Council

CNL(20)44rev

Annual Progress Report
on Actions Taken Under the Implementation Plan for the Calendar Year 2019

Canada
(Revised version received 21 May 2020)

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The Annual Progress Reports allow NASCO to evaluate progress on actions taken by Parties / jurisdictions to implement its internationally agreed Resolutions, Agreements and Guidelines and consequently the achievement of their objectives and actions taken in accordance with the Convention. The following information should be provided through the Annual Progress Reports:

- 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.

In completing this Annual Progress Report please refer to the ***Guidelines for the Preparation and Evaluation of NASCO Implementation Plans and for Reporting on Progress****, CNL(18)49.*

These reports will be reviewed by the Council. Please complete this form and return it to the Secretariat **no later than 1 April 2020**.

Party:	**Canada**
Jurisdiction / Region:	

1: Changes to the Implementation Plan
1.1 Describe any proposed revisions to the Implementation Plan *(Where changes are proposed, the revised Implementation Plans should be submitted to the Secretariat by 1 November).*
Canada has not proposed any changes to our Implementation Plan this year.
1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.
The Government of Canada continued to implement a series of management measures aimed at restoring and maintaining wild Atlantic salmon populations, such as: mandatory catch and release in nearly all of the southern ranges of the Atlantic coast; and a combination of measures in northern ranges, including limits to catch, catch and release, and even the closing of rivers where sustainability targets were not being met. To inform decision-making, Canada continued to engage with Indigenous groups, other levels of government, and non-governmental stakeholders, to bolster science assessment data. Through the Atlantic Salmon Research Joint Venture (ASRJV), the Government of Canada continued to partner and collaborate

with all interested experts to develop a comprehensive understanding of the causes of the global decline of Atlantic Salmon. The Joint Venture was very active in the 2019 focal year of the International Year of the Salmon, and hosted the first Canadian Atlantic Salmon Ecosystem Forum examining "salmon and people in a changing world" in Quebec City in March 2019.

Lastly, in May 2019, the Government of Canada announced a three-year domestic plan, the Wild Atlantic Salmon Conservation: Implementation Plan 2019-2021. The Plan was developed in close collaboration with interested stakeholders, provincial governments, and Indigenous communities, and contains 18 action items which form a multi-pronged program of work that guides the collective efforts of all stakeholders for the conservation and sustainability of wild Atlantic salmon stocks. A key example is the work DFO has initiated, in partnership with provincial and Indigenous governments, to adopt a "river-by-river" model for the management of Atlantic salmon in the Miramichi River system. The new initiative seeks to expand the scope of managing Atlantic salmon and its habitat towards an ecosystem-based and multi-species approach.

2: Stock status and catches.

2.1 Provide a description of any new factors that 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.

No new factors affecting salmon abundance have been identified. Status of Atlantic salmon in eastern Canada is as described in the Implementation Plan; stocks from the northern regions (Quebec, Newfoundland, Labrador) are faring better than stocks in southern regions (Nova Scotia, New Brunswick, Prince Edward Island). Fisheries in the southern regions are either closed or where permitted, recreational fishing is restricted to catch and release only.

2.2 Provide the following information on catches: *(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').*

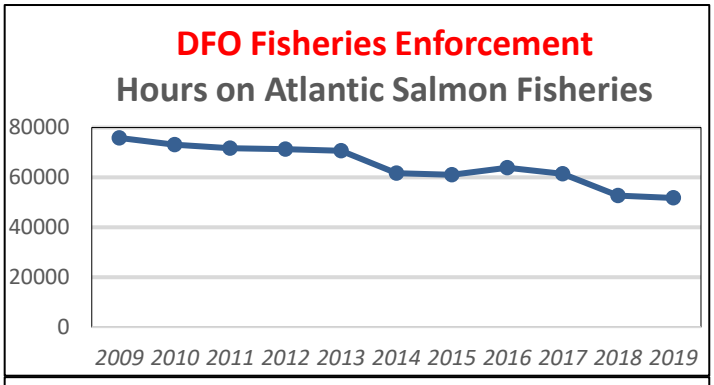
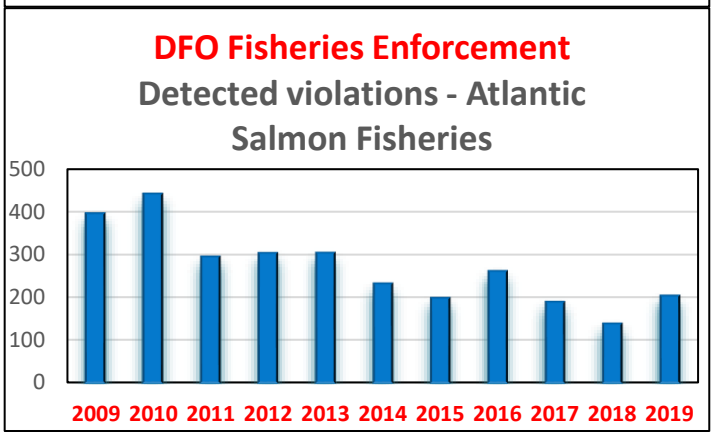
	In-river	Estuarine	Coastal	Total
(a) provisional nominal catch (which may be subject to revision) for 2019 (tonnes)	49.0	38.2	6.6	93.8
(b) confirmed nominal catch of salmon for 2018 (tonnes)	36.5	35.2	6.8	78.5
(c) estimated unreported catch for 2019 (tonnes)	na	na	na	11.6 (incomplete
(d) number and percentage of salmon caught and released in recreational fisheries in 2019	Provisional 2019: - 46,335 salmon released comprising: 26,237 small salmon (<63 cm) and 20,098 large salmon (>= 63 cm) Final values for 2018: - 56,011 salmon released comprising: 34,447 small salmon (<63 cm) and 21,564 large salmon (>= 63 cm)			

