



Agenda item 5.1
For information

Council

CNL(19)25

***Annual Progress Report
on Actions Taken Under the Implementation Plan for the Calendar Year 2018***

Canada

CNL(19)25

Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2018

The primary purposes of the Annual Progress Reports are to provide details of:

- any changes to the management regime for salmon and consequent changes to the Implementation Plan;
- actions that have been taken under the Implementation Plan in the previous year;
- significant changes to the status of stocks, and a report on catches; and
- actions taken in accordance with the provisions of the Convention

These reports will be reviewed by the Council. Please complete this form and return it to the Secretariat **no later than 28 March 2019**.

Party:	Canada
Jurisdiction/Region:	

1: Changes to the Implementation Plan	
1.1 Describe any proposed revisions to the Implementation Plan <i>(Where changes are proposed, the revised Implementation Plans should be submitted to the Secretariat by 1 December).</i>	
None	
1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.	
<p>While the trend of declining returns continued in 2018, the Government of Canada implemented a series of measures to ensure that salmon conservation remains a top priority. The management regime of mandatory catch and release has been implemented in nearly all of the southern ranges of the Atlantic coast. In the northern ranges, a combination of measures was used, including limits to catch, catch and release, and even the closing of rivers where sustainability targets were not being met.</p> <p>To inform decision-making, Canada continued to engage with Indigenous groups, other levels of government, and non-governmental stakeholders, as well as rely on science assessment data.</p> <p>Lastly, the Government of Canada initiated a process to advance the objectives and principles of the Wild Atlantic Salmon Conservation Policy. This included establishing a working group comprised of members of the Atlantic Salmon Conservation Advisory Group to initiate the development of the domestic Salmon Policy Implementation Plan. The Plan was drafted as a consensus based document, and once approved, will serve to guide the collective efforts of all stakeholders to ensure salmon conservation and sustainability.</p>	

2: Stock status and catches.				
2.1 Provide a description of any new factors which may significantly affect the abundance of salmon stocks and, if there has been any significant change in stock status since the development of the Implementation Plan, provide a brief (200 word max) summary of these changes.				
Abundance of Atlantic Salmon stocks in eastern Canada continued to decline in most areas, particularly in the southern regions of the species range. Reductions in the annual recreational retention limits in Newfoundland and Labrador and continued catch and release only or closure of fisheries in the Maritime provinces reflect the realized low abundances in 2016 and 2017. Low river discharges and warm water temperatures necessitated inseason restrictions on recreational fisheries for the purpose of reducing the impact of catch and release fisheries during those stressful events.				
2.2 Provide the following information on catches: <i>(nominal catch equals reported quantity of salmon caught and retained in tonnes 'round fresh weight' (i.e. weight of whole, ungutted, unfrozen fish) or 'round fresh weight equivalent')</i> .				
(a) provisional nominal catch (which may be subject to revision) for 2018 (tonnes)	In-river	Estuarine	Coastal	Total
	36.6	46.1	6.8	89.5
(b) confirmed nominal catch of salmon for 2017 (tonnes)	67.6	33.8	8.4	109.9
(c) estimated unreported catch for 2018 (tonnes)				25 (to be confirmed in June 2018)
(d) number and percentage of salmon caught and released in recreational fisheries in 2018.	Total released salmon in recreational fisheries: 50,184 fish; 73% of the catch (retained plus released) Of this total, 27,708 small salmon were released (61% of small salmon catch) and 22,476 large salmon were released (96% of large salmon catch).			

3: Implementation Plan Actions.		
3.1 Provide an update on progress against actions relating to the Management of Salmon Fisheries (Section 2.8 of the Implementation Plan). <i>Note: The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.</i>		
Action F1:	Description of Action (as submitted in the IP)	Fisheries management measures introduced to compensate for low marine survival include: <ul style="list-style-type: none"> • Reduced daily and season bag limits; • Mandatory catch and release fishing, especially of large salmon; • Salmon fishing closures in areas where the CSRs are not being met; and, • Restrictions on commercial pelagic fisheries to stop or minimize salmon by-catch, including moving these fisheries in time and space and

		<p>modifying the fishing gear to avoid migrating salmon.</p> <p>In addition, Canada’s fisheries managers have asked for a science-led review of reference points for Atlantic salmon which conforms to the Precautionary Approach (PA) for all areas of eastern Canada.</p>
	Expected Outcome <i>(as submitted in the IP)</i>	<p>Fisheries management measures are designed to maintain or improve numbers of salmon returning to Canadian rivers.</p> <p>A consistent approach to Atlantic salmon reference points which conform to the PA will improve management of Atlantic salmon fisheries and overall conservation of the species.</p>
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	<p><u>Maritimes:</u></p> <p>DFO Maritimes Region has adopted 2.4 eggs/m2 of accessible fluvial rearing habitat that is of suitable gradient as the lower reference point under the PA.</p> <p><u>Quebec:</u></p> <p>Since the implementation of the Quebec’s Atlantic salmon management plan 2016-2026, large salmon harvest by recreational anglers was reduced by 45% in comparison to the previous 5 years average, and anglers presence on salmon rivers increased by 4%. In 2018, the annual quota by anglers was reduced from 7 salmon, large or small, to 4 salmon, including a single large salmon, as intended in the management plan (Note – In Quebec, the Department of Ministry of Forests, Wildlife and Parks is responsible for salmon management).</p>
	Current Status of Action	Ongoing
	If ‘Completed’, has the Action achieved its objective?	N/A
Action F2:	Description of Action <i>(as submitted in the IP)</i>	<p>Canadian fisheries scientists and managers are already dealing with aquatic invasive species (AIS) using whatever tools are currently available. In some cases, these tools may not be adequate, and it is becoming more difficult to find resources to address all AIS issues. Fisheries and Oceans Canada is working with provincial and territorial partners to develop a national framework and regulations to manage the threat of AIS. The regulations will complement existing authorities and bridge gaps to enable a broad range of AIS management activities. This initiative will accommodate localized AIS issues, as well as provide a national framework for managing and controlling</p>

