



Wild Atlantic salmon and Canada’s Species at Risk Act

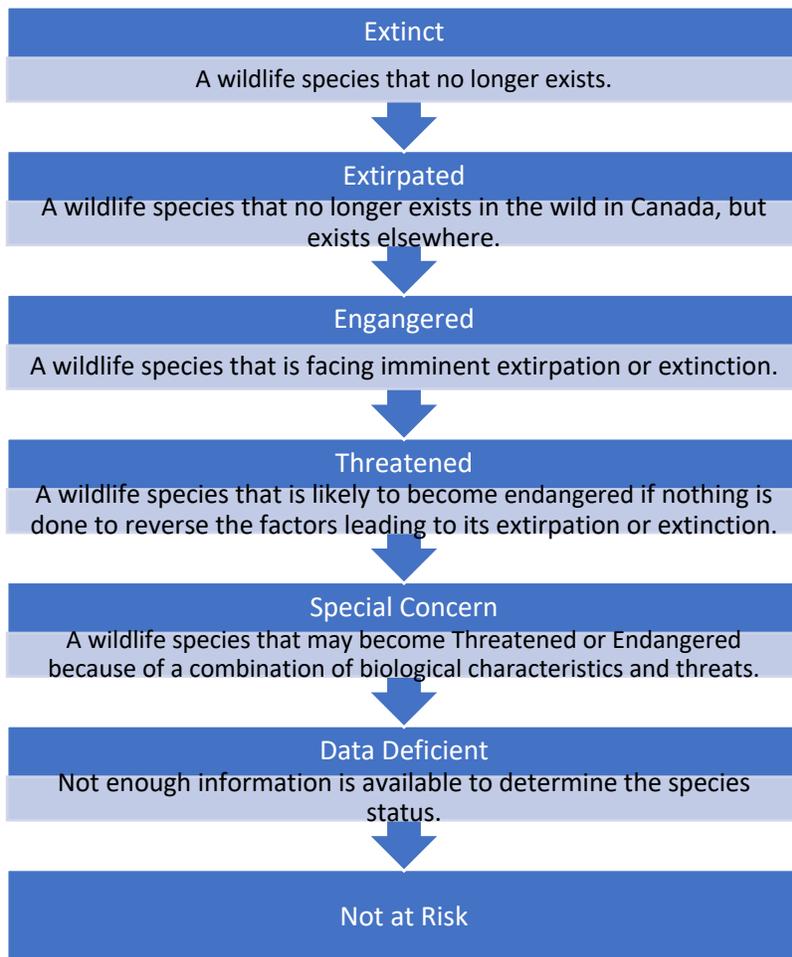
ASF’s analysis and opinion on listing

January 2020

I. Background

Canada’s *Species at Risk Act* (SARA of the Act) was passed by Parliament in late 2002 and came fully into force on June 1, 2004. It is the legislative foundation for Canada’s effort to protect and restore animals at risk of extinction. The law has a purpose statement which says SARA is meant “to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human

activity and to manage species of special concern to prevent them from becoming endangered or threatened.”



Environment and Climate Change Canada (ECC) is responsible for the overall administration of the Act. Parks Canada, and Fisheries and Oceans Canada (DFO) share responsibility for SARA with ECC. DFO is responsible for protecting aquatic species at risk, except those within national parks. SARA is considered to be complimentary to the *Fisheries Act*.

Use of the Act is driven by an assessment process conducted by the arms-length Committee on the Status of Endangered Wildlife in Canada. Known as COSEWIC, this panel of experts was first convened in 1977 to provide advice to the federal government. Its role was formalized under SARA.

Figure 1: The seven categories for assessing wildlife species in Canada. Animals assessed as Special Concern, Threatened, and Endangered are considered to be *at risk* of extinction. **Source:** ASF/Environment Canada

Under the current system, COSEWIC conducts an assessment of each wildlife species it deems to be at risk every 10-years or sooner if there are compelling reasons. Committee members review available data and provide an assessment to the responsible department using seven categories (See Figure 1). COSEWIC bases its assessments on criteria established by the International Union for the Conservation of Nature for its *Red List* of global wildlife at risk of extinction.

