly associated with Liquified Natural Gas (LNG) pipelines and ports.

The Skeena supports Canada's second largest salmon fishery and an internationally renowned recreational salmon fishery. In the mid 1960s and early 1970s, two artificial spawning channels were created in two tributaries to Babine Lake - Fulton River and Pinkut Creek - to provide more spawning habitat and boost total sockeye production. Over the past 50 years, these spawning channels have fundamentally changed the composition of salmon populations in the Skeena and eroded the salmon biodiversity of the region[12].

Commercial fisheries have been dwindling since the 1990s. Although Canadian fisheries for Skeena sockeye have not operated in several recent years due to low abundances, in 2024 there were opportunities for Indigenous Food, Social, and Ceremonial, recreational, and commercial harvest of Skeena sockeye. More generally, harvest rates of Skeena salmon have been curtailed since the turn of the century to also protect critically low numbers of co-migrating steelhead in the Skeena River[28]. However, harvest for sockeye and also pink salmon in 2022 exceeded the previous 10-year average (2012-2021)[29], which - together with above-average spawners for these species - is potentially good news for the region.

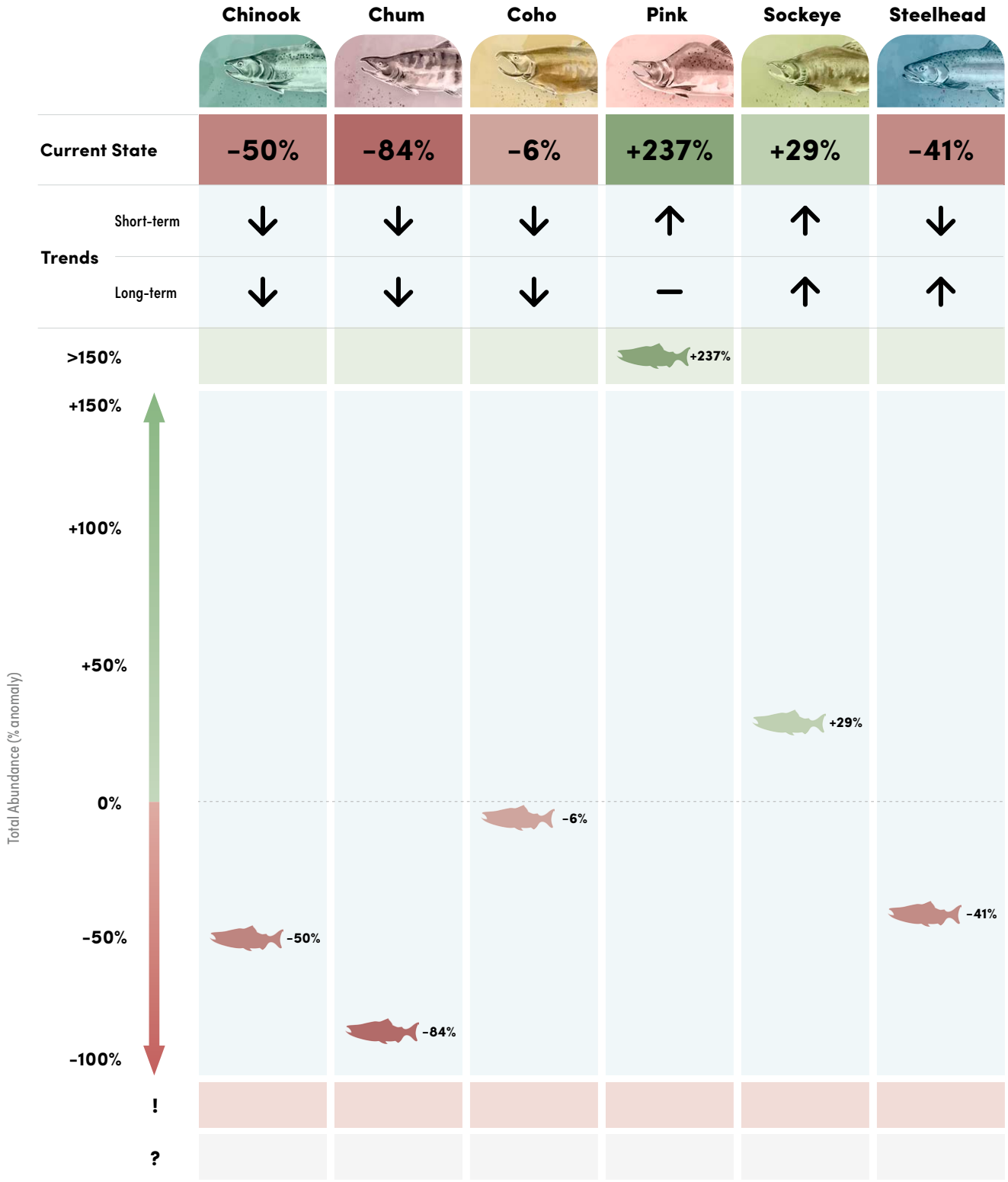
Notable Salmon-Bearing Rivers

Babine Lake, Fulton River, Kitwanga River, Lakelse River, Skeena River.

SKEENA

Tables and figures in this section show the current state and trends for each species of salmon in the Skeena. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



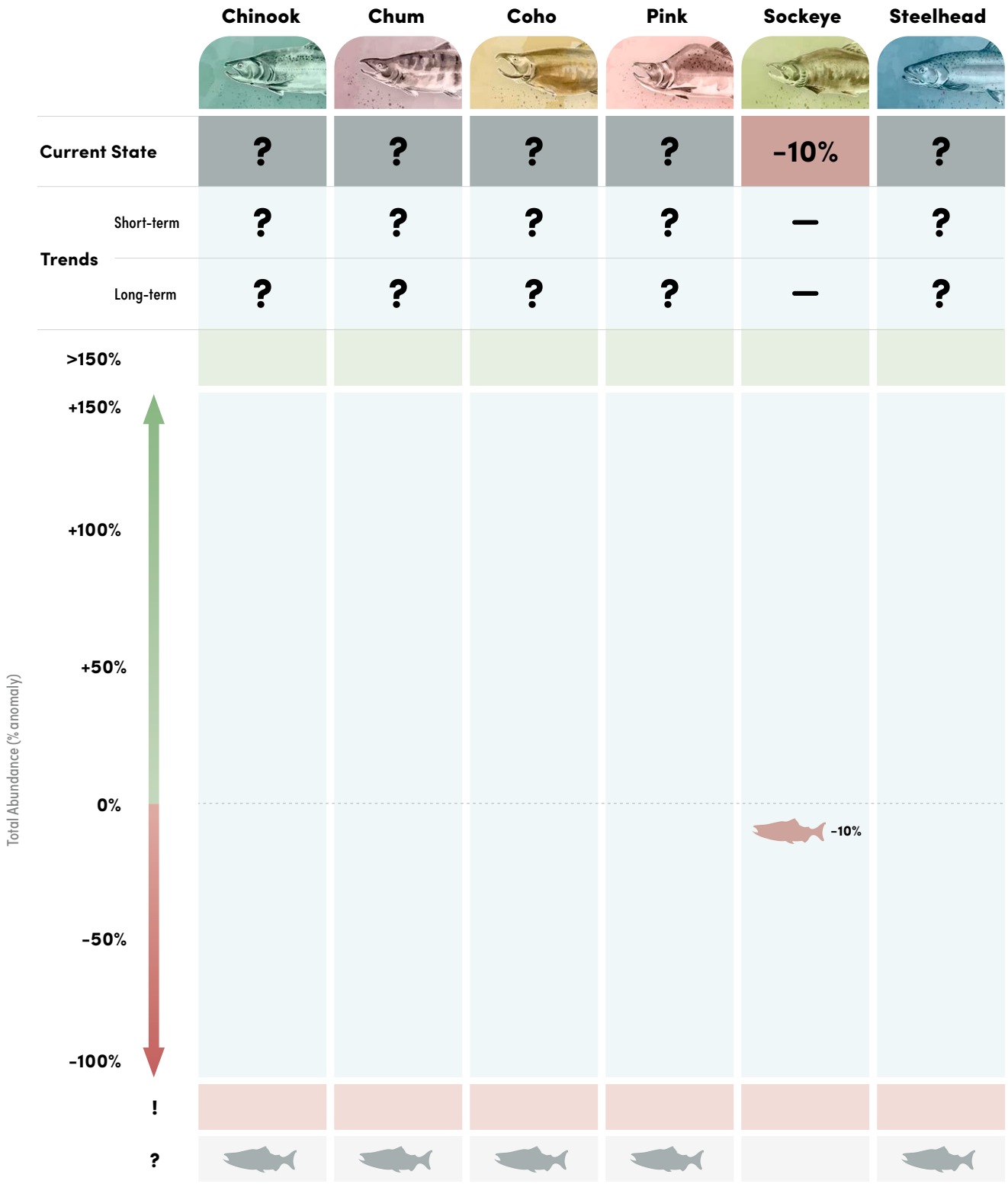
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

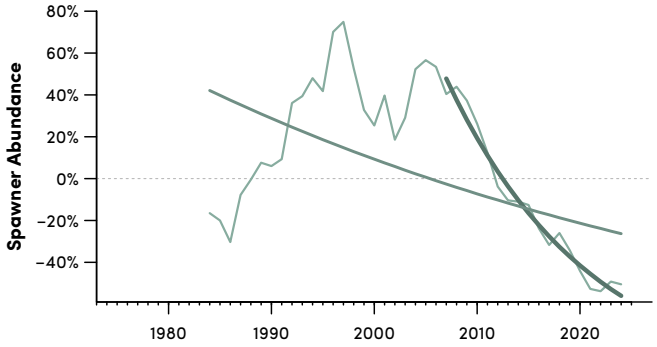


Chinook

The current state remains well-below the long-term average. A negative long-term trend and even steeper, negative short-term trend reflect declines from relatively high spawner abundance in the 1990s and early 2000s. Year-over-year increases in the annual spawner abundance since 2020 provide hope for recovery.

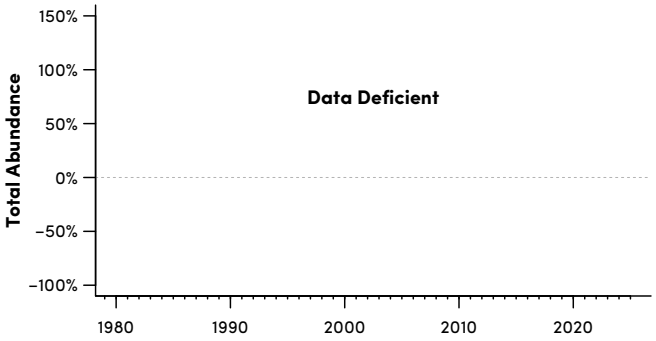
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-50%	↓	↓	22,415 (2019–2024)	45,276 (1984–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

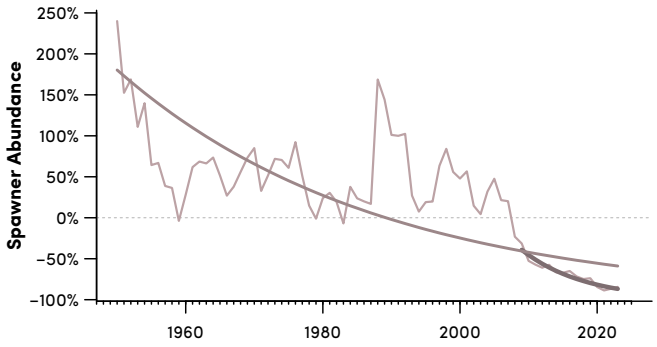


Chum

The current state is well-below the long-term average. A negative long-term trend from 1970-2023 reflects a sudden crash that occurred in the early 2000s, with sustained declines since then and a negative short-term trend. Monitoring of chum salmon has declined coincident with these changes in abundance, creating some uncertainty around recent assessments.

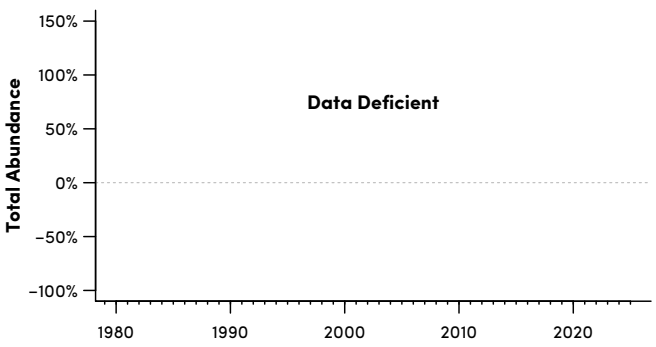
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-84%	↓	↓	1,382 (2019–2023)	8,842 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



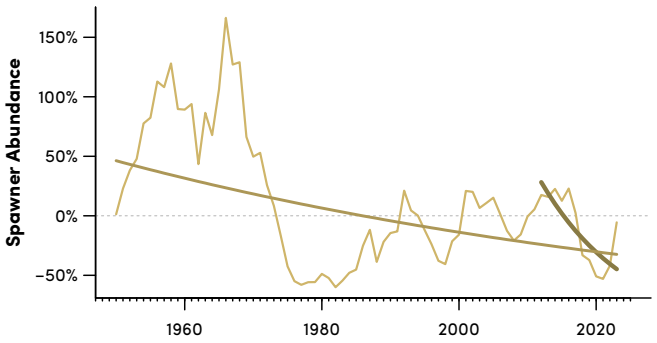
Short-Term Trends — Long-Term Trends —

Coho

The current state is below the long-term average. A negative long-term trend highlights declines since record numbers of spawners in the 1950s and 1960s. Although the short-term trend is also negative, reflecting declines from a peak around 2013–2016, the annual estimate of spawners in 2023 was the highest since 1965.

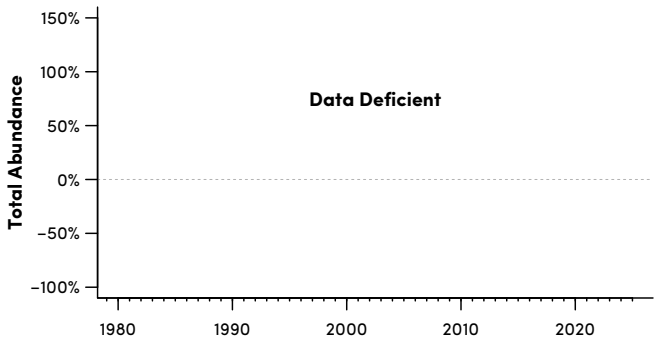
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-6%	↓	↓	84,977 (2020–2023)	89,925 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

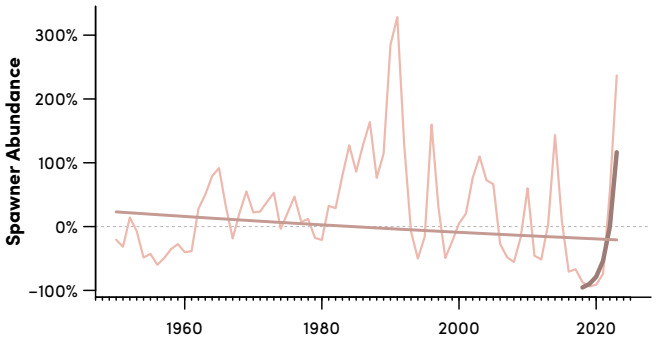


Pink

The current state is well-above the long-term average with a steep, positive short-term trend following a record-high number of spawners in 2023. Frequent fluctuations in spawner abundance since the 1950s mean there is no significant long-term trend in spawners.

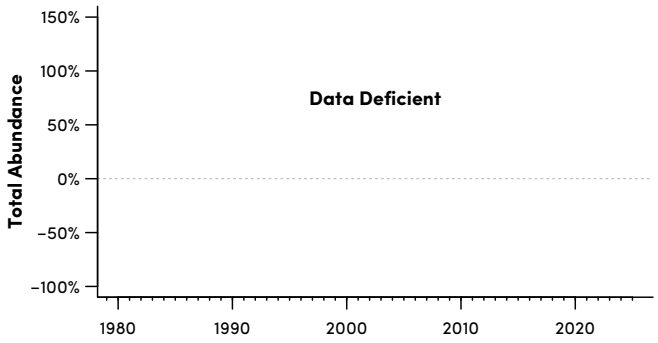
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+237%	↑	—	3,189,545 (2022–2023)	946,883 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

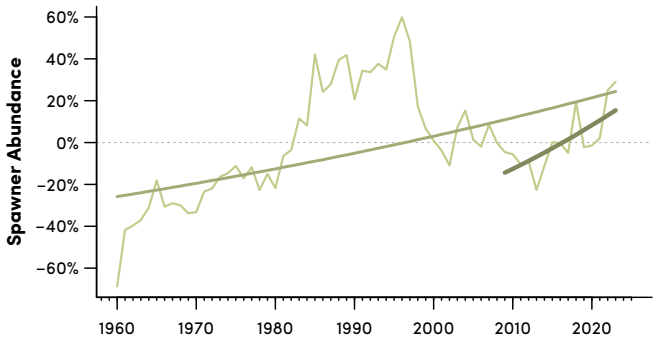


Sockeye

The current state of spawner abundance is above the long-term average, but total abundance has remained below average since the mid 2000s. Positive trends in spawners over the short-term and long-term are not reflected in trends in total abundance, pointing to reductions in the sockeye catch since the 1990s. Recent increases in spawner abundance are also not indicative of returns among all rivers, and there are concerns about the increasing dominance of enhanced sockeye populations within the region. There was a relatively good year for Skeena sockeye in 2024 that is not yet reflected in our data.

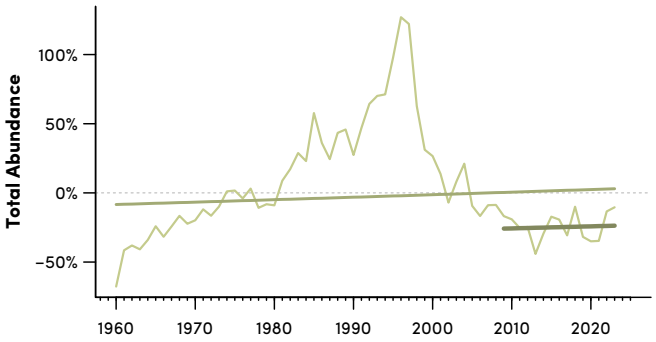
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+29%	↑	↑	**1,252,708** (2019–2023)	**971,200** (1960–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
−10%	—	—	**1,852,037** (2019–2023)	**2,067,870** (1960–2023)

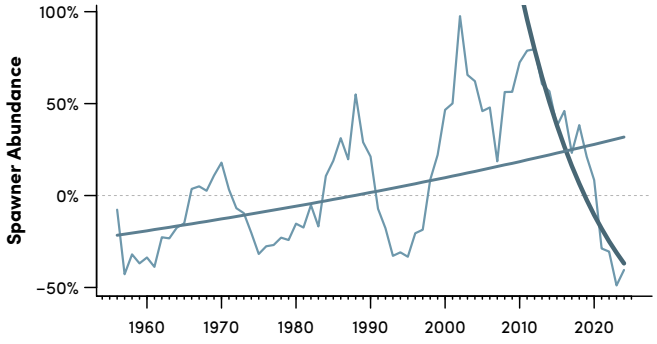


Steelhead

The current state is well-below the long-term average. Although there has been a long-term increase over the entire time series (1956-2024), a steep, negative short-term trend is cause for concern. Although the annual estimate of spawner abundance for 2024 was relatively high, extremely poor returns in 2021 and 2023 mean that the current abundance over the most recent generation is still below average.