		<p>AIS in Canada. Biological risk assessments will identify those species that pose a risk based on probability of arrival, survival and establishment with ecological impacts. The proposed regulation will list AIS by geographical area, prohibit the live import, transport and possession of listed AIS, provide management authorities with a wide range of AIS control and eradication activities, including the use of deleterious substances, and enhance the ability to direct activities (including enforcement) to high risk areas. Along with these regulations, education and public awareness are considered key to achieving success.</p> <p>With respect to the increasing presence of rainbow trout in Quebec waters, at Canada’s request in 2012, NASCO added a question for ICES advice on the impact of this “exotic salmonid’s” expansion outside of its natural habitat through human intervention. This advice will guide actions, where necessary, to control this invasive species.</p> <p>In Nova Scotia, the provincial government enacted <i>Live Fish Possession Regulations</i> in 2012 to prohibit possession of live fish unless authorized, and has closed fishing for smallmouth bass where they are not found, to remove the incentive for illegal introductions.</p> <p>A three-year (2010-2012) containment and eradication plan is in place to control the spread of smallmouth bass in the Miramichi Lake and to eventually eradicate them from the watershed. The plan includes the use of barriers to contain the smallmouth bass, physical removal by intensive fishing and electrofishing, and location and removal of nests.</p>
	<p>Expected Outcome <i>(as submitted in the IP)</i></p>	<p>The national framework and regulations are being designed to support management activities aimed at preventing the introduction of AIS into Canada and controlling the spread of AIS if they are introduced.</p>
	<p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p>	<p>As reported in Canada’s 2015 APR, Canada’s federal Aquatic Invasive Species Regulations came into force May 29th, 2015. The work relating to the AIS Regulations is therefore complete and has achieved its objectives.</p> <p>Control efforts have continued since 2012. Potential impacts of Smallmouth Bass has been successfully managed by suppressing their population within Lake</p>

		Miramichi. DFO is working with stakeholders to determine a long-term control strategy.
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	N/A
Action F3:	Description of Action <i>(as submitted in the IP)</i>	Reduction and elimination of acid rain-causing emissions are the ideal goals to mitigate losses of wild Atlantic salmon due to acidification. In the meanwhile, liming of watercourses is recognized as an acidification mitigation technique that provides benefits to salmon. In Nova Scotia, the Atlantic Salmon Federation (ASF) has been very involved with liming projects e.g. in West River, Sheet Harbour. The ASF and others have operated an automated lime doser for approximately 6 years.
	Expected Outcome <i>(as submitted in the IP)</i>	The liming project in West River has had very positive results. Parr numbers have increased by more than 300% and new sections of the river are being recolonized. Liming can be fairly expensive and must be done repeatedly as long as the source of acidity remains.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	The project is entering its 14th year overall and its third year of significant expansion, which now includes a second lime doser and catchment liming by helicopter. Monitoring for effectiveness includes: operation of an adult salmon counting fence; operation of a smolt assessment facility; ongoing electrofishing; and, water chemistry monitoring. Research is being expanded to examine the interplay between forest resiliency/ productivity and catchment liming to integrate salmon and forest economics.
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	N/A
Action F4:	Description of Action <i>(as submitted in the IP)</i>	Education of the public about the importance of Atlantic salmon conservation is considered very important, as those with a stake in the resource will assist in deterring poaching. Regular patrols by federal fishery officers and provincial conservation officers, as well as undercover work and tips from the public are all used to detect and catch poachers. Fisheries and Oceans Canada has worked with its lawyers in recent years to educate the court system and judges about the seriousness of salmon poaching and its effects on Atlantic salmon populations. As a result, heftier fines and other

penalties are now being imposed by the courts, which is a further deterrent.

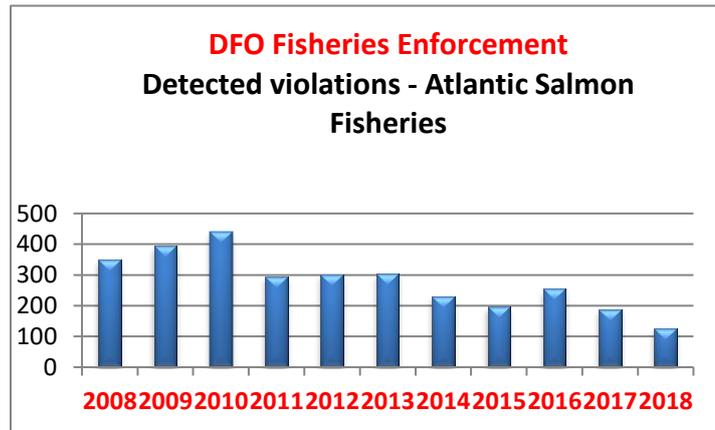
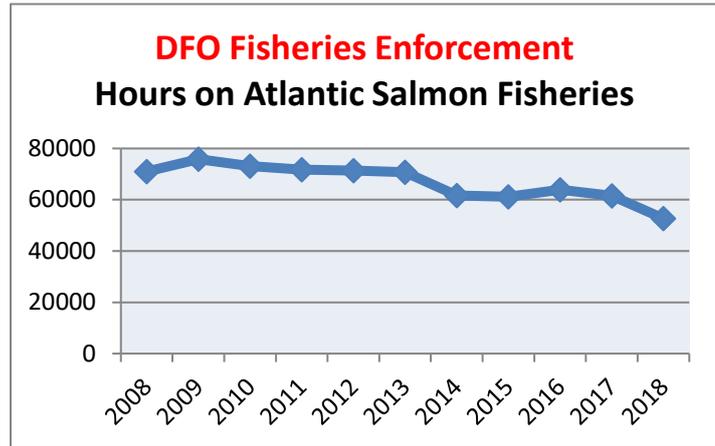
Expected Outcome
(as submitted in the IP)