Once received by DFO, a COSEWIC assessment of an aquatic species at risk sets off an internal process at DFO which includes the steps outline in Figure 2. Upon receipt of a recommendation for listing an aquatic species at risk from the Fisheries Minister, the Minister of ECC seeks assent from the Governor in Council to list or not.

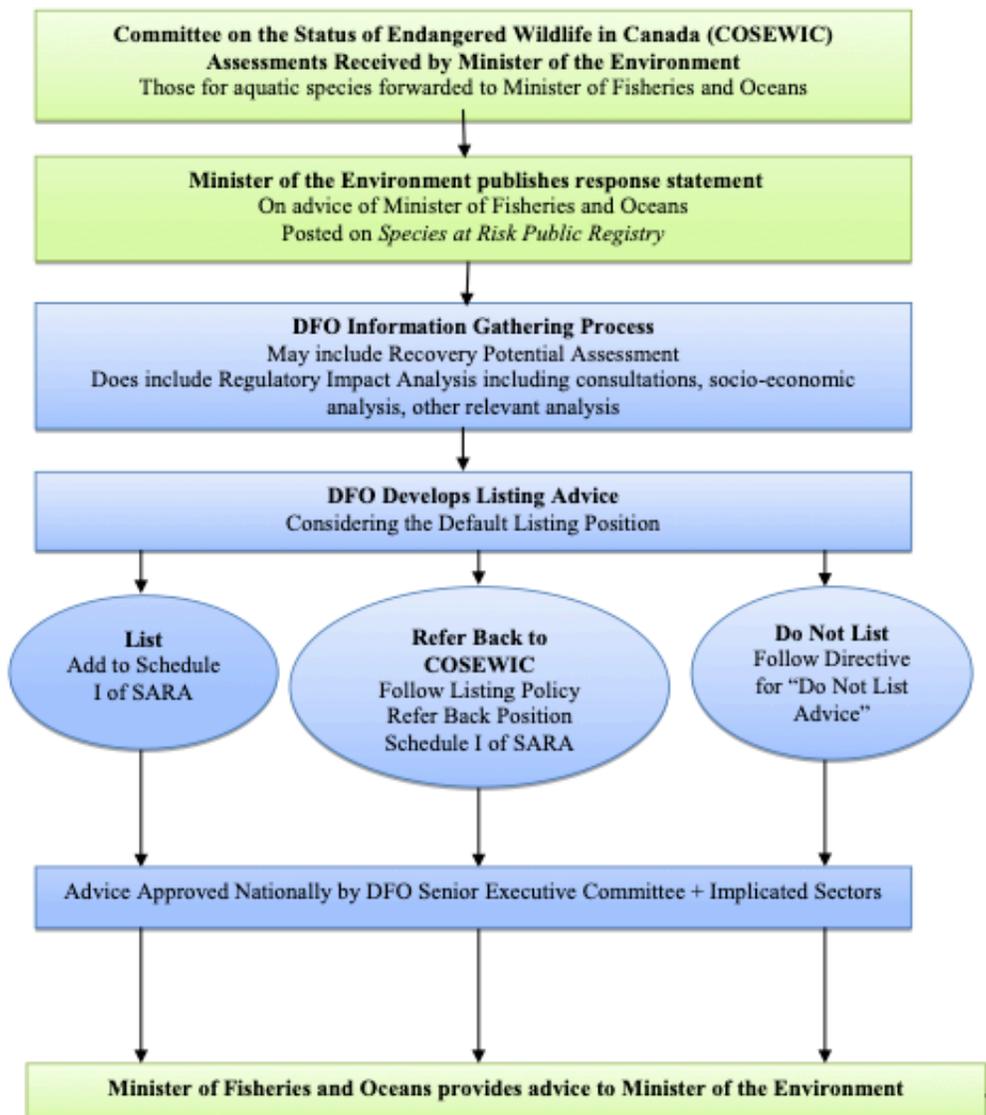


Figure 2: The COSEWIC assessment and listing process. Items shaded green are the responsibility of Environment and Climate Change Canada. Blue items are the responsibility of DFO. **Source: Fisheries and Oceans Canada**

II. DFO's Listing Policy and "Do not list" directive

DFO's SARA listing policy involves regional offices and staff in Ottawa. Upon receipt of a COSEWIC assessment, an information gathering process commences, reaching the office of the Deputy Minister before advice is provided to the DFO Minister on whether to follow the COSEWIC recommendation. The Fisheries Minister then provides advice to the Minister of ECC who seeks assent from cabinet to add a species to Schedule I of SARA.

