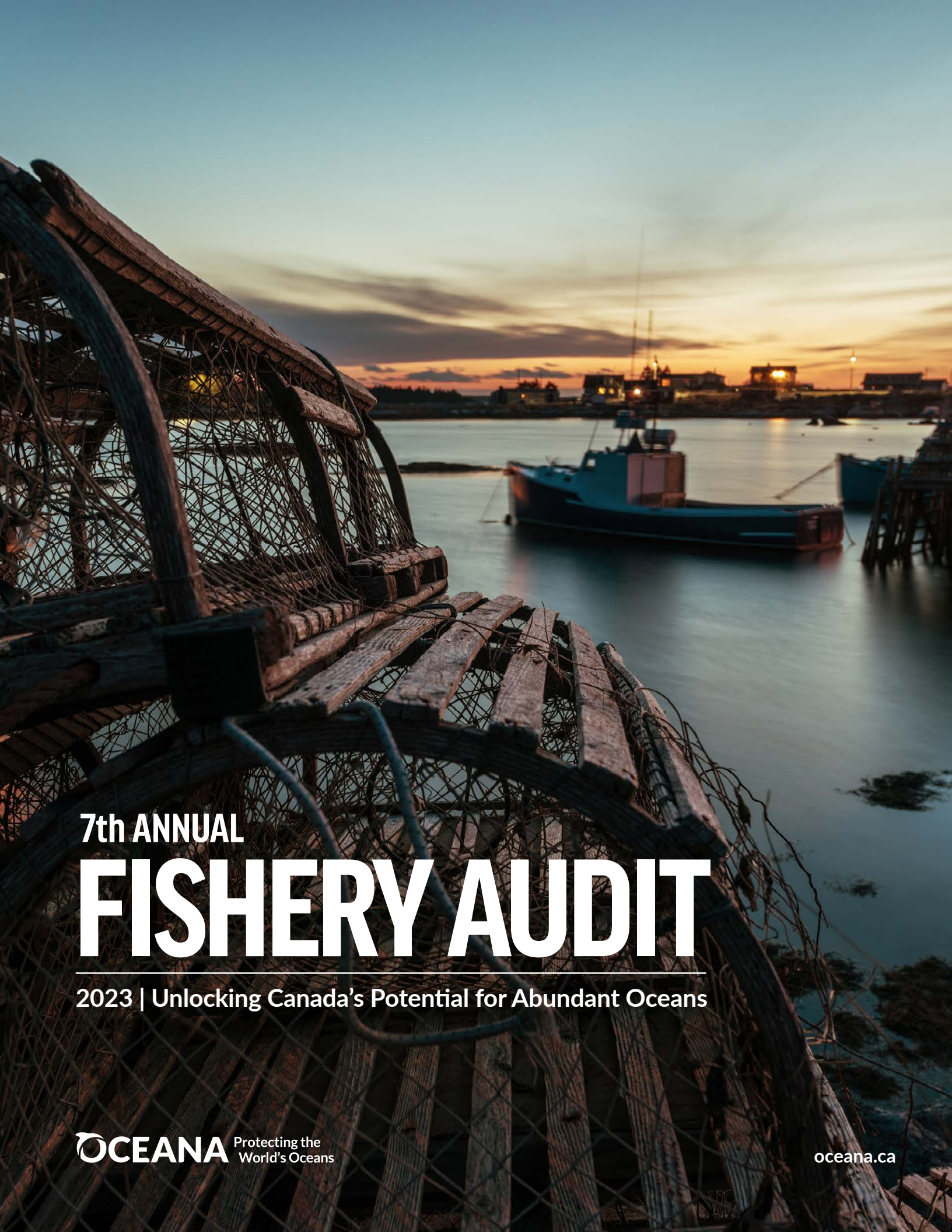

7th ANNUAL

FISHERY AUDIT

2023 | Unlocking Canada's Potential for Abundant Oceans

OCEANA Protecting the World's Oceans

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Oceana Canada's seventh annual *Fishery Audit* assesses the current state of Canada's fisheries and fisheries management, tracks annual progress, and provides recommendations to meet federal policy commitments to return abundant wild fish populations to Canada's oceans.

2023

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EXECUTIVE SUMMARY

THE DIRE CONSEQUENCES OF FISHERIES MISMANAGEMENT


Credit: Oceana Canada/Nicholas Hiscock

Oceana Canada's latest Audit reveals that Canada continues to overfish its oceans despite clear and growing threats from climate change – putting the health of marine life, coastal communities and the planet at risk.

Since the first *Fishery Audit* seven years ago revealed serious issues with the state and management of our fish stocks, the government of Canada has made significant investments, global and national commitments, and legal changes aimed at improving fisheries management. However, this has not translated to clear improvements in either the health of our fish stocks or in the government's own indicators of good fisheries management.

Today, less than a third of Canada's marine fish and invertebrate populations can be considered healthy. Nearly 40 per cent of stocks are still being managed largely in the dark due to the lack of a health status. And the policy implementation gap is widening.

Key quota decisions in 2023 once again ignored scientific advice and lacked transparency. The fisheries monitoring policy finalized in 2019 has yet to be implemented fully for even one stock, inhibiting informed decisions that account for all fishing mortality.

Despite a modernized *Fisheries Act* passed in 2019 requiring action to rebuild depleted fisheries, only 30 out of almost 200 stocks are currently prescribed by regulation. Fisheries and Oceans Canada (DFO) missed an opportunity this year to act on overfishing in Canada by failing to publish any new rebuilding plans or include more stocks under the *Act*'s regulation. **It doesn't have to be this way.**

Other progressive fishing nations have rebuilt stocks by implementing robust plans. Since 2000, the U.S. has successfully rebuilt 49 stocks and has rebuilding plans in place for 84 per cent of its overfished stocks. In Europe, reformed policies and plans have helped recover important commercial stocks like hake, plaice and anchovy by prescribing an end to overfishing.

The Canadian government knows what's needed to rebuild wild fish. It has made commitments and significant investments in solutions. But the pace of implementation is devastatingly slow. By overcoming the inertia we have documented in Oceana Canada's last seven Audits, Fisheries and Oceans Canada can ensure fishing communities and marine ecosystems flourish."

— Josh Laughren, Executive Director, Oceana Canada.

> Failing to adequately address Canada's fisheries crisis has devastating implications for the oceans, fishing communities and our planet.

Prime Minister Trudeau appointed a new Minister to lead DFO in July 2023. If this government and the new Minister act with urgency to implement existing law and policy, Canadians could quickly see improvements on the water, where it matters most — to our planet, to the life that calls the ocean home and to the fishing communities and industries that rely on thriving, healthy wild fish.

Canadians — especially those living in coastal communities — can demand better decisions and management. We can't afford seven more years of stagnation and decline of this globally important resource.

In 2023, the world's oceans hit the highest average temperatures ever recorded, providing a clear indication that climate change is intensifying. And we're already seeing the impact on Canada's fishing industry.

Scientists estimate that the 2021 marine heatwaves in Pacific Canada killed more than a billion mussels, clams and

Credit: Oceana Canada/Nicholas Hiscock

other invertebrates. Hurricanes wrought havoc on fishing communities in Atlantic Canada and Eastern Quebec, resulting in the loss of millions of dollars' worth of fishing gear and extensive damage to harbours. Meanwhile, more species are moving northward in search of cooler water — like North Atlantic right whales, as they follow the movement of copepods, their primary food source. The new presence of these critically endangered whales in the Gulf of St. Lawrence is triggering early closures of Canada's lucrative snow crab fisheries.