Decreased incidence of poaching

Progress on Action to Date
(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)

Enforcement 2018 – Atlantic Salmon
*Tables below do not include Parks Canada or provincial statistics for Quebec Region

Enforcement trends (2008-2018):



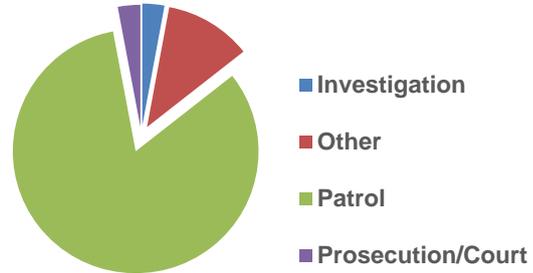
Enforcement Statistics 2018

Activities:

DFO Region	Hours	Fishers checked	Fishing Sites checked
GULF	6,410	586	5,779
MARITIMES	4,575	286	3,303
NEWF & LAB	41,678	2,914	8,138
QUEBEC	11		0

Grand Total	52,674	3,786	17,220
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Enforcement Effort (DFO) by Main Activity (2018)



Detected Violations:

Region	Total
GULF / GOLFE	33
MARITIMES	5
NEWFOUNDLAND & LABRADOR	106
QUEBEC	0
Grand Total	127

by Action Taken	Total
CHARGES LAID	62
CHARGES NOT APPROVED	3
CHARGES PENDING/UNDER REVIEW	9
DIVERTED (ALTERNATIVE MEASURES)	1
NATIVE PROTOCOL	6
SEIZURE(S) - PERSONS UNKNOWN	20
TICKET ISSUED	2
WARNING ISSUED	40
Grand Total	127

by Violation Type	Total
OTHER LEGISLATION	8
AREA / TIME	40
ASSAULT/ OBSTRUCT	1
GEAR - ILLEGAL/ USED ILLEGALLY	41
GEAR CONFLICT	0
ILLEGAL BUY/SELL/POSSESS	10
HABITAT	0
REPORTING	1
SPECIES/SIZE LIMIT	0
INSPECTION	0
REGISTRATION / LICENCE	24
QUOTA / BAG LIMIT	2
Grand Total	127

Current Status of Action

Ongoing

	If 'Completed', has the Action achieved its objective?	N/A
Action F5:	Description of Action <i>(as submitted in the IP)</i>	<p>Current Integrated Fisheries Management Plans (IFMP) for Atlantic salmon and commercial pelagic fisheries provide information on measures that are being taken to reduce salmon by-catch. As a general rule, wild Atlantic salmon that are caught incidentally in any fishery cannot be retained and must be returned to the water in a manner that causes the least harm to the salmon.</p> <p>In addition, Canada is moving towards a more rigorous catch monitoring and reporting regime that will encompass all catches, including by-catch and discards, as set out in Fisheries and Oceans Canada's <i>Policy on Managing By-catch</i>.</p>
	Expected Outcome <i>(as submitted in the IP)</i>	Implementation of the policy, with ongoing monitoring of salmon by-catch and further improvements in management measures to avoid such by-catch, will enhance Atlantic salmon conservation.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	<p>Gear restrictions and close times designed to minimize the bycatch of salmon remain in place.</p> <p>Specific to the Maritimes Region, mandatory logbook reporting of bycatch is a condition of licence in most commercial fisheries using gear types that are likely to interact with salmon.</p>
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	N/A

3.2 Provide an update on progress against actions relating to Habitat Protection and Restoration (Section 3.4 of the Implementation Plan).

Note: The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.

Action H1:	Description of Action (as submitted in the IP)	Focussed Legal Protection
		<p>The Fisheries Act was amended in 2012 to focus on providing for the sustainability and ongoing productivity of recreational, commercial and Aboriginal fisheries. This will require updated policy and decision-making frameworks.</p> <p>Fisheries and Oceans Canada's new Fisheries Protection Program will administer provisions of the Fisheries Act related to managing effects on fish and fish habitat, i.e., the fisheries protection provisions. Fisheries Protection Program staff will focus on managing specific activity and development types. Staff has been organized into teams that will focus on, among other areas: linear development including transportation infrastructure; marine and coastal development including coastal land use such as agriculture and forestry; and mining. These teams will develop specialized expertise to effectively address threats to important fisheries listed in section 3.3: transportation infrastructure, agriculture, forestry, and mining. To address these threats to fisheries, teams will complete several types of actions: development of standards for protection (to be enshrined in policy and regulation); implementation of regulatory requirements including regulatory reviews of development projects and activities under the Fisheries Act and the Species at Risk Act; and identification and protection of important habitats.</p> <p>In addition, a recovery strategy has been developed for the Inner Bay of Fundy Atlantic Salmon populations, under the Species at Risk Act. This document is intended to provide a strategy for the planning and implementation of recovery for Inner Bay of Fundy Salmon. It defines the goal for recovery of the species and outlines objectives to achieve this goal. It identifies activities to be undertaken as well as areas where knowledge is lacking and further information is required. It also includes a description of the species and its needs, and identifies the threats to its survival and recovery.</p>

