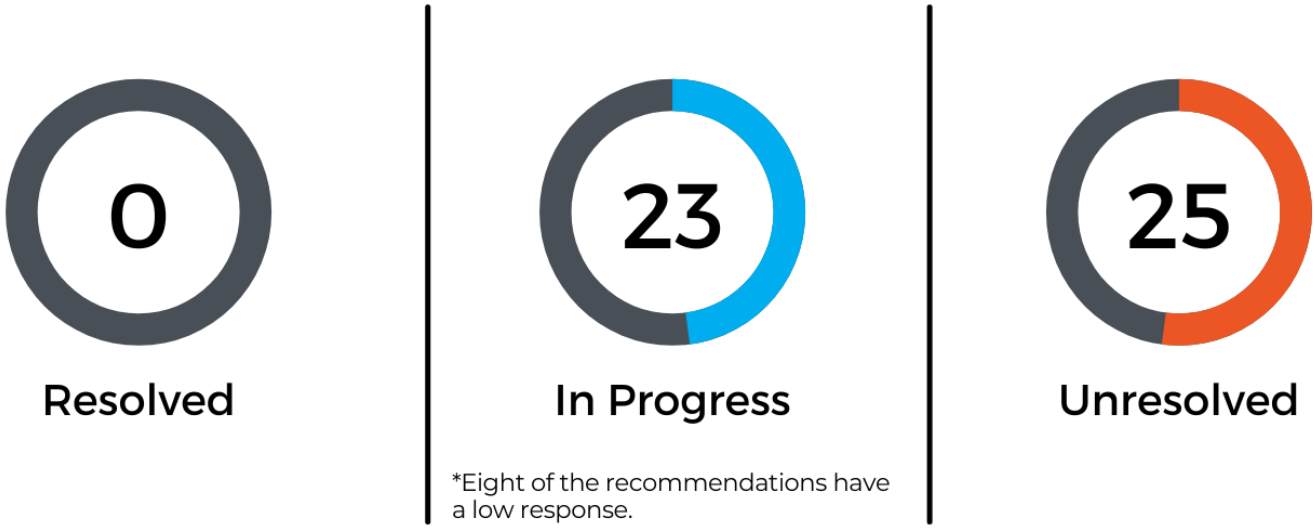
Standing Committee on Fisheries and Oceans
Report 8: Science At The Department of Fisheries and Oceans
Government of Canada Response Analysis

On March 9th, 2023, the Standing Committee on Fisheries and Oceans presented a 88-page report to the Government of Canada, outlining 48 recommendations related to science at the Department of Fisheries and Oceans (DFO). The Government of Canada presented a 8-page response on June 20, 2023 with six themes. Below, we present our analysis of the Government of Canada's response to the 48 recommendations outlined in the Standing Committee on Fisheries and Oceans' eighth report.



Legend:
Resolved: The government has implemented a plan fully addressing the recommendation
In progress: The government is developing or implementing a plan to address the recommendation
In progress - low response: there is limited progress in developing or implementing a plan to address the recommendation
Unresolved: There is no plan to address the recommendation

Recommendation *Below are recommendations as stated in the Committee's report.*	**Status**	**Government Response** *Below is a summary of the government response relevant to each recommendation, and to what extent the Committee recommendation has been addressed.*
Recommendation 1 That the Ocean science activities of the Department of Fisheries and Oceans (DFO) prioritize a comprehensive research strategy to determine the current and estimated future impacts of climate change on marine life and provide regular public updates on findings.	**In progress**	**Theme:** The Impact of Climate Change on Canada's Oceans and Aquatic Ecosystems ● The Government of Canada stated its commitment to improving its understanding of the risks that climate change poses to marine ecosystems, coastal communities, and fisheries, and noted ongoing actions to determine the impacts of climate change on marine life, including: ○ The 2019 amended *Fisheries Act* includes a requirement to consider environmental conditions affecting stocks in the development of management measures and rebuilding plans. ○ In the 2017 Commissioner of the Environment and Sustainable Development Report, DFO identified the risks that climate change poses to the Department's mandate, including potential negative impacts on ecosystems. ○ Per their ministerial mandate letter, the DFO Minister is working with partners to expand climate vulnerability work to better inform marine conservation planning and management. ○ In the November 2022 Canadian Council of Fisheries and Aquaculture Ministers (CCFAM) meeting, the Minister discussed with provincial and territorial partners the impact that a changing climate will increasingly have on marine and freshwater ecosystems. CCFAM agreed that further engagement on how to support fisheries and aquaculture in this changing environment is a priority. ○ DFO scientists are exploring the ecosystem impacts of changing ocean conditions by studying the response of various fish species, and using oceanographic models to predict future ocean conditions. ● The Government noted that DFO publicly reports on the state of Canada's oceans annually though the Canada's Oceans Now series, including a plain language summary.
Recommendation 2	**Unresolved**	**Theme:** The Impact of Climate Change on Canada's Oceans and