Failing to adequately address Canada's fisheries crisis has devastating implications for the oceans, fishing communities and our planet.

Rebuilding ocean abundance is essential to the health of Canada's seafood sector and coastal communities. It is a key step toward reconciliation with Indigenous Peoples, contributes to global food security and builds resilience to the impacts of climate change.

According to a 2023 Oceana Canada survey,[1] more than 90 per cent of Canadians believe the federal government should take stronger action against overfishing.

That means making decisions that follow the advice of scientists and ensuring we have adequate data to support those decisions. It means accounting for climate change and ecosystem impacts. It means creating — and implementing — robust rebuilding plans. And it means working collaboratively with Indigenous Peoples and leveraging Indigenous Knowledge Systems.

But the longer Canada delays, the higher the price.

Canada's new Fisheries Minister, Diane Lebouthillier, has an opportunity to help reverse the decades-long decline in our ocean abundance, leaving a powerful legacy for our oceans and coastal communities — if she acts now. That means taking action on the priority recommendations outlined in this Audit.

[1] A survey of 1,750 Canadians conducted by Abacus Data on behalf of Oceana Canada between April 28 and May 3, 2023.

THE 2023 SCORECARD


Credit: iStock/Gerald Corsi

Most Indicators for Good Fisheries Management Have Stagnated for Seven Years

Canada has both national and global commitments to steward its wild fisheries responsibly and ensure a low-carbon, high-protein source of food for the world's growing population. However, Oceana Canada's seventh annual *Fishery Audit* reveals that Canada has not met those commitments. Overall, the state of the country's marine fisheries can be summed up as:

- **Unhealthy:** A third of marine fish and invertebrate populations are either critically depleted or in the cautious zone, and less than a third can be considered healthy.
- **Without a status:** Nearly forty per cent of all marine fish and invertebrate populations are classified as uncertain due to insufficient reference points and stock status information.
- **Without a plan:** Only six of 28 critically depleted stocks have a rebuilding plan, and none of those are high quality. These few plans fail to meet the criteria laid out in the *Fisheries Act* rebuilding regulations. There were no new rebuilding plans published this year despite legal requirements to do so for 13 critical stocks by 2024.

With the accumulation of threats like climate change, overfishing and plastic pollution, the urgency to rebuild abundant marine ecosystems is greater than ever. Swift action is required to halt the declining trends in our stocks' health and bring them back to more abundant levels.

This scorecard presents the top-line results for 2023, while a deeper dive into the findings begins on page eight.

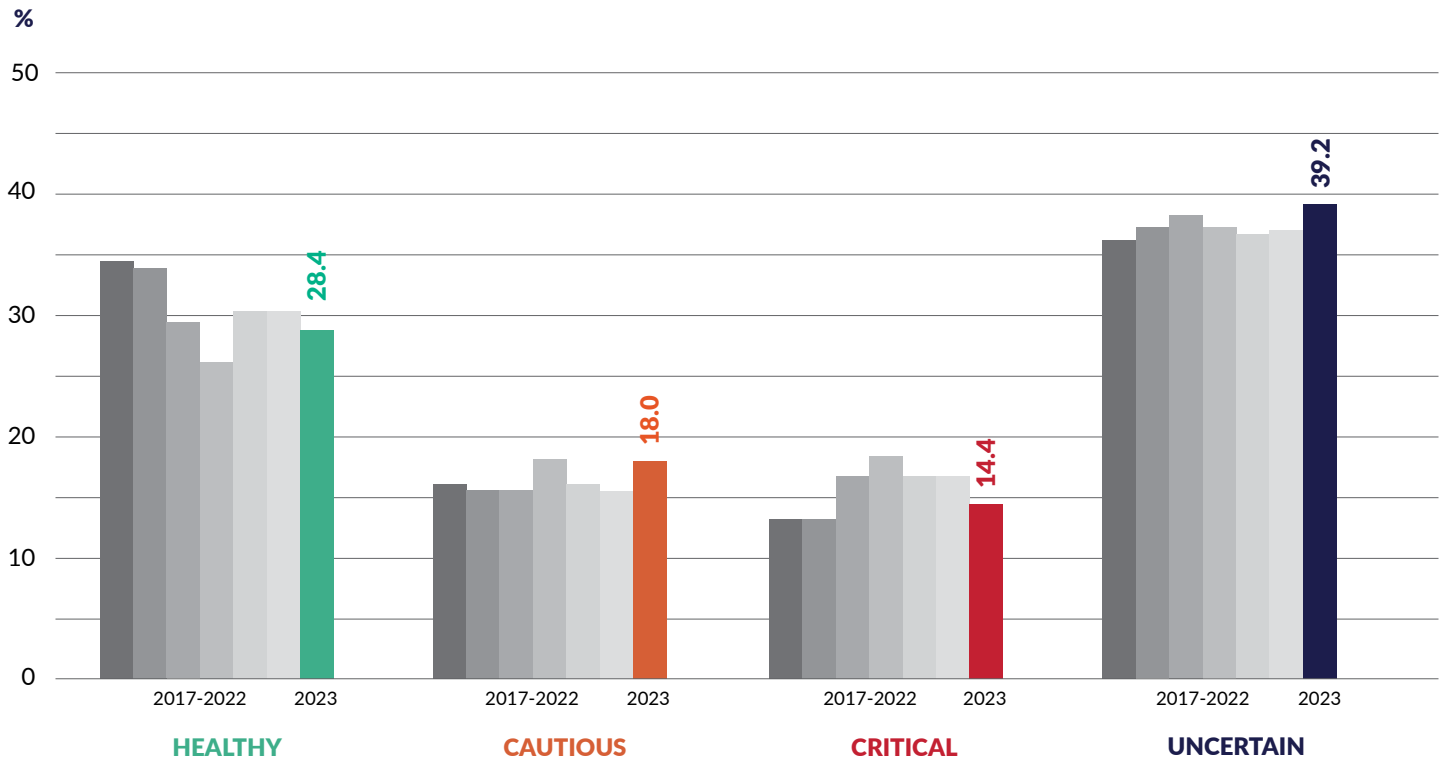
"The continuing poor health of Canada's fish stocks demonstrates that we're failing to manage our fisheries for success and we're getting a dismal return — both ecological and societal — on investments."

— Dr. Robert Rangeley, Science Director, Oceana Canada

COMPARED TO 2022, THERE ARE NOW:

STOCKS	ZONES			
	HEALTHY	CAUTIOUS	CRITICAL	UNCERTAIN
At greater risk	4 FEWER ✗	5 MORE ✗		
Managed in the dark				4 MORE ✗
At reduced risk			5 FEWER ✓	

HEALTH STATUS OF CANADA'S FISHERIES, 2017 TO 2023



Healthy, Cautious and Critical

DFO has three categories of fish stock health: healthy, cautious and critical. These are often defined relative to the stock biomass that would produce a maximum sustainable yield (B_{MSY}) — the largest volume of fish that can theoretically be harvested without reducing the size of the population over the long term.[2]

HEALTHY

A stock is considered healthy if its biomass is greater than 80 per cent of that which would support B_{MSY}. When a stock is in this zone, fisheries management decisions are designed to keep it healthy.