		<p>Activities planned for 2013-2018 to implement the recovery strategy include: progress towards identification of critical habitat in the marine environment which is currently a knowledge gap, and protection of critical habitat identified for the population. As well, three federal funding programs provide ongoing support to conservation and enhancement activities for this population: the Atlantic Salmon Endowment Fund (ASEF), Habitat Stewardship Program (HSP), and the Aboriginal Funds for Species at Risk (AFSAR) program.</p>
	<p>Expected Outcome <i>(as submitted in the IP)</i></p>	<p>Enhanced protection of recreational, commercial and Aboriginal fisheries, improved information sharing between Fisheries Protection officials, and clear, focused risk based decision making processes.</p>
	<p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p>	<p>DFO continues to work in collaboration with Parks Canada Agency (PCA) and with its many partners to implement the Recovery Strategy for the Atlantic Salmon, Inner Bay of Fundy (iBoF) population (http://sararegistry.gc.ca/document/default_e.cfm?documentID=1917). First published in 2010, the Recovery Strategy provides lead federal departments, DFO and PCA, and all other partners with strategic direction for the planning and implementation of recovery. The Recovery Strategy identifies areas of freshwater critical habitat required for the species' survival and recovery. Amendments to the published Recovery Strategy are underway, which will include the identification of estuarine and marine areas of critical habitat, the addition of the Petitcodiac River as critical habitat, as well as other updates.</p> <p>An Action Plan for the iBoF Atlantic Salmon has also been published to the Registry http://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=2936), and outlines the specific recovery measures needed to address all five of the Recovery Strategy objectives. For each recovery measure, it also outlines who will be involved and the associated timeline for completion.</p> <p>Activities undertaken by DFO, PCA and/or its partners to implement the Recovery Strategy and Action Plan in 2018 include:</p> <ul style="list-style-type: none"> • publication of a proposal to establish a Critical Habitat Order to protect the identified critical habitat - http://gazette.gc.ca/rp-pr/p1/2018/2018-07-21/html/reg1-eng.html, • publication of a residence statement to facilitate the protection of iBoF Salmon

		<p>residence (i.e., spawning redds) - https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/residence-descriptions/atlantic-salmon-inner-fundy-2018.html,</p> <ul style="list-style-type: none"> • continuation of the Live Gene Bank (LGB) program to conserve genetic characteristics and help re-establish self-sustaining populations, publication of a Science Advisory Report on a review of the science associated with the iBoF Salmon LGB Program - http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2018/2018_041-eng.html, • marine rearing of wild Fundy National Park salmon, • marine rearing of Petitcodiac River salmon, • continuation of river specific monitoring and many freshwater habitat restoration activities, and • continuation of studies aimed at examining the relationship between marine survival and identified marine threats, such a marine predation post-smolt tracking study on the Stewiacke River, and assessing the impacts of multiple stressors (i.e., aquaculture interactions, hydropower and fisheries) on the early marine survival and migration of wild salmon. <p>Fisheries Protection Program: The Fisheries Protection Program specialized review teams have been established and are conducting regulatory activities within their respective industry sectors, as required. Decision making processes continue to be enhanced. As part of the Government of Canada’s Review of Environmental and Regulatory Processes, on February 6, 2018, the Government of Canada introduced a bill in Parliament that proposes amendments to the <i>Fisheries Act</i> (www.parl.ca/Content/Bills/421/Government/C-68/C-68_1/C-68_3.PDF). The bill outlines changes to restore lost protections and incorporate modern safeguards into the Act. Proposed amendments were developed following in-depth engagement with the Canadian public.</p> <p>The proposed changes include: – A return to broad prohibitions against causing the death of fish (other than by fishing) and against</p>
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		<p>causing the harmful alteration, disruption or destruction of fish habitat.</p> <p>– Authorities to set standards and make decision making more transparent, predictable and integrated.</p> <p>Federal Funding Programs: The following three federal funding programs provide ongoing support to conservation and recovery activities for this population and its habitat:</p> <p><i>1) Habitat Stewardship Program (HSP)</i> In 2017-18, the HSP allocated \$361,709.00 to six (6) projects for the conservation and recovery of Atlantic Salmon populations. In addition to federal funding, program Recipients and their partner organizations contributed \$672,189.00 of cash or in-kind support to these projects, bringing the total value of work to approximately \$1,033,899.00. Regionally speaking, projects were carried out in the Atlantic Provinces, and focused on salmon populations found in rivers and watersheds of New Brunswick, Nova Scotia and Prince Edward Island Provinces.</p> <p><i>2) Aboriginal Funds for Species at Risk (AFSAR)</i> In 2017-18, the AFSAR program allocated \$618,938 to ten (10) projects involving Atlantic Salmon. Nine (9) of these projects directly targeted Atlantic Salmon populations, with four (4) focused on populations listed under Schedule 1 of the Species at Risk Act (SARA). Activities including population monitoring and assessment, habitat stewardship and enhancement, outreach and education, and the collection and management of Indigenous Knowledge. In cases where projects addressed SARA listed species, monitoring and outreach activities were designed to support actions identified in corresponding Recovery Strategies. In addition to federal funding, AFSAR recipients and their partner organizations contributed as much as \$815,907.00 in cash or in-kind support, bringing the total value of the projects to approximately \$1,434,845.00. These AFSAR projects were carried out in Quebec and the Atlantic Provinces, focusing on salmon populations found in the Southern Gulf of St. Lawrence; the Inner and Outer Bay of Fundy areas, and; the Southern Coast of Newfoundland.</p> <p>Specific waterways benefiting from this work include the Midgell, Restigouche, Petecodiac, Gaspereau, Cross, Naufrage, Stewiacke and Middle rivers, along</p>
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		<p>with several of their smaller tributaries and salmon streams.</p> <p><i>3) Recreational Fisheries Conservation Partnerships Program (RFCPP)</i> In 2017-18, \$1,559,013 million was contributed to 40 projects in Atlantic Canada that restored Atlantic Salmon habitat. As this is the last funding cycle for the RFCPP program, and limited funds are available, it was decided that the cycle would span two fiscal years (FY 2017-2018 and 2018-2019). Projects were funded in Québec (2 projects valued at \$75,517), New Brunswick (16 projects valued at \$527,757), Prince Edward Island (5 projects valued at \$230,547), Nova Scotia (9 projects valued at \$462,220), Newfoundland and Labrador (7 projects valued at \$234,557), and Ontario (1 project valued at \$28,415).</p> <p><i>4) Coastal Restoration Fund (CRF)</i></p> <p>Since its launch in May 2017 the Coastal Restoration Fund to date has supported 10 coastal restoration projects worth \$16,581,332 over five years in Atlantic Canada. These projects will benefit Atlantic salmon, and is broken down as follows:</p> <ul style="list-style-type: none"> - 3 projects in Nova Scotia valued at \$5,948,844; - 1 project in PEI valued at \$2,065,932; - 4 projects in New Brunswick valued at \$4,372,736; and - 2 projects in Newfoundland valued at \$4,193,820
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	N/A
Action H2:	Description of Action (as submitted in the IP)	<p><u>Enforcement and Standards</u></p> <p>The Fisheries Act was revised in 2012 and now includes a number of provisions that will enable enhanced compliance and protection of commercial, recreational and Aboriginal fisheries.</p> <p>A number of provisions enable enhanced protection of these fisheries by:</p> <ul style="list-style-type: none"> • Aligning the Fisheries Act with the Environmental Enforcement Act (increased fines and penalties for offences); • Creating more easily enforceable conditions for Ministerial authorizations; • Modernizing inspector powers to assist them in ensuring compliance with section 35 (dealing with harm to fish and their habitat); and • Establishing a “duty to notify” provision to