That the Government of Canada request that the Chief Science Advisor examine how and to what degree DFO has deployed an ecosystem-based approach for stock management and recovery, and, if necessary, make recommendations on how DFO may better implement ecosystem-based fisheries management.		Aquatic Ecosystems ● The Government response did not address this recommendation.
Recommendation 3 That DFO speed up the implementation of an ecosystem-based approach to fisheries management in Canada given the impact of climate change.	**In progress**	**Theme:** The Impact of Climate Change on Canada's Oceans and Aquatic Ecosystems ● The Government stated that DFO scientists continue to consider environmental variables when providing science advice on fish stocks. ● The Government noted that DFO continues to analyze how ecosystem information can be better incorporated in fisheries management, and will be undertaking further engagement over the coming year with stakeholders and Indigenous Peoples, including Modern Treaty and Self-Government partners, on advancing an ecosystem based approach to fisheries management across federally-managed fisheries.
Recommendation 4 That Canada increase collaboration with our international allies and neighbors for stock assessments and scientific research for all transboundary species.	**In progress**	**Theme:** Domestic and International Collaboration ● The Government agreed that (inter)national collaborations are highly beneficial to advancing the DFO mandate, and that access to external expertise is essential to generate the best available science to support policies and decisions. ● The Government shared various ongoing collaborations for stock assessments and scientific research, including: ○ DFO scientists lead or participate in scientific committees and working groups on priority commercial fisheries, and engage in bilateral fisheries science projects of mutual interest and benefit to DFO and its partners. ○ Through membership in the International Council for the Exploration of the Sea, DFO is helping to advance knowledge in the Atlantic Ocean.

		○ DFO contributes scientific expert analyses and advice for a number of transboundary fish stocks to regional fisheries management organizations. ○ DFO is a member of the International Hydrographic Organization, whose Council was chaired by a DFO official for the last three years. ● The Government continues to identify new opportunities to leverage international expertise to support its domestic science programming.
Recommendation 5 That the Minister of Fisheries, Oceans and the Canadian Coast Guard direct departmental officials to immediately initiate a review of DFO allocations for science to ensure departmental resources are available for the scientific work in both fisheries and ocean science that is required to inform decisions of DFO and Minister and likewise ensure that DFO scientists are not dependant on external funding streams to complete their work.	**In progress: low response**	**Theme:** DFO Science Capacity ● The Government shared the Committee's views on the importance of allocating sufficient resources to carry out scientific activities. ● The Government described that resources are allocated through various research programs, and DFO Science capitalizes on program synergies to ensure the "best and most coordinated" results are achieved, in alignment with the department's mandates and the Government of Canada priorities. ● The Government noted that the Department's Science sector also provides funding for scientific research and related activities to external organizations through the DFO Science Contribution Framework. ● The Government stated that it will "continue to review its processes, allocations, and resources to ensure that science program funding is aligned with the Departmental mandate and broader Government of Canada priorities."
Recommendation 6 That DFO conduct an internal audit on the performance of new research vessels to ensure the suitability of new vessels to maintain and improve the DFO's ability to conduct stock assessments, and that the results of this audit be communicated to the	**Unresolved**	**Theme:** DFO Science Capacity ● The Government noted that DFO Science and Canadian Coast Guard (CCG) staff work collaboratively to optimize available CCG assets and ensure that key science activities are carried out. ● The Government did not commit to conducting an internal audit on the performance of new research vessels.