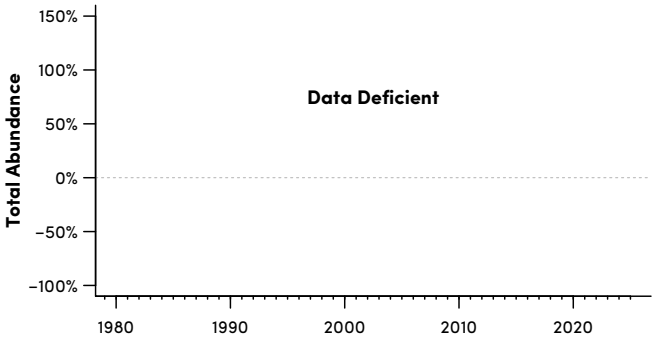
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
−41%	↓	↑	**13,001** (2020–2024)	**21,853** (1956–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



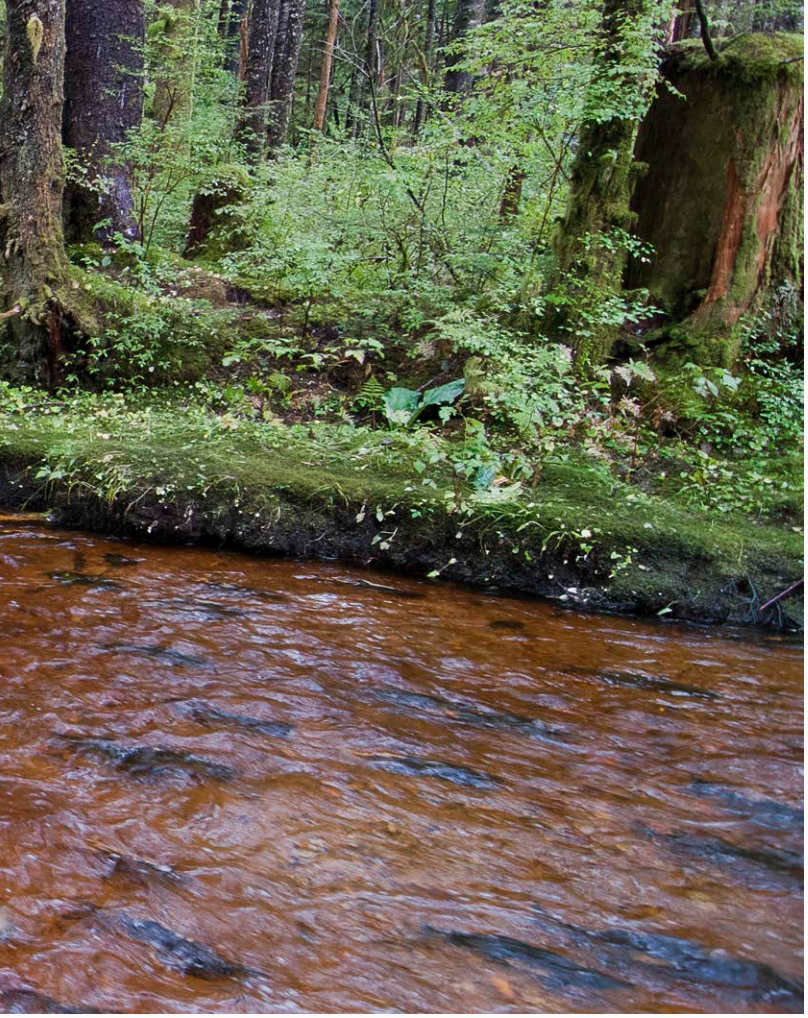
CENTRAL COAST

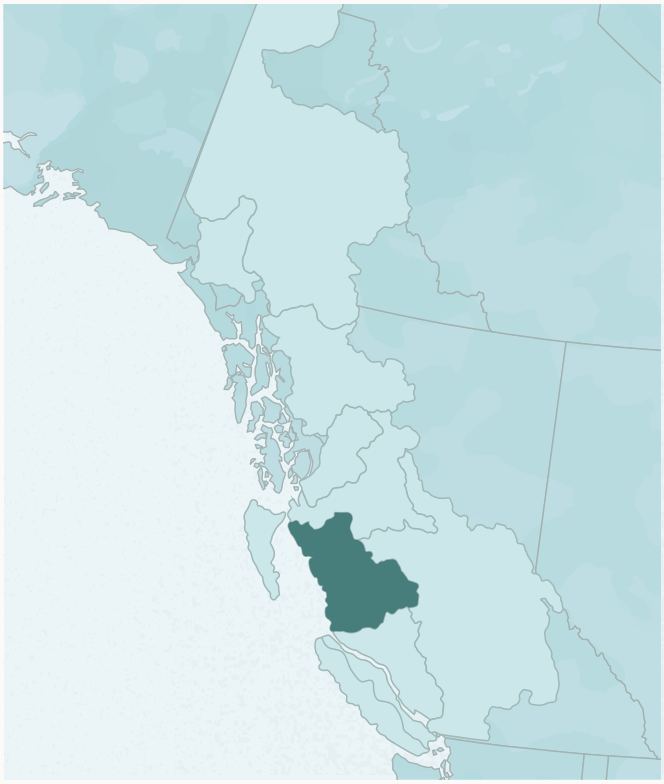
Chum and sockeye are struggling, though declines in monitoring create uncertainty around the current state of salmon in the region.

The Central Coast, home to the highest salmon biodiversity in any region, is facing declines in spawner abundance for most species, but reduced monitoring—now covering less than half of historically surveyed streams—means the full extent of declines is unknown. Although indicator stocks for Chinook in the region appear to be doing well, these stocks are enhanced by hatcheries, and the state of dozens of wild Chinook populations is largely unknown.

Chum salmon reached their lowest spawner abundance on record in 2023, emphasizing ongoing concerns about the erosion of chum salmon biodiversity in the region. In recent years, over 50% of the regional chum salmon abundance has been attributed to the Bella Coola River, where large-scale hatchery production of chum salmon occurs, while other populations have suffered severe declines[30].

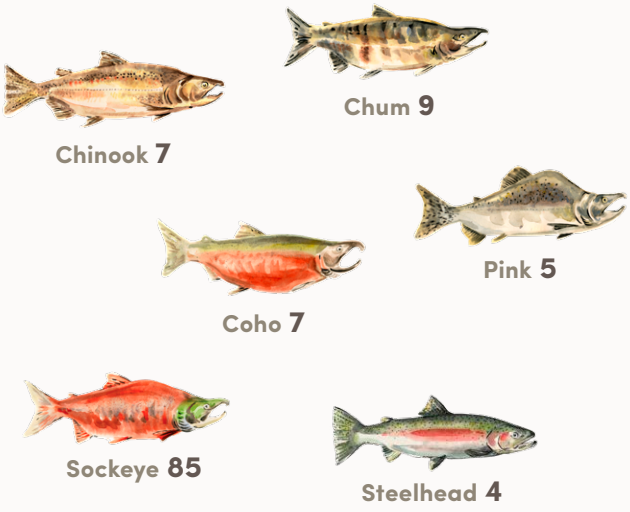
Sockeye spawners have also been below their long-term average since the mid 1990s. Historically, Owikeno Lake and Long Lake were one of the three largest salmon runs in British Columbia[13]. These populations have crashed in recent decades and all major commercial sockeye fisheries in the region have been curtailed.





Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.



Region Profile

The Central Coast Region is part of the Great Bear Rainforest, one of the largest remaining tracts of intact temperate rainforest left in the world. The Central Coast stretches from Douglas Channel and Banks, McCauley, and Pitt Islands in the north to Rivers Inlet and Smith Inlet in the south, covering 54,813 square kilometres. It comprises large inland fjords, thousands of coastal islands, and numerous small- to medium-size rivers that drain more than 132,400 square kilometres of streams into Hecate Strait and Queen Charlotte Sound.

With a diversity of stream, river, lake, and estuary habitats, the region offers some of British Columbia's most intact and productive spawning habitats, which support a rich diversity of salmon. All six species of salmon and steelhead occur on the Central Coast, with hundreds of uniquely adapted populations.

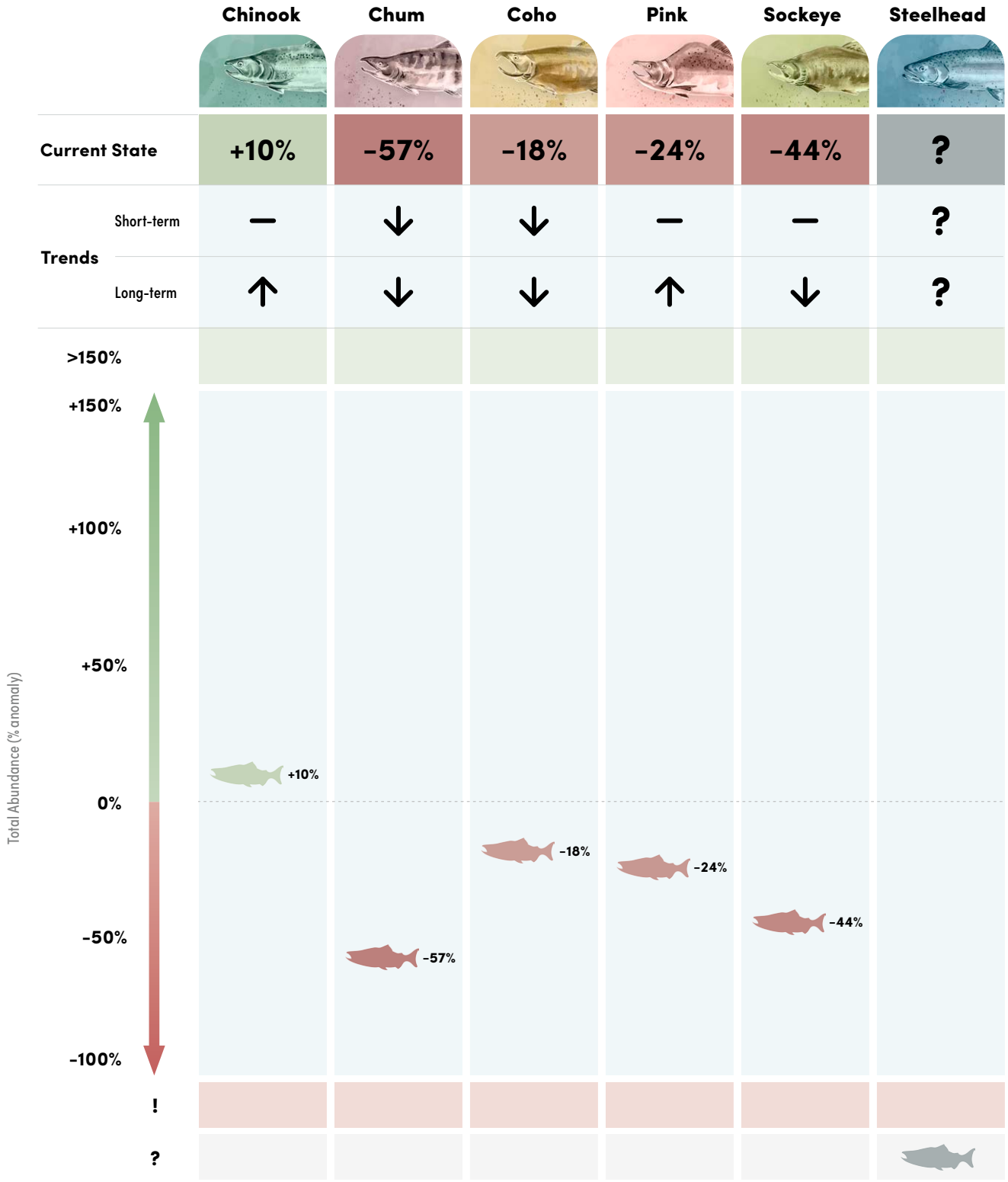
Notable Salmon-Bearing Rivers

Atnarko River, Bella Coola River, Kainet Creek, Kemano River, Quaal River.

CENTRAL COAST

Tables and figures in this section show the current state and trends for each species of salmon in the Central Coast. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



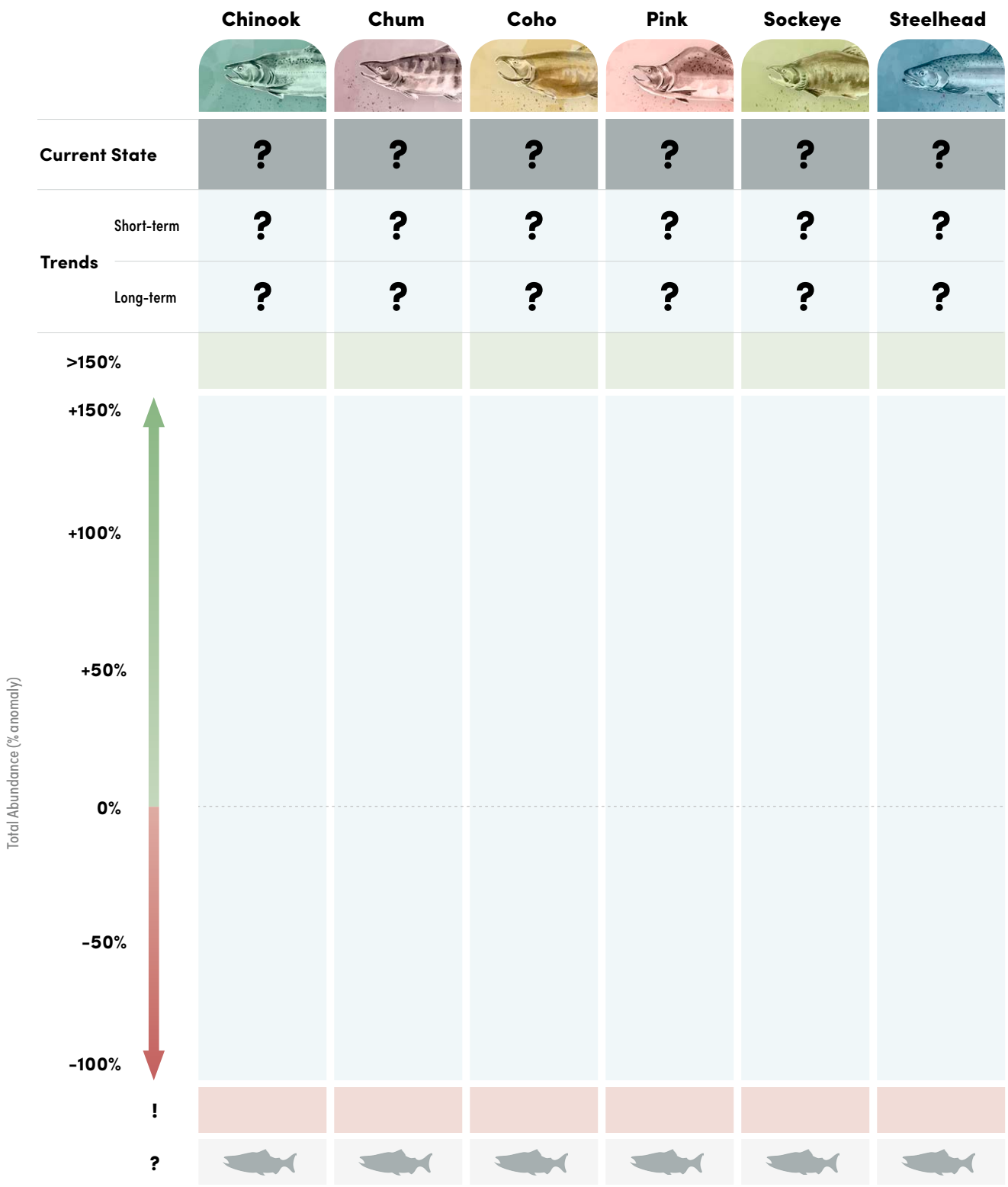
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

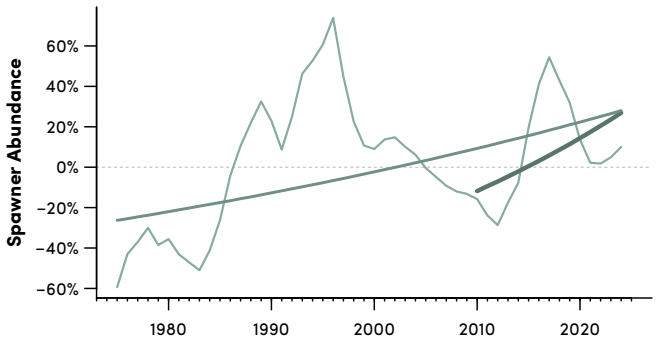


Chinook

The current state of spawner abundance is above the long-term average with a stable short-term trend and a slight increase over the long term (1975–2024). This assessment is based on two enhanced indicator stocks - the Atnarko River and Rivers Inlet - and patterns in Chinook abundance may differ among the many small, coastal watersheds within the region.

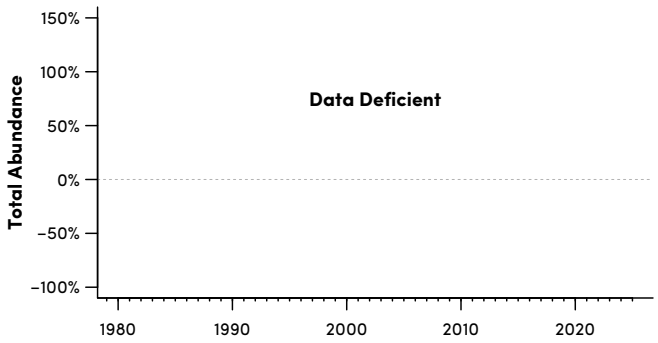
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+10%	—	↑	18,278 (2020–2024)	16,615 (1975–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

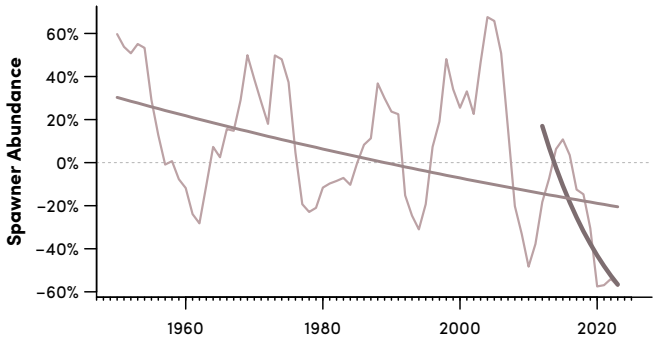


Chum

The current state is well-below the long-term average. Declines since 2015 have resulted in a negative short-term trend, while a less-severe long-term trend indicates a general decline since the start of the time series in 1950. Significant hatchery production of chum salmon in the Bella Coola River began in the mid-1980s, and subsequent declines in unenhanced populations have raised concern about the erosion of chum salmon biodiversity in the region.

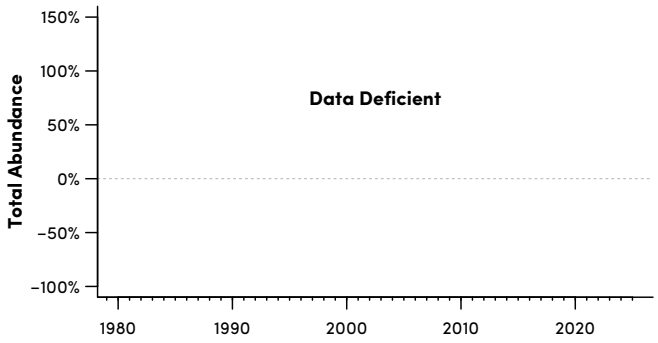
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-57%	↓	↓	210,944 (2020–2023)	494,330 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



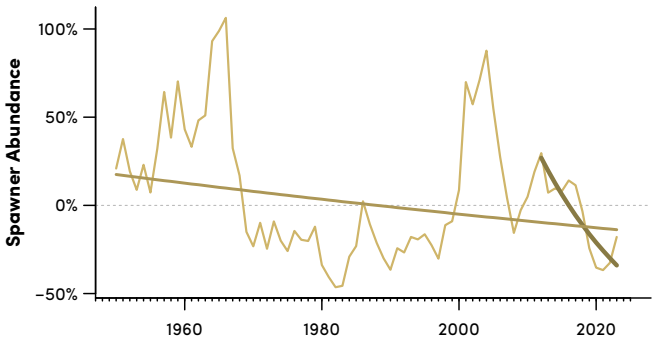
Short-Term Trends — Long-Term Trends ——

Coho

The current state is below the long-term average despite increases in recent years, due to a sharp decline over two decades starting in the early 2000s. A negative long-term trend indicates a general decrease since the time series began in 1950.

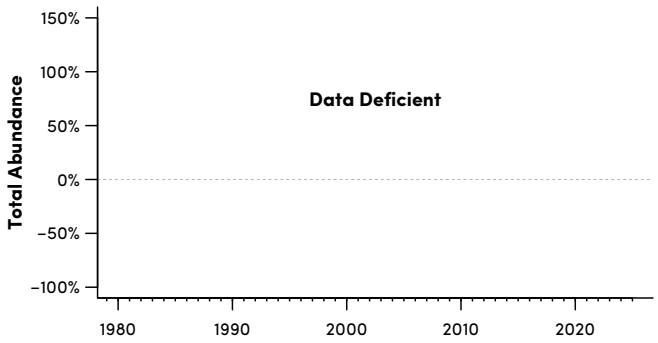
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-18%	↓	↓	135,175 (2020–2023)	164,734 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

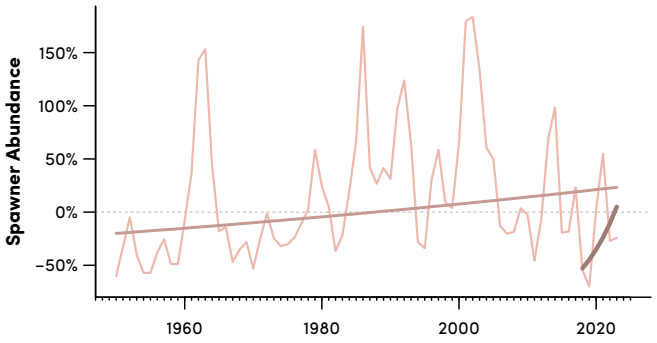


Pink

The current state is below the long-term average. Spawner abundance has fluctuated around average over the past decade, and the short-term trend is stable. A small but positive long-term trend has occurred from 1950-2023.