3: Implementation Plan Actions.

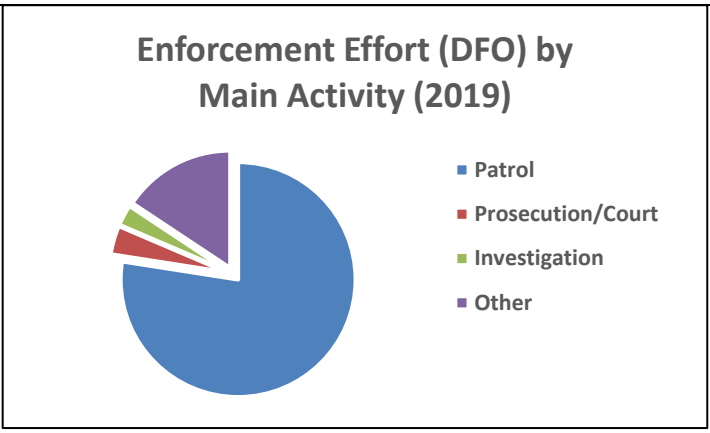
3.1 Provide an update on progress on actions relating to the Management of Salmon Fisheries *(section 2.9 of the Implementation Plan). **Note:** the reports under 'Progress on action to date' should provide a brief overview of each action. For all actions, provide clear and concise quantitative information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. 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 F1:	Description of action (*as submitted in the IP*):	**Illegal fishing activities** DFO Newfoundland and Labrador Region will combat illegal salmon fishing activities based on strategic patrol plans developed with Intelligence Led Special Operations in cooperation with the inland guardian program, including deploying 90 Inland Fishery Guardians, 3 Marine Fishery Guardians, and 14 Aboriginal Fishery Guardians. These strategic operations will continue before, during and post-season. DFO plans to deploy these staff for a minimum 60,000 hours, conducting a minimum of 3400 inspections/year. Provincial Wildlife Enforcement Officers and DFO will support both regular patrols and special operations. Gulf and Maritimes regions have developed mapping software that contains historical angling activity along certain rivers in their regions and provide key information to enforcement officers about areas with illegal activity, creating more effective patrol planning and use of enforcement resources. The first river system where this pilot project has been implemented is the St. John River. The Miramichi River system will be added in the near future. Even though all but three rivers in the Maritimes Region have been closed to salmon angling, catch and release became a practiced activity on a number of other major salmon rivers under the guise of angling for trout and smallmouth bass. DFO will continue to impose complete angling closures in important salmon holding pools and, in some cases, closures of 20 kilometres or more on specific rivers (Medway, Tobique). C&P will continue to use Social Media in order to emphasize the consequences to salmon stocks of illegal activities and bring awareness to the penalties. Planned Surveillance deployments by Region for 2019-2024:

	Patrol Hours	Inspections
NL	48,000	3,500
Gulf	6,400	500
Maritimes	4,600	300
Que	40,000	No specific objectives

		• Surveillance in Que does not reflect its ZEC managed system
	Expected outcome (*as submitted in the IP*):	Deterrence of illegal activity will be achieved by noting decreasing numbers of poaching incidents due to increased ability to detect such activities and by publicizing penalties on Social Media associated with resulting prosecutions.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	Enforcement 2019 – Atlantic Salmon Tables below do not include Parks Canada statistics for Quebec Enforcement trends (2009-2019):   Enforcement Statistics 2019 Activities:

DFO Region	Hours	Fishers checked	Fishing Sites checked
GULF	6,372	740	4,649
MARITIMES	3,120	107	1,669
NEWF & LAB	42,241	3,675	8,725
QUEBEC	41	0	0
Grand Total	51,774	4,522	15,043