House of Commons Standing Committee on Fisheries and Oceans.		
Recommendation 7 That DFO allocate sufficient resources, including sufficient at-sea capabilities, to conduct timely and comprehensive stock assessments and acoustic surveys for all commercial fish species.	**Unresolved**	**Theme:** DFO Science Capacity ● The Government noted that it carries out annual off-shore multi-species scientific surveys to monitor key commercial species, where the frequency of stock assessments depends on a range of factors. ● The Government did not directly address this recommendation.
Recommendation 8 Considering that DFO's scientific models used for stock assessments rely on data from surveys, the Committee recommends that greater emphasis be placed on completing surveys and robust data acquisition, even when vessels break down or are unavailable. That DFO do this by fostering relationships with the fishing industry to utilize commercial fishing license holders and vessels to supplement DFO scientific data collection.	**In progress**	**Theme:** DFO Science Capacity ● The Government noted that where there are gaps, opportunities to work with external partners to secure platforms are pursued. ● The Government noted that it continues to work with domestic and international partners to charter vessels, and has recently streamlined the process by creating a list of qualified suppliers to draw on as needed.
Recommendation 9 That, in order to ensure stock assessment surveys are completed, DFO identify and use opportunities that exist for harvester data to be included in stock assessment activities, thereby contributing to collaborative and citizen science.	**In progress**	**Theme:** Transparency and Scientific Independence ● The Government noted that industry groups conduct surveys and research with DFO through various programs, including: ○ The Fisheries Science Collaborative Program (FSCP) facilitates fishing industry engagement on data collection and research to contribute to stock assessments in Atlantic Canada. ○ The Groundfish Sentinel Program which funds harvesters to carry out surveys, which are incorporated into Northern Cod assessments.
Recommendation 10 That DFO immediately implement, in partnership with academic and industry scientists, a review of the criteria for the	**Unresolved**	**Theme:** Transparency and Scientific Independence ● The Government response did not address this recommendation.

selection of survey areas to consider variability in stock distributions as well as harvester observations in order to have a more realistic view of the status of fish stocks and fishing pressure. These stock surveys should take place twice a year.		
Recommendation 11 Given the importance of a sustainable fishery on the economic and social health of small, coastal communities and our obligations toward Indigenous reconciliation, that DFO prioritize completing regular and thorough stock assessments on all three coasts and commit to timely and fulsome community and stakeholder engagement on proposed fishing restrictions to protect fish stocks and marine species threatened or at risk.	**In progress: low response**	**Theme:** Engagement and Consultation ● The Government noted that DFO regularly consults with stakeholders through stock-specific advisory committees and working groups. This includes participants from the recreational; Indigenous food, social, and ceremonial; and commercial fisheries providing input on management measures and decisions. ● As stated above in **Recommendation 7**: "The frequency of stock assessments depends on a range of factors." ● The Government response did not directly address the recommendation to prioritize completing regular and thorough stock assessments on all three coasts.
Recommendation 12 That DFO commit to more timely decision-making to provide certainty to fish harvesters and industries impacted by fisheries decisions. This would ensure that those impacted, whether positively or negatively by these decisions have enough time to prepare and react to the changes and will ensure that government can provide support for those industries negatively impacted by fishery closures.	**In progress: low response**	**Theme:** Decision-Making and Communication ● The Government acknowledged that clear and timely communication of fisheries decisions is important for harvesters, and that it strives to achieve timely decision-making, while considering the best available science. ● The Government noted that data must be collected and analyzed prior to providing recommendations, and co-management regimes must be considered, so decisions are made as soon as practical.
Recommendation 13 That DFO review the allocation of its resources, financial and otherwise, between ocean science and fisheries science to	**Unresolved**	**Theme:** DFO Science Capacity ● As stated above, in **Recommendation 5**: ○ The Government shared the Committee's views on the importance of allocating sufficient resources to carry out

• ensure sufficient funding for the stock assessments required for sound management, eco certifications and rebuilding plans required to restore depleted stocks; and • reflect the commercial, social, and cultural importance of fisheries in coastal communities.		scientific activities. ○ The Government described that resources are allocated through various research programs, and DFO Science capitalizes on program synergies to ensure the "best and most coordinated" results are achieved, in alignment with the department's mandates and the Government of Canada priorities. ○ The Government stated that it will "continue to review its processes, allocations, and resources to ensure that science program funding is aligned with the Departmental mandate and broader Government of Canada priorities." • The Government did not commit to review the allocation of its resources, financial and otherwise, between ocean science and fisheries science.
Recommendation 14 That DFO introduce an annual Report to Parliament on the status of fish stocks, staffing levels and expenditures by program area, and fisheries management performance in a publicly available report to enable transparency of evidence used for ministerial decision-making, including any pertinent decision notes.	**Unresolved**	**Theme:** Decision-Making and Communication • As stated below in **Recommendation 20**, the status of fish stocks and information on the sustainability of fisheries is publicly available through DFO's annual Sustainability Survey for Fisheries (since 2016). • The Government response did not directly address the recommendation (e.g., to provide annual information on staffing levels and expenditures by program area, and fisheries management performance).
Recommendation 15 That the Minister of Fisheries, Oceans and the Canadian Coast Guard immediately direct departmental officials to provide the Committee on an annual and ongoing basis with documentation containing tables reflecting how many fishery stocks DFO manages, how many stocks have and have not been assessed in the current year, and what actions the Minister will commit to ensure resources and direction are provided to increase stock assessments starting in	**Unresolved**	**Theme:** Decision-Making and Communication • The Government response did not address this recommendation.