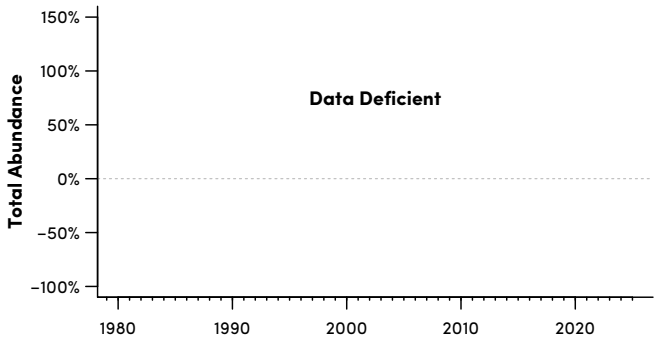
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-24%	—	↑	1,628,315 (2022–2023)	2,149,065 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



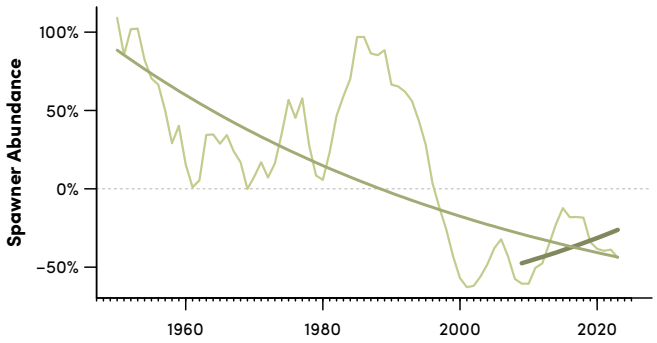
CENTRAL COAST

Sockeye

The current state is well-below the long-term average. A negative long-term trend reflects a tipping point in the mid 1990s from generally above-average spawner abundance to consistently below average. Spawner abundance has remained low with a stable short-term trend over the most recent three generations.

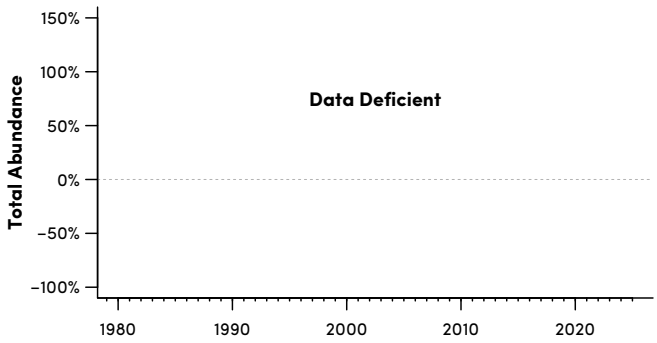
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-44%	—	↓	226,513 (2019–2023)	405,193 (1950–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

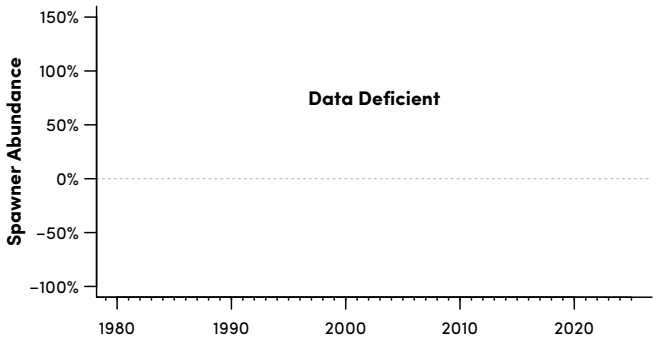


Steelhead

There are no data available on steelhead abundance in the region.

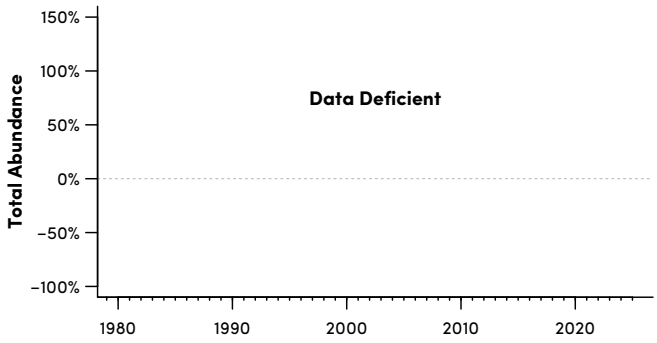
Spawner Abundance

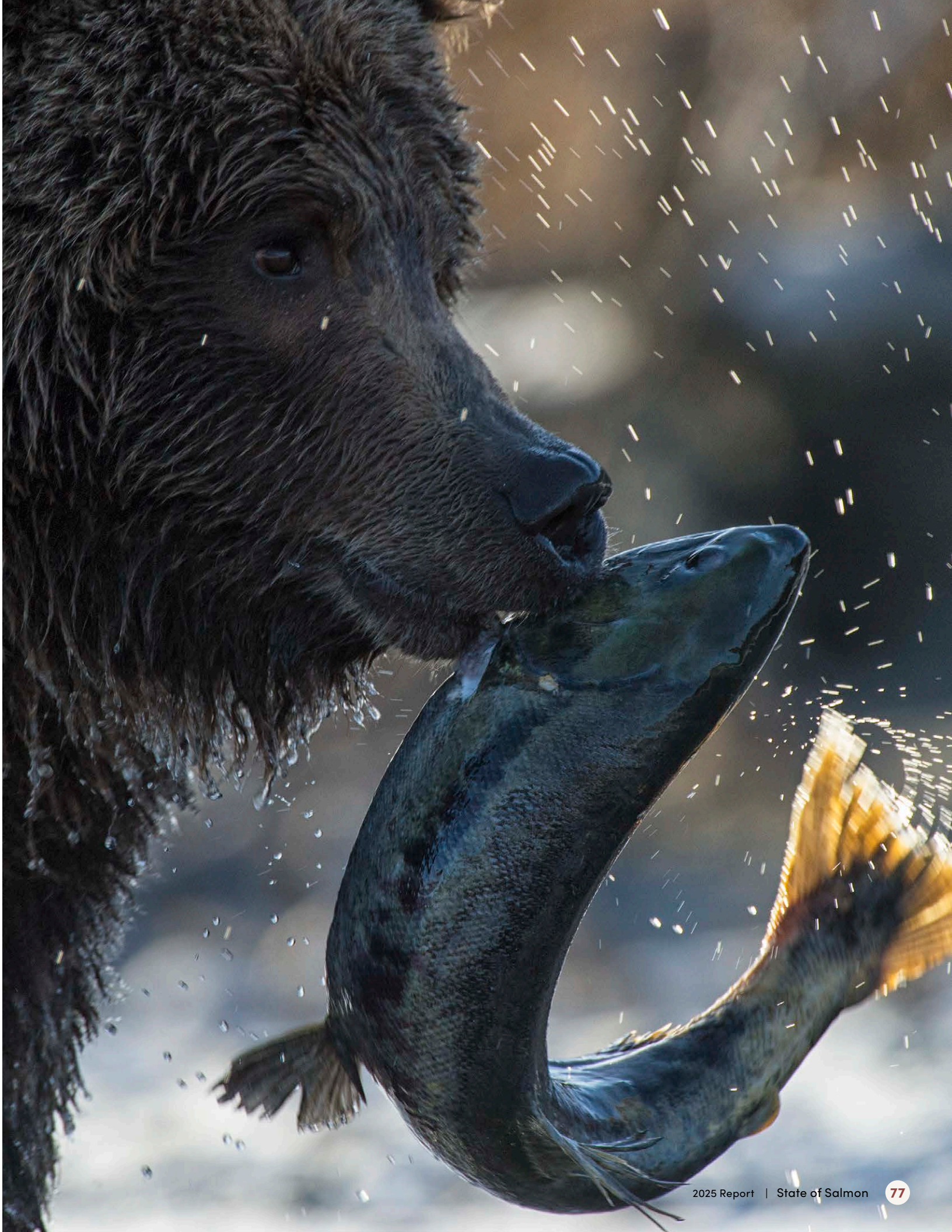
Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?





FRASER

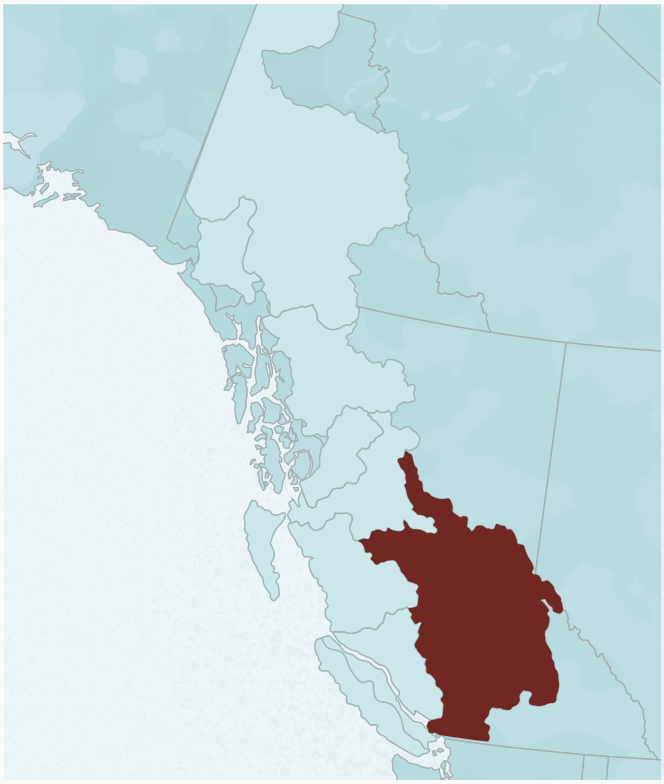
Coho and pink salmon are seeing a resurgence and recent upticks in all species except steelhead provide hope amidst climate emergencies.

Coho and pink salmon are showing promising signs of recovery, with spawner and total abundances currently well-above the long-term average. Coho salmon appear to be taking advantage of improving ocean conditions in the Strait of Georgia, while reduced harvest is allowing spawner abundances to recover[8].

There was an exceptionally high return of Chinook in 2023 and above-average counts in 2024, providing hope that this may be a turning point for Fraser Chinook. However, stocks in the upper reaches of the Fraser and those that spend more time in freshwater are making up a smaller proportion of recent returns.

Despite sockeye spawners recently increasing above average, total abundance in 2024 remained below the devastating returns in 2009 that triggered a federal inquiry[14]. The number of sockeye that returned to the Fraser in 2024 was less than half a million fish - a small fraction of the returns that regularly topped 10 million in the 1980s and 90s. High flows, low flows, warm water, and fish passage impediments are causing many sockeye to die en route to their spawning grounds (up to 90% in some years[15]). Although more than 10 million sockeye are expected to return in 2025, a much needed boost for some populations such as the critically endangered Early Stuart sockeye[31], high rates of pre-spawn mortality warrant cautious optimism.

Steelhead are well-below the long-term average and many populations face an imminent risk of extinction. Interior steelhead (Chilcotin and Thompson River populations) are listed as Endangered[16] by the Committee on the Status of Endangered Wildlife in Canada.



Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Chinook **19**

Chum **1**

Coho **8**

Pink **1**

Sockeye **32**

Steelhead **6**

Notable Salmon-Bearing Rivers

Chilko River, Fraser River, Harrison River, Lillooet River, Thompson River.

Region Profile

The Fraser River Basin is the largest salmon-bearing watershed in British Columbia, draining an area almost the size of California. From its source in the Rockies, the Fraser River travels 1,375 kilometres to the Strait of Georgia. It consists of 13 sub-watersheds defined by major tributaries, such as the Harrison, Thompson, Adams, Nechako, Chilko, Chilcotin, and Lillooet rivers.

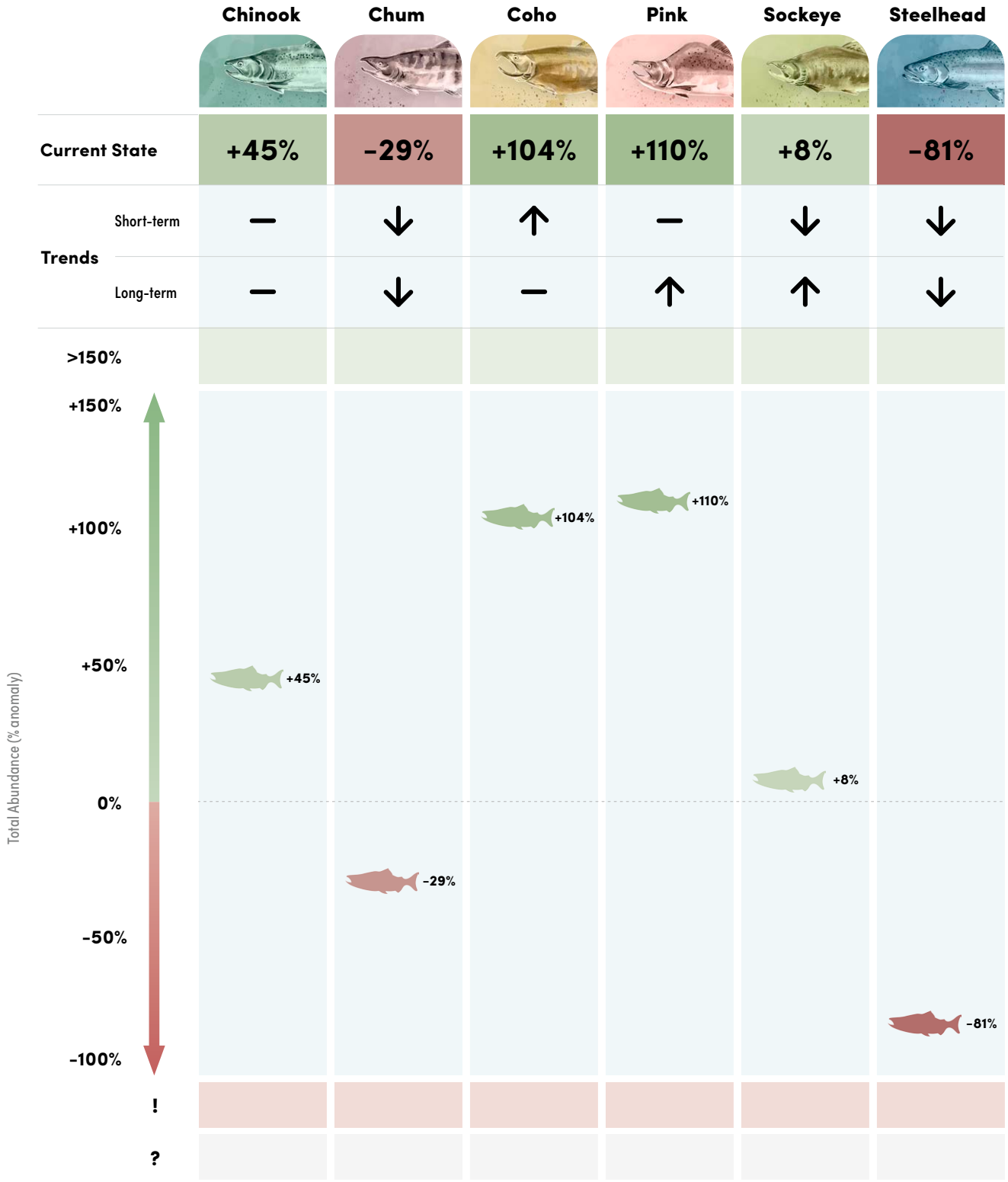
The region supports an incredible diversity of Pacific salmon. It boasts British Columbia's most abundant sockeye populations, with historical abundance in the millions. At the same time, the Fraser River Basin is home to three million people, nearly two-thirds of the total population in British Columbia. The region is significantly impacted by urban and industrial development. In particular, the land around the Fraser estuary is heavily populated, exposing salmon to the cumulative pressures of habitat degradation and pollution, yet the estuary is critically important to hundreds of populations of salmon across all species of Pacific salmon including steelhead.

Historical and recent landslides have created a legacy of impacts for Fraser salmon. In 1914, a massive human-caused landslide in Hells Gate blocked passage for migrating salmon, causing significant declines in salmon populations, which never fully recovered. A century later, a landslide at Big Bar near Lillooet in 2019 created a five-metre waterfall that trapped migrating salmon below the slide. A nature-like fishway was developed, but fish passage remains a challenge in other areas of the watershed, especially for early migrating sockeye in years of high flow. In summer 2024, a landslide on the Chilcotin River formed a temporary dam, blocking migrating salmon and damaging critical habitat. Yet by October, both sockeye and Chinook were observed upstream of the slide — an impressive display of salmon resilience in the face of disruption.

FRASER

Tables and figures in this section show the current state and trends for each species of salmon in the Fraser. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



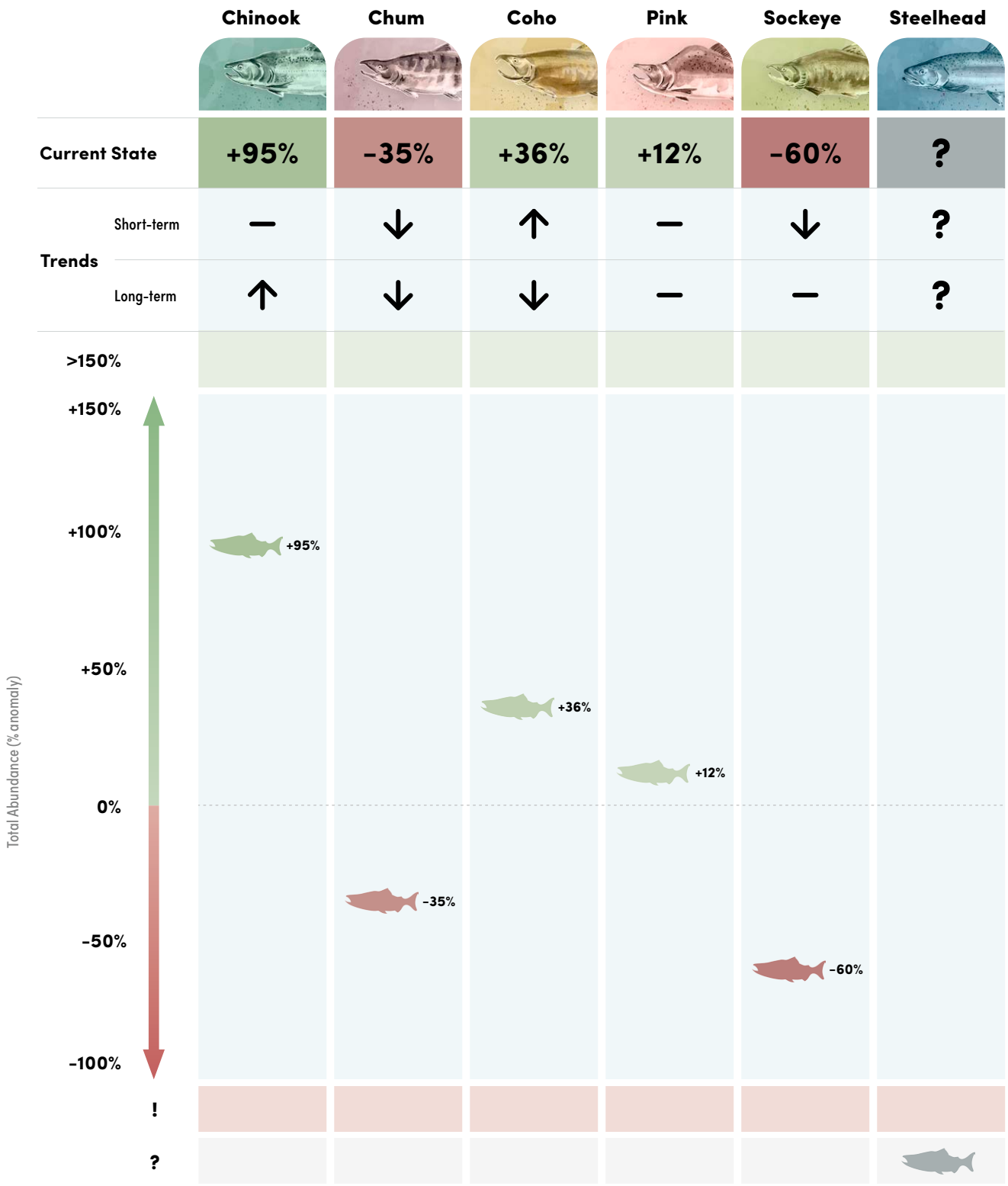
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

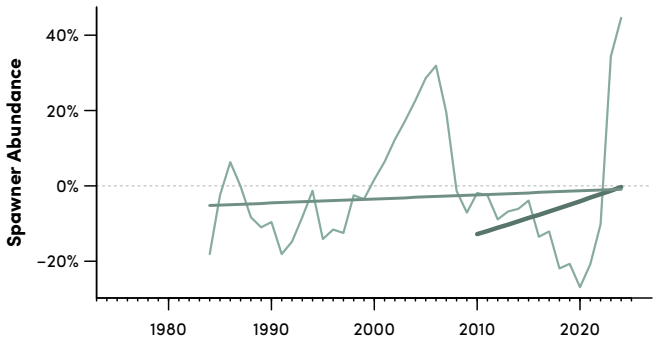


Chinook

The current state is above the long-term average due to above-average returns of primarily ocean-type Chinook to the Fraser over the past three years (2022-2024). The short-term trend is stable, but there is a negative long-term trend reflecting a general decline since the early 2000s.

