Five Year Progress Report of the Modernized *Fisheries Act*

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Introduction

The 2019 reforms to Canada's *Fisheries Act* marked a historic milestone by legally mandating the rebuilding of depleted fish stocks. The Fish Stocks Provisions (FSP) introduced requirements to ensure both that stocks are maintained at sustainable levels and that rebuilding plans are developed and implemented for depleted stocks. The Fish Stocks provisions in the amended *Fisheries Act* (ss. 6.1-6.3) came into force through amendments to the Fishery (General) Regulations (FGR) on April 4, 2022 (Government of Canada, 2022). The regulations included an initial list of 30 major fish stocks[1] prescribed under the FSP, almost half of which are in a critical state, triggering the requirement to implement rebuilding plans. The amendments also specified the required content and timelines for the development of rebuilding plans, which must be completed within 24 months, with a possible 12-month extension. The regulations state the Department's intent to prescribe the majority of its 180 key fish stocks in regulations, through sequential priority "batches" so that all major stocks will be protected under the Fisheries Act.

The updated Fishery (General) Regulations also introduce new components to enhance transparency and accountability. They require the Minister to ensure that the level of fishing of the stock during that time is consistent with rebuilding and to publish any reason for amending rebuilding plan timelines. This transparency is essential for public awareness and for ensuring that decision-making processes are open to scrutiny (Skerritt, 2024). Creating and implementing scientifically credible rebuilding plans are not only vital for restoring fish populations but also for moving beyond short-term crisis management that often leads to conflict among fishery users. For instance, Atlantic mackerel and 3Ps cod have already shown positive outcomes from rebuilding efforts, demonstrating significant benefits for marine life and fishing opportunities.

Despite the clear legal framework, the federal government has been slow to act. It took three years to list the first batch of stocks and no more have been listed since. As such, only 30 federally managed fish stocks have been included under the new regulations. This slow pace hampers the effectiveness of the rebuilding provisions. For these provisions to be fully effective in rebuilding fisheries, all relevant stocks must be listed under the regulations, thereby triggering the legal obligations for rebuilding depleted populations and sustainably managing fisheries.

Rebuilding fish stocks to healthy levels is vital to add revenue and jobs to coastal communities. The example set by the United States with the *Magnuson-Stevens Act* illustrates the potential

[1] Note that Oceana's Fishery Audit index stock list (n=194, excludes marine mammals, diadromous fish, and freshwater fish and may distinguish smaller management units) is not directly equivalent to DFO's major stock list (n=195 in 2022, includes 25 salmon stocks, 17 marine mammals, 3 diadromous stocks). The initial list of stocks prescribed to the FSP include 30 DFO stocks or 24 Oceana index stocks.

benefits of strong rebuilding mandates. Since its enactment in 1996 and strengthening in 2006, the U.S. has made significant strides in rebuilding fish stocks. By 2010, notable progress was evident, with rebuilt stocks generating 54 percent more revenue compared to when they were overfished. As of 2023, the U.S. successfully rebuilt 50 fish stocks, leading to more resilient ecosystems and greater economic opportunities for the fishing industry (NOAA, 2023).

In 2022, the Department of Fisheries and Oceans (DFO) committed to prescribing the majority of the 180 federally managed key stocks by regulations (Government of Canada, 2022). The departmental work plans for 2023- 2025 indicate an intention to prescribe a second, larger batch of stocks, with initial aims for early 2024 (Box 1) (DFO, 2023; 2024a). Consultations for over 60 proposed stocks, including at least 6 critical ones, concluded in 2022 (DFO, 2022a). However, even with more stocks prescribed, at least half of federally managed stocks remain unlisted, delaying essential rebuilding efforts and the adoption of best management practices.

Departmental Commitments

"By March 2024, DFO aims to add a second, larger batch of stocks, as determined by regulation, to the list of those subject to the FSP."
– 2023 Departmental Work Plan

"DFO aims to prescribe the majority of its key fish stocks in regulations.... DFO remains committed to prescribing the majority of the 180 key stocks"
– 2022 Regulations

"...to support sustainable, stable, prosperous fisheries through the continued implementation of the modernized Fisheries Act"
– 2021 Minister's Mandate letter

The DFO asserts that prescribing stocks will not result in costs to businesses, consumers, or Canadians, as the regulations impose obligations solely on the department (Government of Canada, 2022). The anticipated costs of future management measures are expected to align with existing fisheries management policies. Thus, listing all stocks in the regulations offers substantial potential gains in terms of recovered stocks with minimal associated costs.