2023 as an annual exercise.		
Recommendation 16 That the current DFO modelling used for stock assessments be changed to allow for fisher data input and that the DFO modelling should be reviewed in the European stock assessment modelling concept.	**Unresolved**	**Theme:** Domestic and International Collaboration ● The Government response did not address this recommendation.
Recommendation 17 That DFO conduct robust peer reviewed, non-biased science with academic organizations and include both harvesters' knowledge and Indigenous traditional knowledge.	**In progress**	**Theme:** Transparency and Scientific Independence ● The Government shared the Committee's views on the importance of impartial evidence-based science, and remains committed to effectively coordinating the delivery of peer-reviewed scientific processes, advice, and products. ● The Government noted that it continues to work within existing policy and funding frameworks to increase the diversity of expertise and perspectives, including its Departmental Science Advisor, as it strengthens the independence of the peer-review process. ● The Government noted that an external expert registry has been developed to help ensure a diverse set of experts are participating in scientific peer-review. ● Refer to **Recommendation 21** for the Government's response.
Recommendation 18 That the Government of Canada initiate an independent audit of how and to what degree DFO has implemented their science integrity policy and that the resulting audit report be tabled in the House of Commons in 2023.	**Unresolved**	**Theme:** Transparency and Scientific Independence ● The Government stated that the department's Policy on Science Integrity was implemented in April 2019. ● The Government noted that it actively participates in the Interdepartmental Scientific Integrity Policy Working Group, led by the Office of the Chief Science Advisor for Canada to ensure a whole-of-government approach to scientific integrity. ● The Government did not commit to an independent audit to assess the degree to which DFO has implemented their scientific integrity policy. *Note*: The Office of the Chief Science Advisor conducts annual surveys

		to assess progress in implementing scientific integrity procedures, and has issued a report in 2021 and 2022 on the status of the federal scientific integrity policies. Participating science-based departments and agencies provide supporting evidence when completing the annual survey, but this data is not published publicly, nor are departments and agencies named directly in the resulting reports.
Recommendation 19 That DFO improve the transparency of data and research by developing a portal to publish the detailed studies, including the scientific and socio-economic impact documentation, that are the inputs into the CSAS and COSEWIC processes. This portal should be easy to navigate and include both raw data and summaries free of scientific or bureaucratic jargon so that all Canadians, and fishers in particular, can understand the findings.	**In progress: low response**	**Theme:** Transparency and Scientific Independence ● Refer to **Recommendations 20** and **32** for the Government's response. ● The Government response did not address the latter part of the recommendation (i.e., ease of navigation, and that raw data and summaries are free of jargon).
Recommendation 20 Make all scientific data produced by DFO publicly available for peer review from researchers outside of the Department.	**In progress**	**Theme:** Transparency and Scientific Independence ● The Government noted that resulting scientific advice to inform decision-makers is available publicly online, including the scope of the advice, its intent, the data inputs, and participants involved in the peer-review. ● The Government is working to make its science and data more open and accessible to Canadians in a timely way, including: ○ The Government is increasing its publicly available datasets on the Open Government and other portals, but notes challenges, such as the need for data releases to be in compliance with all relevant legislation. ○ Departmental scientists publish primary papers, present findings at conferences, and partner with ocean literacy organizations to communicate about Canada's aquatic ecosystems. ○ DFO has partnered with science-based departments and the Office of the Chief Science Advisor to establish a Federal