		<p>establish obligations on persons whose actions result in harm to fish habitat to report and to take corrective measures.</p> <p>These changes support the action of enforcing the fisheries protection provisions of the Fisheries Act, through activities aimed at both deterring activities that may harm fish and fish habitat, and at compelling compliance with the Act. Enforcement actions will help address the threats to fish and fish habitat listed in section 3.3 (H1).</p> <p>In addition, clear standards and guidelines for routine projects will be set in order to increase protection of commercial, recreation and Aboriginal fisheries.</p>
	Expected Outcome <i>(as submitted in the IP)</i>	Enhanced protection of recreational, commercial and Aboriginal fisheries from works, undertakings and activities that represent the greatest threats.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	<p>The Fisheries Protection Program initiated, in 2018, the review of its Compliance Protocol. The revision of this document will improve clarity on the roles and responsibility with regards to inspection and enforcement. It will also contribute to the department's ability to respond to occurrences and potential non-compliance to the <i>Fisheries Act</i> with regards to the protection of fish and fish habitat.</p> <p>The Fisheries Protection Program also completed an exercise to Standardize the wording of management measures (advice) to ensure that they explicitly conveys the actions that are needed by proponents, and that they are measurable and verifiable for monitoring, auditing, and compliance activities.</p> <p>In addition to monitoring the effectiveness of voluntary guidelines, the Program is also making progress in improving tools and systems for monitoring compliance and effectiveness with respect to legal requirements under the <i>Fisheries Act</i>. Proposed changes to the Act will also further enhance tools to enforce compliance.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	N/A
Action H3:	Description of Action <i>(as submitted in the IP)</i>	The amended Fisheries Act provides Canada's Minister with the ability to develop regulations in order to enter into agreements with other federal departments, provinces and others for the effective management of fisheries resources, including wild Atlantic salmon habitat.

		<p>Threat H2 related to the presence of multiple jurisdictions, will be addressed through current and future partnerships.</p> <p>Reporting will be done by various means, including regular reports to Parliament and under the Multi-Agency Wild Atlantic Salmon Habitat Reporting Working Group.</p> <p>As well, jurisdictions within Atlantic Canada continue to work through informal arrangements and under the Wild Atlantic Salmon Conservation Policy to increase coordination on all key areas of management for Atlantic salmon.</p>
	<p>Expected Outcome <i>(as submitted in the IP)</i></p>	<p>Increased agreements, partnerships and collaboration among jurisdictions in Atlantic Canada.</p>
	<p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p>	<p>Inter-jurisdictional discussions and collaborative activities are ongoing - no new agreements have been struck.</p>
	<p>Current Status of Action</p>	<p>Ongoing</p>
	<p>If Completed, has the Action achieved its objective?</p>	<p>N/A</p>

3.3 Provide an update on progress against actions relating to Aquaculture, Introductions and Transfers and Transgenics (Section 4.8 of the Implementation Plan).

Note: The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.