CAUTIOUS

A stock falls in the cautious zone if its biomass is between 40 and 80 per cent of B_{MSY}. If a stock falls into this zone, harvesting rates should be reduced to avoid serious depletion and to promote rebuilding to the healthy zone.

CRITICAL

A stock falls in the critical zone if its biomass is less than 40 per cent of B_{MSY}. If a stock moves into the critical zone, serious harm is occurring, and conservation actions become crucial.

Using MSY-based reference points aligns with international standards. However, this approach is increasingly criticized for failing to meet broader social and ecological objectives and failing to incorporate complementary Indigenous Knowledge Systems.[3]

[2] Maximum sustainable yield (MSY) is a globally accepted standard for fisheries management. The UN Food and Agriculture Organization's Code of Conduct for Responsible Fisheries, to which Canada is a signatory, indicates that governments or other agencies responsible for fisheries management need to adopt appropriate measures, based on the best scientific evidence available, that are designed to maintain or restore stocks at levels capable of producing MSY.

[3] Frid, A., Wilson, K. L., Walkus, J., Forrest, R. E., Reid, M. (2023). Re-imagining the precautionary approach to make collaborative fisheries management inclusive of Indigenous Knowledge Systems. Fish and Fisheries, 00: 1-19. DOI: 10.1111/faf.12778.

What It Takes to Restore Abundance to Our Oceans

Good management decisions are based on a **precautionary approach**. This means being cautious when scientific knowledge is uncertain and taking action to avoid serious harm to fish stocks and the marine ecosystem even when adequate information isn't available.

Fish stocks cannot be managed in isolation. Oceans are complex ecosystems where everything is interconnected and what happens to one species affects others. Ecosystem-based management considers the impact of decisions on target and non-target fisheries species and their interactions, the habitats they depend on and the ecosystem of which they are a part.

And an ecosystem-based approach includes the deep place-based understanding and multi-generational perspectives of **Indigenous Knowledge Systems** that have allowed Indigenous Peoples to steward their local ecosystems for millennia.

> Oceans are complex ecosystems where everything is interconnected and what happens to one species affects others.

© Oceana/Juan Cuetos

THERE ARE THREE PILLARS REQUIRED TO REBUILD AND MAINTAIN THE HEALTH OF CANADA'S FISHERIES:

Sound science
to understand the status of stocks, their biology and how fishing pressure and environmental factors will affect them in the future.

Effective monitoring
to determine how many fish are harvested and discarded from all sources of fishing activity.

Good management decisions
based on data that considers stocks in the context of a changing ecosystem and prioritizes long-term health and abundance over short-term yields.

For healthy fisheries and lasting change, DFO must reset the relationship with Indigenous Peoples and work together through collaborative fisheries management so we can move beyond single-species management, toward ecosystem-based approaches that intertwine Indigenous Knowledge Systems with Western science in a way that restores healthy oceans and ways of life for all Canadians."

— Doug Neasloss, Chief Councillor, Kitasoo Xai'xais Nation

Credit: Oceana Canada/Evermaven

Science Indicators

Encouraging Developments but Significant Shortcomings

There have been several positive developments since last year's Audit. More stocks now have upper reference points, which is key for informing long-term rebuilding goals and maintaining healthy fisheries. Mortality estimates have improved, increasing certainty in management measures. And more stocks now have Integrated Fisheries Management Plans, enhancing transparency and accountability in decision-making. Change is possible, and the groundwork is already being established.

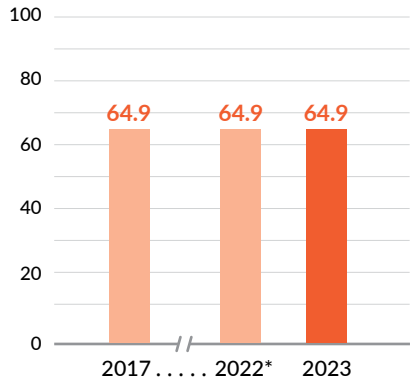
However, significant shortcomings persist. Over a third of stocks still lack limit reference points: the threshold at which serious harm is occurring to the stock and conservative measures must be prioritized. Management decisions are often made without giving the public access to essential scientific information. The percentage of stocks with recent assessments has been consistently declining since 2020, while the percentage of stocks with exploitation rate data remains low. Furthermore, the science and management documents for nearly three-quarters of fish stocks do not formally consider climate change, despite the availability of scientific evidence.

> It is imperative that Fisheries and Oceans Canada prioritize filling key science gaps to accelerate the implementation of fundamental requirements for management.

INDICATOR:

Stocks with sufficient data to assign health status (%)

Purpose: Allow scientists to make robust estimates of the amount of fish in the water and assign stock health status.

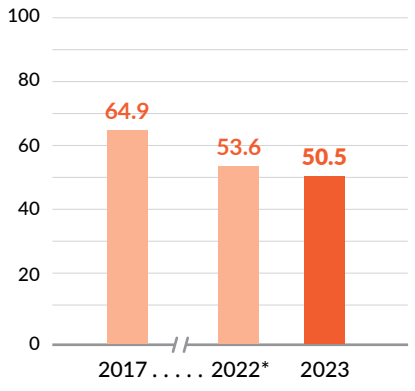


More than a third of stocks don't have sufficient data to assign them a health status.

INDICATOR:

Stocks with recent biomass estimates (%)

Purpose: Help managers make decisions based on recent estimates (i.e., within the last five years) of how many fish are in the water.



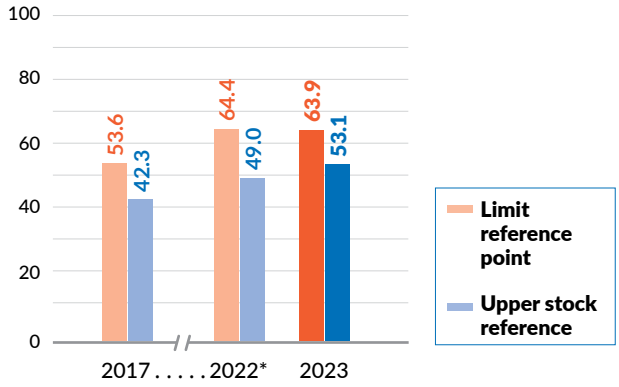
Today, barely half of stocks have had recent biomass estimates — an indicator that has steadily declined over the past seven years. Encouragingly, there is an increase in the number of stocks with interim status updates.

* 2018 to 2021 data available at Oceana.ca/FisheryAudit2023

INDICATOR:

Stocks with reference points established (%)

Purpose: Allow managers to assess whether a stock is in healthy, cautious or critical condition, set appropriate harvest levels and gauge the success of management measures.



Since 2017, there has been a significant increase in the percentage of stocks with LRPs and USRs. However, more than a third of stocks still lack LRPs and almost half lack USRs. The past year saw a decline in the percentage of stocks with LRPs but an increase in the percentage with USRs, which now includes all Pacific herring stocks.

REFERENCE POINTS

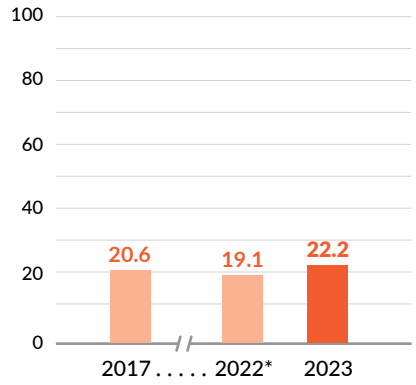
An **upper stock reference** (USR) identifies the boundary above which a fishery can be considered healthy, while a **limit reference point** (LRP) identifies the boundary below which it can be considered to be in a critical state. DFO policies — and global best practices — dictate that corrective action should be taken before a stock reaches the limit reference point.