		Open Science Repository to make federally funded scientific outputs accessible to all Canadians. ○ The status of fish stocks and information on the sustainability of fisheries is publicly available through DFO's annual Sustainability Survey for Fisheries (since 2016).
Recommendation 21 That the government expand the CSAS process beyond scientists and individuals with a scientific background to be more inclusive of traditional Indigenous knowledge and harvesters' knowledge.	**In progress**	**Theme:** Transparency and Scientific Independence ● The Government noted various ongoing efforts to expand the CSAS process beyond individuals with a scientific background, including: ○ The Government noted that DFO continues to work within existing policy and funding frameworks to increase the diversity of expertise and perspectives in the peer-review process. ○ DFO developed an external expert registry to help ensure a diverse set of experts are participating in peer-review. ○ The Government continues to build and strengthen relationships with First Nations, Métis, and Inuit, on various collaborative research and monitoring projects, marine protected area management plans, and the development of collaborative or co-governance agreements with Indigenous communities, including Modern Treaty and Self-Government partners. These collaborations have allowed Indigenous knowledge to be documented and incorporated into the Department's processes and policies. ○ The department has legal obligations to Indigenous groups, including Modern Treaty and Self-Government partners, under the Constitution and Court decisions: Marshall (moderate livelihood), Sparrow (Food Social Ceremonial), and Ahousaht (right to sell fish from their territory). The Government also noted that there are unique fisheries co-management decision processes for land claims groups outlined in legally-binding agreements, which include the consideration of science advice for sustainable harvest levels, along with Indigenous and treaty rights and socio-economic impacts, and consultation processes. ○ DFO continues to implement processes that are inclusive of Indigenous knowledge, ecosystem and precautionary thresholds.

		○ Recently, the vital leadership role of Indigenous Peoples, including Modern Treaty and Self-Government partners, in marine conservation was recognized most recently in the establishment of the Gwaxdlala/Nalaxdlala marine refuge, the Northern Shelf Bioregion Network Action Plan, and the proposed Tang.gwan – hačxwiqak – Tsigis Marine Protected Area. ○ The Government noted that the fishing industry is a critical source of fisheries knowledge, expertise, and capacity for the Department, and that DFO supports and participates in various collaborative research programs and monitoring activities that provide key data inputs to DFO's stock assessments. ○ The Government noted that industry groups conduct surveys and research with DFO through a number of programs which facilitates the collection of fisheries science data and research that contributes to stock assessments. (See **Recommendation 9** for details.)
Recommendation 22 That DFO work to incorporate traditional Indigenous knowledge and fisher knowledge into its scientific activities and to give it greater consideration.	**In progress**	**Theme:** Transparency and Scientific Independence ● Refer to **Recommendation 21** for the Government's response.
Recommendation 23 That DFO increase the collaborations with Indigenous peoples and fishers in the development of field and lab work, as well as in the development of scientific conclusions.	**In progress**	**Theme:** Transparency and Scientific Independence ● Refer to **Recommendation 21** for the Government's response.
Recommendation 24 DFO should work with First Nations to develop a culturally appropriate way to use traditional Indigenous knowledge and fisher knowledge in management, such as to trigger early warning signs about the health of marine species and ecosystems.	**In progress**	**Theme:** Engagement and Consultation ● Refer to **Recommendation 21** for the Government's response.

Recommendation 25 Honour and respect existing fisheries and oceans management cogovernance agreements and implement those processes that are inclusive of Indigenous knowledge, ecosystem and precautionary thresholds.	**In progress**	**Theme:** Engagement and Consultation ● Refer to **Recommendation 21** for the Government's response.
Recommendation 26 That the government build scientific and technical capacity with First Nations and their organizations in recognition of their inherent Indigenous title and rights.	**In progress**	**Theme:** Engagement and Consultation ● Refer to **Recommendation 21** for the Government's response.
Recommendation 27 That DFO should work with fish harvesters to communicate, in a more open and transparent manner their work and scientific conclusions, especially in cases where the evidence seems at odds with the observations of fish harvesters.	**In progress**	**Theme:** Decision-Making and Communication ● The Government noted that "as per the CSAS process, the science advice that informed the decision-making process is ultimately publicly available on our website. Other considerations that were taken into account are often included in public-facing documents found on the departmental website, as appropriate." ● As stated above in **Recommendation 20**, the Government is working to make its science and data more open and accessible to Canadians in a timely way.
Recommendation 28 That DFO make greater efforts to improve the flow of information from fish harvesters to the DFO Science branch about what they are seeing out on the water.	**In progress: low response**	**Theme:** Engagement and Consultation ● The Government noted that in addition to formal processes, partners and stakeholders are regularly connected to regional DFO officials through ongoing communications as part of the recurring annual fisheries seasons and respective activities. ● The Government also noted that DFO regularly launches working groups to investigate particular changes in fisheries management approaches as required, including engagement to develop rebuilding plans and Sustainable Fisheries frameworks.