This process is guided by DFO's ***Species at Risk Act Listing Policy and Directive for "Do Not List" Advice***. The policy establishes a default listing position which says the Minister will follow the COSEWIC assessment unless "DFO can provide a compelling rationale not to do so."

For marine fishes, a compelling reason not to list is found in the majority of cases. **Fuller et al.** in 2015 found 71 per cent of marine fishes assessed as Threatened or Endangered by COSEWIC were denied listing. The authors conclude that conflict with fisheries, federal-provincial relations, and a dysfunctional process are contributing factors.

Do-Not List decisions are also intended to lead to recovery action. DFO is compelled to review the legislative and policy tools available and create a work plan for recovery. Managers must report to DFO's Senior Executive Committee every five years on progress.

DFO's listing policy and directive for "Do Not List" advice

<https://waves-vagues.dfo-mpo.gc.ca/Library/365882.pdf>

Fuller et al

<https://foca.on.ca/wp-content/uploads/2015/06/Fish-Species-at-Risk-insufficiently-managed-NRC-Report-Sep-2015.pdf>

III. Atlantic salmon and COSEWIC

For the purposes of assessment, Atlantic salmon in Canada are divided into 16 sub-populations based on geography, shared life history traits, and genetic differences. These sub-populations are known as *designatable units*.

The first assessment of wild Atlantic salmon in Canada by COSEWIC was completed in 2001 for the Inner Bay of Fundy population. The committee assessed that population as Endangered, and soon after SARA was passed, in 2003, Inner Bay of Fundy salmon were added to Schedule 1 of the Act. It remains the only Atlantic salmon population in Canada listed under SARA.

The first **comprehensive assessment** of all Atlantic salmon in Canada was completed by COSEWIC in 2010-2011. Figure 3 shows the boundaries of the designatable units and the 2010-2011 COSEWIC assessment.



Figure 3: Map of designatable units and COSEWIC’s 2010-2011 population assessment. **Source:** ASF

COSEWIC found 10 of the sixteen *designatable units* were at risk of extinction: four Special Concern, one Threatened, and five Endangered, including the previously assessed Inner Bay of Fundy population.

Following the completion of the DFO information gathering process outlined in Figure 2, in 2014-2015 the deputy minister provided a recommendation to the Fisheries Minister on whether to follow COSEWIC’s recommendation. That recommendation is considered privileged as it constitutes advice to the minister.

The announcement in late 2020 that DFO would make a decision on COSEWIC’s 2010-2011 Atlantic salmon assessments was the first information on the process that has flowed out of the department since the 2014-2015 consultation and recommendation period.

2010-2011 comprehensive assessment by COSEWIC

<https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports/atlantic-salmon.html>

IV. Effectiveness of SARA

SARA has been criticized for its slow pace, lack of legislated timelines, and general inability to achieve its stated objectives. As Fuller et al. (2015) showed, SARA has been particularly ineffective at protecting and restoring marine fish species. Evidence shows it takes approximately 4.5 years from the receipt of a COSEWIC assessment to a listing decision for marine fishes, longer than any other species group. For Atlantic salmon, the process started prior to 2010.

The main instruments of SARA are prohibitions, management plans, recovery strategies, and action plans. Unfortunately, as the outgoing chair of COSEWIC, Eric Taylor, **told the Narwhal** in 2019, “There’s nothing in there, nothing mandated, that actually says you have to do anything to help the animals and plants on the ground.”

A **2018 review conducted by the World Wildlife Fund Canada** looked at the period 2002 to 2014 and found the 64 animal species listed under Schedule I of the Act declined by an average of 28 per cent. Furthermore, a 2014 study by **Favaro et al.** found the probability of recovery for species at risk was not related to the length of time they had been SARA listed.

For Atlantic salmon, the Inner Bay of Fundy population provides an example. From an estimated 40,000 adult salmon returning to 32 rivers in the early 20th century, it was estimated that the Inner Bay of Fundy population consisted of approximately 250 adults at the time of listing in 2003. It took seven years to complete a recovery strategy and a final action plan was completed in 2019.