Regulatory actions: Advancing the modernized *Fisheries Act*

The next few years offer a crucial window of opportunity to implement regulations for all depleted stocks if we are to achieve meaningful success in rebuilding and sustaining healthy fisheries while minimizing biodiversity and economic losses. Canada's progress in meeting international obligations, such as those outlined in the Global Biodiversity Framework (GBF), hinges on the effective management of fisheries and the maintenance of healthy aquatic ecosystems. All of the targets that were not met in the 2020 GBF have to do with failing to manage fisheries sustainably and maintaining healthy aquatic ecosystems. This is the main area where Canada is lagging behind

other global leaders with the accompanying reputational and business consequences. The inclusion of stocks in the FSP of the *Fisheries Act* is crucial for meeting GBF targets[2] by 2030, such as halting species extinction, ensuring sustainable harvesting, and managing wild species to benefit people. Canada still falls short of international standards like those set by the United Nations Convention on the Law of the Sea, as they lack rebuilding targets in the healthy zone and maximum rebuilding timelines, and they only apply to 17 per cent of major stocks in Canada (Schijns and Rangeley, 2024).

As we mark the fifth year since the implementation of the *Fisheries Act* in 2019, progress has been notably slow. To date, only one batch of stocks has been listed, and a proposed second batch of stocks has yet to be prescribed. Additionally, around half of all federally managed fish stocks do not have an associated timeline for listing. At the current pace, with new batches added every three years and assuming each batch is the same size as the proposed one, it would take 16 years to apply the regulations to all stocks, requiring five batches in total (Figure 1, Table 1). In contrast, if ambitious action were taken to include all remaining fish stocks by next year, all critical stocks could have rebuilding plans by 2027, meaning that the *Fisheries Act* would be fully implemented in 8 years since it was enacted. Comparing these timelines, the status quo would take twice as long, leaving as many as 21 critical stocks without the strongest protection available under the law and hindering progress in fisheries rebuilding.

Figure 1 shows and Table 1 describes regulatory actions to date and future actions needed to ensure that the *Fisheries Act* applies to all fish stocks[3] within ten years of its enactment. Accelerating the inclusion of all relevant stocks and ensuring strict adherence to rebuilding plans are essential for reversing the decline in fish populations and fulfilling Canada's commitments to sustainable fisheries management and biodiversity conservation. This would contribute to meeting the GBF targets for 2030 to halt and reverse biodiversity loss in Canada (ECCC, 2024).

[2] Listing stocks in the Fish Stocks provisions of the *Fisheries Act* helps Canada meet these international obligations such as GBF targets including: Target 4: Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts; Target 5: Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species; and Target 9: Manage Wild Species Sustainably To Benefit People.

[3] Note on total stock values: This analysis uses the fishery index stock list of 194 stocks. The Sustainable Survey for Fisheries in 2022 includes 195 stocks including marine mammals, diadromous species and salmonoids. There are differences in total values depending on the stock list used, as the Fishery Audit index stock list may have different stock definitions depending on management unit and does not include the 3 salmon stocks in the batch 1 list and 4 salmon stocks, 5 arctic char stocks, 1 spot prawn stock in proposed batch 2.