Detected Violations:

Region	Total
GULF / GOLFE	48
MARITIMES	15
NEWFOUNDLAND & LABRADOR	139
QUEBEC	0
Grand Total	202
by Action Taken	Total
CHARGES LAID	46
CHARGES NOT APPROVED	7
CHARGES PENDING/UNDER REVIEW	33
DIVERTED (ALTERNATIVE MEASURES)	0
NATIVE PROTOCOL	25
SEIZURE(S) - PERSONS UNKNOWN	36
TICKET ISSUED	8
WARNING ISSUED	47
Grand Total	202
by Violation Type	Total
OTHER LEGISLATION	4
AREA / TIME	39
ASSAULT/ OBSTRUCT	2
GEAR - ILLEGAL/ USED ILLEGALLY	78
GEAR CONFLICT	2
ILLEGAL BUY/SELL/POSSESS	39
HABITAT	2
REPORTING	2
SPECIES/SIZE LIMIT	5
INSPECTION	3
REGISTRATION / LICENCE	24
QUOTA / BAG LIMIT	2
Grand Total	202

Current status of action:	Ongoing

	If 'Completed', has the action achieved its objective?	
Action F2:	Description of action (*as submitted in the IP*):	**Labrador mixed-stock fishery** In order to reduce the interception of non-Labrador origin salmon in the Labrador mixed stock fishery, intervention in the fisheries that are most likely to intercept non-Labrador origin salmon will occur. These interventions include the relocation (time, space) of fishing effort away from areas with known interceptions of non-Labrador origin salmon. This will require improvements in logbook reporting (including date and location of catches) and modified/enhanced sampling of the fishery catches to assess origin of the catches and effectiveness of the management interventions at reducing catches of non-Labrador origin salmon. Beginning in 2019, fishery sample processing will be targeted to areas with higher probability of non-local stock interceptions. Partnerships with Indigenous groups will continue in these sampling activities.
	Expected outcome (*as submitted in the IP*):	Adaptive management of locations and timing of the fishery based on annual estimates of origin of salmon in the Labrador subsistence fisheries. Effectiveness of management actions will be shown by the absence or reduction over time of harvests of non-Labrador origin salmon.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	In 2019, 867 samples were taken from salmon harvested in the Labrador fishery. Genetic analyses were conducted on 500 of these samples from the coastal area of Labrador where interceptions from non-Labrador origin salmon are most likely. Results of these analyses are forthcoming. As of March 3, 2020, 74% of all logbooks (including data and location of catches) had been reported.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action F3:	Description of action (*as submitted in the IP*):	**Warm water protocols for adaptive management for recreational fisheries** Due to the warming of waters and the trends of declining returns of Atlantic salmon in the rivers of Eastern Canada, a number of measures have been put in place to limit fishing activity and to reduce fish mortality. The most significant measure is the use of warm water protocols. This measure is particularly important given that warm waters have been shown to impact fish mortality. Warm water protocols for wild Atlantic recreational fisheries have been developed for some jurisdictions in eastern Canada (rivers of Gulf Region and all rivers in Newfoundland and Labrador) and are expected to be developed for other rivers

		(rivers with documented problems in Quebec), where they can be proven to function as a useful tool in supporting decisions to promote sustainability of the stocks.
	Expected outcome (*as submitted in the IP*):	Increased number of rivers with warm water protocol in Canada, and a reduction in the number and proportion of salmon that die as a result of catch and release, associated with warm water conditions.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	As in previous years, a warm water protocol was implemented for all river in Newfoundland and Labrador in 2019. River closures began August 1 in response to high water temperatures. Closures were implemented in 43 of the 186 rivers. Twenty rivers re-opened as conditions improved and 20 rivers remained closed for the season.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action F4:	Description of action (*as submitted in the IP*):	**Survival of salmon at sea** Throughout the North Atlantic, survival at sea of salmon has declined, particularly for populations in the southern and mid-range of the species. Location and timing of the most important mortality events are still unknown. Factors hypothesized to be contributing to increased mortality, and which could potentially be managed include: predation by native fish such as striped bass, Atlantic cod on out-migrating smolts, seal predation on returning adult salmon in estuaries and rivers, and changes/reductions in the salmon food base that are also subject of fisheries (capelin, herring). Research focused on the identification of the factors that are contributing to reduced sea survival is required to determine if fisheries management actions may contribute to improving marine survival. Even without a complete understanding of the mechanisms involved, scientific information enabling the prediction of salmon returns from the sea could improve management practices.
	Expected outcome (*as submitted in the IP*):	The objective of the ASRJV Science Plan is to guide the strategic planning and implementation of science initiatives in eastern North America that lead to improved understanding of the trends and causes of variation and/or decline in the abundance and distribution of wild Atlantic salmon. The annual call for proposals will result in collaboratively funded projects that will increase our understanding of the factors associated with the survival of salmon at sea thus clarifying options for the conservation and management of wild Atlantic salmon populations in Canada and the U.S.