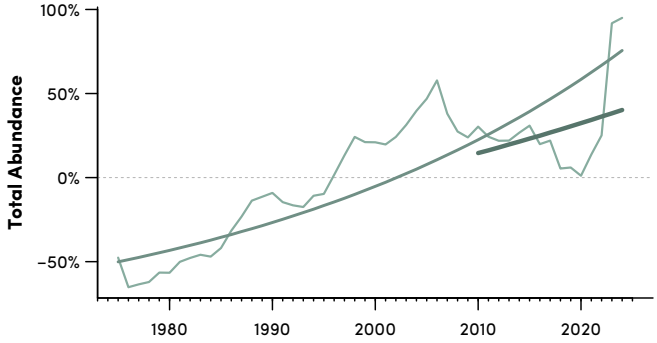
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+45%	—	—	**331,275** (2020–2024)	**229,157** (1984–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+95%	—	↑	**285,740** (2020–2024)	**146,550** (1975–2024)

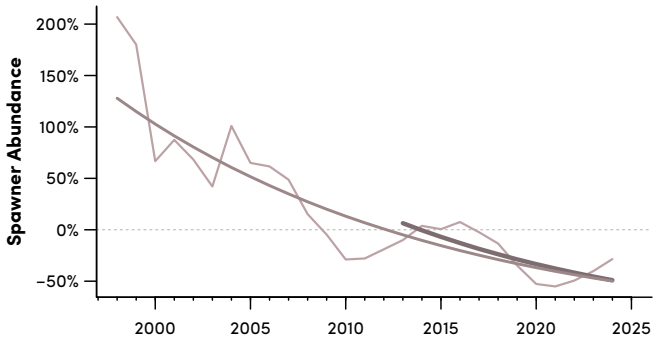


Chum

The current states are below the long-term average for both spawner and total abundances following two decades of declines since reliable monitoring began in 1998. All three metrics concur that chum salmon in the region are of conservation concern, but increases since the previous generation provide some hope.

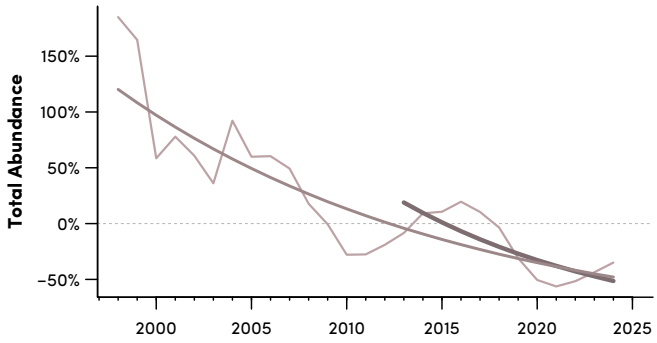
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-29%	↓	↓	**809,178** (2021–2024)	**1,131,748** (1998–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-35%	↓	↓	**841,198** (2021–2024)	**1,291,221** (1998–2024)



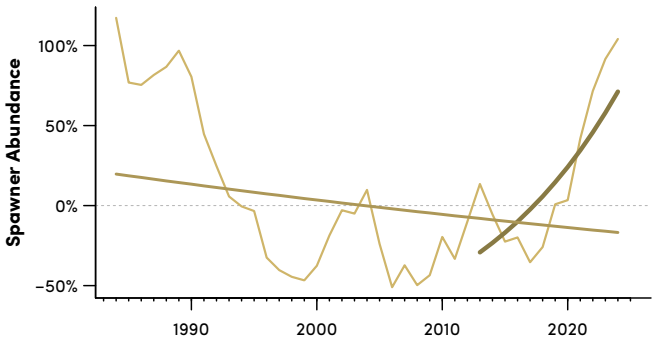
Short-Term Trends — Long-Term Trends ——

Coho

The current state is well-above the long-term average for spawner abundance and total abundance. Although these recent increases are reflected by positive short-term trends for both spawner and total abundances, a negative long-term trend in total abundance highlights the dramatic declines in the 1980s and 1990s that prompted fisheries closures.

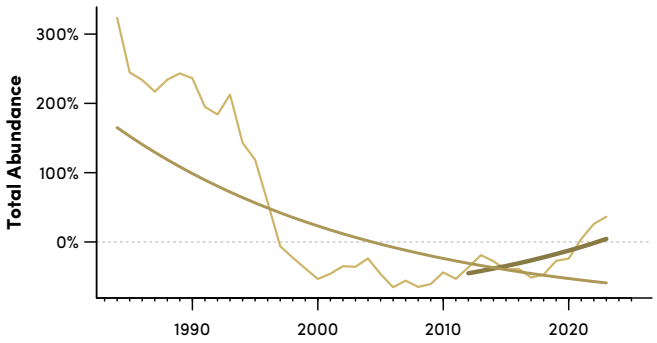
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+104%	↑	—	79,999 (2021–2024)	39,187 (1984–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+36%	↑	↓	85,926 (2020–2023)	62,957 (1984–2023)

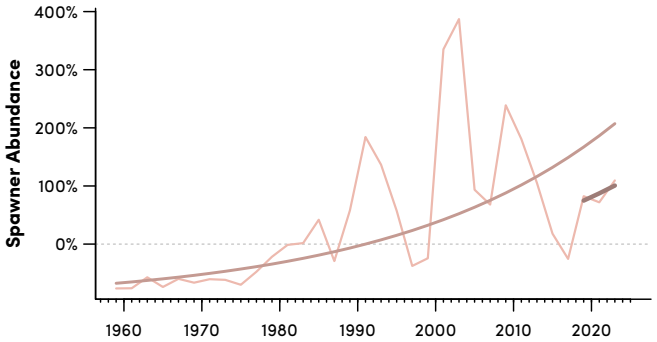


Pink

Pink salmon return to the Fraser in odd years only and so the current states reflect 2023 abundances. The current state is well-above the long-term average for spawner abundance, with total abundance also above average. There is a positive long-term trend in spawners, but relatively low catch in recent years (2015-2023) means that total abundance has remained stable over the long-term. The short-term trend is stable for both spawner abundance and total abundance; the short life cycle of pink salmon makes it unusual to see significant trends over just three generations, highlighting the impressive recent increase of this short-lived species.

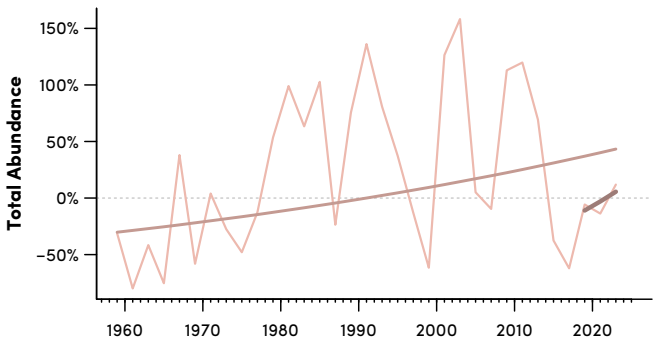
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+110%	—	↑	9,542,025 (2022–2023)	4,553,942 (1959–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+12%	—	—	10,513,292 (2022–2023)	9,391,273 (1959–2023)

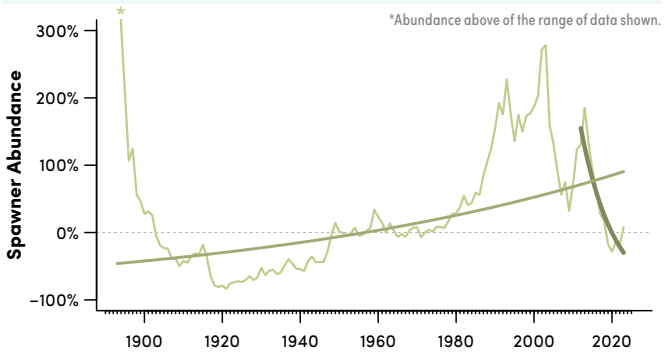


Sockeye

The current state of spawner abundance is above average but a long-term decline in fisheries and abysmal returns in 2024 put total abundance well-below average. The short-term trends in spawner abundance and total abundance are both negative, but the exceptional return in 2025 - topping 10 million sockeye - is not yet captured in our data. There is a positive long-term trend in spawners resulting from steady increases from 1920-2000. Total abundance has been stable over the long-term (1893-2024) but declines in catch since the 1990s are concerning and reduced abundance in sub-dominant years indicates an erosion of diversity and reduced resilience of both sockeye and fisheries.

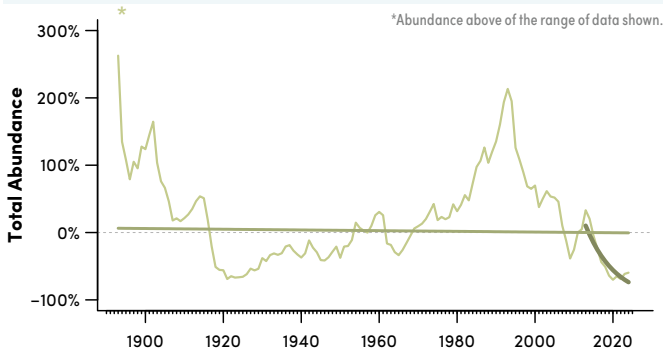
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+8%	↓	↑	1,139,550 (2020–2023)	1,052,628 (1893–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-60%	↓	—	1,819,994 (2021–2024)	4,504,830 (1893–2024)

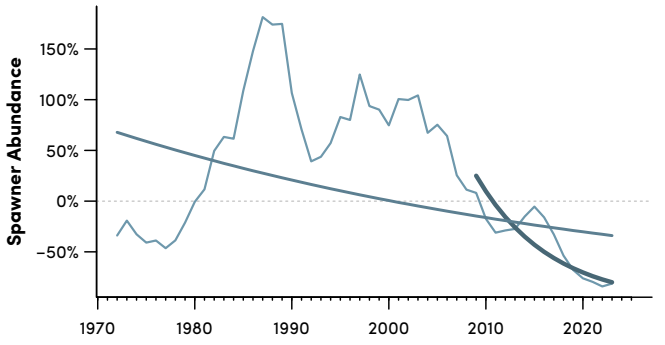


Steelhead

The current state is well-below the long-term average. The short-term trend reflects steep declines in spawners over the past three generations, while a stable long-term trend from 1972-2023 is due to peak spawner abundance in the late 1980s.

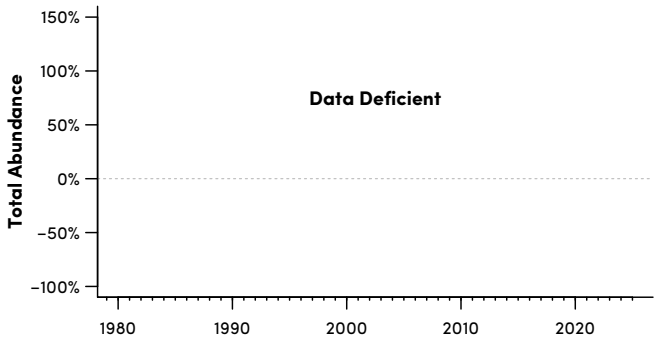
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-81%	↓	↓	271 (2019–2023)	1,452 (1972–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



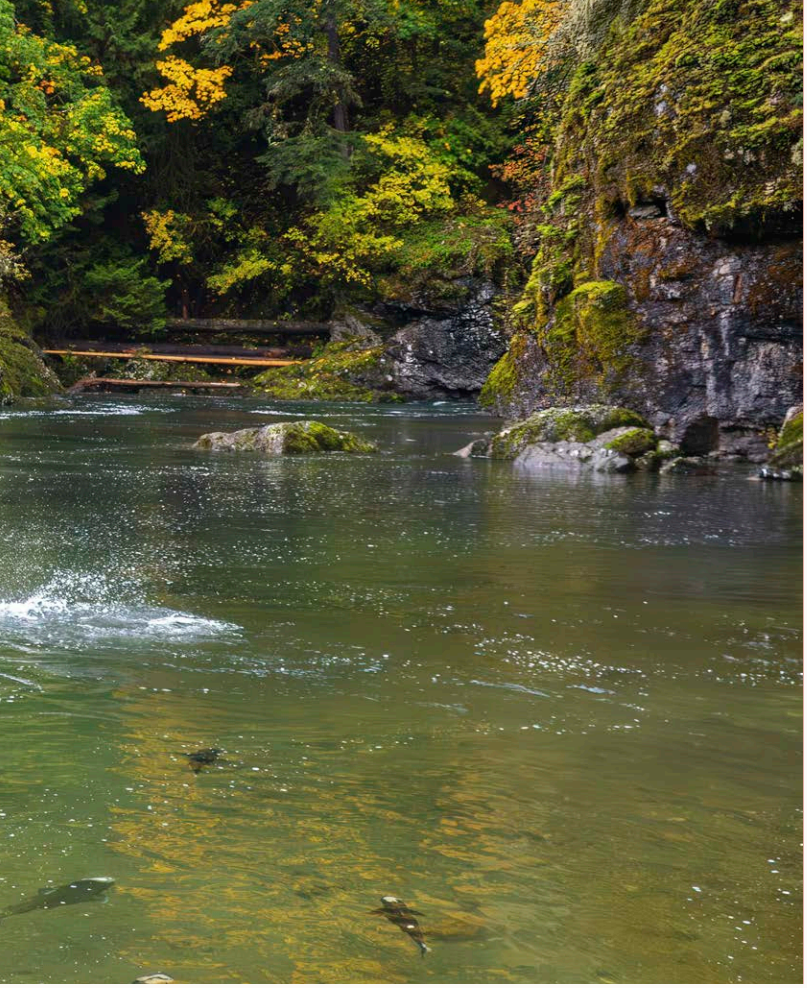
EAST VANCOUVER ISLAND & MAINLAND INLETS

Chinook, chum, coho, and pink are making a comeback – but the recovery isn't happening everywhere.

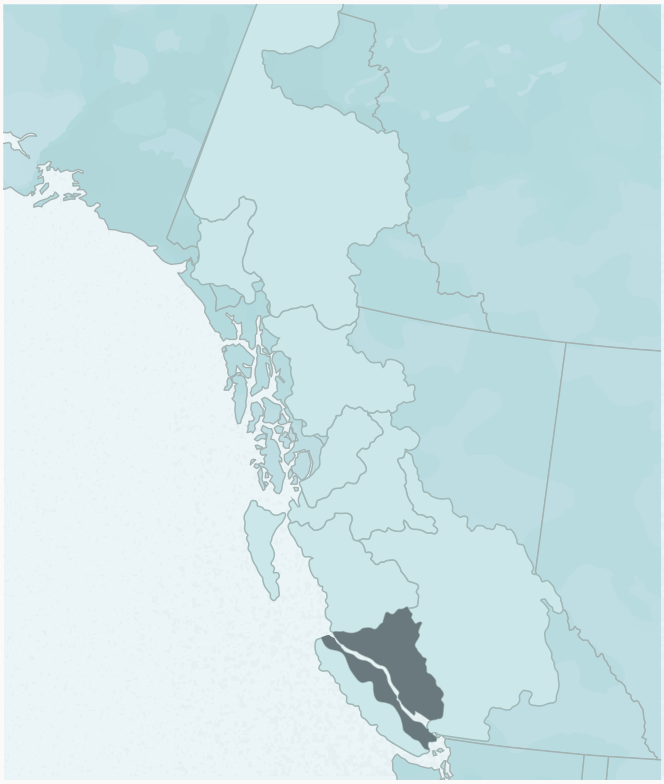
East Vancouver Island & Mainland Inlets is one of the southern regions where Chinook are above their long-term average. Several populations are thriving, including in the Cowichan River where Chinook returns have reached record highs after a low of just 500 natural spawners in 2009. Many Chinook populations in the region are artificially enhanced by hatcheries, but their strong marine survival suggests favourable conditions in the Strait of Georgia — a promising signal for all salmon in the region.

Indeed, coho and pink salmon are also above average with anecdotal reports that many rivers saw high numbers of chum salmon, as well, in 2024. However, public reporting of spawner surveys tends to lag, so our assessments for chum, coho, pink and sockeye are based on 2023 data and may not capture the more recent increases observed in the field. While the exact reasons for this positive shift remain unclear, improving ocean conditions in the Strait of Georgia and the removal of salmon farms along key migration routes may be contributing factors.

Except for Chinook, assessments in this region rely solely on spawner data. Spawner abundance estimates draw from hundreds of stream surveys, but still many streams go unmonitored. As such, these estimates don't reflect all the spawners in the region - and can't be added to catch statistics to yield total abundance.



EAST VANCOUVER ISLAND & INLETS



Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Notable Salmon-Bearing Rivers

Cowichan River, Kakweiken River, Nanaimo River, Nimpkish River, Qualicum River.

Region Profile

The East Vancouver Island & Mainland Inlets Region encompasses 53,305 square kilometres across the east coast of Vancouver Island and the adjacent mainland fjords and inlets, from Burrard Inlet and Howe Sound in the south to Smith Inlet and the Broughton Archipelago in the north. This region includes large, glacier-fed rivers in the mainland inlets to small coastal streams on Vancouver Island. Southeast Vancouver Island has a uniquely dry micro-climate compared to the rest of the region due to the rain-shadow effect from the surrounding Vancouver Island and Olympic mountain ranges, making streams more prone to drought conditions. This climate is in stark contrast to the rest of the region, which has high annual rainfall typical of temperate rainforest ecosystems.

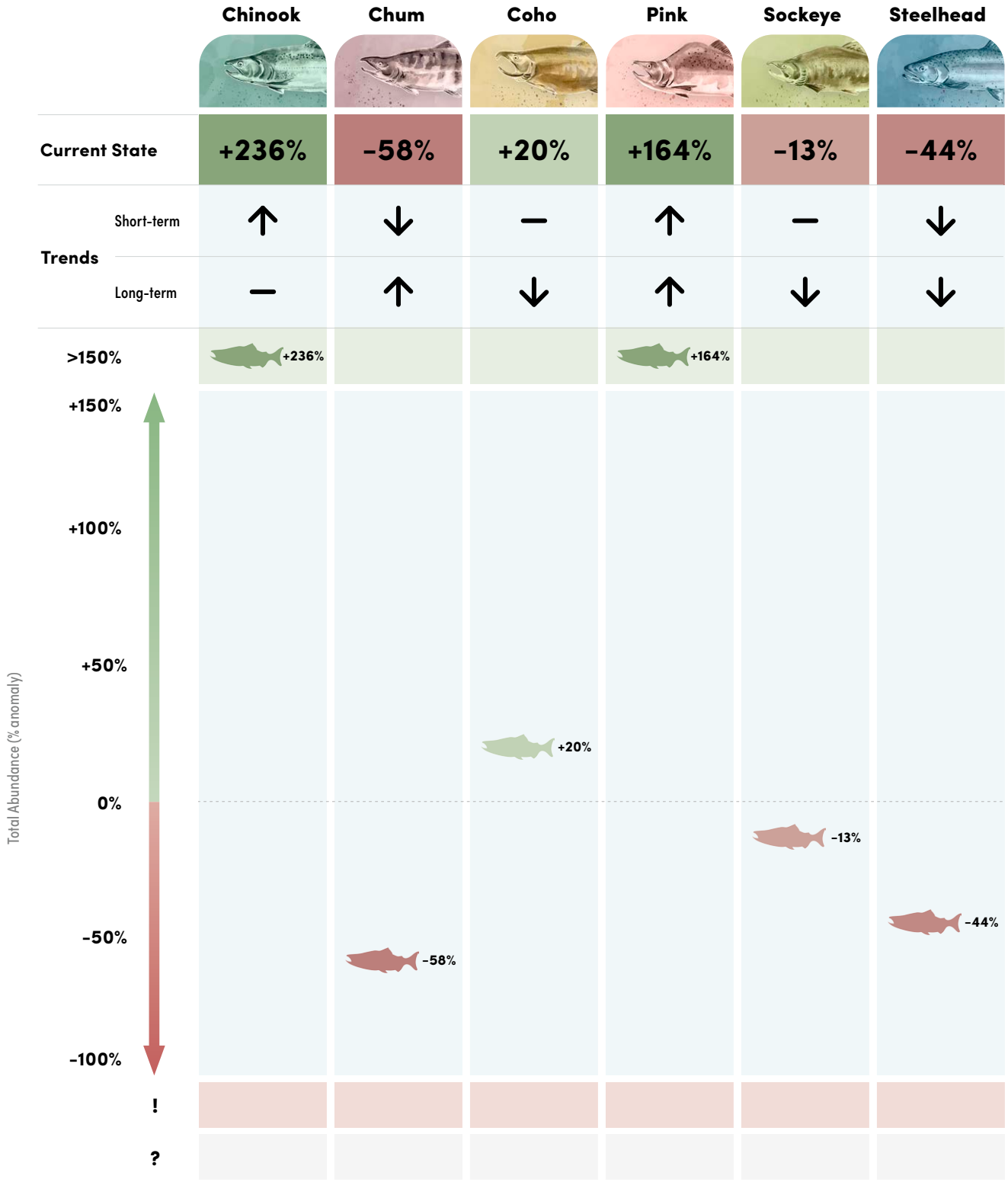
East Vancouver Island is highly urbanized, impacting the natural functioning of aquatic ecosystems. The Nanaimo River estuary is one heavily developed area with ferry terminals, a shipping terminal, marinas, and log booms affecting salmon habitat[32]. The vast array of armoured coastlines along east Vancouver Island also impacts salmon by eliminating spawning and rearing habitat and reducing prey supply.