<p>Action A1:</p>	<p>Description of Action (as submitted in the IP)</p>	<p>Implementation and improvement of current sea lice management tools (legislation, regulation, policy, standards, monitoring and reporting on sea lice management) and the development of new tools, where required.</p> <p>A range of tools is possible, including the development of proposed <i>Aquaculture Activities Regulations</i> under the <i>Fisheries Act</i>; the Bay Area Management approach; Integrated Pest Management; complimentary Provincial policies and regulations; monitoring; and aquaculture public reporting, including the use of sea-lice performance indicators.</p> <p>The five-year renewal of the Fisheries and Oceans Canada's Sustainable Aquaculture Program (SAP) (from 2013 to 2018) was announced in Canada's 2013 Budget. The Aquaculture Sustainability Reporting Initiative was renewed as Aquaculture Public Reporting and is focused on providing timely, accurate, relevant and coherent information within the Department's regulatory framework under the <i>Fisheries Act</i>, both on a periodic and ongoing basis, to the public, markets and investors about the regulatory management of the sector as well as its economic and environmental performance.</p> <p>The combined objective of these tools is to ensure that all participants in the management of farmed fish health in general, and sea lice management in particular, throughout the NASCO Commission area in Canada do so in a coordinated manner, using a risk and evidenced based approach, addresses impacts to fish populations that support commercial, recreational, and Aboriginal fisheries as well as the habitats that support them.</p>
	<p>Expected Outcome (as submitted in the IP)</p>	<p>Improved implementation and coordination of sea lice management through new agreements, regulations and policies.</p> <p>Adoption of new standards, research, improved monitoring and dissemination of information on sea lice management.</p>

<p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p>	<p>Sea lice management continues to be conducted through provincial regulations and programs in New Brunswick, Nova Scotia, and Newfoundland and Labrador.</p> <p>National standards are being considered for a range of purposes and may be incorporated by reference (potentially) in DFO's proposed General Aquaculture Regulations once they are completed.</p> <p>In addition, in relation to sea lice management, DFO is conducting a review and analysis of federal, provincial, and territorial regulations and policies/guidelines, as well as industry best practices and international regimes. This work may help to inform sea lice management practices for the possible development of national standards. This work will be done in consultation with provincial regulators, where appropriate.</p> <p>Sea lice research and development activities in Atlantic Canada remain focused on evaluating new means of managing on-farm sea lice levels, as well as the environmental monitoring of products currently used to control sea lice.</p> <p>The Aquaculture Activities Regulations (AAR) (http://www.dfo-mpo.gc.ca/aquaculture/management-gestion/aar-raa-eng.htm) are Canada's first national regulations for aquaculture, developed to increase coherence between federal and provincial/territorial regulation of aquaculture activities related to the control of disease, pests and biofouling, and the feeding and cultivation of fish. These regulations are intended to minimize harm to fish and fish habitat, while permitting essential aquaculture activities to take place.</p> <p>Consistent with the Government of Canada's commitment to openness and transparency, DFO recently began publishing detailed drug and pesticide deposit data, collected under the AAR, including contextual information (www.dfo-mpo.gc.ca/aquaculture/management-gestion/apr-rpa-reporting-eng.htm). This information will be updated on an annual basis.</p> <p>Monitoring of sea lice levels is restricted to on-farm monitoring; this information is evaluated to assess yearly and monthly trends in on-farm sea lice levels,</p>
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		<p>helping to evaluate progress in meeting the NASCO goal of no increase in sea lice loads. DFO continues to study aspects of sea lice life history to inform future management options surrounding the control and mitigation of infestations.</p> <p>Salmosan® received full registration approval from Health Canada as an approved pesticide for sea lice treatment in 2017. The aquaculture sector continues to implement an Integrated Pest Management Program, which has focussed on the research and development of alternative sea lice treatments, such as using warm water or freshwater bath treatments. The industry continues the practice of single year class sites and bays, which includes site and whole bay fallowing as a mechanism to control and manage sea lice.</p> <p>In New Brunswick (NB), the Inner Bay of Fundy recovery and stock enhancement program continued successfully in 2017, with a record number of adults (close to 1000) being released in the Fundy National Park rivers as part of a program involving First Nations, the aquaculture industry, the University of New Brunswick, NB Government and federal government partners.</p> <p>The Province of Nova Scotia (NS) initiated and implemented a web-based data management system, “i-Trends” (2016-2017), with the other Atlantic provinces, for sea lice monitoring through the Atlantic Veterinary College, Centre for Aquatic Health Sciences. This was to satisfy regulatory changes for marine fish farm leases in Nova Scotia, which required increased surveillance and reporting for sea lice. The monitoring, counting, recording and possible treatment reporting of sea lice at fish culture sites has become part of these regulatory changes. Records related to sea lice must be completed for the fish health portion of each marine finfish operation’s annual farm management plan. The program supports these requirements and was successful in its first year of implementation. The contract for 2017-2018 was renewed (2nd year) and it is anticipated to continue for 2018-2019 (3rd year).</p> <p>In NS, Farm Management Plans are regulatory requirements for aquaculture licence holders that have specific requirements for Fish Health Management, Containment Management Farm Operations and Environmental Management. There are monitoring and</p>
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		<p>reporting requirements for sea lice within the Farm Management Plans. All aquaculture licence holders were required to have a Farm Management Plan as of October 26, 2016.</p> <p>Newfoundland and Labrador (NL) implemented Bay Management Area (BMA) planning in 2011 for salmon aquaculture along the south coast of NL. BMA regions are informed by hydrography/oceanography, aquatic animal health, and epidemiology data. BMA policies ensure relevant activities are coordinated to enhance aquatic animal health and biosecurity. Data collection continues in partnership with salmon producers in support of BMA planning and this work is crucial to improving knowledge of coastal oceanography in the Province.</p> <p>The Government of Newfoundland and Labrador collaborates with industry and academia on research for alternative sea lice control/management such as cleaner fish. Cleaner fish are currently used in the aquaculture industry in Newfoundland and Labrador.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	N/A
Action A2:	Description of Action <i>(as submitted in the IP)</i>	<p>Implementation and improvement of current management tools (legislation, regulation, policy, standards and public dissemination of information on the management of farmed fish which have breached containment) and the development of new tools, where required.</p> <p>A range of tools is possible, including the development of legislative authority to enforce requirements; adoption of containment standards; and aquaculture public reporting, including the use of containment performance indicators.</p> <p>The combined objective of these tools is to ensure that all participants in the containment of farmed fish throughout the NASCO Commission area in Canada do so in a manner that minimizes impacts to fish populations that support commercial, recreational and Aboriginal fisheries as well as the habitats that support them.</p>
	Expected Outcome <i>(as submitted in the IP)</i>	Improved implementation and coordination of farmed fish containment through new agreements, regulations and policies, adoption of new standards, research, improved monitoring and dissemination of information on farmed fish containment