In contrast to the scientifically determined USR and LRP, a **target reference point** (TRP) refers to the desired state of a stock, based on productivity goals, broader ecological considerations and socioeconomic objectives for the fishery. The TRP is often set at or above the USR.

INDICATOR:

Stocks with fishing mortality estimates (%)

Purpose: Help determine the rate of fish removed from a population by fishing activities and inform sustainable fishing limits.

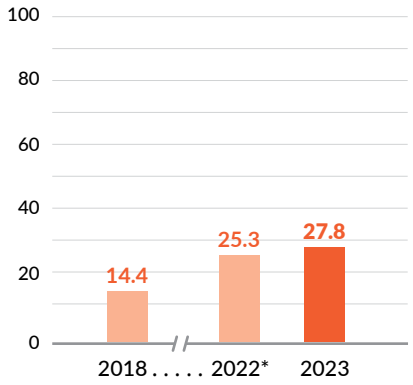


Nearly 80 per cent of Canada's wild marine fish populations lack an estimate of fishing mortality. Meanwhile, only four stocks have undergone recent stock assessments that indicate all suspected sources of mortality were accounted for: commercial, recreational, bait, food-social-ceremonial and bycatch.

INDICATOR:

Stocks with natural mortality estimates** (%)

Purpose: Help make better fisheries management decisions by determining the rate at which fish die from natural causes.



Between 2018 and 2023, there has been a significant increase in the percentage of stocks with an estimate of natural mortality rates. This is likely due to increased use of new modelling approaches and research on natural mortality as a potential driver of stock dynamics.

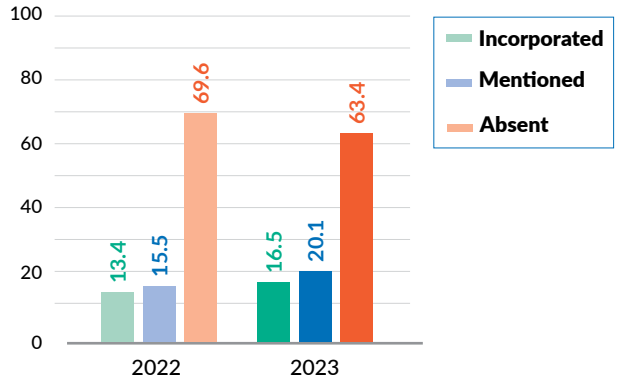
* 2018 to 2021 data available at Oceana.ca/FisheryAudit2023

** New indicator in 2018

INDICATOR:

Science and management documents that incorporate climate change considerations*** (%)

Purpose: Assesses the vulnerability and impact of climate change on fish stocks to inform climate-ready management measures.



*** New indicator in 2022

Only 16.5 per cent of DFO's most recent science and management documents fully incorporate climate change considerations, despite the availability of peer-reviewed data on climate change impacts for 91 per cent of stocks.

SCIENCE RECOMMENDATIONS

- Manage fisheries based on the best available science and policy, including establishing a status and limit reference point (LRP) for all uncertain stocks.
- Account for climate change effects on marine ecosystems.

Crabs, Climate Change and Canada's Seafood Economy

Snow crab supports high-value fisheries and thousands of jobs across Atlantic Canada and Quebec. But this cold-water species is also highly sensitive to temperature changes,[4] and marine heat waves can cause mass die-offs. That's why it's crucial to use assessment models that consider environmental conditions, build climate adaptation measures into management plans and diversify Canada's seafood economy to lessen our dependence on a small number of species.


Credit: Oceana Canada/Nicholas Hiscock

[4] Lewis, S. A., Stortini, C. H., Boyce, D. G., & Stanley, R. R. (2023). Climate change, species thermal emergence, and conservation design: a case study in the Canadian Northwest Atlantic. FACETS. Vol 8:1-16. DOI: 10.1139/facets-2022-0191.

This year's Audit uncovers a troubling truth: Fisheries and Oceans Canada's efforts to rebuild fish populations continue to fall short of meeting policy commitments and the legal requirements of the modernized *Fisheries Act*, putting at risk the health of Canada's fish and fisheries."

— Rebecca Schijns, Fishery Scientist, Oceana Canada

Credit: iStock/Don White

Catch Monitoring Indicators

After Big Gains, Progress Has Stalled

Good fisheries management requires monitoring to determine how many fish are harvested — and how many are discarded — each year. Since 2017, there has been a significant increase in the number of fisheries that are now required to have either monitoring via at-sea observers, electronic monitoring, dockside monitoring of landings, logbooks that record the entire catch, or some combination of these.

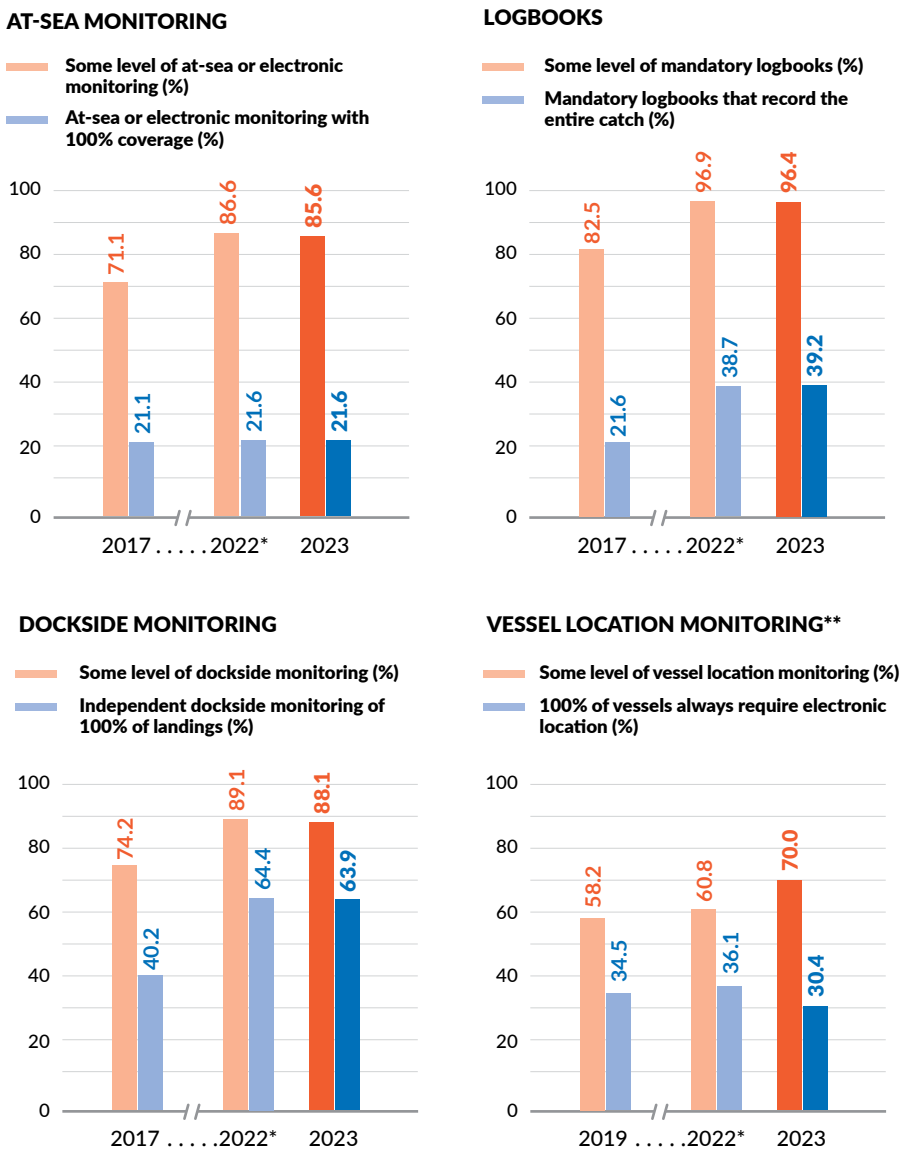
These increases have been driven by the growing number of stocks with Integrated Fisheries Management Plans, greater clarity on monitoring requirements and a 2019 DFO review that provided more documentation on monitoring coverage levels to inform the development and implementation of a new national fisheries monitoring policy.