The listing puts extra administrative burden on groups carrying out conservation and research projects – anything that could intentionally or incidentally harm or disturb a listed endangered species requires a special permit. This includes routine surveys and fish passage improvements.

It has led to the development of a live gene bank to preserve the genetic lineage of Inner Bay of Fundy salmon, but SARA has failed to address activities like open net pen salmon aquaculture, which DFO recognizes as a leading marine threat. Even the recent discovery of European origin salmon genetics inside the live gene bank from illegally imported aquaculture salmon led to no known enforcement or action from DFO.

Told the Narwhal

<https://thenarwhal.ca/it-just-takes-too-damn-long-how-canadas-law-for-protecting-at-risk-species-is-failing/>

2018 review conducted by the World Wildlife Fund Canada

<https://wwf.ca/living-planet-report/>

Favaro et al.

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0113118>

V. Implications of listing Atlantic salmon

The Species at Risk Act can hamper conservation and recovery efforts. The Act prohibits activities that could possibly kill, harm, or harass individuals and their habitat, including projects like population surveys and fish passage improvements. Such work can happen, but it requires special permits which in practical terms can be burdensome and onerous.

The prohibitions also mean Indigenous and recreational fishing activities are prohibited for populations assessed as Threatened or Endangered. For wildlife species assessed as Special Concern, general prohibitions on harming and killing do not apply and a management plan is developed.

Listing of the five designatable units assessed as Threatened or Endangered would close recreational and Indigenous fisheries in Cape Breton, Quebec, and Newfoundland. It would also extinguish the hopes of reopening fisheries in parts of New Brunswick and mainland Nova Scotia.

Evidence and experience show that closing low-impact recreational fisheries disengages people from salmon conservation activities and closures have not resulted in population recovery. ASF's 2018 Engagement Strategy recognizes "that salmon conservation is a people-oriented activity," and "Without a strong community of people who value and care about salmon and who are willing and able to speak and work effectively on their behalf, we have little chance of achieving our conservation goals."

Similarly, SARA adds administrative burden for local groups and volunteers who wish to carry out habitat restoration and fish passage projects. The prohibitions that come with a SARA listing require project leaders to apply for and receive a special permit to carry out work in streams where Threatened and Endangered species are present.

Therefore, a listing could affect ASF's ability to connect with members and supporters and impair our ability to carry out conservation work.

VI. ASF's position and "compelling rationale"

ASF's position is that the Minister of Fisheries and Oceans should provide "Do Not List" advice to the Minister of ECC for all nine *designatable* units of Atlantic salmon under consideration for SARA listing.

As noted in Section II, DFO's default policy is to follow COSEWIC's recommendation unless a "compelling rationale" emerges to contradict. We believe a compelling rationale exists because DFO has the legislative and policy tools it requires to do more for wild Atlantic salmon, the

COSEWIC assessments are too old and the data are poor, SARA will not be beneficial, and alienating people connected to low-impact fisheries is an assault on the principle of shared stewardship. We expand on each point below:

DFO has the legislative and policy tools it requires.

Fisheries Act: The inability of the Species at Risk to protect and restore marine fishes was a principal motivator for the NGO community when pushing for modernization of the Fisheries Act. The new Act not only restores lost habitat protections, it has requirements for rebuilding objectives and gives DFO's clear powers to create *Ecologically Significant Areas* and govern activities within. DFO maintains authority to open and close fisheries for conservation reasons.

Wild Atlantic Salmon Conservation Policy: DFO, NGOs like ASF, and Indigenous representatives spent years developing the Wild Atlantic Salmon Conservation Policy and its plan for implementation which was launched in 2019. Under the heading "Purposeful Action" the policy and its implementation are meant to "set the stage for all levels of government, Indigenous communities and other stakeholders to work together and contribute through shared stewardship." There are 18 action items to be completed by the end of 2021 that address ecosystem integrity, science and research, and human interactions.

Atlantic Salmon Research Joint Venture: Created by DFO in 2016, the joint venture brings together researchers from government, NGOs, and universities to coordinate research efforts focused on the most pressing salmon conservation issues. For example, ASF's Greenland adult salmon tracking program, headed into a third field season, is a product of the joint venture where costs and effort are shared.