<p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p>	<p>It remains the objective of Canadian aquaculture regulators to ensure that all farmed fish are contained on production sites, as potential escapes represent both a potential environmental impact and a significant economic loss. Inventory management in marine cages during production remains challenging. Although large escape events can be readily recognized, estimated, publically reported, and addressed, on-going small-scale escapes during operation are difficult to estimate and control. All provinces and stakeholders continue to explore methods to reduce escapes by focusing on improving the multiple management activities that comprise containment.</p> <p>The monitoring of and reporting on breaches of containment at aquaculture facilities in Canada is a responsibility that is shared among federal and provincial jurisdictions. In the Commission area, this falls exclusively to provincial jurisdictions where salmon farming occurs, notably, the provinces of Nova Scotia (NS), New Brunswick (NB), and Newfoundland and Labrador (NL). Through partnership arrangements, Canada reports these on an annual basis, through NASCO, as part of its North American Commission (NAC) reporting.</p> <p>DFO continues to research the impacts of farmed fish escapement from both a fish health and genetic perspective. Recent studies (2017) have provided updated knowledge on the prevalence of escaped farmed salmon in rivers of the Northwest Atlantic and informed on initial steps for the potential usage of a cumulative spatial metric of aquaculture production to predict the impacts of escaped farmed salmon. In addition, projects are ongoing (concluding in 2019) on the East Coast (NL) to quantify the magnitude of escapes, and the annual variation in hybridization among wild and escaped farmed Atlantic Salmon through targeted surveys. Science advice from this research will be used to inform the development of any new legislative or regulatory approaches regarding the management of containment and the impacts of escapement. Additionally, Canada is leading an international research effort that is evaluating models that predict population-level impacts from escaped farmed salmon on wild salmon stocks. Models generated must be region specific.</p> <p>In addition, in relation to siting and containment, DFO is conducting a review and analysis of federal,</p>
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		<p>provincial, and territorial regulations and policies/guidelines, as well as industry best practices and international regimes. This work may help to inform siting and containment practices for the possible development of national standards. This work will be done in consultation with provincial regulators, where appropriate.</p> <p>In NB, progress continues via ongoing dialogue of the NB Aquaculture Containment Liaison Committee, which is comprised of members from the provincial and federal governments, as well as conservation groups (Atlantic Salmon Federation, NB Salmon Council, Conservation Council of NB) and the Atlantic Canada Fish Farmers Association. This progress includes increased communication with industry and NGOs in responding to, and following up on, breaches of containment from aquaculture facilities in Atlantic Canada. With industry assistance, work of the Committee has also led to the origin identification of aquaculture escapees captured in the wild.</p> <p>In NS, as part of the <i>2015 Aquaculture Management Regulations</i>, there are a number of regulatory provisions associated with containment. The Province has specifically established a containment management section within their annual Farm Management Plans that supports the regulatory requirements for containment. This establishes minimum requirements for procedures and protocols for: reporting breaches or suspected breaches from containment systems, operating procedures that limit the risk of breaches, processes for installing and maintaining infrastructure, responses to a breach, site management related to unusual or severe weather events, inventory reporting, and engineering approvals for infrastructure designs. There are also auditing requirements on a yearly basis of the containment management sections of Farm Management Plans and of sites when a breach is determined and escaped fish are identified as are specific operators.</p> <p>The NS Government is currently creating a Traceability Program that will establish mechanisms to enable regulators to trace salmonids back to the operator of origin. This is being done through the NS Salmonids Traceability Committee, which is made up of stakeholders from federal and provincial agencies, industry and industry associations, and angling associations and federations. The Committee was</p>
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		<p>responsible for establishing criteria that will form the basis of the traceability requirements for salmonid growers in NS. The criteria have been established and the supporting policy is currently being developed. Based on recommendations from the Traceability Committee, changes are being made to the NS <i>Aquaculture Management Regulations</i> to accommodate the traceability program.</p> <p>An Engineering Working Group has also been established by the Province of NS, to contribute to and comment on the creation of policy around containment structures. The Province is currently working on developing policies that will define the requirements and processes for the certification and auditing of aquaculture infrastructure designs and installations in the marine environment.</p> <p>The Code of Containment for the Culture of Salmonids in NL continues to be implemented as a condition of the salmonid aquaculture licence.</p> <p>NL is looking to enhance the implementation and coordination of farmed fish containment through new agreements, regulations and policies, adoption of new standards, research, improved monitoring, and dissemination of information on farmed fish containment.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	N/A
Action A3:	Description of Action (as submitted in the IP)	Renewal of Canada’s National Code on Introductions and Transfers of Aquatic Organisms
	Expected Outcome (as submitted in the IP)	The objective of this action is to complete the review and update Canada’s National Code on Introductions and Transfers of Aquatic Organisms. A renewed Code accounting for changes in federal authority over the management of aquatic animal disease risks and potential refinements.
	Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)	The renewed National Code on Introductions and Transfers of Aquatic Organisms and the National Aquatic Animal Health Program were implemented in 2017 (see 2015 NASCO APR for details).
	Current Status of Action	Completed
	If Completed, has the Action achieved its objective?	Yes
		Description of Action