Many salmon from the region spend their early marine life in the Salish Sea, a semi-enclosed sea between Vancouver Island and the mainland, with a significant freshwater influence from the Fraser River. Most of these salmon exit the Salish Sea through Johnstone Strait in the north. The Salish Sea has experienced cycles in productivity that influence early marine survival of salmon and were associated with sharp decreases in survival of Chinook, coho, and steelhead in the 1990s. Higher survival of Chinook and coho over the last few years suggest this may be changing.

EAST VANCOUVER ISLAND & MAINLAND INLETS

Tables and figures in this section show the current state and trends for each species of salmon in East Vancouver Island & Mainland Inlets. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



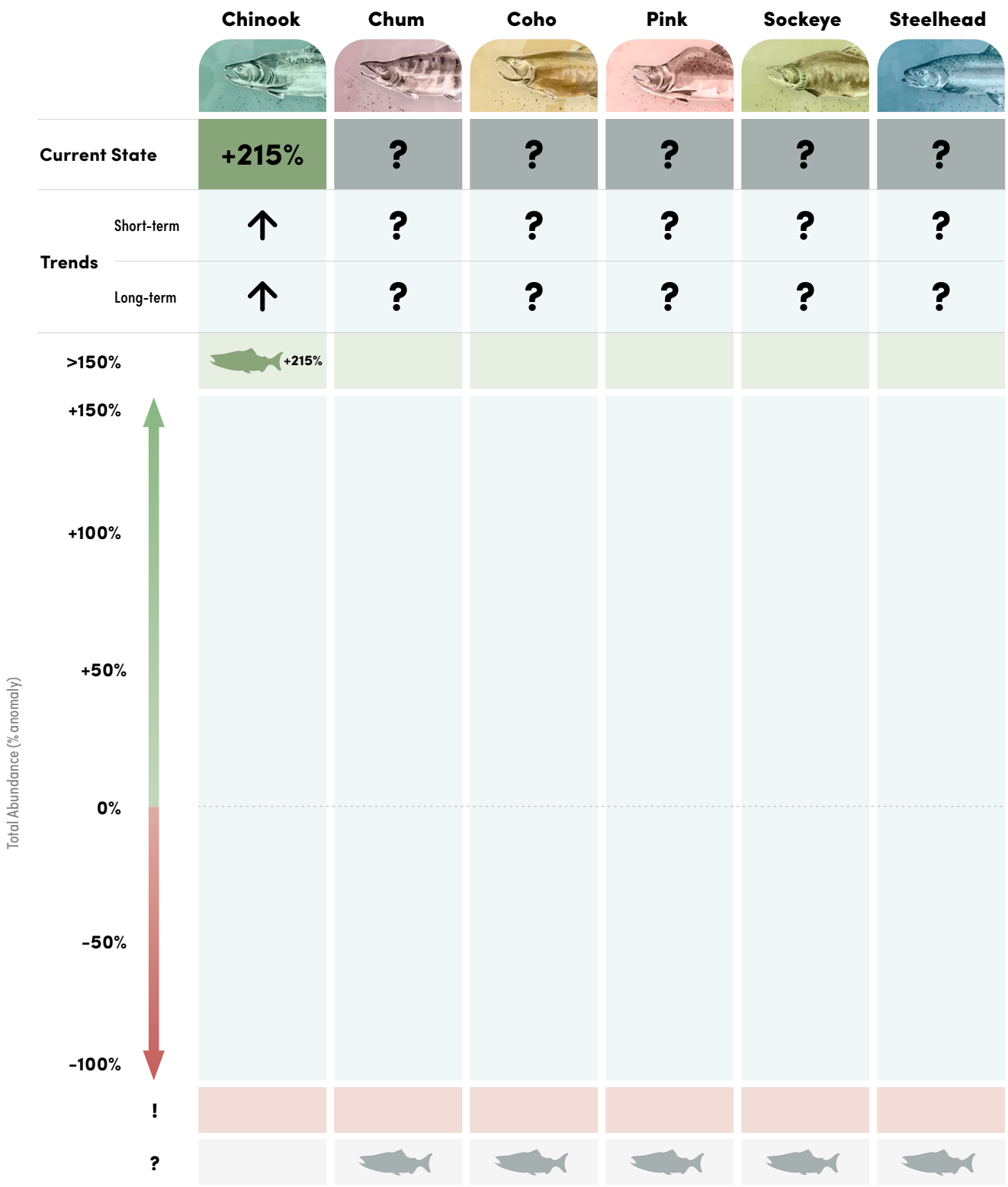
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

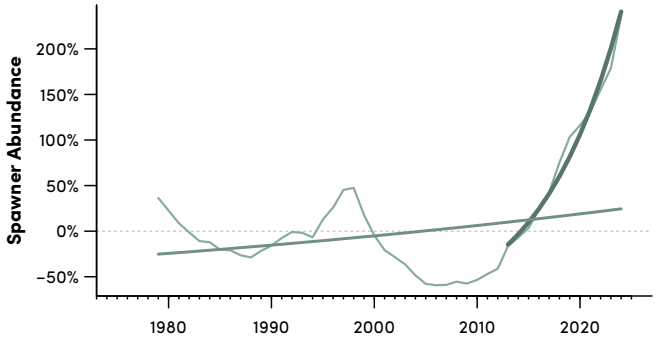


Chinook

The current states of spawner abundance and total abundance are well-above the long-term average, with both short-term trends pointing to increasing abundance. The total abundance is also increasing over the long term - a trait that is unique among all regions and species. However, at least some of this positive outlook is attributable to hatcheries that enhance the production of Chinook in the region.

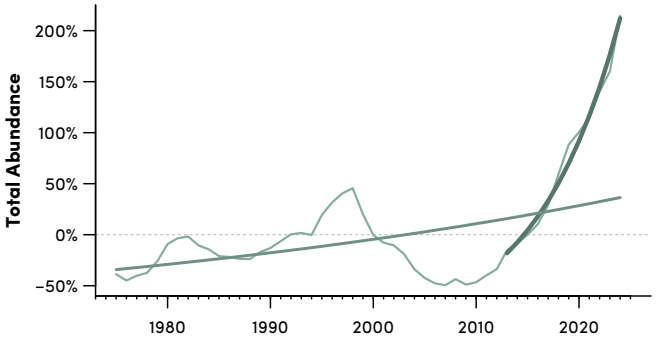
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+236%	↑	—	26,382 (2021–2024)	7,847 (1979–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+215%	↑	↑	30,119 (2021–2024)	9,577 (1975–2024)

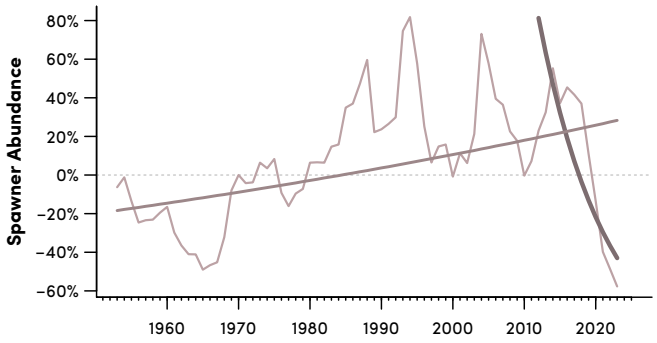


Chum

The current state is below the long-term average, but does not include data from the more positive chum return in 2024. Relatively high spawners from the mid 1980s to the mid 2000s resulted in a positive long-term trend from 1953-2023. However, spawners have declined dramatically over the short-term, with 2023 spawner abundance reaching a historic low.

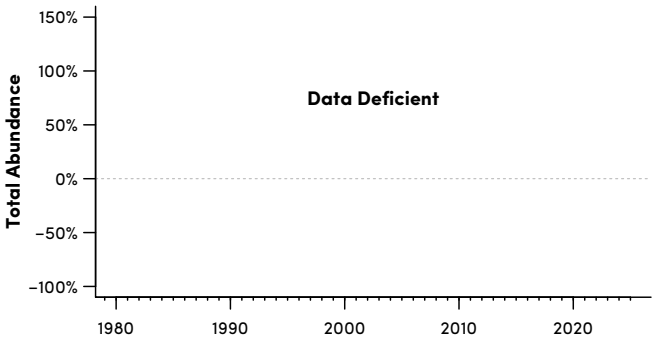
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-58%	↓	↑	345,309 (2020–2023)	816,432 (1953–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



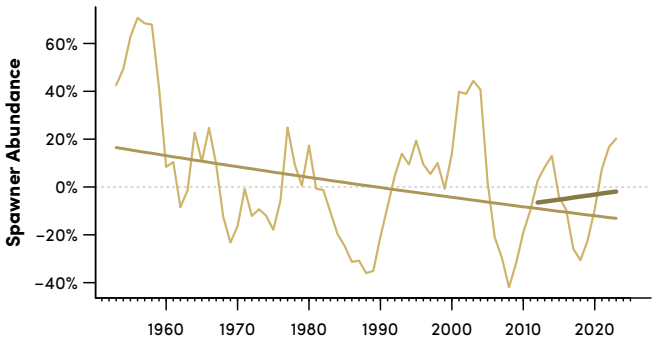
Short-Term Trends — Long-Term Trends —

Coho

Coho salmon have increased above their long-term average in recent years, stabilizing the short-term trend in spawner abundance. However, a long-term decline remains cause for concern and reflects declines from peak spawners in the 1950s.

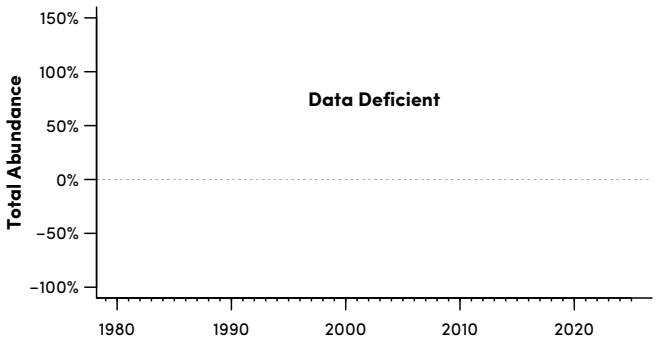
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+20%	—	↓	319,430 (2020–2023)	265,705 (1953–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

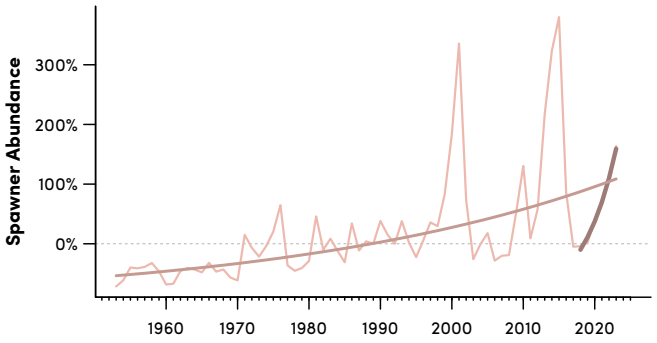


Pink

The current state is well-above the long-term average with a positive short-term trend reflecting a sharp increase since 2017. The long-term trend is also positive, with high spawner abundances in 2000-2001 and 2012-2015 driving an upward trajectory from 1953-2022.

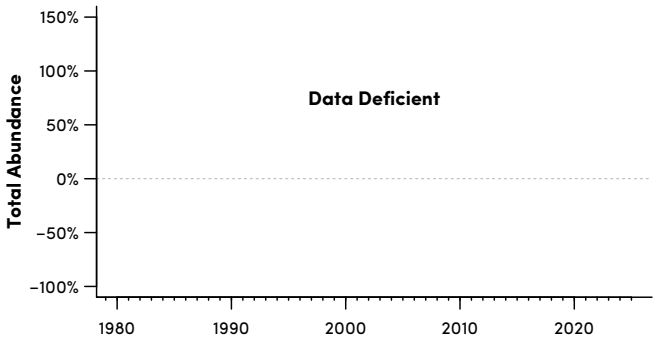
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+164%	↑	↑	2,986,455 (2022–2023)	1,131,532 (1953–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

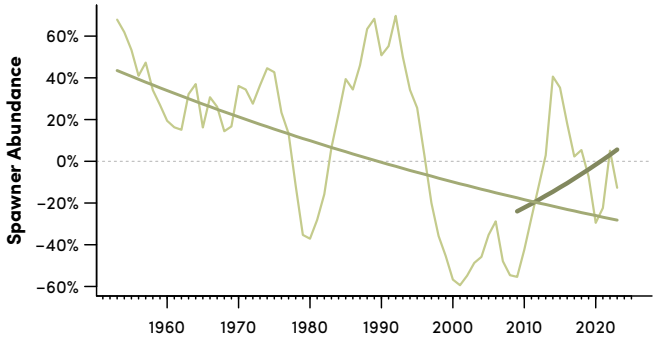


Sockeye

The current state is below the long-term average. A negative long-term trend reflects a general decline in spawner abundance from 1953-2023, but annual spawner estimates have fluctuated around average over the past three generations leading to a stable short-term trend.

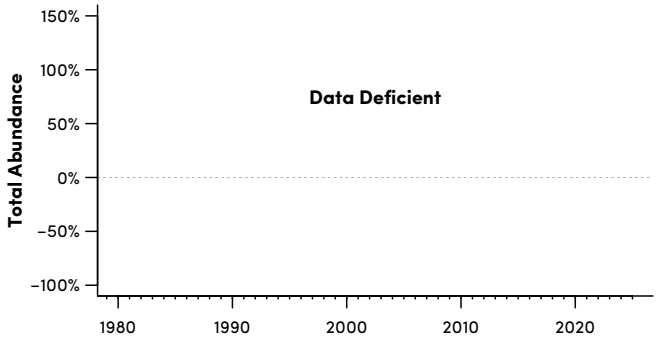
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-13%	—	↓	97,047 (2019–2023)	111,119 (1953–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

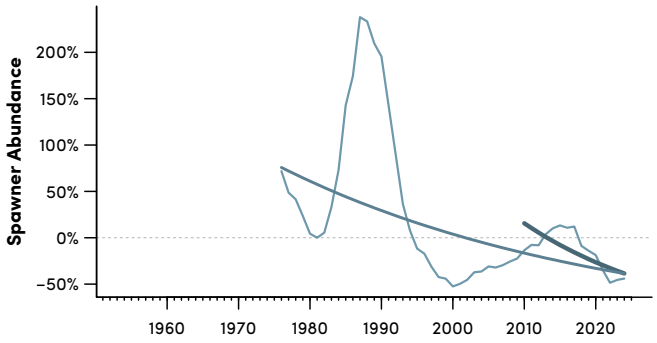


Steelhead

The current state is well-below the long-term average with negative short- and long-term trends. Slight increases over the past two years are encouraging, but spawner abundances are far below what was seen in the 1980s.

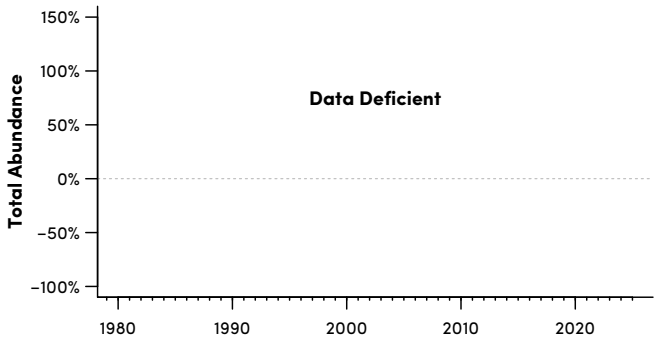
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-44%	↓	↓	731 (2020–2024)	1,306 (1976–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



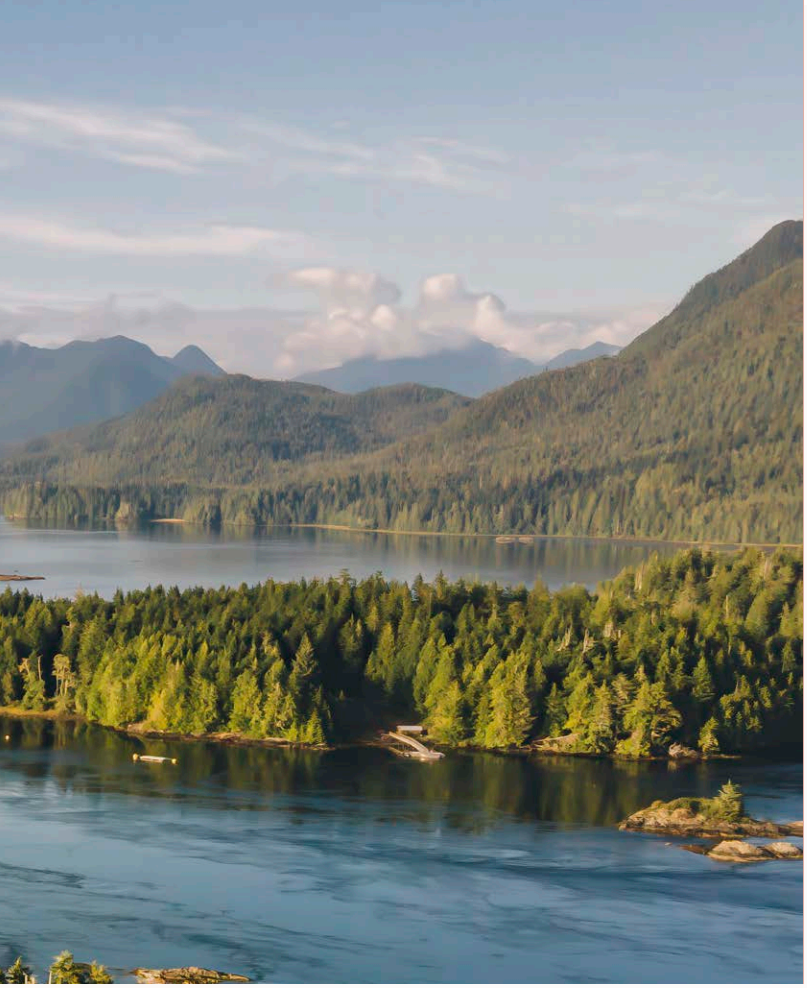
WEST VANCOUVER ISLAND

Chinook and sockeye spawners are above average, but chum and coho salmon are at multi-decade lows.

Chinook on West Vancouver Island had above-average spawner abundance, driven by relatively high numbers of spawners in 2023, but some populations continue to experience declines. Two Vancouver Island Chinook populations have been assessed as Threatened[33] by the Committee on the Status of Endangered Wildlife in Canada, with straying of hatchery-origin spawners raising concerns about potential impacts on the genetic diversity of wild Chinook within the region.

Barkley Sound sockeye, including those in the Somass River, hold important cultural and economic value. While major populations like Great Central and Sproat lakes have had above-average abundances in the past few years, weaker or uncertain runs elsewhere — and below-average total abundance — call for a precautionary approach to protect sockeye biodiversity. Climate change is also threatening these populations with low water levels and warm temperatures, which can lead to mortality of sockeye on their upriver migration, before spawning.

There have been very few pink salmon in rivers on West Vancouver Island in recent decades, though historical data from the 1970s suggest abundances have declined since then.



WEST VANCOUVER ISLAND

Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Chinook **3**

Chum **2**

Pink **3**

Coho **3**

Sockeye **26**

Steelhead **2**

Notable Salmon-Bearing Rivers

Conuma River, Great Central Lake, Nitinat River, Sarita River, Sproat Lake.