		ASCF annual call for proposals (late fall) for applied research on Atlantic salmon conservation priorities, review of proposals by Science advisory committee, allocation of funds for research, annual reporting of activities to the ASCF.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	The Atlantic Salmon Research Joint Venture (ASRJV) five-year strategic science plan was finalized and published in 2019 (https://www.dfo-mpo.gc.ca/science/publications/asrjv/plan/index-eng.html). A call for proposals was issued in November 2018. The Science committee reviewed 11 proposals of which seven (including four ongoing projects) were approved by the ASRJV Management Board. The studies supported for 2019-2020 included: - year 2 of 2: hydrothermal characterization of salmon rivers; - year 2 of 2: impacts of warming freshwater conditions and temperature cycling on physiology and metabolism of salmon juveniles; - year 3 of 3: cross species distribution of population modelling of life history parameters; - year 2 of 3: distribution wide genome scans to characterize population structuring; - new: acoustic and satellite tag monitoring of salmon from Inner Bay of Fundy rivers; - ongoing: satellite tagging of salmon at West Greenland to characterize migration, distribution and habitat use of salmon in second autumn and winter at sea; and - new (2-year funding): using stable isotopes to reveal fifty-year trends in the marine feeding ecology of Atlantic salmon based on scales of salmon from West Greenland. For 2020/2021, the Science committee collectively developed a strategic proposal aimed at addressing priority research related to early phase smolt and post-smolt survival across the species range in eastern Canada. Review and funding approval is pending.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	

3.2 Provide an update on progress on actions relating to Habitat Protection and Restoration *(section 3.5 of the Implementation Plan). **Note:** the reports under 'Progress on action to date' should provide a brief overview of each action. For all actions, provide clear and concise quantitative information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. 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*):	**Threats related to industrial land-use activities** DFO will identify and begin development of additional tools and investments in water quality protection, flow management, and fish passage protection, as well as work with partners, including Indigenous peoples and organizations, to identify priority areas for existing habitat programs. The recently modernized *Fisheries Act* includes provisions related to fish and fish habitat protection, including: - measures relating to authorization and permitting of works, undertakings and activities; - creation of fish habitat banks by a proponent of a project; - establishment of standards and codes of practice; - establishment of a public registry; and, - establishment of ecologically significant areas.
	Expected outcome (*as submitted in the IP*):	Greater variety of options for regulatory tools and partnerships to reduce the threat to Canada's Atlantic salmon habitat.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	The Fisheries Act ("the Act") was amended, and came into force in 2019. The Act restores lost protections, prioritizes rebuilding fish populations and incorporates modern safeguards so that fish and fish habitats are protected for future generations and Canada's fisheries can continue to grow the economy and sustain coastal communities. A total of 284 million Canadian dollars was allocated to implement the amended Act and also to support the overall modernized Fish and Fish Habitat Protection Program (FFHPP), by, among other things, increasing program capacity, being more proactive in working with partners and stakeholders, and supporting the participation of Indigenous peoples in the conservation and protection of fish and fish habitat. Upon coming into force, the FFHPP also released a policy statement that summarized its interpretation of the key provisions in the modernized Act, as well as guidance for proponents applying for Fisheries Act authorizations, and two interim codes of practice. In the months that followed, FFHPP released an updated guide to offsetting. FFHPP makes this information publically available on DFO's Projects Near Water website (https://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html). DFO has also made the commitment that future regulations, policies and guidelines would be developed in collaboration with Indigenous communities, partners, and stakeholders. DFO has also committed to publicly releasing information on project decisions through an online registry, which went live in March 2020 via the Government of Canada's Open Government platform. The registry can be found at the following links: English - https://open.canada.ca/data/en/dataset/2c09d2fd-9a8e-4d8c-b5af-95747e36eaac