<p>Action A4:</p>	<p><i>(as submitted in the IP)</i></p>	<p>of Transgenics</p> <p>Canada plans to continue to rigorously implement and enforce our risk-based legislative and regulatory process for living organism products of biotechnology, including transgenic salmonids.</p> <p>Canada plans to continue to invest in contained, land-based laboratory research involving transgenic fish to generate scientific knowledge to inform risk assessment, risk management and regulatory approaches aimed at protecting the aquatic environment including wild salmon populations.</p>
	<p>Expected Outcome <i>(as submitted in the IP)</i></p>	<p>Government of Canada decision makers have access to scientific knowledge for the risk assessment and regulation of fish products of biotechnology (immediate outcome).</p> <p>Fish products of biotechnology do not harm the environment or wild salmon populations (long-term outcome).</p>
	<p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p>	<p>Canada continues to achieve its objective to protect the environment, including wild Atlantic Salmon, from potential risks associated with transgenic salmonids, and through implementation and enforcement of a strong regulatory framework.</p> <p>Canada continues to enforce mandatory control measures implemented under the <i>Canadian Environmental Protection Act</i> and the <i>New Substance Notification Regulations (Organisms)</i>, as prescribed in Significant New Activity Notice 16528.</p> <p>Canada continues to inspect all facilities that rear transgenic Atlantic Salmon in Canada, and enforce compliance under the <i>Canadian Environmental Protection Act</i>. Furthermore, all proposed intentional movements of live transgenic fish are assessed for genetic and ecological, and disease risks by Introductions and Transfers Committees established in each province and the Yukon. Potential disease risks of transgenic fish are also addressed by the Canadian Food Inspection Agency's (CFIA) National Aquatic Animal Health Program (NAAHP).</p> <p>In 2013, Canada decided to allow the commercial production of transgenic Atlantic Salmon in contained facilities, as prescribed in Section 3 of Significant New Activity Notice 16528, published in volume 147, No.</p>

		<p>47 of the <i>Canada Gazette</i>, Part I on November 23, 2013.</p> <p>In May 2016, Health Canada and the CFIA approved the transgenic AquaAdvantage™ Atlantic Salmon for human food and animal feed use, respectively (see: http://news.gc.ca/web/article-en.do?nid=1068309).</p> <p>In 2017, there were no known violations of the <i>New Substances Regulations (Organisms)</i> with respect to Atlantic Salmon, and there were no known violations of the Significant New Activity Notice 16528.</p> <p>In July 2018, a regulatory package was submitted under the <i>New Substances Notification Regulations (Organisms)</i> for the manufacture and grow-out of EO-1α Salmon (the AquaAdvantage® Salmon), a fast growing, genetically engineered Atlantic Salmon, at a new land-based aquaculture facility near Rollo Bay, PEI. This notification is currently under review.</p> <p>Canada continues to invest in contained, land-based laboratory research of transgenic fish, to generate scientific knowledge that informs risk assessment, risk management, and regulatory approaches aimed at protecting wild Atlantic Salmon and the aquatic environment.</p> <p>The Province of NS has implemented a policy that no transgenic salmon will be farmed in NS.</p> <p>The NL aquaculture industry has not indicated intent to utilize transgenic species in aquaculture.</p> <p>Canada continues to achieve our objective to protect the environment, including wild Atlantic salmon, from potential perceived risks associated with transgenic salmonids, through implementation and enforcement of a strong regulatory program.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	N/A

4: Additional information required under the Convention	
4.1	Details of any laws, regulations and programmes that have been adopted or repealed since the last notification.
4.2	Details of any new commitments concerning the adoption or maintenance in force for specified periods of time of conservation, restoration and other management measures.
4.3	Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles.
4.4	Details of any new actions to invite the attention of States not Party to the Convention to matters relating to the activities of its vessels which could adversely affect salmon stocks subject to the Convention.
4.5	Details of any actions taken to implement regulatory measures under Article 13 of the Convention including imposition of adequate penalties for violations.
North American Commission Members only:	
4.6	Details of any new measures to minimise by-catches of salmon originating in the rivers of the other member.
	The mixed stock fishery in Labrador occurs primarily in the estuaries. No additional measures have been implemented, however DFO science continued genetic sampling to determine the origin of salmon harvested in the Labrador mixed stock fishery. The sampling data from 2018 indicate that 98-99% of the fish captured originate from Labrador rivers.
4.7	Details of any alteration to fishing patterns that result in the initiation of fishing or increase in catches of salmon originating in the rivers of another Party except with the consent of the latter.
None	