Region Profile

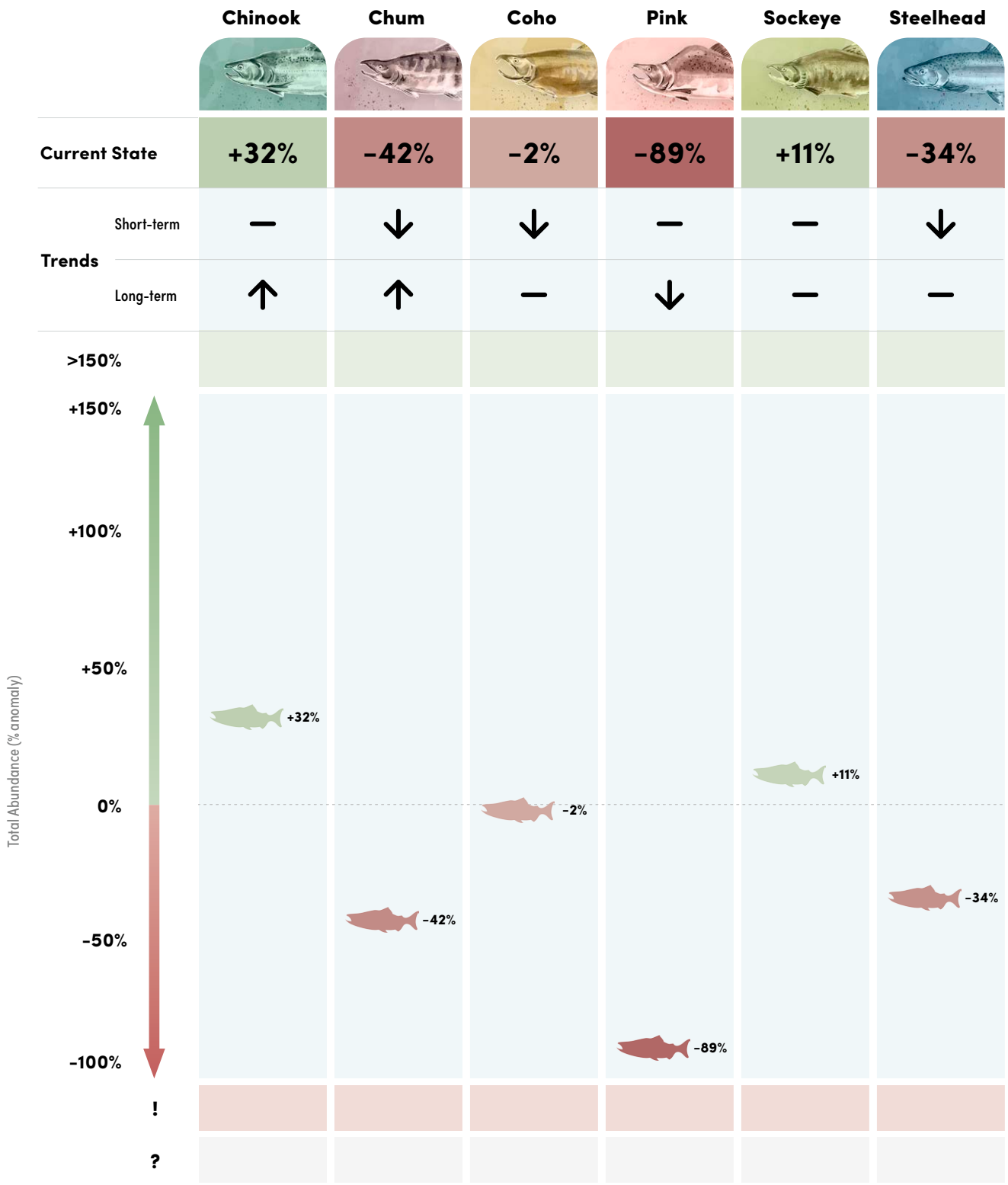
The West Vancouver Island Region spans 17,674 square kilometres west of Vancouver Island's mountain ranges, stretching from San Josef Bay to Sooke. Characterized by remote inlets, small coastal streams, and a mosaic of islands, the region supports rich and diverse terrestrial and aquatic ecosystems. However, decades of industrial logging have stripped much of the old-growth forest and significantly altered salmon habitats.

Chinook salmon here are notably large, often exceeding 13 kilograms. They are a key food source for the endangered Southern Resident killer whale, which relies on the west coast of Vancouver Island as a critical foraging area. These Chinook also support socially and economically valuable fisheries from Vancouver Island to southeast Alaska. However, changes in the marine ecosystem have affected the survival rates of juvenile Chinook and wild diversity is being undermined by interbreeding of hatchery fish and size-selective fishing. In recent years drought has also impacted these rain-dominated streams, affecting the ability of salmon to access spawning grounds.

WEST VANCOUVER ISLAND

Tables and figures in this section show the current state and trends for each species of salmon in West Vancouver Island. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



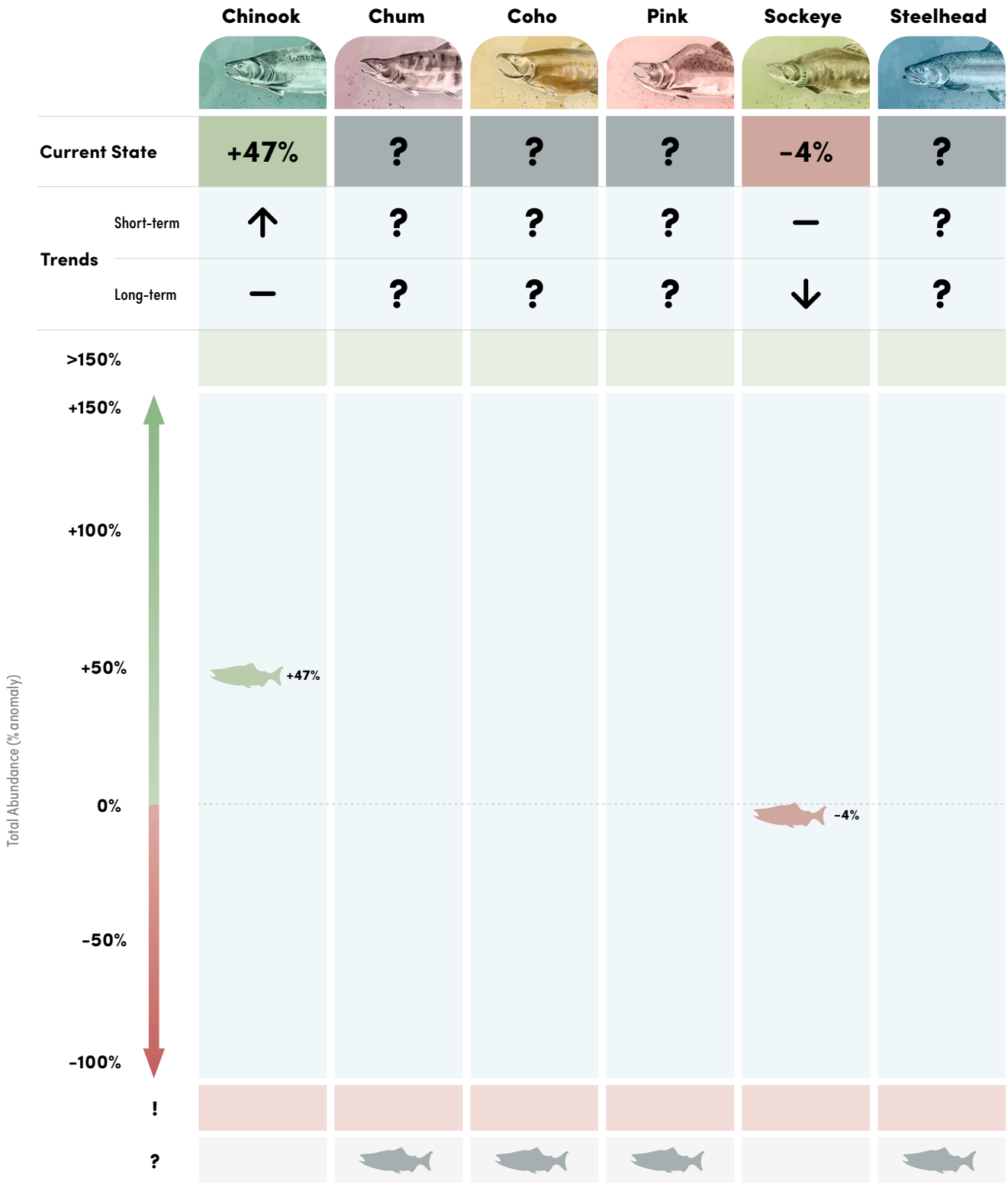
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

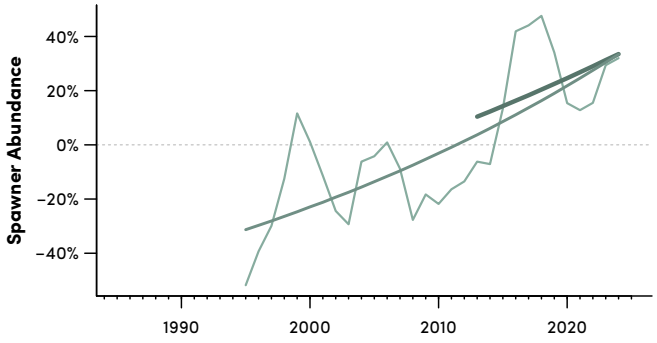


Chinook

The current state is above average with a positive long-term trend (1995-2024) and stable short-term trend. Despite this encouraging assessment, some populations within the region are struggling.

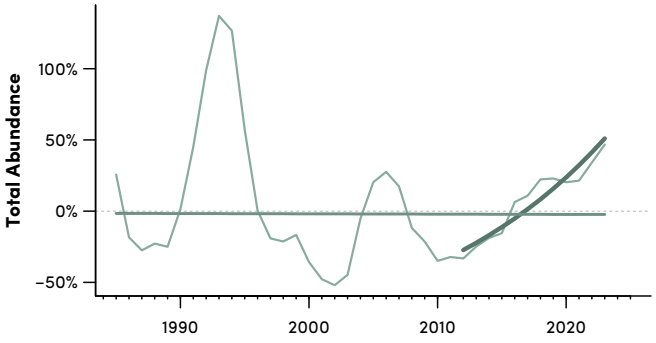
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+32%	—	↑	16,323 (2021–2024)	12,362 (1995–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+47%	↑	—	355,233 (2020–2023)	242,134 (1985–2023)

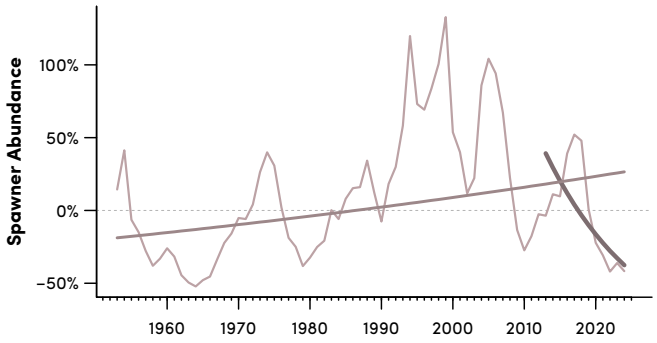


Chum

The current state is well-below average with a negative short-term trend marking declines from peak abundance in the late 1990s. A positive long-term trend is driven by generally below-average spawner abundance prior to 1990.

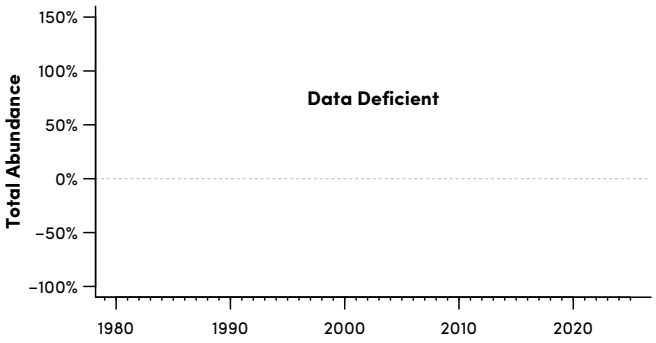
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-42%	↓	↑	257,860 (2021–2024)	442,138 (1953–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



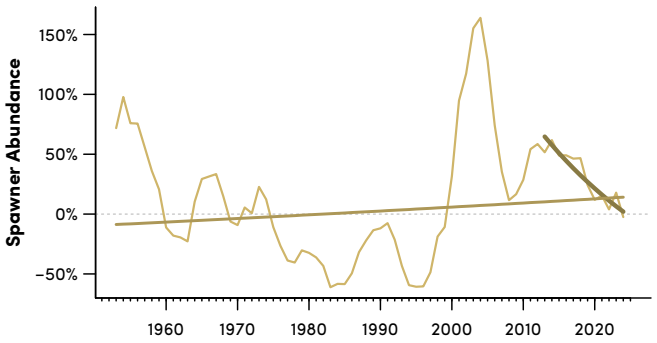
Short-Term Trends — Long-Term Trends —

Coho

The current state is below average for the first time since 1999, driven by the lowest spawner counts in decades in 2024. There is a negative short-term trend marking this recent, sharp decline. The long-term trend is stable due to a period of low abundance in the 1980s and early 90s.

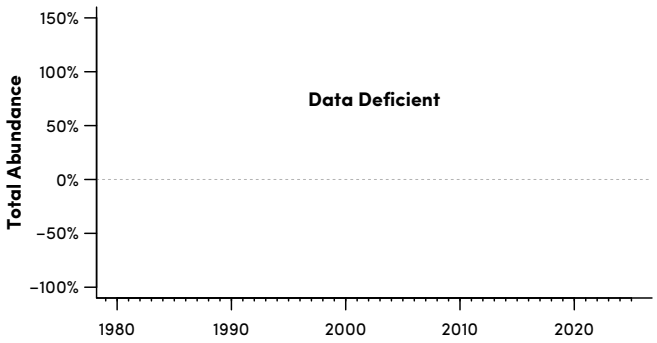
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-2%	↓	—	**126,408** (2021–2024)	**129,606** (1953–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

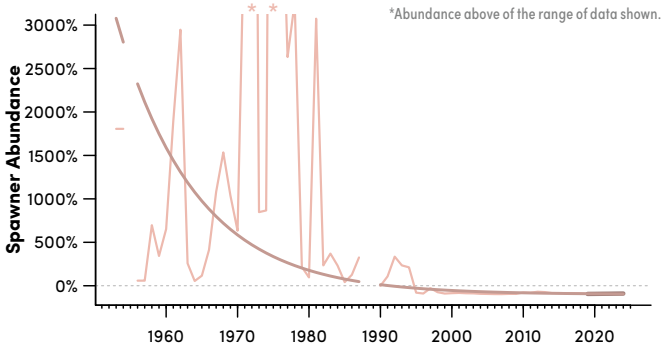


Pink

The current state is well-below average, but there are very few pink salmon recorded on West Vancouver Island and monitoring is sparse. Since the 1990s, there has been only several hundred pink salmon recorded annually, far from the half million seen in the 1970s. This pattern is captured by the stable short-term trend and negative long-term trend.

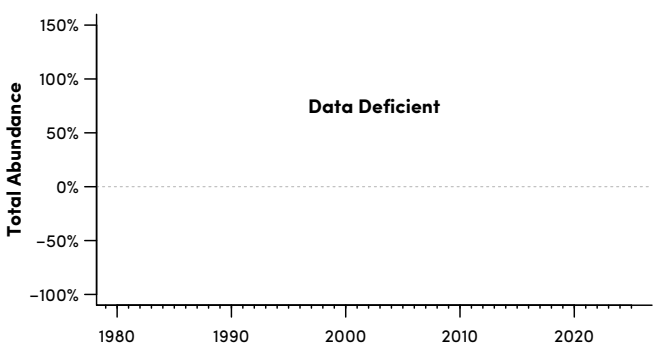
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-89%	—	↓	**665** (2023–2024)	**6,290** (1953–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

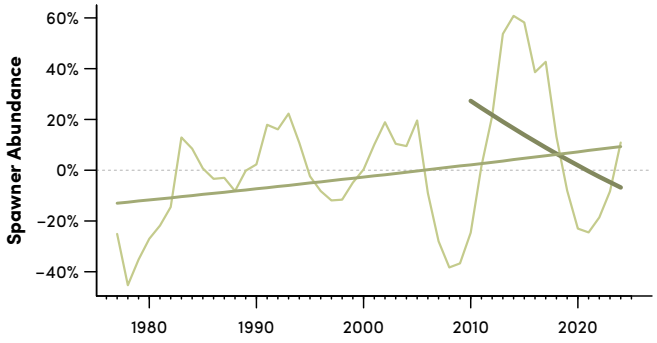


Sockeye

The current state of spawner abundance is above average, but total abundance is below average suggesting a loss of harvest opportunities for sockeye. Indeed, the negative long-term trend in total abundance suggests this, though increases in spawner and total abundances since 2021 are encouraging.

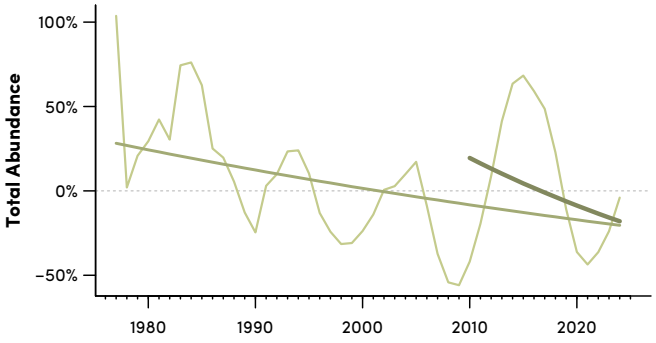
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+11%	—	—	**440,852** (2020–2024)	**397,532** (1977–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-4%	—	↓	**669,218** (2020–2024)	**697,391** (1977–2024)

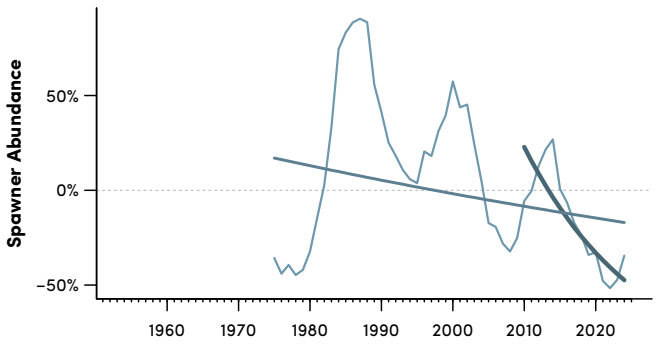


Steelhead

The current state is below average with a negative short-term trend highlighting declines since 2014. However, 2024 saw above-average numbers of steelhead spawners and a recent uptick in spawner abundance is reason for hope. The long-term trend is stable due to below-average spawner abundances in the late 1970s.

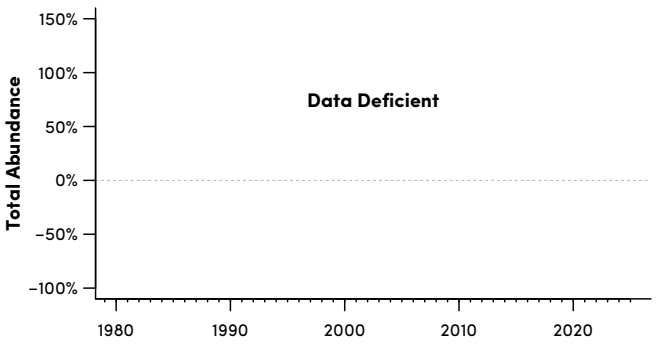
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
-34%	↓	—	**413** (2020–2024)	**631** (1975–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



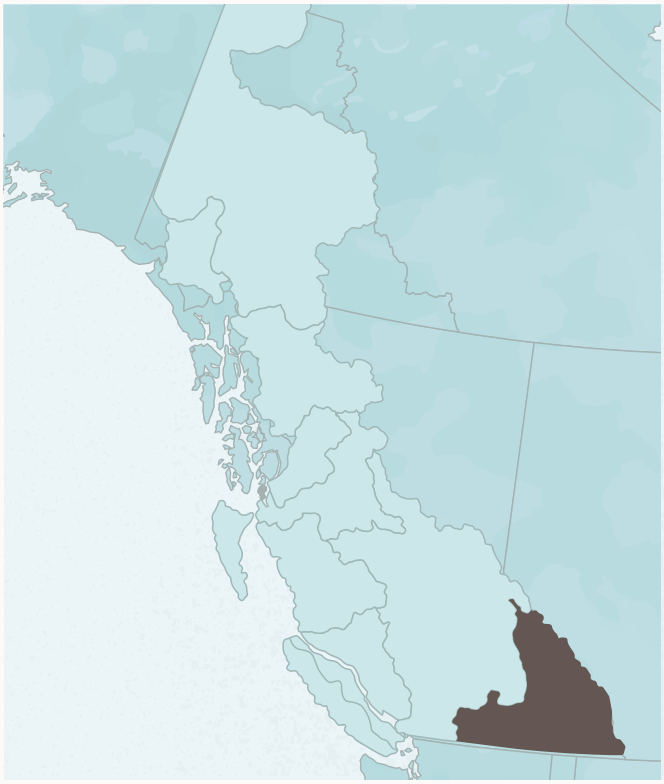
COLUMBIA

Sockeye are above average, while Chinook and steelhead face critically low population numbers.

The Columbia River has an extensive history of development including major dams. Salmon have been virtually eliminated from most of the Canadian portion of the Columbia for more than 80 years[9].

Less than 30 years ago, Columbia sockeye faced extinction, but Indigenous-led efforts have led to an impressive recovery with sockeye now spawning and rearing in Osoyoos, Skaha, and Okanagan Lakes[34]. Record returns of Okanagan sockeye were celebrated in 2022 and 2024, but Okanagan sockeye remain vulnerable to the impacts of climate change and a long migration past several major dams. Indeed, warm waters appear to be challenging sockeye and delaying spawning migrations in 2025[35] – though this year's abundances are not yet captured in our data.