		French - https://ouvert.canada.ca/data/fr/dataset/2c09d2fd-9a8e-4d8c-b5af-95747e36eaac A free-standing registry (hosted outside of the Open Government platform) with geospatial capacities is in development for the summer of 2020.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action H2:	Description of action (*as submitted in the IP*):	**Acid Rain** 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. The West River Acid Mitigation Project is led by the not-for-profit Nova Scotia Salmon Association (NSSA). The project is entering its 14th year overall and its third year of significant expansion. The first decade of this project was funded by the NSSA with recent funding coming from collaboration between the federal and provincial governments and continued funding from the NSSA. The following activities will continue during the 2019-2024 Implementation Plan cycle: 1) Lime dosing using two dosers to directly treat salmon habitat units affected by acid rain; 2) Having completed the first experimental tributary (~180ha of limed land), the helicopter catchment liming project will extend to the next priority tributary of the West River watershed; 3) Physical habitat restoration within the West River is addressing a legacy of log driving and nearby road construction, to increase water depth of coldwater habitat pools; 4) Continued monitoring, including: operation of the adult salmon counting fence; operation of smolt assessment facilities; and, ongoing electrofishing and water chemistry monitoring; 5) Expanding research to include the interplay between forest resiliency/ productivity and catchment liming to integrate salmon and forest economics; 6) Expanding research on the interplay of acid mitigation of salmon rivers and the potential for carbon sequestration to address national carbon targets with regard to climate change policy; and, 7) A regional acid rain mitigation strategy is being developed based on the experience of the West River project. This

		strategy will identify priority sites for future acid mitigation strategies based on updated water chemistry and salmon resource data (eDNA) and other considerations.
	Expected outcome (*as submitted in the IP*):	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 *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	Liming using the second doser continued on the Killag River (priority tributary to the West River) in 2019. An additional 80 ha of catchment (land) was limed by helicopter in 2019 with another 300 ha of catchment liming planned for 2020-2022. Work has been funded and commenced on the planned Regional Acid Mitigation strategy.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	Actions identified above are ongoing to 2024. Increases of more than 300% in the wild production of smolt continue to be observed with new areas of the watershed being colonized.
Action H3:	Description of action (*as submitted in the IP*):	**Aquatic Invasive Species (AIS)** The threat of AIS are being managed as they arise, under various control regimes. DFO is working with federal, provincial and territorial partners to implement the Aquatic Invasive Species Regulations (AISR) that came into force in 2015. In New Brunswick and Prince Edward Island, as the provincial governments are not signatories to the AISR, DFO and the provinces are collaborating closely to manage existing aquatic invasive species. Since 2008, DFO has worked with partners to contain smallmouth bass to the Miramichi Lake through the use of a physical barrier and associated physical control methods. A project proposal of eradication by use of Rotenone has been submitted to DFO for review by various stakeholders in June 2019. As the species was confirmed in the Miramichi River in August 2019, DFO is currently working with stakeholders to implement a short-term action plan aimed at assessing the extent of the spread removing fish by angling, seining and electrofishing, as well as developing a long-term control strategy to mitigate this threat. In Nova Scotia, through the province and DFO, targeted removals of smallmouth bass and chain pickerel through electrofishing boat capture and other methods on rivers during smolt emigration has been undertaken. In addition, DFO has provided support to the province in a smallmouth bass control/eradication program in Piper Lake in the headwaters of St. Mary's River.

	Expected outcome (*as submitted in the IP*):	Implementation for the AISR will help to prevent introductions of new AIS and to control and manage existing populations. The long-term control strategy for smallmouth bass in the Miramichi Lake and in the river will help prevent further spread of this invasive species. In Nova Scotia, electrofishing for targeted removal of smallmouth bass and chain pickerel will continue on an annual basis. Data from this activity will be used to inform successfulness of this control and determine future required action.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	In Nova Scotia, targeted removals of smallmouth bass and chain pickerel are continuing on an annual basis. In addition, a rapid response initiative for smallmouth bass in Piper Lake has begun. The work in 2019 focused on: (1) ensuring containment of the smallmouth bass population within Piper Lake; (2) continuing to control the population using current methodologies; and (3) dewatering the lake to the extent possible to further reduce the potential for downstream migration and potentially induce winter mortality of smallmouth bass. To facilitate containment, a berm and screened water control structure was installed at the outlet of the lake to prevent downstream escapement. Next steps are being explored by the province of N.S. in coordination with DFO Aquatic Invasive Species National Core Program staff.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	