Despite those overall improvements, pervasive gaps remain. Often, fisheries fail to achieve the targeted level of coverage, and not all monitoring includes both the targeted species and unintended bycatch. Although Canada introduced the national Fishery Monitoring Policy in 2019 to account for all catches in a fishery, it has yet to be fully implemented in any fishery. DFO should accelerate implementation of the policy, establish deadlines for compliance and enforce the policy across all fisheries.

INDICATORS:

Stocks with fisheries that have catch monitoring in place (%)

Purpose: Help prevent overfishing, control bycatch and collect scientific information for stock assessments.



Over the past seven years, there has been a significant increase in the percentage of stocks requiring some level of at-sea or electronic monitoring, logbooks, dockside monitoring or vessel location monitoring. However, there has been a decline in the percentage of stocks requiring 100 per cent vessel location monitoring and at-sea or electronic monitoring since Oceana Canada began tracking this indicator in 2019.

* 2018 to 2021 data available at Oceana.ca/FisheryAudit2023

** Oceana Canada began collecting data for this indicator in 2019

Good monitoring paints a clear picture of where and when fish harvesting takes place and how much of each species is removed from the ocean.

MONITORING RECOMMENDATION

- Count everything caught in a fishery — including for recreational and bait purposes — and account for all sources of fishing in management decision-making.

Phasing Out Paper

Emerging technologies such as on-board video cameras and electronic logbooks can support stock assessments and make data collection more timely, accurate and cost-effective. A National Electronic Logbook initiative is underway at DFO that aims to phase out paper logbook tracking by 2024 to modernize management, support harvesters and collect near real-time data.

WHY A KEEN EYE IS KEY TO REDFISH RECOVERY

Since 2011, redfish in the Gulf of St. Lawrence have made a remarkable comeback. As the abundance and body size of these fish continue to grow, so does the pressure to re-open the commercial fishery for the once-critically-depleted stock. But careful monitoring will be key to any re-opening once the stock shows consistently healthy levels.

That's because there are actually two species of redfish in the Gulf of St. Lawrence, and they look identical to the untrained eye. Deepwater redfish (*Sebastes mentella*) are healthy and flourishing. However, there are significantly fewer Acadian redfish (*Sebastes fasciatus*), putting them in the cautious zone.

DFO surveys found that there were 4.4 million tonnes of redfish in the Gulf of St. Lawrence in 2019 — the highest biomass for redfish on record. But breaking that down further reveals that deepwater redfish dominate the landscape, accounting for 99 per cent of the biomass.

So, while a sustainable fishery may be able to target deepwater redfish, it would need to avoid undersized Acadian redfish and other bycaught species. And the main way to tell them apart is by counting the number of soft rays in their anal fin. This so-called "species split" takes some time to master, but onboard observers can be trained in this technique. Monitoring is an essential component of the rebuilding process.

Credit: Alamy Stock Photo/Zip Lexing

Management Indicators

Delays, Inconsistencies and Troubling Trends

To successfully rebuild depleted stocks — as progressive fishing nations that adhere to globally accepted fisheries management standards have done — Canada must create and implement robust plans. However, despite important progress on Haida Gwaii Pacific herring, Atlantic herring in NAFO Division 4T, Gulf groundfish, Atlantic cod and mackerel, Canada failed to publish any rebuilding plans this year.

Another key is ensuring fisheries decisions are transparent, predictable, based on the best available evidence and informed by government policy and Canadian law. Yet the lead-up to the 2023 fishing season highlighted some troubling trends and blatant inconsistencies from the Canadian government.

Management decisions for some depleted populations contradict scientific advice, DFO's precautionary approach, the intent of the *Fisheries Act* and the Minister's mandate.

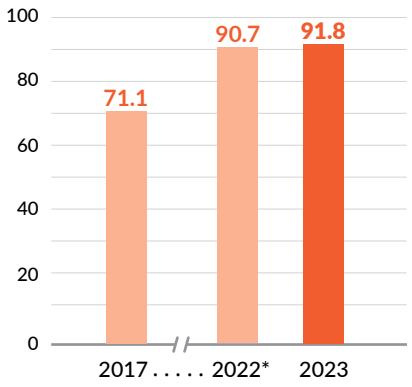
As discussed on the next page, 2023 quotas for many stocks were simply rolled over from the previous year, rather than taking the latest data into account. Meanwhile, quota announcements were delayed for many important stocks, including Atlantic forage fish, with no explanation and no indication of when the information could be publicly accessible.

> Canada must improve fisheries management to halt biodiversity loss, advance reconciliation with Indigenous Peoples and protect against climate change.

INDICATOR:

Stocks included in Integrated Fisheries Management Plans (IFMPs) (%)

Purpose: Provide a planning framework for the conservation and sustainable use of Canada's fisheries, clearly outlining how a fishery will be managed over a given period.

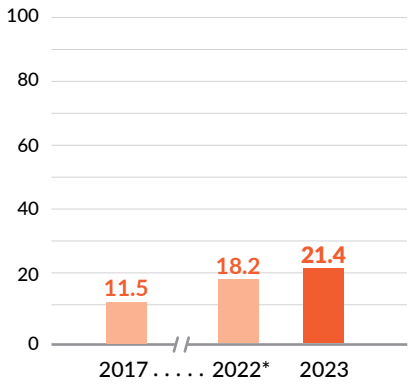


There has been a significant increase in the percentage of stocks with IFMPs since 2017 and a slight increase over the past year.

INDICATOR:

Stocks in the critical zone with rebuilding plans in place (%)

Purpose: Provide a planning framework to rebuild stocks out of the critical zone. Serious harm is occurring to stocks in the critical zone, and conservation actions are crucial.



Although numbers have improved since 2017, they are still unacceptable. Today, only six of 28 stocks in the critical zone have a rebuilding plan.

MANAGEMENT RECOMMENDATIONS

- Implement 10 new rebuilding plans and three revised rebuilding plans by April 2024 as required by the Fish Stocks provisions.
- Implement rebuilding plans for remaining critical stocks by 2026.
- Make management decisions that are consistent with the law.