The current states of Chinook and steelhead are categorized as "critically low" because the absolute numbers suggest less than a few dozen spawners in the Canadian portion of the watershed, putting these species at high risk of extinction in the region. The Okanagan population of Columbia Chinook was listed as Endangered[5] by the Committee on the Status of Endangered Wildlife in Canada in 2017.



Salmon Biodiversity

The number of Conservation Units below represents the region's salmon biodiversity.

Chinook **1**

Chum **0**

Coho **0**

Pink **0**

Sockeye **1**

Steelhead **1**

Notable Salmon-Bearing Rivers

Inkaneep Creek, Okanagan River, Osoyoos Lake, Skaha Lake.

Region Profile

The Canadian headwaters of the Columbia River are part of a vast drainage system the size of France (668,000 square kilometres), most of which is found within the United States. Originating in Columbia Lake in the Rocky Mountains, British Columbia, the river flows northwest and then south and west for 2,000 kilometres to join the ocean at Astoria, Oregon.

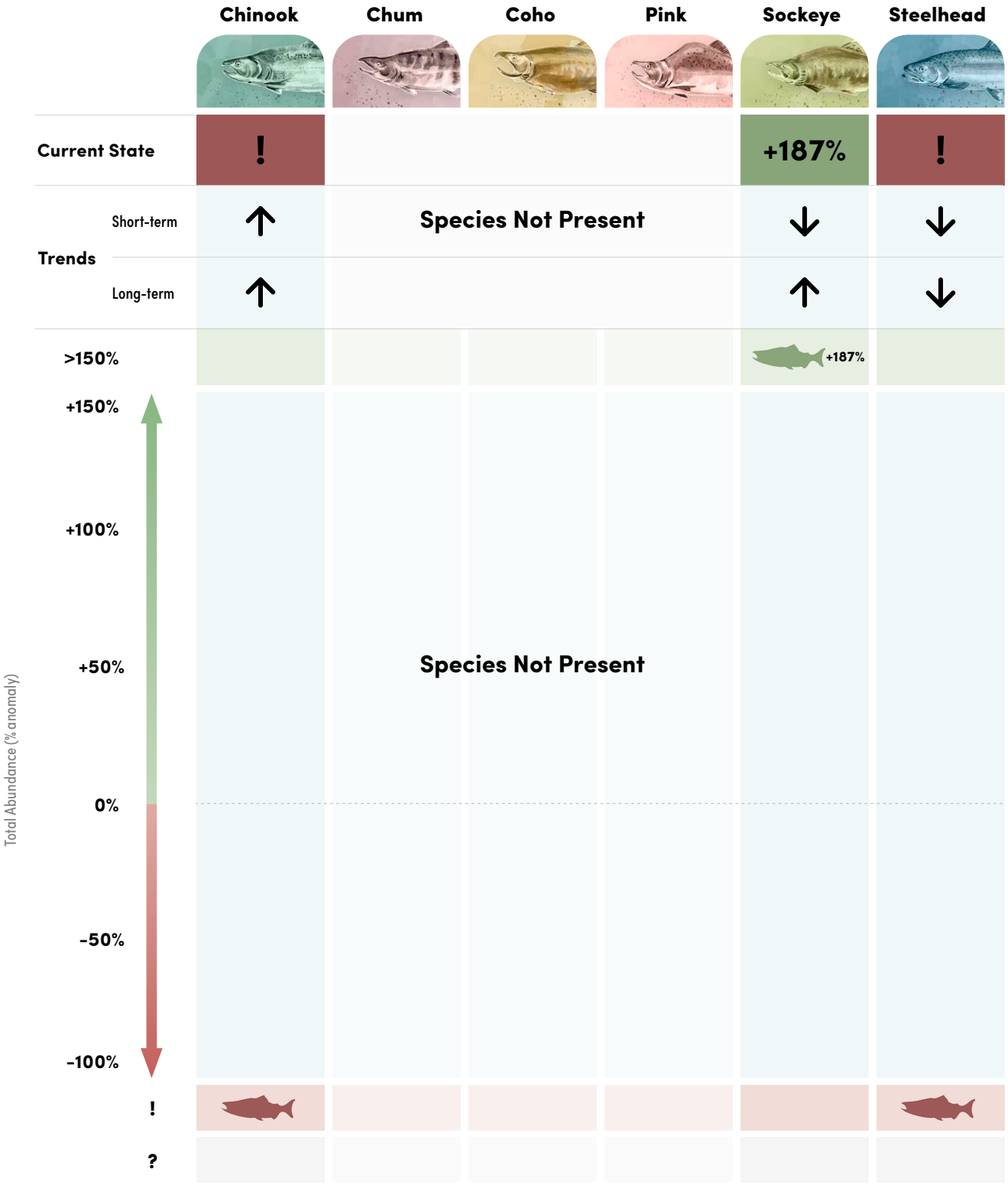
The upper Columbia River Basin once supported robust Pacific salmon populations, with historic returns of up to four million fish. But an extensive history of development, including 12 major dams, devastated salmon habitat and has virtually eliminated salmon from most of the Canadian portion of the Columbia for more than 80 years. Reintroduction efforts led by Indigenous communities through the Okanagan Nation Alliance and the Canadian and British Columbia governments have led to an impressive recovery for sockeye.

The Okanagan River, a major tributary to the Columbia River, is the only portion of the Columbia watershed currently accessible to anadromous salmon in Canada. The Okanagan River and the Okanagan, Skaha, and Osoyoos Lakes support sockeye, summer spawning Chinook, and steelhead. Based on local and traditional knowledge as well as downstream observations, a spring Chinook population and coho salmon may also be present[36].

COLUMBIA

Tables and figures in this section show the current state and trends for each species of salmon in Columbia. The current state is the per cent anomaly of current spawner or total abundance over the most recent generation compared to the long-term average for each species. Trends measure the direction of change and are reported as short-term (over the most recent three generations) and long-term (over all available years).

Spawner Abundance



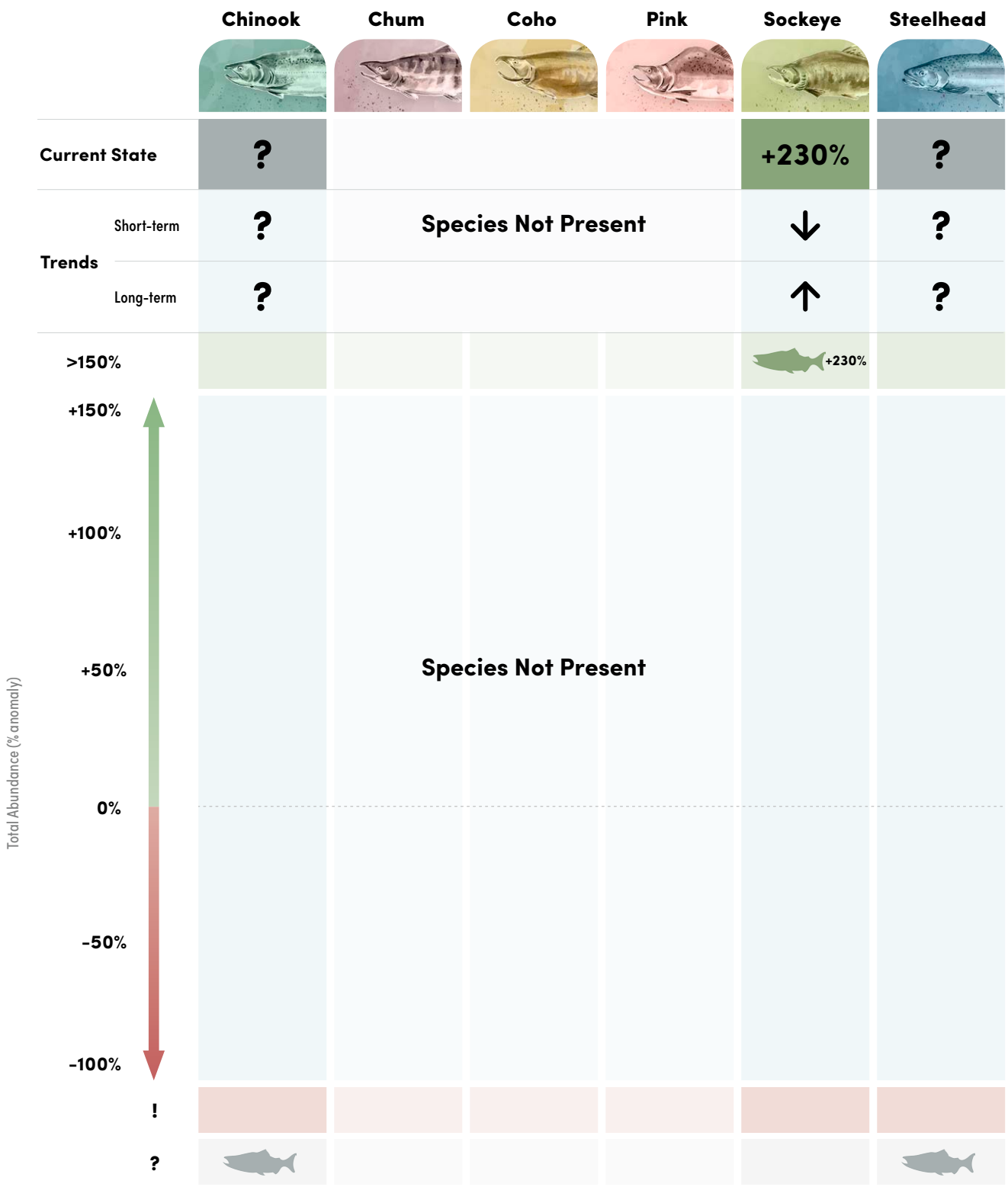
Well-above long-term average. No conservation concern.
Above long-term average. Current outlook is good.
At or near long-term average. Precaution is warranted.
Below long-term average. Current outlook is poor.
Well-below long-term average. Significant conservation concern.
Critically low. At risk of local extinction.
Unknown state due to a lack of readily accessible data.

Arrows indicate if the trend in abundance is increasing or decreasing.

A horizontal line indicates if the trend in abundance is stable.

A question mark indicates an unknown current state or trend due to a lack of readily accessible data.

Total Abundance

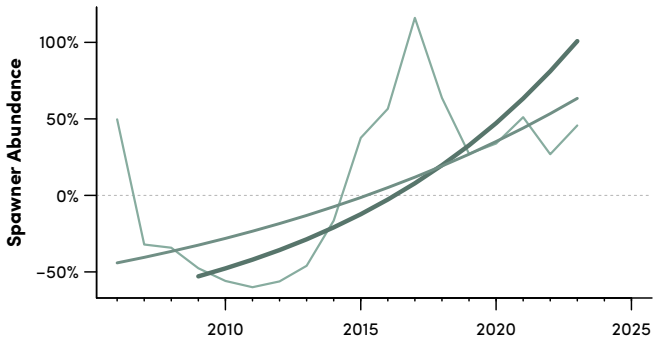


Chinook

The current state is critically low because there were fewer than 1,500 spawners observed in 2023. Although spawner abundance has increased since monitoring began in 2006, with positive short- and long-term trends, the critically low numbers leave Okanagan Chinook at high risk of extinction. Historically, Chinook returns to the Columbia River Basin were in the millions, and they were a primary food source for First Nations and central to their cultures and community well-being.

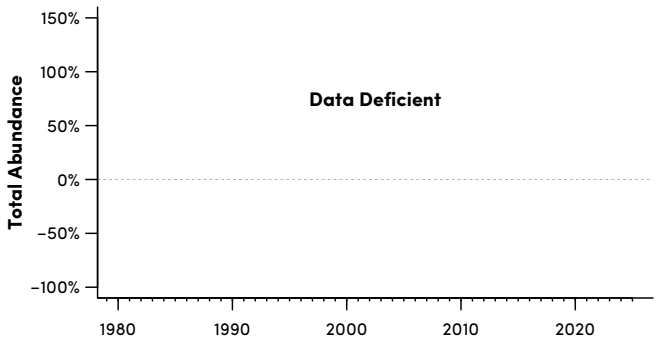
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
!	↑	↑	**33** (2019–2023)	**23** (2006–2023)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?

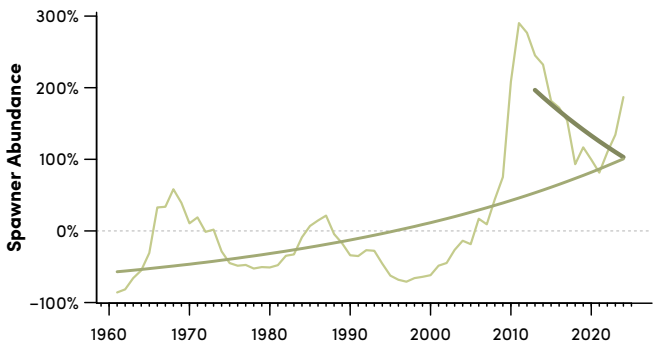


Sockeye

The current states of spawner and total abundance are well-above the long-term average with positive long-term trends. Negative short-term trends are the result of declines from peak abundances around 2010, but relatively high returns in recent years provide hope that abundances may remain above average.

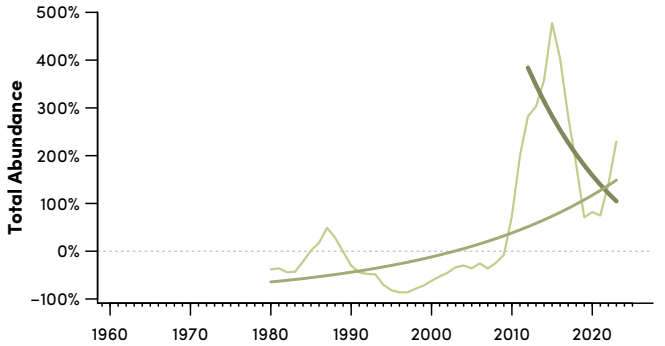
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+187%	↓	↑	**64,656** (2021–2024)	**22,538** (1961–2024)



Total Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
+230%	↓	↑	**212,551** (2020–2023)	**64,504** (1980–2023)



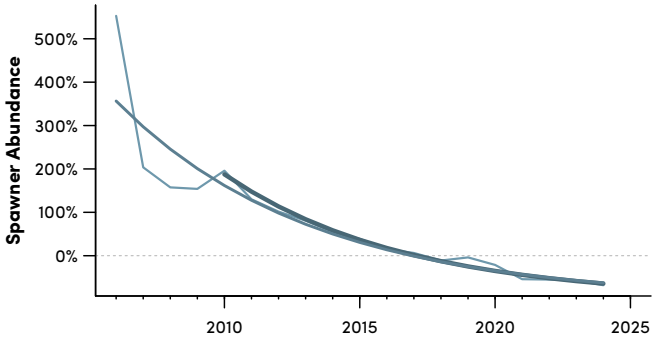
Short-Term Trends —— Long-Term Trends ——

Steelhead

The current state is critically low because there were fewer than 1,500 spawners observed in 2023. Since 2006, when monitoring began, there have been negative short- and long-term trends with an average of just 20 natural-origin spawners counted per year since 2013.

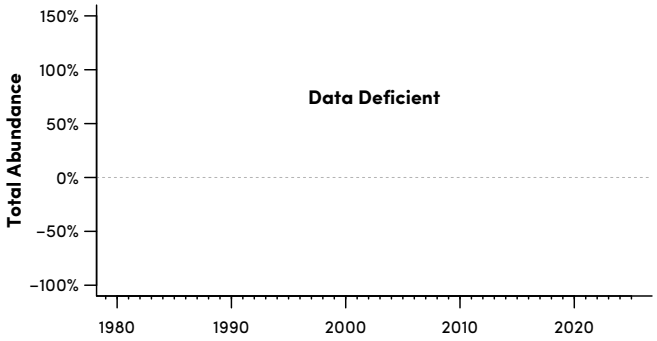
Spawner Abundance

Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
!	↓	↓	7 (2020–2024)	21 (2006–2024)