Recommendation 29 That DFO include knowledge and data collected by commercial fishers, including independent inshore fishers, in the peer review process, including their knowledge and observations regarding changes in distribution and abundance. That DFO formalize a system for fishers to participate and provide input in all aspects of fisheries management, including stock assessment protocols and management plans.	**In progress: low response**	**Theme:** Decision-Making and Communication ● As stated below in **Recommendation 36**: ○ Department officials carefully review input, including formal science advice through the CSAS process, socio-economic impact analysis, feedback from consultation and engagement sessions, and present the Minister with factors to be considered for a decision. ○ Per Section 2.5 of the Fisheries Act, the Minister may consider the following in fisheries management decision-making: the application of the precautionary approach and an ecosystem approach; Indigenous knowledge; the sustainability of fisheries; scientific information; community knowledge; co-operation with any government of a province, and any Indigenous governing body — including a co-management body — established under a land claims agreement; social, economic and cultural factors in the management of fisheries; the preservation or promotion of the independence of license holders in commercial inshore fisheries; and the intersection of sex and gender with other identity factors. ● The Government did not address the latter part of the recommendation: to formalize a system for fishers to participate and provide input in fisheries management.
Recommendation 30 That DFO apply the same management measures to all fishers of a given species in a given fishing zone based primarily on science and stock conservation for a sustainable fishery.	**Unresolved**	**Theme:** Engagement and Consultation ● The Government response did not address this recommendation.
Recommendation 31 That DFO revitalize relationships with the recreational and commercial fishing industries and demonstrate fair process in decision-making.	**Unresolved**	**Theme:** Engagement and Consultation ● The Government response did not address this recommendation.

Recommendation 32 That DFO consult those who could be most socio-economically impacted by its decisions and ensure that the socio-economic impacts on communities and the fishing industry are factored in its decision-making processes. The assessment of economic and social impacts resulting from decisions should be provided when requested by Canadians.	**In progress: low response**	**Theme:** Decision-Making and Communication ● The Government noted that DFO undertakes socio-economic analyses to serve various departmental functions, including to support decision-making and policy development. ● The Government stated that socioeconomic analysis is one of the key inputs that the Minister may consider in fisheries management. ● The Government noted that the publication of the Regulatory Impact Analysis Statement (RIAS), as part of the regulatory process, includes the analysis of impacts on stakeholders. ● The Government noted how assessments of economic and social impacts are made publicly accessible, including: ○ "The publication of the RIAS of a proposed Regulation in Canada Gazette, Part 1 also serves as a consultation tool as stakeholders can provide comments to DFO on the proposed regulation and the accompanying analysis." ○ "The detailed cost-benefit analysis study supporting the RIAS is also available to the public upon request in accordance with the federal regulatory requirements outlined in the Cabinet Directive on Regulations."
Recommendation 33 That the Government of Canada request that the Chief Science Advisor ● undertake an examination of how DFO fisheries management officials influence the work and findings of DFO scientists; ● and produce a report to government including an assessment of such influence, ● whether this influence is appropriate and ethical; ● and recommendations, if necessary, of how to reform fisheries management influence on science in DFO in order	**Unresolved**	**Theme:** Decision-Making and Communication ● The Government response did not address this recommendation.

to increase independence of DFO science and ensure there is an established conduit for science to be directly channeled from scientists to decision-makers for them to consider when making decisions.		
Recommendation 34 That the Government of Canada request that the Chief Science Advisor ● assess the viability of restructuring existing DFO systems and processes in a manner that would ensure that science advice is independently collated, assessed and delivered to managers and decision-makers by DFO scientists; and ● produce a report with recommendations from this assessment and that that report be tabled by the government in the House of Commons by 2024.	**Unresolved**	**Theme:** Decision-Making and Communication ● The Government response did not address this recommendation.
Recommendation 35 That the Government of Canada request that the Chief Science Advisor ● examine to what degree science advice from scientists is implemented in DFO management and decision-making processes; and ● produce a report with advice and recommendations for establishing protocols to measure to what degree science advice from scientists is implemented in DFO management and decision-making processes and	**Unresolved**	**Theme:** Decision-Making and Communication ● The Government response did not address this recommendation.