* 2018 to 2021 data available at Oceana.ca/FisheryAudit2023

QUESTIONABLE QUOTAS FOR FORAGE FISH AND NORTHERN COD

Before fishing boats can hit the water each season, Canada's Minister of Fisheries and Oceans sets an annual harvesting quota for each fishery. Good fisheries management demands timely, transparent quotas that draw on the best available scientific data, including the current size of the population, relative to reference points. They must incorporate uncertainty and broader ecosystem considerations. And they must be informed by policy and consistent with Canada's modernized *Fisheries Act*.

However, in several instances in 2023, DFO rolled over quota levels from last year contrary to advice based on new evidence and in direct opposition to the government's rebuilding commitments.

One example is capelin in northeast Newfoundland and Labrador. This crucial forage species feeds other fish and marine life, including the historically overfished and culturally significant northern cod. But the Minister set the 2023 quota at 14,533 tonnes — higher than this critically depleted population can support.[5]

The same is true for several other depleted forage fish. Although fisheries closures were maintained for some populations, such as certain Pacific herring stocks and Atlantic mackerel, fishing pressure remains too high on capelin and fall-spawning Atlantic herring in the Southern Gulf of St. Lawrence, according to DFO's own science. **Simply put, it's government-sanctioned overfishing.**

Meanwhile, the Minister also defaulted to last year's harvest allowance for the stewardship fishery of northern cod, setting the quota at 12,999 tonnes, rather than a recommended precautionary limit of 4,300 tonnes.[6] **This decision fails to follow DFO's own science and policy to rebuild a population that has technically been under a fishing moratorium for the last three decades.**

Boats in harbours and waterways across Canada buoy local economies and are integral to our culture. If we care about fishing — and the people and communities fisheries support — then we must also care about the fish. To do this, the government must provide the public with regular evidence that measures progress (and failings) toward protecting wild fisheries. Without these insights, the public operates in the dark and at a time when the stakes have never been higher to protect fish, fishing and coastal communities."

— Jenn Thornhill Verma, freelance journalist from Newfoundland now living in Ottawa, covering fisheries, oceans and climate change

Management decisions that followed scientific advice

- ✓ Pacific herring (Haida Gwaii)
- ✓ Atlantic herring (Southern Gulf of St. Lawrence spring spawner)
- ✓ Atlantic mackerel

Management decisions that ignored scientific advice

- ✗ Capelin (2J3KL)
- ✗ Atlantic herring (Southern Gulf of St. Lawrence fall spawner)
- ✗ Northern cod (2J3KL)
- ✗ Atlantic herring (Southwest Nova Scotia/Bay of Fundy spawner)

[5] Oceana Canada (2022). Capelin in Crisis: Urgent Action Needed to Rebuild Abundance. https://oceana.ca/en/reports/capelin-in-crisis/
[6] Oceana Canada (2023). Oceana Canada's Recommendations for Northern Cod. https://oceana.ca/en/reports/oceana-canadas-recommendations-for-northern-cod/

EMBRACING INDIGENOUS KNOWLEDGE SYSTEMS


Credit: iStock/KarenMassier

For millennia, Indigenous Peoples have intentionally and respectfully stewarded the species and ecosystems that provide food, medicines and materials. These relationships are upheld by laws, values and empirical ways of knowing, referred to collectively as Indigenous Knowledge Systems. Incorporating that time-tested approach into collaborative fishery management in Canada can improve fisheries sustainability and strengthen ecosystem and societal resilience.

By pairing the holistic, place-based knowledge of Indigenous Peoples with Western science in a "Two-Eyed Seeing" approach,[7] DFO can ensure actions taken today don't compromise the future of a species or ecosystem.

It's also an opportunity to advance reconciliation. Instead of undertaking species-by-species negotiations around access to resources, DFO can help reset its relationships with Indigenous Peoples by developing and implementing collaborative fisheries management agreements.

Current policies under DFO's Sustainable Fisheries Framework exclude Indigenous Knowledge Systems. And they do not align with international, national and departmental commitments to reconciliation under the *United Nations Declaration on the Rights of Indigenous Peoples Act*.

But that could be poised to change. Recent agreements between Indigenous, federal and provincial governments are creating a new legal landscape that could allow collaborative fisheries management that includes Indigenous Knowledge Systems and Two-Eyed Seeing.

One important example is the 2021 Fisheries Resources Reconciliation Agreement between Canada and Coastal First Nations in B.C., which seeks to establish a Nation-to-Nation approach to fisheries management.

The 2023 action plan for the B.C. Northern Shelf Initiative is another example, bringing together First Nations, the Government of Canada and the Province of B.C. to plan for a Marine Protected Area Network on Canada's West Coast.

Revising existing policies such as the Precautionary Approach creates an opportunity to incorporate Indigenous Knowledge Systems, shifting the focus away from maximizing sustainable exploitation of organisms and toward a more holistic approach that supports resilient ecosystems, cultures and local economies.

Seizing these opportunities to transform fisheries management in Canada will make fisheries more sustainable. It will improve the resilience of marine ecosystems. And it will advance reconciliation with Indigenous Peoples in meaningful ways.

INDIGENOUS KNOWLEDGE SYSTEMS RECOMMENDATIONS[8]

- Revise the suite of policies under the Sustainable Fisheries Framework to meaningfully include Indigenous Knowledge Systems in fisheries management.
- Implement collaborative fisheries management agreements.
- Support fisheries, habitat monitoring and management initiatives by Indigenous Peoples.

[7] Two-Eyed Seeing is a term based on the Mi'kmaw concept of Etuaptmumk, first coined by Mi'kmaw Elders Albert Marshall and Murdena Marshall.

[8] These recommendations summarize the more detailed list found in Frid, A., Rangeley, R. and Schijns, R. (2023). Inclusion of Indigenous Knowledge Systems in collaborative fisheries management can improve fisheries sustainability and strengthen ecosystem resilience. Oceana Canada. This appendix to Oceana Canada's 2023 Fishery Audit can be found at Oceana.ca/FisheryAudit2023.

> The Indigenous principle of taking only what you need and leaving lots for the ecosystem promotes greater abundance, bigger fish and more resilient food webs.

Credit: iStock/Wirestock

FISHERIES ACT PROGRESS REPORT


Credit: iStock/Tom Becker

Progressive fishing nations have rebuilt stocks by implementing robust and strong laws that mandate rebuilding plans. The U.S. has successfully rebuilt 49 stocks since 2000 and has put rebuilding plans in place for 84 per cent of its overfished stocks. In Europe, the reformed Common Fisheries Policy and recovery plans have resulted in an end to the overfishing of hake, plaice and anchovy and mandated rebuilding.

Canada is falling far behind.

Currently, DFO has established rebuilding plans for only six out of 28 critically depleted stocks. The modernized *Fisheries Act* can — and must — mark a turning point.

Once a critical zone stock is prescribed under the *Fisheries Act* rebuilding regulations, DFO is legally required to develop a rebuilding plan for it within specified timeframes. And while that plan is being developed, DFO must ensure that any fishing allowed is consistent with building the stock out of the critical zone.

But we're still waiting to see results.

In April 2022, regulations came into force prescribing the first batch of 30 major fish stocks under the amended *Act*. Thirteen of these are in the critical zone, which means DFO is legally required to have rebuilding plans in place for them by April 2024. That deadline is fast approaching, but to date, none have been completed.