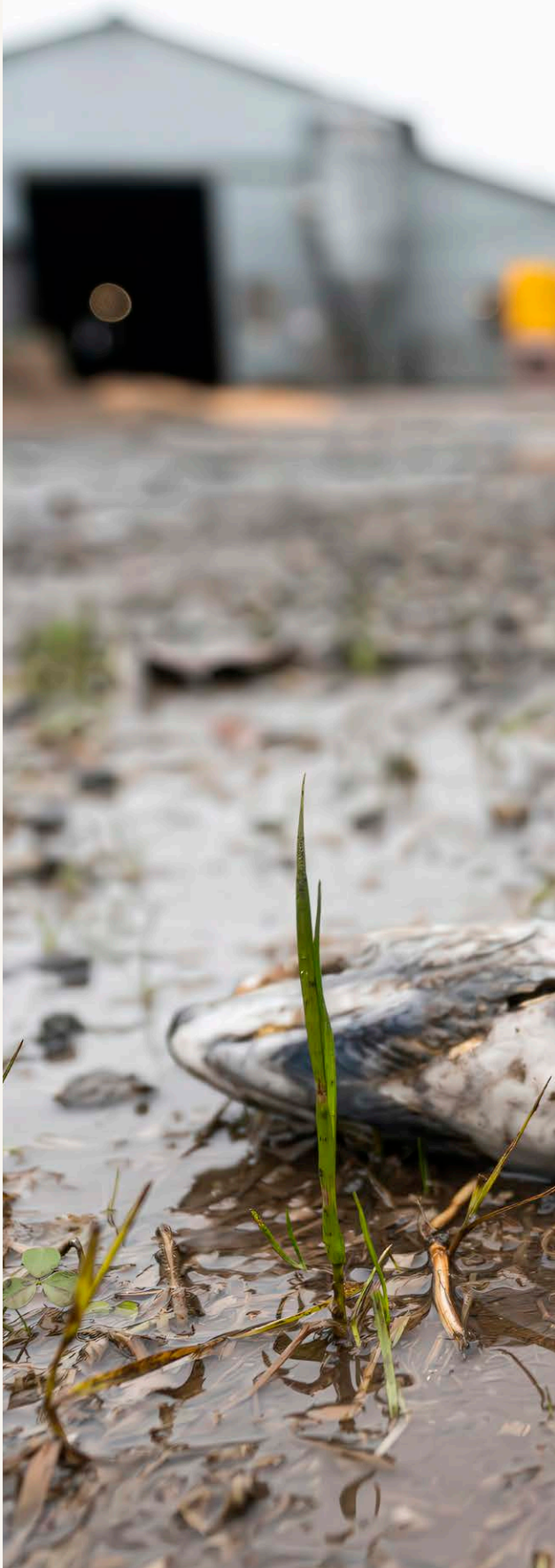


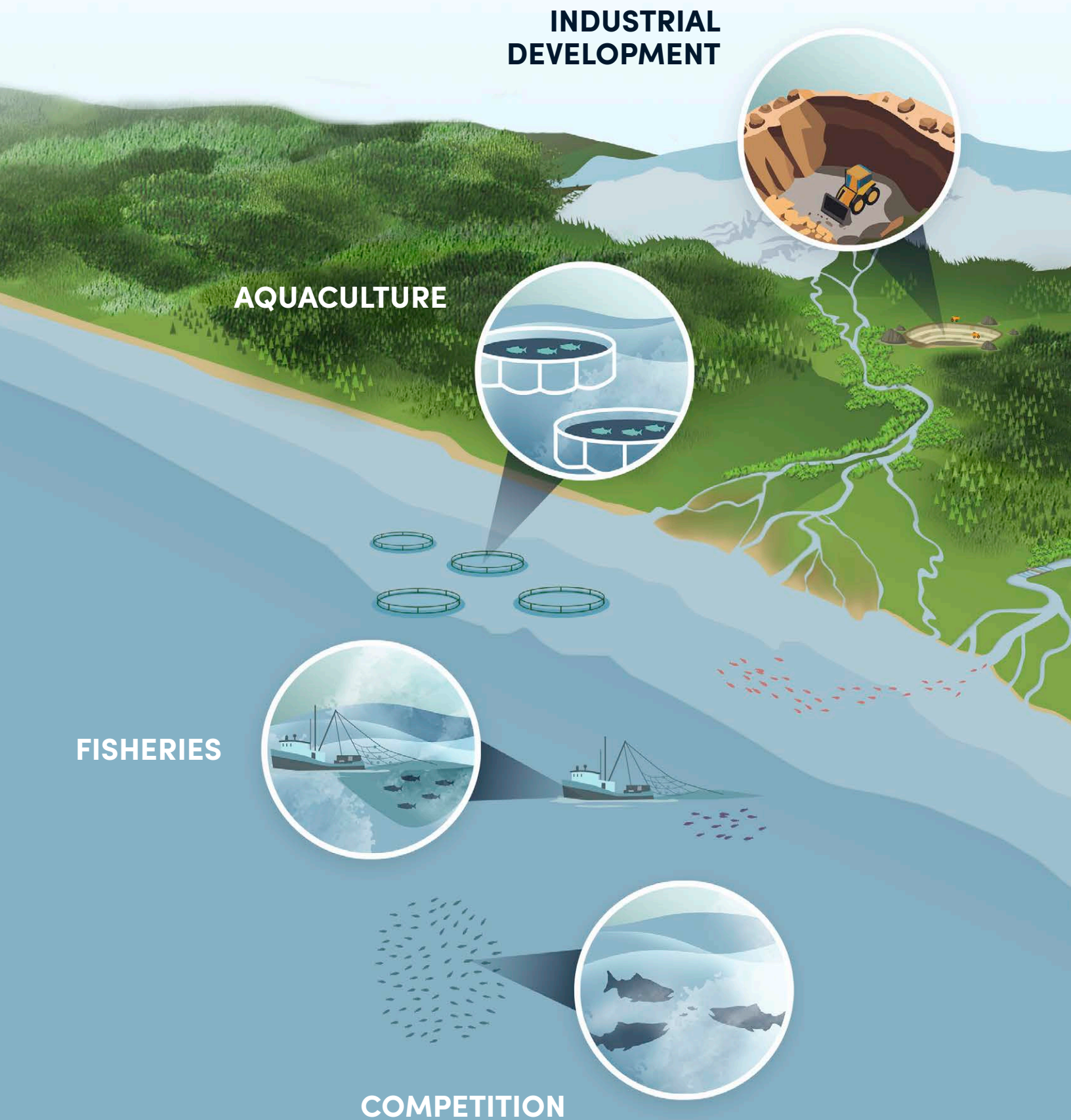
Total Abundance

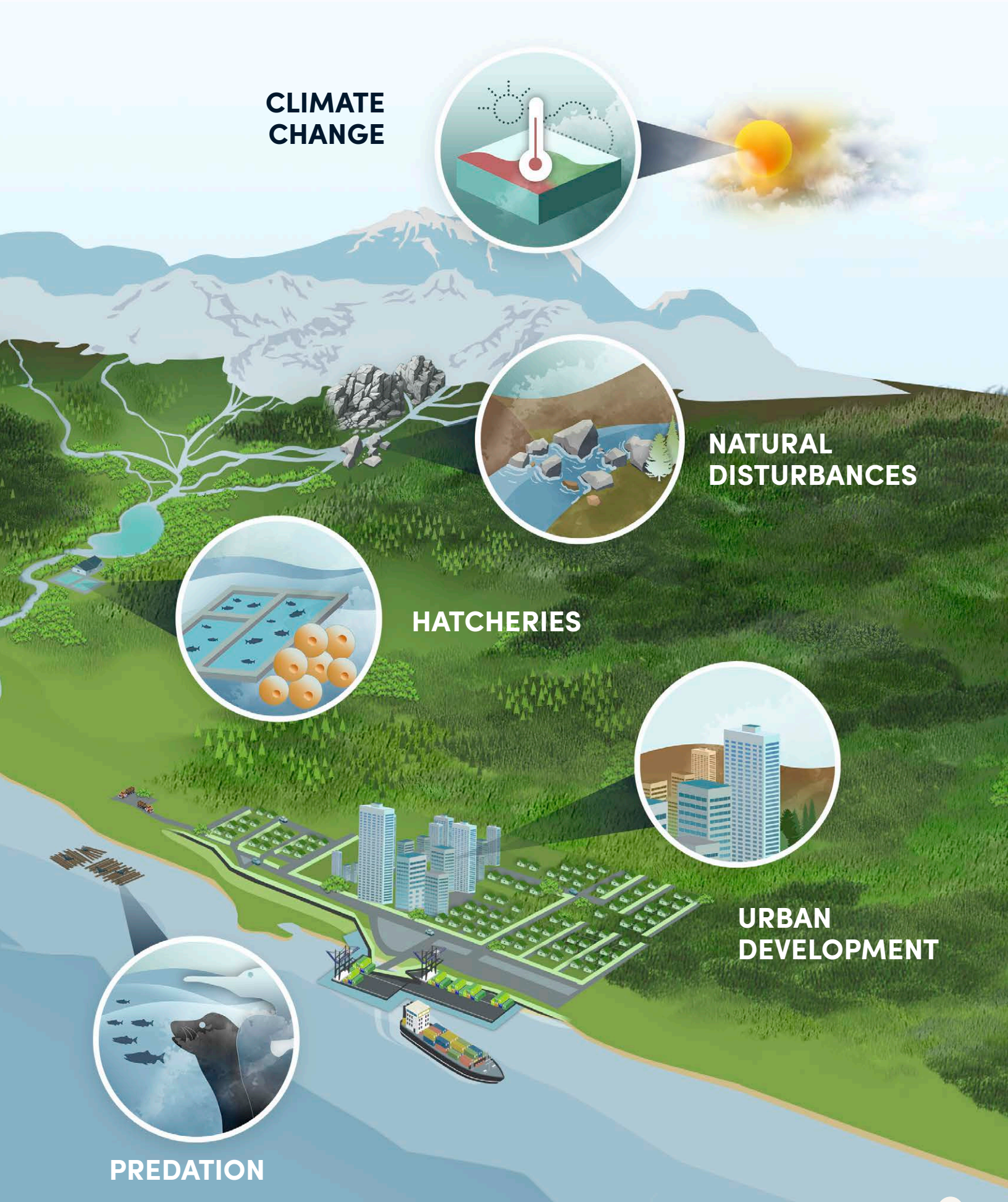
Current State	Trends Short-Term	Trends Long-Term	Current Abundance	Long-Term Average
?	?	?	?	?



FACTORS AFFECTING THE STATE OF SALMON




INDUSTRIAL DEVELOPMENT
AQUACULTURE
FISHERIES
COMPETITION


CLIMATE CHANGE
NATURAL DISTURBANCES
HATCHERIES
URBAN DEVELOPMENT
PREDATION

The salmon life cycle extends from freshwater streams and lakes to the North Pacific Ocean, exposing salmon to numerous pressures that can accumulate and interact to influence survival. Over the past 150 years, the number of factors affecting the abundance of Pacific salmon have dramatically increased, challenging salmon survival.

NATURAL DISTURBANCES. Events such as forest fires, floods, and landslides cause ecosystem change and renewal – but the resulting impacts to watersheds can present immediate challenges for salmon. For example, the Big Bar landslide blocked upstream migration of Fraser River salmon in 2019. The debris prevented migrating Fraser salmon from moving beyond the landslide to their spawning grounds, negatively affecting the reproductive cycle of several upper Fraser salmon populations.

INDUSTRIAL DEVELOPMENT. Activities like forestry, mining, agriculture, and associated infrastructure including pipelines, ports, dams, and railways can have significant impacts on the landscape, altering geomorphology and hydrological processes. Industrial extraction of surface and ground water can reduce stream flows, increase water temperatures, and limit access to habitats.

FISHERIES. Although Canada's commercial fisheries have greatly diminished over the last 30 years, concerns are mounting over the bycatch of non-targeted species and populations in mixed-stock fisheries. Mixed-stock fisheries make it difficult to target enhanced or healthy populations, putting weaker stocks at risk and potentially leading to their over-harvest. Climate change is also making the timing and magnitude of returns less predictable, further challenging sustainable fisheries management.

HATCHERIES. Hatchery production can enhance fisheries and provide community connections to salmon, but also poses risks to wild salmon. Hatchery salmon can interbreed or displace wild salmon, reducing genetic diversity, resilience, and adaptive capacity of wild populations.

CLIMATE CHANGE. More frequent extremes in temperature, flow, and ocean conditions impact salmon throughout their life cycles. These changes compound and interact with other pressures to affect salmon survival, sometimes unpredictably. Maintaining cold-water refuges and protecting undeveloped watersheds can buffer salmon against climate change in freshwater, but cascading impacts in ocean ecosystems are hindering salmon recovery.

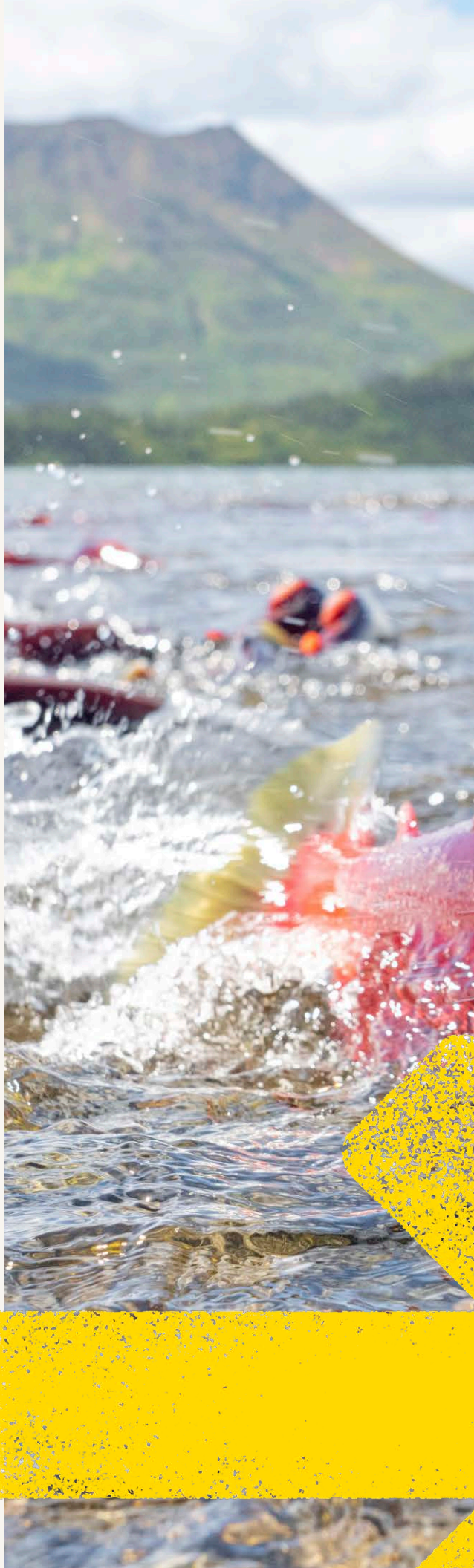
URBAN DEVELOPMENT. Buildings, roads, and coastal modifications like seawalls have led to the loss, degradation, and fragmentation of salmon habitats. With urbanization preceding modern-day record keeping in many regions and the passability of different migration barriers often unknown, the magnitude of this impact on salmon is hard to quantify.

COMPETITION. Although Pacific salmon in Canada are at a fraction of their historical abundance, there are more salmon in the North Pacific Ocean than ever before due to increased global hatchery production, and competition for resources can be fierce. Competition among salmon at sea can influence salmon growth, maturity, and productivity, and the impacts are significant.

PREDATION. Juvenile salmon are an important food source for many species and naturally incur high mortality from predation. Human and natural disturbances can increase predation by reducing habitat complexity, removing hiding places for juvenile salmon. Piers and docks tend to be avoided by salmon, forcing migrating fish into more open habitats where predators may be waiting, while log booms provide a platform for predators (seals and seal lions) to hunt both juvenile and adult salmon.

AQUACULTURE. Open net-pen salmon farms pose several risks to wild salmon, mainly the introduction and transmission of pathogens that can impact wild salmon health and survival. Other potential impacts include environmental contamination from chemical use, pollution from feed and effluent, and direct interactions (predation, competition) between farmed and wild salmon.

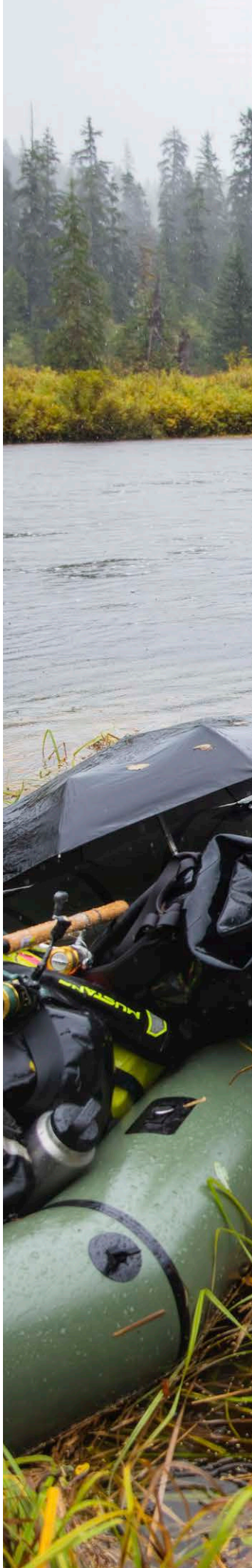
THE PATH FORWARD



This State of Salmon report provides a data-driven assessment of the current state of Pacific salmon throughout their Canadian range. The results suggest that salmon need our help.

Conserving and recovering wild salmon in the face of climate change requires forward-looking, coordinated action that is focused on protecting and rebuilding the natural diversity of salmon populations and their habitats.

Indigenous communities are leading the way by revitalizing traditional systems of salmon management and taking legislative actions to protect salmon ecosystems. The Pacific Salmon Foundation is empowering First Nations and other decision makers with data, status assessments, and decision-support tools, collaborating on salmon recovery and resilience planning, and supporting grassroots initiatives through our grant making.



METHODOLOGY & REFERENCES

Overview

We report on the state of salmon in each of the ten regions that represent all major Pacific salmon-bearing watersheds in Canada: Yukon, Northern Transboundary, Haida Gwaii, Nass, Skeena, Central Coast, Fraser, East Vancouver Island & Mainland Inlets, West Vancouver Island, and Columbia. These regions are also used to organize data in the Pacific Salmon Explorer (salmonexplorer.ca). There are a relatively small number of Pacific salmon that spawn in the MacKenzie River basin in Arctic Canada that are currently not considered here.

For each of these regions, we compiled and analysed data on six species of Pacific salmon: Chinook (*Oncorhynchus tshawytscha*), chum (*O. keta*), coho (*O. kisutch*), pink (*O. gorbuscha*), sockeye (*O. nerka*), and steelhead (*O. mykiss*). Where possible, we report on both spawner abundance and total abundance for each region and species. Spawner abundance (also called "escapement") is the number of salmon that "escape" fisheries and make it back to reproduce in rivers. These salmon are available to meet ecological needs within watersheds and contribute to future generations.

As such, assessing spawner abundance is important to inform conservation planning. Where data are available, we also report on total abundance, which is the number of salmon that survive to maturity, equal to the sum of spawners, catch, and pre-spawn mortality in rivers. In some years, a substantial proportion of salmon that survive to maturity are caught in commercial and recreational fisheries, in addition to Food, Social and Ceremonial fisheries by First Nations. Tracking total abundance provides information on the productivity of salmon and their ability to support these fisheries. Often, the state and trends for spawner abundance are more optimistic than for total abundance because of widespread declines in catches of Pacific salmon in Canada[6].

Data Sources

We constructed an index of spawner and total abundances at the regional scale using the best available data. Details of specific data sources for each region and species are outlined in the Technical Documentation (salmonwatersheds.github.io/state-of-salmon/) and raw data are publicly available in the associated GitHub repository (github.com/salmonwatersheds/state-of-salmon). We preferentially relied on data vetted by the Pacific Salmon Commission and used to assess international obligations under the Pacific Salmon Treaty. Specifically, these data come from the appendices of reports by the Yukon River Joint Technical Committee, Transboundary Technical Committee, Northern Boundary Technical Committee, Chinook Technical Committee, and Chum Technical Committee. The Fraser River Panel provides data on pink and sockeye abundance directly via their Annual Report Application. Publication of these appendices may take years and more up-to-date versions were provided to Pacific Salmon Foundation staff directly by Fisheries and Oceans Canada (DFO) upon request.

In the Nass region, we drew on information from the draft 2024 Post-Season Report from the Nisga'a Lisims Government - Fisheries & Wildlife Department[27]. Fraser coho, Columbia Chinook, and Columbia sockeye data were provided directly to Pacific Salmon Foundation staff by DFO upon request. The Fraser coho estimates of spawner and total abundances are based on Interior Fraser coho that spawn upstream of Hells Gate, British Columbia (including five Conservation Units: Fraser Canyon, Interior/Middle Fraser, Lower Thompson, South Thompson, and North Thompson). Steelhead spawner abundances in the Skeena and Fraser are publicly available from the Province of British Columbia. Steelhead spawner abundance in the Canadian portion of the Columbia is reported by the Okanagan Basin Monitoring and Evaluation Program.

For regions and species that did not have reliable estimates of aggregate abundance at the regional scale, we constructed an index of spawner abundance from stream spawner surveys reported in DFO's New Salmon Escapement Database System (NuSEDS) up to 2023. We accounted for variable survey effort using a proportional infilling approach to impute missing surveys based on the average decadal contributions of each stream to the aggregate. We then expanded the imputed dataset to account for smaller "non-indicator" streams. The details of this expansion approach are outlined in the Technical Documentation (salmonwatersheds.github.io/state-of-salmon/).

In total we compiled spawner abundance for 50 regional salmon populations (i.e. unique region-species combinations), with an average time series length of 58 years (range 18 to 131 years). The temporal currency of data varied among sources, with most regions and species having spawner abundance up to 2024 (n = 29) or 2023 (n = 20). The most recent year of data for Haida Gwaii Chinook was 2006 and so we do not report its current state, leaving 49 regional salmon populations with a current state assessment in the 2025 report. Fewer regions and species had estimates of total abundance because information on which rivers (and regions) salmon are destined for when caught in the ocean is not always available, making it difficult to assign catch to a region. We compiled total abundance for 21 regional salmon populations, with an average time series length of 46 years (range 24 to 132 years). Most total abundance time series were current to 2024 (n = 16) or 2023 (n = 5).

Analysis

We smoothed the raw time series of spawner and total abundances using a right-aligned running geometric mean over the generation length. This smoothing reduces the influence of dominant years for species with cyclic dynamics (e.g. Fraser sockeye) and produces an index of abundance that is less sensitive to stochastic interannual variability that is common in salmon population dynamics[37]. The generation length is based on the dominant life-history type for each species in a particular region. To facilitate comparison among species that are naturally very different in their absolute abundance, we transformed the smoothed time series into a per cent anomaly from the geometric mean abundance among all years for that species and region.

We summarised the current state as the per cent anomaly for the most recent year of the smoothed time series (i.e. the per cent difference between the geometric mean spawners over the most recent generation and the geometric mean spawners over all years). For species with long generation lengths (e.g. six years for Yukon Chinook), the current state may not reflect recent, dramatic changes in abundance because the generational average will lag behind. Where there are noteworthy changes in abundance in specific years that are not obvious from the smoothed time series, we may refer to the raw "annual abundance" estimates.

We summarised trends as the average annual per cent change in abundance, calculated from the slope of a linear regression model fitted to the log-transformed, smoothed time series. We show both short-term trends based on the slope over the most recent three generations only and long-term trends based on the slope over all available years for each species in a given region.

Data Availability

The outcomes of this State of Salmon report are publicly available through the Salmon Watersheds Program Data Library (data.salmonwatersheds.ca) as two datasets:

1. Time series of Regional Salmon Abundance by species. This dataset contains both the raw annual abundance and the smoothed time series shown in the trends plots.
2. State and Trends in Salmon Abundance for each region and species, including the values for the current state, short-term trend, long-term trend, the generation length, and the years of data.

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GLOSSARY

Total abundance: The number of salmon that survive to maturity, calculated as spawners plus catch.

Average abundance: The geometric mean of raw, annual estimates of spawner or total abundance over some specified period, such as all years of data ("long-term average abundance") or a generation ("smoothed abundance").

Critically low: Spawner abundances that are less than 1,500 fish and represent absolute counts of the regional salmon population lead to a designation of 'critically low' due to the extremely small population size and associated high risk of extirpation from environmental catastrophes (e.g. landslides) or random fluctuations in survival and reproductive success.

River-type sockeye: A life-history type of sockeye salmon that migrate to the ocean shortly after emerging from the river gravel, forgoing a freshwater rearing stage; also called "ocean-type".

Lake-type sockeye: A life-history type of sockeye salmon that rears in lakes for one or more years before migrating to the ocean.

Ocean-type Chinook: A life-history type of Chinook that migrate to the ocean shortly after emerging from the river gravel, forgoing a freshwater rearing stage in rivers.

Stream-type Chinook: A life-history type of Chinook that rear in freshwater for a year before migrating to the ocean.

Spawner abundance: The number of salmon that survive to maturity and make it to spawning grounds in rivers or lakes. Data on spawner abundance may or may not account for salmon that are removed for broodstock (i.e. to provide eggs and milt for hatchery production) or in First Nations fisheries, depending on the data source.

Conservation Unit (CU): an irreplaceable group of salmon that have unique genetic and life-history traits. Maintaining multiple Conservation Units within a region strengthens the resilience of the species as a whole and helps salmon withstand and adapt to changing conditions.

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September 24, 2025

PACIFIC SALMON FOUNDATION

Learn more at **stateofsalmon.ca**

(604) 664-7664
salmon@psf.ca