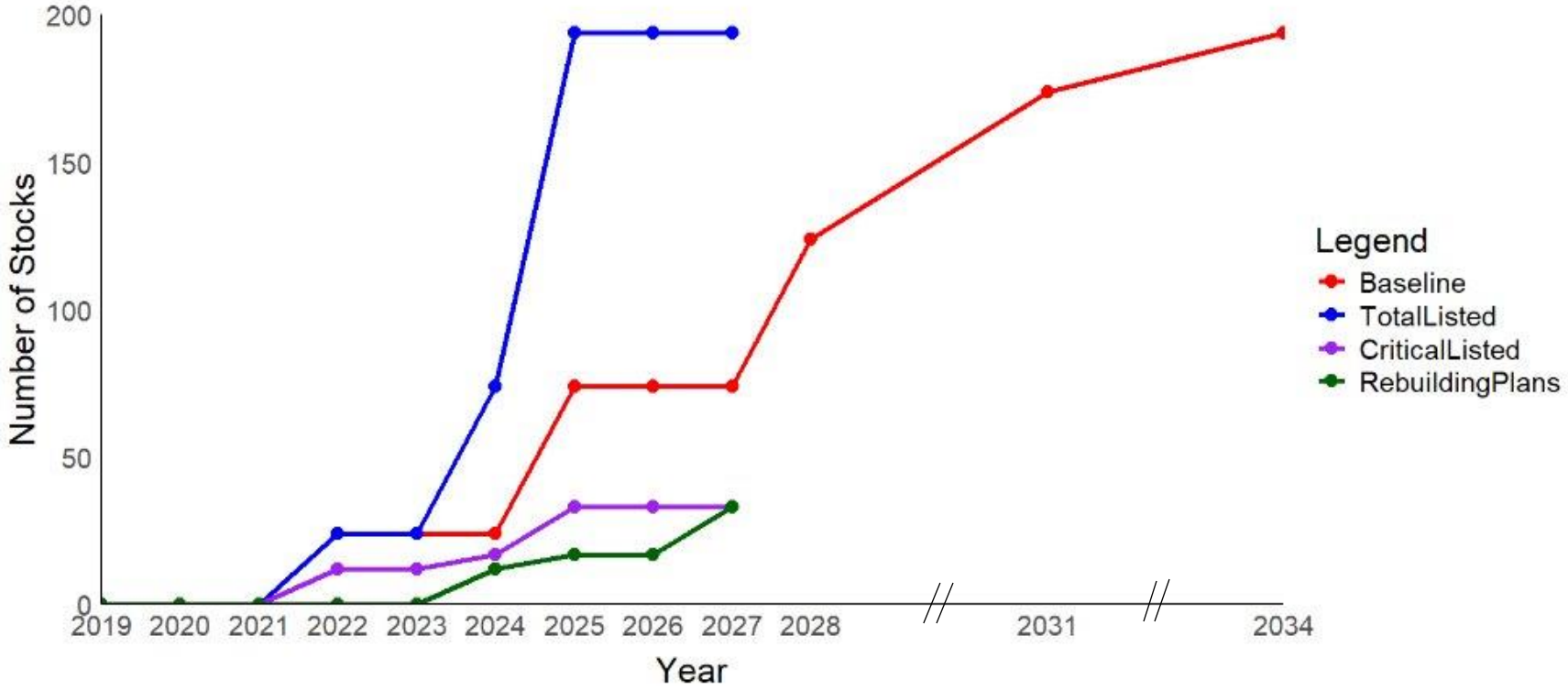

Figure 1. The number of total Fishery Audit index stocks (blue line, n=194) and critical stocks (purple line, n=33 in 2024) listed in the Fish Stocks provisions over time, as well as the total number of rebuilding plans published since the implementation of the Modernized *Fisheries Act* in 2019 (green line), under an ambitious action scenario (completed by 2027), compared to the baseline number of total stocks listed under the status quo (red line). Refer to Table 1 for corresponding events that impact each total over time.

Table 1. The number of total Fishery Audit index stocks (n=194) and critical stocks (n=33 in 2024) listed in the Fish Stocks provisions over time, as well as the total number of rebuilding plans published since the implementation of the Modernized *Fisheries Act* in 2019, under an ambitious action scenario, compared to the baseline number of total stocks listed under the status quo. Italicized event details indicate progress made to this date.