Rebuilding plans for three critical stocks in the first batch — northern cod, Atlantic mackerel and northern shrimp in SFA 6 — exist but still need to be strengthened to comply with the rebuilding regulations. And eight new plans that were scheduled to be published by now have been postponed to the end of 2023/2024.

Encouragingly, rebuilding plans for Pacific herring in Haida Gwaii and Atlantic cod in NAFO 3Ps are near completion, although not yet published. And eight others are in development: one for Atlantic herring in NAFO Division 4T (spring spawner component), one for cod in the northern Gulf of St. Lawrence, two for Chinook salmon in the Okanagan and West Coast of Vancouver Island and four for groundfish in the Gulf of St. Lawrence.

Meanwhile, DFO has proposed listing an additional 62 stocks under the *Fisheries Act* rebuilding regulations but has yet to prescribe them. This slow process continues to inhibit recovery and cause long-term harm to fisheries, communities and the ecosystem. Oceana Canada is calling for DFO to include all depleted stocks in regulations and implement 13 plans by April 2024.

RECOMMENDATIONS

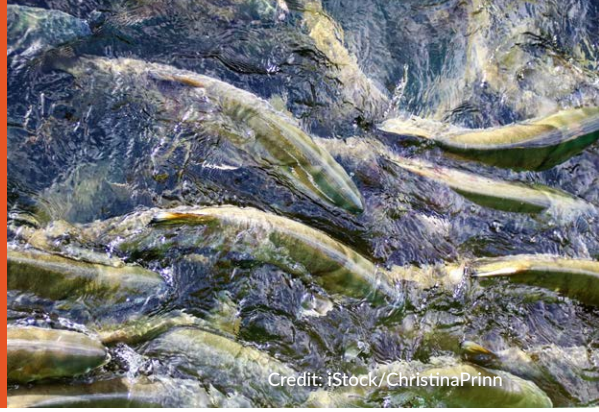
- Prescribe all remaining critical and cautious stocks to the Fish Stocks provisions in the *Fisheries Act* by April 2024.
- Include all other stocks in regulations by December 2024.

REVIVING HAIDA GWAII PACIFIC HERRING: A COLLABORATIVE REBUILDING PLAN

The draft rebuilding plan for Haida Gwaii Pacific herring serves as a clear example of the advantages of collaboration. Developed in partnership between Canada and the Council of the Haida Nation, the plan seeks to rebuild not only herring populations but also entire ecosystems that can sustain coastal communities for generations to come. This plan exceeds regulatory requirements by embracing an ecosystem-based management approach and incorporating Haida traditional knowledge. Measures that support rebuilding herring, such as closures, are maintained.

Credit: Alamy Stock Photo/ John Elk III

REGIONAL BREAKDOWN OF CANADA'S MOST DANGEROUSLY DEPLETED STOCKS


Credit: iStock/ChristinaPrinn

Today, Canada has the necessary regulatory, policy and science foundations in place to rebuild wild fish for the benefit of ocean ecosystems, coastal communities and the seafood industry. Yet only six of 28 critically depleted stocks have rebuilding plans in place.

More than 80 per cent of those stocks are concentrated in the Atlantic Ocean — the legacy of historic overfishing and DFO's decades-long failure to implement measures to restore abundance.

There are no healthy forage fish populations in the Atlantic and Pacific regions. These species are critical links in marine ecosystems, providing food for larger fish, seabirds and marine mammals. Prioritizing their recovery is essential.

Forage fish are particularly vulnerable to the effects of climate change due to impacts on their spawning habitat and the abundance of their food supplies. But because they are small fish that reproduce relatively quickly, it often doesn't take long to rebuild populations once catch limits are lowered and environmental conditions are positive. This creates cascading benefits throughout the entire ecosystem.


Credit: iStock/wrangel

Credit: iStock/StephenBridger

REBUILDING STATUS FOR CRITICAL STOCKS

REGION	TOTAL # OF CRITICAL STOCKS	HAS A PLAN	DELAYED[9]	# REQUIRING REBUILDING PLANS BY 2024
Pacific[10]	5	0	1	1
Gulf	7	0	5	5
Maritimes	5	3	0	0
Quebec	2	0	1	1
National Capital Region[11]	2	2	0	2
Newfoundland and Labrador[12]	7	1	1	2
Arctic[13]	0	0	0	0

[9] Delayed refers to the rebuilding plans identified by DFO in previous work plans (2022–2023) whose dates of completion have been revised in the latest work plan (2023–2024). In most cases, this is because these stocks have been listed in the new rebuilding regulations and are therefore subject to additional legal requirements.

[10] Does not include critical salmon management units (two of which are listed in Batch 1). Also note that two stocks with rebuilding plans (bocaccio and yelloweye inside) have grown above their LRPs and out of the critical zone.

[11] Both rebuilding plans (Northern shrimp in SFA6 and Atlantic mackerel) require revisions to comply with the regulations.

[12] Northern cod rebuilding plan requires revisions to comply with regulations.

[13] There are currently no critical stocks identified in the Arctic region. However, climate change may shift stock distributions poleward and deeper. It will be important to continue monitoring Arctic fish populations and adapt with effective management as needed.

IN TEN YEARS, HALF OF CANADA'S STOCKS COULD BE HEALTHY


Credit: iStock/DaveAlan

A better future is possible — if the necessary measures are taken with urgency.

First and foremost, we must give fish populations the best chance of recovery by ending overfishing. This includes ensuring critical stocks are fished at the lowest possible levels and determining biomass estimates for uncertain stocks so sustainable quotas can be set.

We must also address the cumulative pressures on fish and the marine ecosystem — especially those caused by climate change.

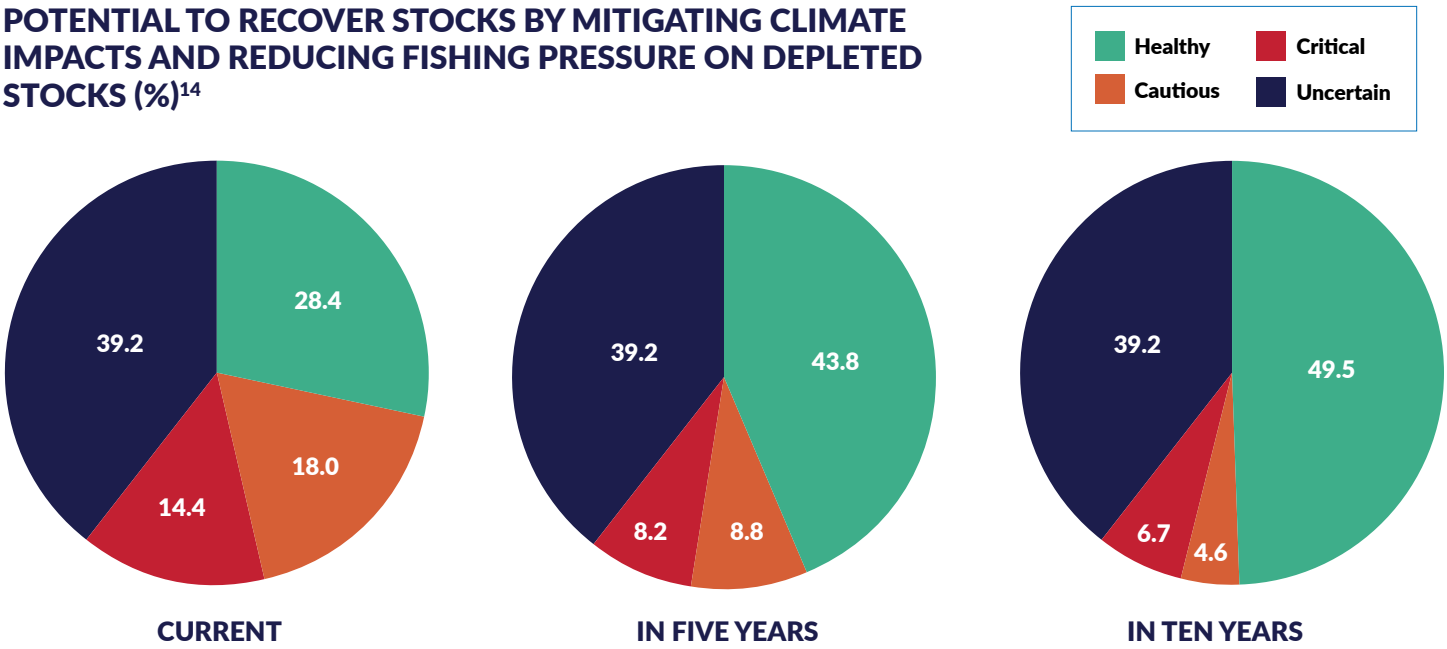
Climate change is affecting fisheries around the world, raising water temperatures, changing water chemistry, impacting biological processes, altering migratory patterns and disrupting habitats.