3.3 Provide an update on progress on actions relating to Aquaculture, Introductions and Transfers and Transgenics *(section 4.11 of the Implementation Plan). **Note**: the reports under 'Progress on action to date' should provide a brief overview of each action. For all actions, provide clear and concise quantitative information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. 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 A1:	Description of action (*as submitted in the IP*):	**Sea lice** The Atlantic provinces are the primary regulatory authority to establish measures aimed at controlling sea lice levels on salmon farms in the region, and are best placed to report on specific actions and strategies for minimizing the risk of sea lice transfer between wild and farmed fish. Within 2019-2024, DFO is conducting an engagement process for amalgamating and developing the Federal Aquaculture Act and the General Aquaculture Regulations. These proposed provisions would be developed in consultation with all provinces and territories. This process will review current regulations and seek to strengthen them, where possible. It is anticipated that their development and completion will fall within the Implementation Plan period. In New Brunswick, the new non-therapeutant sea lice control measures that are in place, such as warm water baths and high pressure water sprays, have greatly reduced the use of approved theraputants. Regulatory requirements are in place for weekly sea lice counts, which are audited by the Department of Agriculture, Aquaculture and Fisheries. Sea lice are managed under the Integrated Pest Management Plan for Sea Lice, using measures such as single year-class farming, site fallowing, prevention, rotation of treatment regimes, monitoring, etc. Further, the province's anticipated legislative and regulatory review process is expected to encompass additional measures for sea lice management. Newfoundland and Labrador is undergoing a legislative and regulatory review process, which will include modernization of their fish health management policies. In Nova Scotia, as part of the 2015 *Aquaculture Management Regulations*, there are provisions associated with sea lice management. The Province has specifically established a sea lice management section within their annual Farm Management Plans that support the regulatory requirement, and establishes minimum procedures for managing sea lice. The current management regime has maintained sea lice numbers below treatment levels, and will be maintained and adapted, as required, over the Implementation Plan period.
	Expected outcome (*as submitted in the IP*):	Improved implementation and coordination of sea lice management through new regulations, policies and agreements,

		research, improved monitoring, and dissemination of information on farmed fish containment.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	Provincial governments are the main regulators in Atlantic Canada and do so within their legal regimes. In New Brunswick, a new Aquaculture Act was passed in December 2019, and the associated regulations, which will contain provisions related to sea lice, are currently being developed. The new non-therapeutant sea lice control measures that are in place, such as warm water baths and high pressure water sprays, have greatly reduced the use of approved therapeutants. According to provincial authorities, sea lice counts are not provided due to privacy legislation. In Newfoundland and Labrador, policies implemented in 2019 require public reporting of sea lice numbers by companies starting in January 2021. This reporting will be required to both the provincial government and the public. Sea lice levels will be publically reported as of January 2021. There have been no regulatory changes for sea lice management in Nova Scotia in 2019. Sea lice continue to be monitored at the site level in Nova Scotia per the Aquaculture Management Regulations. Levels for sea lice numbers have been historically low and have not exceeded treatment thresholds since new regulated thresholds were established in 2016. The treatment threshold levels are as follows: April, May, June: Sea lice levels equal to or greater than 0.5 adult female louse on average, for the site. July, August, September: Sea lice levels equal to or greater than 1.0 adult female louse on average for the site. October, November, December: Sea lice levels equal to or greater than 0.5 adult female louse on average, for the site.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action A2:	Description of action (*as submitted in the IP*):	**Containment of Farmed Fish** The Federal Government supports the goal to achieve 100% containment of fish, whether reproductively viable or not, in order to manage ecological, genetic and disease risks. Within the Implementation Plan period, DFO is conducting an engagement process for amalgamating and developing the Federal Aquaculture Act and the General Aquaculture Regulations. These proposed provisions would be developed in close consultation with all provinces and territories. This process will review current regulations and seek to strengthen

		them, where possible. Federally-funded research is ongoing to quantify the magnitude of escapes, and the annual variation in hybridization through targeted surveys. Science advice from this research will be used to inform the development of any new legislative or regulatory approaches to 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. In New Brunswick, progress continues with ongoing dialogue through the New Brunswick Aquaculture Containment Liaison Committee, which is comprised of members from the provincial and federal governments, as well as conservation groups 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. Work of the Committee, with industry assistance, has led to the origin identification of aquaculture escapees captured in the wild. The Code of Containment for the Culture of Salmonids in Newfoundland and Labrador continues to be implemented as a condition of the salmonid aquaculture licence. Further, the Newfoundland and Labrador's Department of Fisheries and regulations in the province. Nova Scotia is currently creating a Traceability Program that will establish mechanisms that will enable regulators to trace salmonids caught in a water body back to the operator of origin. This is being done through the Nova Scotia Salmonids Traceability Committee, made up of stakeholders from federal and provincial agencies, industry, and angling associations. The Committee established criteria that will form the basis of the traceability requirements for salmonid growers in Nova Scotia. These minimums have been established and the supporting policy is currently being developed. Based on recommendations from the Committee, changes are being made to the Nova Scotia *Aquaculture Management Regulations* to accommodate the traceability program. An Engineering Working Group has also been established by Nova Scotia 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 installation in the marine environment.
	Expected outcome (*as submitted in the IP*):	Improved implementation and coordination of farmed fish containment through new regulations, policies, and agreements. Improved research and understanding on containment and impacts of farmed fish on wild stocks.