Year	Baseline number of stocks listed under status quo	Total number of stocks listed	Total number of critical stocks listed	Total number of rebuilding plans published	Stock notes	Event details
2019	0	0	0	0		*Modernized Fisheries Act becomes Law*
2020	0	0	0	0		*Regulations in development*
2021	0	0	0	0		*Regulations in development*
2022	24	24	12	0		*Batch 1 listed, Batch 2 proposed*
2023	24	24	12	0		*Batch 2 regulations in development*
2024	24	73	17	12		Plans published for Batch 1, Batch 2 listed
2025	74	194	33	12	(+ new critical stocks)	Assign uncertain stock status to all remaining stocks, newly assigned critical stocks trigger rebuilding plan requirements. Batch 3 listed.
2026	74	194	33	17	(+ new critical stocks)	Plans published for Batch 2.
2027	74	194	33	33	(+ new critical stocks)	Plans published for Batch 3.
2028	124				(+ new critical stocks)	Assuming Batch 3 is the same number of stock increase as Batch 2 and takes 3 years.
2029	124					
2030	124					
2031	174					Assuming Batch 4 is the same number of stock increase as Batch 3 and takes 3 years.
2032	174					
2033	174					
2034	194					Assuming Batch 5 adds remaining stocks and takes 3 years.
2035	194					
2036	194					

Decision-making: Prescribed, critical stocks benefit from decisions that promote rebuilding

Canada's new legislative framework to rebuild fisheries and has led to better management decisions to date. Our analysis of 16 key stocks[4] found that rebuilding was promoted more consistently for prescribed and critically depleted stocks compared to non-prescribed stocks (Figure 2).

Making rebuilding the law has reduced overfishing, while promoting transparency in decision-making. Fisheries decisions for critical stocks were more rigorous in following scientific advice and were based on measures defined in rebuilding plans and/or established procedures (Table 2). Rebuilding plans provide clear guidelines for management to move beyond short-term crisis management that generates conflict among users every year and provides a clear direction towards a shared vision of rebuilt fisheries. While the rationale for certain decisions was informed by rebuilding plans, it should be noted that the plans themselves have not yet been made publicly available (e.g. Atlantic mackerel, 3Ps cod, Gulf groundfish).

The 2024 Northern cod decision was the only prescribed stock that disregarded precautionary management[5]. The decision to reopen the commercial northern cod fishery after a 32-year moratorium, along with increasing the Canadian Total Allowable Catch (TAC) by 38.5% to 18,000 tonnes was not scientifically justified, despite only recently being assessed above its Limit Reference Point (LRP). The decision was made despite the stock barely moving out of the critical zone at a time when there is insufficient capelin abundance (cod's main food source) to support cod population growth (DFO, 2024b). There is a high probability that the stock will decline back into the critical zone in about three years, posing significant risks to the future recovery of this iconic fish population and the centuries-old fishery vital for Newfoundland and Labrador's coastal communities.

The Northern cod decision highlights an inconsistent interpretation of Section 6.1 (1) of the *Fisheries Act*, as it applies to stocks in the cautious zone, which states: "*In the management of fisheries, the Minister shall implement measures to maintain major fish stocks at or above the level necessary to promote the sustainability of the stock, taking into account the biology of the fish and the environmental conditions affecting the stock*" (despite clear guidelines for interpreting this language (DFO, 2022b)). Reopening a commercial fishery and increasing allowable catches without a Removal Reference, Upper Stock Reference, Target Reference Point, or pre-determined interim measurable fishery management objective is a textbook case of fisheries mismanagement.

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[4] 16 stocks were selected for this analysis with a focus on forage fish (n=13) and select groundfish (n=3) that underwent a fisheries management decision this year prior to July 1st. The stocks selected cover all health status categories (healthy, cautious, critical, uncertain), with a focus on depleted statuses, and status in the Fish Stocks provisions (prescribed, proposed to be listed, no status).

[5] A briefing note dated May 9 discloses that the DFO Deputy Minister advised continuing the commercial moratorium on northern cod based on scientific data and maintaining the previous year's stewardship maximum harvest level.

Decisions for key stocks not yet prescribed in the Fish Stocks provisions were not fully consistent with rebuilding with elements of the Precautionary Approach (PA) framework missing such as Harvest Control Rules (HCRs) or reference points. In these cases, commercial interests prevailed leading to higher pressures on depleted populations than applying precaution would have (e.g. 2J3KL capelin, redfish). Even in some cases where HCRs are available and include stakeholder input, the decision did not necessarily follow this science advice, and the rationale is not clearly stated. For example, the quota for Atlantic Herring in Southwest Nova Scotia/Bay of Fundy was set at 16,000 t for the next 4 years, despite HCRs specifying 14,000 t as the highest level capable of supporting growth out of the critical zone within 10 years.