that this report be tabled in the House of Commons by 2024.		
Recommendation 36 That the Government of Canada develop and table legislation that establishes a science-based fisheries management framework and a requirement for the government, through DFO, to ensure that DFO decisions align with the science-based management framework and demonstrate alignment of decisions with the framework by publicly releasing scientific reasons and other factors for decisions.	**Unresolved**	**Theme:** Decision-Making and Communication ● The Government did not commit to developing legislation that establishes a science-based fisheries management framework. ● The Government noted how science is using in the decision-making process: ○ Per Section 2.5 of the Fisheries Act, the Minister may consider the following in fisheries management decision-making: the application of the precautionary approach and an ecosystem approach; Indigenous knowledge; the sustainability of fisheries; scientific information; community knowledge; co-operation with any government of a province, and any Indigenous governing body — including a co-management body — established under a land claims agreement; social, economic and cultural factors in the management of fisheries; the preservation or promotion of the independence of license holders in commercial inshore fisheries; and the intersection of sex and gender with other identity factors. ○ The Government noted that stock conservation is the Minister's first priority in decision-making. ○ Department officials carefully review input, including formal science advice through the CSAS process, socio-economic impact analysis, feedback from consultation and engagement sessions, and present the Minister with relevant factors to be considered for a decision. ○ As per CSAS processes, the science advice which informed the decision-making process is ultimately publicly available on DFO's website. ○ Per the Fisheries Act Fish Stock Provisions, the Minister must implement measures to maintain stocks prescribed by regulation at levels necessary to promote their sustainability and to develop and implement rebuilding plans for depleted stocks. This allows the Minister to change fishery management measures if the measures could result in adverse cultural or socio-economic impacts.

		○ DFO relies on sound scientific information, socio-economic analysis, and public consultations to ensure decisions are in the best interest of all Canadians.
Recommendation 37 That the Government of Canada initiate an independent audit of how and to what degree DFO has implemented the Sustainable Fisheries Framework and that the resulting audit report be tabled in the House of Commons by December 15, 2023.	**Unresolved**	**Theme:** Engagement and Consultation ● The Government response did not address this recommendation.
Recommendation 38 That the Government of Canada request that the Chief Science Advisor ● assess the viability of establishing an independent science advice body to directly advise DFO decision-makers, assess health and performances of fisheries, make recommendations on scientific research priorities, and oversee the implementation of science-based activities; and ● provide this assessment in a report with recommendations to the government to be tabled by 2024.	**Unresolved**	**Theme:** Transparency and Scientific Independence ● The Government response did not address this recommendation.
Recommendation 39 That scientists conduct pinniped diet analysis for all species of pinnipeds over longer periods of the year in more diverse regions than in the past and make their data publicly available by posting it on the DFO website.	**In progress: low response**	**Theme:** Domestic and International Collaboration ● The Government noted that DFO's pinniped science program activities include at-sea sampling of seals by members of the fishing industry, supporting internal and external research, and regular engagement with external experts. These activities are complementary to other DFO research projects which examine the diets of key seal and/or sea lion species, and will help to improve our understanding of pinniped populations and their impacts on fish stocks.

		• While analysis is ongoing, the Government did not directly address the recommendations to make this specific data publicly available (other than what has generally been outlined in **Recommendation 20**), nor to conduct data analysis in more diverse regions than in the past.
Recommendation 40 That, in order to accurately assess the effects of pinniped predation when estimating mortality levels in fish stock biomass, scientists compare data from countries with similar species of pinnipeds.	**In progress**	**Theme:** Domestic and International Collaboration • Refer to **Recommendation 39** for the Government's response.
Recommendation 41 Given the conflict of interest between DFO's mandate relating to aquaculture versus the application of the precautionary principle and the ongoing crisis for the health of wild Pacific salmon stocks, that the government implement, on the West Coast only, Recommendation #3 in the Cohen Commission report on the state of wild salmon: "The Government of Canada should remove from the Department of Fisheries and Oceans' mandate the promotion of salmon farming as an industry and farmed salmon as a product."	**Unresolved**	**Theme:** Engagement and Consultation • The Government acknowledged that various threats, including climate change and fishing pressures, have negatively affected Pacific salmon. • The Government stated that as previously noted in the Cohen Commission response, DFO continues to share responsibility for the fish and seafood industry with other federal partners. • The Government noted that DFO's role is "primarily regulatory in nature, and is less focused on promotion of the sector."
Recommendation 42 That the Government of Canada initiate an independent audit of what recommendations of the December 2018 report titled "Report of the Independent Expert Panel on Aquaculture Science" have been implemented by DFO, how many have been fully implemented and timelines for full implementation for	**Unresolved**	**Theme:** Transparency and Scientific Independence • The Government response did not address this recommendation.