		Improved monitoring, and dissemination of information on farmed fish containment.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	There are no marine net-pens in Prince Edward Island. There were no escapes reported for Newfoundland and Labrador in 2019. Further, licensees are required to comply with the Code of Containment for the Culture of Salmonids, which includes equipment standards, reporting requirements, and other provisions. The Code is currently being revised and will be nested in regulation with an associated ticketing and penalty system. Specific revisions to the Code include reporting requirements, recapture license procedures and the addition of engineering and equipment installation standards. In Nova Scotia, there were five escape events of rainbow trout in 2019: the first event had 20 escaped fish, and the second event had less than 20 escaped fish. The number of escaped fish is unknown for the following three events but will be determined after the 2020 harvest season. In these five incidents, the escaped fish were all female of the same species and strain that are stocked in Nova Scotia rivers and lakes by the Department of Fisheries and Aquaculture. Third party audits of the containment management sections of the Farm Management Plans held by each operator were conducted. A report on the results of a third-party audit was submitted to the Department and included any corrective actions taken in response to the results of the audit. The Department also has the authority to implement mitigation strategies based on the results of the containment management audit. Nova Scotia's Aquaculture Management Regulations 15(h) have also been updated. The new language is: "The containment management section of a Farm Management Plan for a holder of an aquaculture licence for finfish in a marine aquaculture site must include information and procedures related to …: … (h) a finfish marking plan." This is a requirement of all salmonid aquaculture operators, and the Province is currently working with the industry to approve marking plans to trace escapees. In New Brunswick, there were two escape events of Atlantic salmon in 2019: the first event had an estimated 1000 escaped fish with an average size of 3.3 kg and the second had roughly 225 escaped fish with an average size of 1.3 kg. The larger event was caused by a broken hose in Deer Island in the Bay of Fundy. Management action was taken to recapture the escaped fish and 53 fish were recaptured. Additionally, the broken hose was replaced and cameras were installed for better surveillance. The second event was caused by a net tear during treatment. Management action was taken to recapture the escaped fish and 31 fish were recaptured. The tear in the net was also repaired. A

		new Aquaculture Act was passed in December of 2019; the associated regulations, which will contain provisions related to fish containment, are currently being developed.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action A3:	Description of action (*as submitted in the IP*):	**Fish Health and Emerging Diseases** The management of risks to wild salmon associated with introductions and transfers is undertaken under a variety of federal statutory instruments, policies, and programs, such as the *Fishery (General) Regulations* under the *Fisheries Act*, *Health of Animals Act*, National Code on Introductions and Transfers of Aquatic Organisms, and the NAAHP. Federally, these instruments manage the potential disease, ecological, and genetic risks associated with the movement of aquatic organisms, including Atlantic salmon. DFO fish health research is ongoing and contributes to the Department's ability to identify and address threats to wild fish and ecosystem health. DFO, CFIA, and the provincial authorities continuously work together to identify and manage diseases of concern. For example, a policy is currently being developed to establish a federal emerging disease committee (between the CFIA and DFO) that would identify, assess, and recommend potential federal management actions, and clarify roles and responsibilities. In New Brunswick, there are a number of provisions in their legislation and regulations related to aquatic animal health. Currently the Province conducts monthly fish health surveillance of each site, both by veterinarians and fish health care professionals. The Certificate of Health for Transfer has been developed by Atlantic provincial veterinarians to help ensure healthy stocks are transferred between hatcheries and to the sea cage environment. In the Atlantic provinces, the movement of live salmon between sea cages is not authorized. The Atlantic provinces utilize the Certificate of Health for Transfer to mitigate disease risk. Newfoundland and Labrador's Department of Fisheries and Land Resources is in the process of policy modernization regarding fish health management as part of their legislative, policy and planning modernization. They conduct an aquatic animal health surveillance program for aquatic animal diseases In Nova Scotia, as part of the 2015 *Aquaculture Management Regulations*, there are a number of regulations associated with aquatic animal health. The Province has specifically established an aquatic animal health section within their annual Farm Management Plans that support the regulatory requirements for aquatic animal health. This establishes minimum requirements