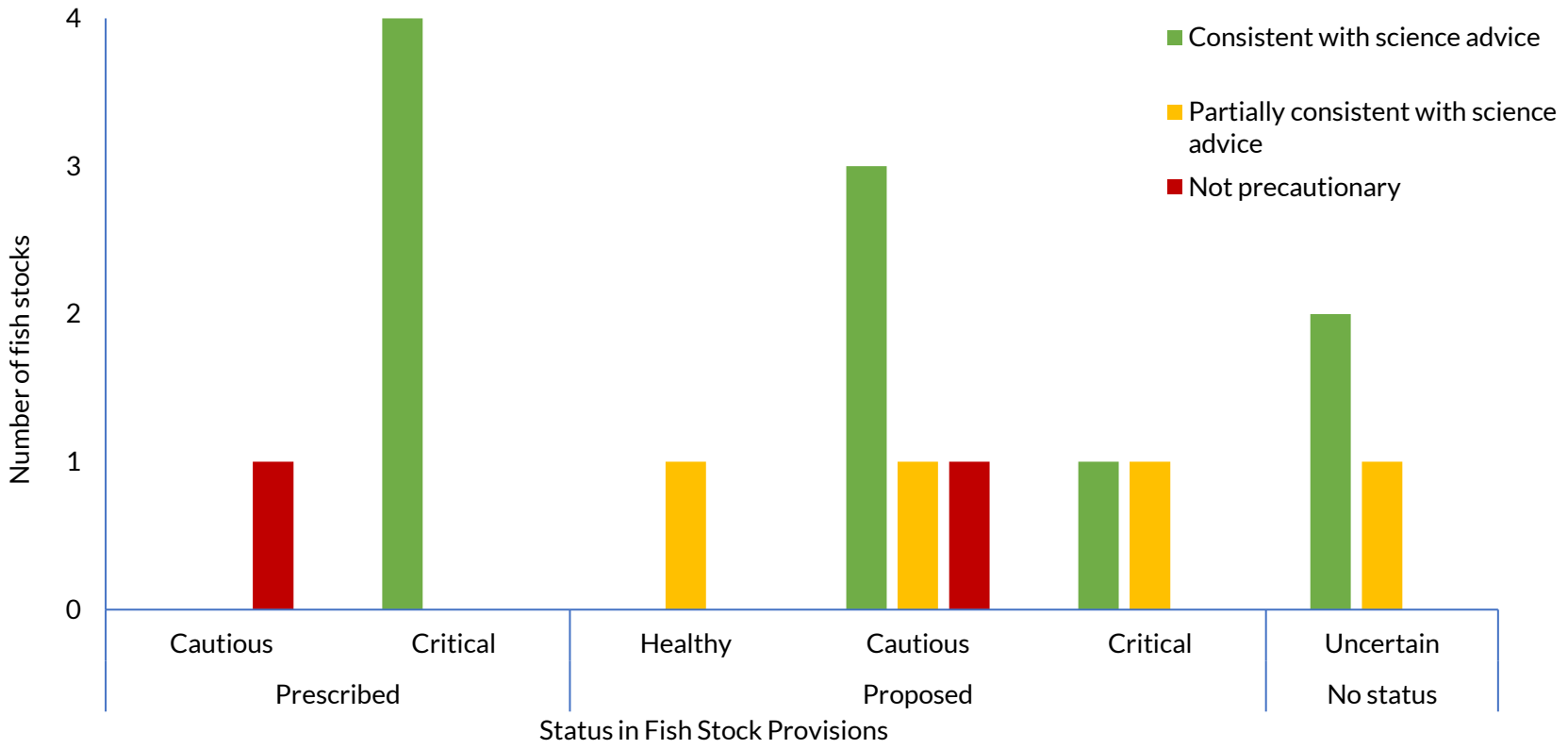

Figure 2. The number of key forage and groundfish stocks (n=16) categorized by health status (healthy, cautious, critical, uncertain) and their status under Fish Stocks provisions (prescribed, proposed to be listed, no status), with an assessment of decision-making consistency with scientific advice (alignment with the latest IFMP/Rebuilding Plan/SAR).