recommendations that are not yet fully implemented and that the resulting audit report be tabled in the House of Commons by June 9, 2023.		
Recommendation 43 That, in light of the established aquaculture management division within the department and that DFO favours the interest of the salmon-farming industry over the health of wild fish stocks, DFO establish a wild salmon position independent from this division as recommended in Recommendation 4 of the Cohen Commission report to maintain impartiality.	**Unresolved**	**Theme:** Engagement and Consultation ● As noted above in **Recommendation 41**: ○ The Government acknowledged that various threats, including climate change and fishing pressures, have negatively affected Pacific salmon. ○ The Government stated that as previously noted in the Cohen Commission response, DFO continues to share responsibility for the fish and seafood industry with other federal partners. ○ The Government noted that DFO's role is "primarily regulatory in nature, and is less focused on promotion of the sector." ● The Government noted that the Department launched the 2018-2022 Wild Salmon Policy Implementation Plan (WSPIP) to support the conservation of this species by working towards the restoration of their habitat. ● In 2021, the Government invested in the Pacific Salmon Strategy Initiative to take a coordinated approach to stabilize and restore Pacific salmon and its habitat, and has created a new group within DFO to oversee this work. ● The Government response did not directly address this recommendation.
Recommendation 44 That DFO place appropriate and adequate value to perspectives provided by the External Advisory Committee on Aquaculture Science, and reflect such perspectives in policy recommendations and advice to the Minister of Fisheries, Oceans and the Canadian Coast Guard, and that the work of the External Advisory Committee on Aquaculture Science be reported to Parliament on an annual basis.	**Unresolved**	**Theme:** Domestic and International Collaboration ● The Government response did not address this recommendation. ● On a related note, as stated above in **Recommendation 36**, department officials carefully review various inputs before presenting the Minister with relevant factors to consider for decision-making, including formal science advice through the CSAS process, and feedback from consultation and engagement sessions.

Recommendation 45 Given the perceived issues with the DFO's risk assessment of the impact of aquaculture operations in the Discovery Islands on wild fish stocks including: ● the failure to assess the cumulative impacts of the viruses and bacteria detected; and ● the suppression of additional research that could have had a material impact on the overall risk assessment, that DFO submit to an independent review of the risk assessment, including but not limited to decisions on the assessment's terms of reference and factors that resulted in the suppression of research findings on the impact of sea lice and possibly other issues with a material impact on the health of wild fish stocks. That there be an independent audit and analysis to determine the accuracy and decision-informing value of the Science Advisory Report presented to the Minister of Fisheries, Oceans and the Canadian Coast Guard on DFO's risk assessment of aquaculture operations in the Discovery Islands.	**Unresolved**	**Theme:** Transparency and Scientific Independence ● The Government response did not address this recommendation.
Recommendation 46 That the Minister of Fisheries, Oceans and the Canadian Coast Guard provide in writing to the Committee a statement as to whether or not DFO omitted, canceled or in any other way did not complete or make unavailable a 10th CSAS risk assessment examining potential risks to Fraser sockeye.	**Unresolved**	**Theme:** Transparency and Scientific Independence ● The Government response did not address this recommendation.

Recommendation 47 That in light of new scientific revelations of potential impacts of Tenacibaculum maritimum and Piscine orthoreovirus (PRV) on wild Pacific salmon, the Government of Canada request that the Chief Science Advisor assess and make recommendations to the Minister of Fisheries, Oceans and the Canadian Coast Guard on the potential necessity for a CSAS assessment of risks posed by Tenacibaculum maritimum and PRV on all species of wild Pacific salmon, including Fraser sockeye.	**Unresolved**	**Theme:** Transparency and Scientific Independence ● The Government response did not address this recommendation.
Recommendation 48 That, within 60 days after of this report being presented to the House of Commons, DFO make publicly available on their website all documents, including working papers, the Science Advisory Report and the Recovery Potential Assessment, associated with the CSAS assessment of interior Fraser steelhead in British Columbia.	**Unresolved**	**Theme:** Transparency and Scientific Independence ● The Government response did not address this recommendation.