Restoring marine abundance means reducing greenhouse gas emissions to keep them below internationally recognized thresholds. It also means adapting fisheries management to the climate impacts that are already evident. Failing to do so will cause further declines in fishery health and prolong the time it takes for fish populations to recover.

If Canada follows the rebuilding regulations for all fish stocks and incorporates and mitigates climate impacts in fisheries management decisions, the proportion of healthy stocks could increase from less than 30 per cent today to half of all populations by 2033.

By rebuilding fish populations, we can help restore ecosystems, enhance food security and support the livelihoods of millions of people who depend on fishing for their income and cultural identity.

POTENTIAL TO RECOVER STOCKS BY MITIGATING CLIMATE IMPACTS AND REDUCING FISHING PRESSURE ON DEPLETED STOCKS (%)[14]



[14] This figure is part of a more detailed analyses found in McLennan, L., Schijns, R. and Rangeley, R. (2023). Projections of fishery recovery in Canada. Oceana Canada. This appendix to Oceana Canada's 2023 Fishery Audit can be found at Oceana.ca/FisheryAudit2023

SUMMARY OF RECOMMENDATIONS


Credit: Oceana Canada/Nicholas Hiscock

Modernizing fisheries management in Canada means ending overfishing, especially on critically depleted stocks, and taking climate change impacts into account. It means ensuring there is sufficient data and transparency to support sustainable fisheries. And it means fulfilling the government's obligations to reconciliation with Indigenous Peoples. To achieve this, Oceana Canada calls on DFO to complete the following key actions within the next year:

1. **Prescribe all remaining stocks in the critical and cautious zones** under the Fish Stocks provisions in the *Fisheries Act* and make management decisions that are consistent with the rebuilding regulations.

2. **Manage fisheries based on the best available science and Indigenous Knowledge Systems** by revising the suite of policies under the Sustainable Fisheries Framework to meaningfully implement Two-Eyed Seeing approaches, including through collaborative agreements.

3. **Account for climate change effects on marine ecosystems** by implementing climate-adaptive approaches in fisheries management and prioritizing rebuilding depleted forage fish.

4. **Count everything caught in a fishery** — including for recreational and bait purposes — and make decisions that account for all sources of fishing mortality.


Credit: Oceana Canada/Nicholas Hiscock

Fisheries and Oceans Canada's To-Do Checklist

SCIENCE

- [x] **Manage fisheries based on the best available science and policy, including establishing status and limit reference points for all uncertain stocks:** DFO must prevent further declines in the health of Canada's stocks by implementing informed recovery measures and ensuring the provisions under the *Fisheries Act* rebuilding regulations apply to all stocks.

- [x] **Account for climate change effects on marine ecosystems:** DFO must assess the vulnerability of stocks to climate change, incorporate these risks into management decisions and consider ecosystem impacts. Crucially, DFO should prioritize rebuilding depleted forage fish, which are particularly vulnerable to climate impacts.

MONITORING

- [x] **Count everything caught in a fishery — including for recreational and bait purposes — and account for all sources of fishing in management decision-making.** DFO must accelerate efforts to modernize fisheries monitoring, including a transition to electronic reporting and monitoring technologies that record all catches.

MANAGEMENT

- [x] **Implement 10 new rebuilding plans and three revised rebuilding plans by April 2024** as required by the Fish Stocks provisions.

- [x] **Prescribe all remaining critical and cautious stocks to the Fish Stocks provisions by April 2024** and implement rebuilding plans for remaining critical stocks by 2026.

- [x] **Include all other stocks in the Fish Stocks provisions by December 2024.**

INDIGENOUS KNOWLEDGE SYSTEMS

- [x] **Revise the suite of policies under the Sustainable Fisheries Framework to meaningfully include Indigenous Knowledge Systems in fisheries management.**

- [x] **Implement collaborative fisheries management agreements with Indigenous Peoples.**

- [x] **Support fisheries, habitat monitoring and management initiatives by Indigenous Peoples.**

AUDIT METHODOLOGY


Credit: Oceana Canada/Nicholas Hiscock

The data in this report focuses exclusively on Canada's marine fisheries. This includes finfish, shellfish and other invertebrates but not freshwater fish or fish that spend part of their life in freshwater, like salmon. The 2023 data in this report covers the period from July 2, 2022, to July 1, 2023. Note that each year Oceana Canada corrects minor errors found during the update process. As a result, some of the values for previous years may differ slightly from past reports.

Canada's fisheries management performance is assessed using indicators developed from globally accepted best practices and DFO's policy framework and is based on data from 194 index stocks[15] published on DFO websites.

For full details about the methodology and analysis, visit oceana.ca/FisheryAudit2023.


Credit: Oceana Canada/Nicholas Hiscock

[15] *The Fishery Audit index stock list (194 stocks) was created for the* 2017 Fishery Audit. *It is based on marine fish and invertebrate stocks included in Oceana Canada's 2016 report* Canada's Marine Fisheries: Status, Recovery Potential and Pathways to Success, *combined with those included in the first public release of the DFO's* Sustainability Survey for Fisheries *and any stocks with newly available information from government reports that year.*

TAKE ACTION

It's time to stop overfishing and rebuild our oceans.

1. **Sign the petition and add your voice to the urgent call to rebuild Canada's fish populations at Oceana.ca/RebuildAbundance.**

2. **Share your passion for ocean protection with friends and family.**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WE CAN SAVE THE OCEANS AND FEED THE WORLD.

Oceana Canada was established as an independent charity in 2015 and is part of the largest international advocacy group dedicated solely to ocean conservation. Oceana Canada has successfully campaigned to ban single-use plastics, end the shark fin trade, make rebuilding depleted fish populations the law, improve the way fisheries are managed and protect marine habitat. We work with civil society, academics, fishers, Indigenous Peoples and the government to return Canada's formerly vibrant oceans to health and abundance. By restoring Canada's oceans, we can strengthen our communities, reap greater economic and nutritional benefits and protect our future.

OCEANA Protecting the World's Oceans