Table 2. 16 key forage and groundfish stocks and decisions assessed by consistency with science advice (follows latest IFMP/Rebuilding Plan/SAR), transparency (decision is made publicly available on DFO webpage or via public fishery notice, including rationale) and timeliness (announced prior to last year's date), compared to status in the Fish Stocks provisions (FSP) of the *Fisheries Act*.

Stock	**Health status**	**FSP status**	**Consistency**	**Transparency**	**Timeliness**	*Details*
Northern Cod - 2J3KL	Cautious*	Prescribed	Not precautionary	Transparent	On time	Reopening commercial cod fishery at 18,000 t for Canada, additional 5% for NAFO countries, unreported recreational fishery announced via DFO management decisions webpage in June 2024. The latest assessment shows that reducing fishing removals by 50 percent minimizes the risk of stock decline back into the Critical zone, and the lack of available capelin is the primary factor impeding recovery. Biology and environmental conditions were not included in the decision rationale. No clarity on how the shelved rebuilding plan will be transitioned to a management plan.
Atlantic herring, 4T (Spring Spawner)	Critical	Prescribed	Consistent with science advice	Transparent	On time	Closure to commercial and bait announced via notice to fish harvesters March 2024, based on science advice and management measures in draft rebuilding plan. Rebuilding plan is not yet publicly available.
Atlantic mackerel	Critical	Prescribed	Consistent with science advice	Transparent	On time	Small bait fishery of 470 tonnes announced via DFO management decisions webpage on May 2024. Primary concern being inadequate monitoring leading to the fishery exceeding the TAC. Management plan includes 2-part phased approach to the TAC, with regular reports to stakeholders at 25%, 50% and 80% caught, then daily until closure (July 3 for first 1/2, 235 t of TAC). Rebuilding plan is not yet publicly available.
Cod - 3Ps	Critical	Prescribed	Consistent with science advice	Transparent	On time	Increased from 1,304 t to 1,550 t based on the management procedure adopted by Canada and France in 2023, with 1,308 designated to Canada, announced via DFO management decisions webpage in April 2024. Follows science advice and increases the probability of stock growth by 10%. It should be

						noted that reducing fishing mortality would increase the probability of stock growth by 23%. Rebuilding plan is not yet publicly available.
Pacific herring, Haida Gwaii	Critical	Prescribed	Consistent with science advice	Transparent	On time	Closed to commercial harvest announced via IFMP published for November 7, 2023 – November 6, 2024. No MSE tested management procedures could meet the conservation objective of avoiding the LRP, even in the absence of fishing. Rebuilding plan is not yet publicly available.
Capelin – 2J3KL	Cautious*	Proposed	Not precautionary	Transparent	On time	No rationale provided. Roll-over of quota of 14,533 t does not follow science advice to manage this stock and its dependent predators (cod) for growth. Lacks HCRs and Upper Stock Reference point.
Pacific Herring – Central Coast	Cautious	Proposed	Consistent with science advice	Transparent	On time	FSC and limited commercial Spawn on Kelp herring opportunities (4% harvest rate) to a maximum of 200 tons announced via IFMP published for November 7, 2023 – November 6, 2024. Results from Management Strategy Evaluation (MSE) simulations that met the conservation objective of avoiding the LRP of 30% of the unfished herring biomass with a high (>75%) probability over 15 years of application. MSE results show HCR up to 10% meet conservation objectives with high certainty.
Pacific Herring – Prince Rupert District	Cautious	Proposed	Consistent with science advice	Transparent	On time	FSC, Spawn on Kelp, and Roe herring opportunities (5% harvest rate) announced via IFMP published for November 7, 2023 – November 6, 2024. Results from MSE simulations that met the conservation objective of avoiding the LRP of 30% of the unfished herring biomass with a high (>75%) probability over 15 years of application. MSE results show HCR up to 20% meet conservation objectives with high certainty.
Pacific Herring –	Cautious	Proposed	Consistent with science advice	Transparent	On time	FSC, Food and Bait, Special Use, and Roe herring opportunities (10% harvest rate) to a maximum of 8,058 tons announced via