		for procedures and protocols for finfish husbandry and welfare, veterinary care and disease surveillance, biosecurity measures, and general emergency measures, including culling or mass stock depopulation practices. The Regulations also require mandatory reporting and authority to control disease through isolation, quarantine, depopulation, biosecurity measures, movement controls and fallowing. Pathogen spread is managed through a regulated requirement for a Certificate of Health for Transfers.
	Expected outcome (*as submitted in the IP*):	Better interdepartmental communication and coordinated federal action to manage emerging diseases of aquatic organisms, including Atlantic Salmon on the Atlantic Coast. Federal management committee (to be established within the 2019-2024 Implementation Plan period).
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	In New Brunswick, a new Aquaculture Act was passed in December 2019, and the associated regulations, which will contain provisions (including the appointment of a Chief Veterinary Officer for fish health management and regulatory control) and others related to aquatic animal health, are currently being developed. New Brunswick also has a memorandum of understanding with the Canadian Food Inspection Agency on Emerging Disease Response. This has been in place since 2016 and facilitates a response on emerging diseases. In Newfoundland and Labrador, the provincial Aquatic Animal Health Division conducts surveillance, biosecurity audits and conducts pre-transfer assessments as required by the Certificate of Health for Transfer. New policies were implemented in autumn 2019, which included reporting requirements to the province and to the public. The Aquatic Animal Health Contingency Plan was also included. Review of the legislation, regulations and policies are ongoing to address aquatic animal health. All current policies are available on the department website. In Nova Scotia, emerging disease issues are addressed at three committee tables: the Nova Scotia Introductions and Transfers Committee, Atlantic Canada's Provincial Aquaculture Veterinary Committee and Nova Scotia Department of Fisheries and Aquaculture/Canadian Food Inspection Agency Food and Animal Health Bilateral Committee. Further, the province updated their Aquaculture Management Regulations in 2019. Changes related to aquatic animal health were included to help better define terms and definitions, and section 21 was modified to quantified reportable mortality events as follows: "21 (1) In this Section, "mortality event", in relation to fish in an aquaculture site, means the death of a number of fish: within a 24-hour period, equivalent to at least 2% of the current aquaculture site inventory, or;

		within a 5-day period, equivalent to at least 5% of the current aquaculture site inventory."
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action A4:	Description of action (*as submitted in the IP*):	**Commercial Production of Transgenics** There is no production of transgenic fish in Nova Scotia. New Brunswick does not allow the use of marine transgenic fish. There is no policy prohibiting use of transgenic in Newfoundland and Labrador. The Newfoundland Aquaculture Industry Association (NAIA) has stated that transgenic fish will not be used. Members of the Canadian Aquaculture Industry Alliance (CAIA), which represents the majority of farmed salmon facilities in Canada, do not farm or sell GM salmon, and are not growing or researching transgenic salmon. Production of transgenic salmon occurs only in one Canadian land-based production facility. Canada plans to continue to rigorously implement, and enforce its legislative and regulatory process for living organism products of biotechnology, including transgenic salmonids. Canada plans to continue to invest in contained, land-based laboratory research involving transgenic fish to generate scientific knowledge to inform risk assessments, risk management and regulatory approaches aimed at protecting the aquatic environment, including wild salmon populations. In keeping with Annex 5, paragraph d) of the Williamsburg Resolution, DFO has established the Centre of Expertise on Aquatic Biotechnology Regulatory Research, where contained, land-based research is undertaken to provide scientific knowledge that informs the risk assessment, risk management and regulatory approaches for transgenic salmonids. To facilitate decision-making in the absence of full scientific certainty, where there is a risk of serious or irreversible harm, the Government of Canada has developed a Framework for the Application of Precaution in Science-Based Decision Making about Risk. This approach is aligned with Article 7 of the Williamsburg Resolution.
	Expected outcome (*as submitted in the IP*):	Government of Canada decision-makers have access to scientific knowledge for the risk assessment and regulation of fish products of biotechnology (immediate outcome). Fish products of biotechnology that do not harm the environment or wild salmon populations (long-term outcome).

	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):*	Canada continues to achieve our objective to protect the environment, including wild Atlantic salmon, from potential risks associated with transgenic salmonids, through implementation and enforcement of a strong regulatory framework. In 2013, Canada decided to allow the commercial production of EO-1α Salmon (the AquAdvantage® Salmon), a fast growing, genetically engineered Atlantic Salmon, at a land-based and contained facility near Fortune, Prince Edward Island. In 2018, Canada decided to allow the manufacture and grow-out of EO-1α Salmon, at a second land-based aquaculture facility, near Rollo Bay, Prince Edward Island. Canada continues to inspect all facilities that rear transgenic Atlantic salmon in Canada, and enforce compliance under the Canadian Environmental Protection Act. Canada continues to invest in contained, land-based laboratory research involving transgenic fish, to generate scientific knowledge that informs risk assessment, risk management, and regulatory approaches aimed at protecting the aquatic environment, including wild Atlantic salmon. There is no production of transgenic fish in Nova Scotia, New Brunswick, or Newfoundland and Labrador. Members of the Canadian Aquaculture Industry Alliance, which represents the majority of farmed salmon facilities in Canada, do not farm or sell genetically modified salmon, and are not growing or researching transgenic salmon.
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	

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.

The modernized Fisheries Act (Act) came into force on August 28, 2019. Upon the Act coming into force, the Fisheries Protection Program (FPP) became the Fish and Fish Habitat Protection Program (FFHPP). FFHPP also released a policy statement that summarized its interpretation of the key provisions in the modernized Act, as well as guidance for proponents applying for Fisheries Act authorizations, and two interim codes of practice.

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.
No new measures.
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.