Strait of Georgia						IFMP published for November 7, 2023 – November 6, 2024. Results from MSE simulations that met the conservation objective of avoiding the LRP of 30% of the unfished herring biomass with a high (>75%) probability over 15 years of application. MSE results show HCR up to 15% meet conservation objectives with high certainty.
Atlantic Herring – 4T (Fall Spawner)	Cautious	Proposed	Partially consistent with science advice	Transparent	On time	Decision announced via notice to fish harvesters in July 2024 with a TAC set at 8,500 t for 2 years in 2024 and 2025. This is a 15% decline from 2023 TAC at 10,000t. As the stock is deep in the Cautious Zone, the PA framework states that actions should promote stock rebuilding towards the Healthy zone. According to the latest assessment, catches below 10,000 have higher probabilities for increasing biomass for next year, but the stock is still projected to decline due to low productivity, reduced weight-at-age, and high natural mortality. The annual catch levels offering the greatest probabilities of increasing SSB in the short and long term are 0, 2,000 and 4,000 t. Rebuilding plan initiated. Noting interim Total Allowable Catch (TAC) of 250 t, taken from the herring fall fishery TAC, is available for the summer fishery. Bait fishery announced June 2024 includes mandatory hail out, logbook (elog voluntary), weekend closures, weekly limit, gear limits.
Pacific Herring - WCVI	Critical	Proposed	Consistent with science advice	Transparent	On time	Closed to commercial harvest announced via IFMP published for November 7, 2023 – November 6, 2024. No MSE tested management procedures could meet the conservation objective of avoiding the LRP, even in the absence of fishing.
Atlantic Herring – 4X5Y	Critical	Proposed	Partially consistent with science advice	Partially publicly available	On time	Decision announced to advisory committee in July 2024 to reduce quota by 23% to 16,000 t for 4 years 2024-2027. Stock has been declining for decades, critically depleted since 2017.

(Southwest Nova Scotia/Bay of Fundy)						Multi-year stakeholder process developed MSE-informed harvest rules to rebuild the stock out of the critical zone within 10 years, with 14,000 TAC being the highest level to support this target but so far they have not been applied.
Redfish Unit 1 + 2	Healthy	Proposed	Partially consistent with science advice	Partially publicly available	On time	Decision for Unit 1 announced via DFO management decisions webpage in June 2024. Science advice available for Unit 1 redfish but risk to critically depleted bycatch stocks not assessed. No clear rationale for 60,000 t but science evidence on bycatch measures implemented, including bycatch caps from rebuilding plans. Some measures published online but no Conservation Harvest Plan or Unit 2 plan. Unit 2 set at 8,500 t but lacks updated assessment and PA approach.
Capelin - 4RST	Uncertain	No status	Partially consistent with science advice	Transparent	On time	Rollover of quota of 10,225 t announced via DFO management decisions webpage in May 2024. No rationale provided. The inferred low fishing mortality and the status from the composite index indicate that harvest levels are comparable to those attained over the last decade are unlikely to pose a risk to the stock.
Atlantic Herring - 4R (Spring Spawner)	Uncertain	No status	Consistent with science advice	Transparent	On time	Rollover of single 20,000 t TAC for both spring and fall spawners (maintained since 2003) follows scientific advice and announced via DFO management decisions webpage in March 2024. The main results of stock assessment indicate that maintaining the TAC at status quo should not pose any significant risk to the two herring spawning stocks in Division 4R in the short term. Noting both spawner stocks do not have a stock status or HCRs.
Atlantic Herring - 4R (Fall Spawner)	Uncertain	No status	Consistent with science advice	Transparent	On time	Rollover of single 20,000 t TAC for both spring and fall spawners (maintained since 2003) follows scientific advice and announced via DFO management decisions webpage in March 2024. The main results of stock assessment indicate that

						maintaining the TAC at status quo should not pose any significant risk to the two herring spawning stocks in Division 4R in the short term. Noting both spawner stocks do not have a stock status or HCRs.

*Status at the time of fisheries management decisions and do not reflect the status assigned in the 2024 Fishery Audit as the latest stock assessment was not published by July 1st. In the Fishery Audit, both cod and capelin in 2J3KL are categorized as Critical stock status.

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