Precautionary approach for recreational fishery management: To improve management of recreational Atlantic salmon fishing, further reducing its minimal impacts, DFO managers are engaged with NGOs and Indigenous representatives to design a precautionary approach management model.

Protected Areas: DFO has the ability and mandate to protect marine species in Canada through the establishment of protected areas. Where specific threats to salmon exist or may occur in the future, DFO can establish area protections and regulations that prohibit or control activities.

The data are old, awkward, and the COSEWIC process is restarting

Old: The analysis contained in the 2010-2011 COSEWIC assessments is out of date. Likewise, the recovery potential assessments from 2014-2015 do not account for conservation initiatives that have occurred in recent years.

For example, the ASF-NASF 12-year Greenland Salmon Conservation Agreement is saving thousands of large spawning salmon annually, including fish from Threatened and Endangered Populations.

Habitat projects small and large have been continuously executed since the last COSEWIC assessment. The Nova Scotia Liquor Commission's Adopt-a-Stream program, administered by the Nova Scotia Salmon Association, has raised more than \$800,000 in the last decade for connectivity and habitat improvement restoring thousands of kilometres of river and stream habitat. The recently created **Canada Nature Fund** for Aquatic Species at Risk has kickstarted multi-million dollar climate resiliency and habitat improvement projects throughout the range of Atlantic salmon.

Many of the actions already being taken are exactly like those prescribed in the final action plan for Inner Bay of Fundy Atlantic salmon, yet they are happening organically, driven by NGOs and local volunteers who are action oriented.

Canada Nature Fund

<https://www.canada.ca/en/fisheries-oceans/news/2020/11/canada-takes-action-with-partners-across-the-country-to-protect-aquatic-species-at-risk.html>

Awkward: DFO's system of monitoring sites was not designed to inform the Species at Risk Act process. Many monitoring sites have persisted over decades and today are not good proxies to assess the health of nearby rivers. Assessment sites are also few and far between.

For example, in South Newfoundland, four monitoring sites cover 130 known salmon bearing watersheds. The sites themselves are concentrated in the eastern portion of this expansive region, including two in Bay d'Espoir, where a significant portion of the province's troubled open net pen salmon aquaculture industry is based. In fact, DFO catch statistics indicate that most rivers outside of the area exposed to aquaculture would not meet the criteria for listing.

The paucity and poor distribution of assessment sites could affect hopes of a reopened fishery on rivers like the St. Mary's in Nova Scotia, where DFO continues to measure adult returns to the troubled LaHave, 300 kilometres away, as an index for the region. Indications are the St. Mary's population is rebounding thanks to a major federally funded, locally delivered habitat restoration project underway.

One of the commitments of the Wild Atlantic Salmon Conservation Policy Implementation Plan is to increase the number of assessment sites and improve

monitoring technology by the end of 2021. It is not appropriate to make decisions affecting the future of vast areas using an antiquated, sparse system of index sites.

The COSEWIC process is restarting: The published calendar of COSEWIC assessments indicates that Atlantic salmon will be reassessed in 2022. The reassessment could result in new recommendations or changes to the boundaries of *designatable units*. Given the grinding pace of SARA, even if a designatable unit were listed in 2021, none of the required SARA actions would be complete by the time of the 2022 COSEWIC reassessment.

SARA is ineffective

In addition to the evidence presented in Section IV above, it should be noted that the recovery plans and action plans required by the Act are long drawn out bureaucratic processes that require the assembly of recovery teams and years of work from government, Indigenous organizations, NGOs, and industry representatives. The processes divert the scarce resources currently dedicated to salmon conservation.

Closures do not lead to population recovery

As noted above, closing rivers to low-impact recreational fisheries has little benefit and severs the important connection between people who fish and support conservation. There are direct and indirect benefits from low-impact fisheries.

For example, anglers are the main informants on illegal activities like poaching which kills an estimated 12 metric tonnes of Atlantic salmon annually, equal to several thousand individual fish. Indirectly, people connected to fisheries fund initiatives like the Greenland Salmon Conservation Agreement and ASF's long-term marine tracking program. Spending on wild Atlantic salmon related activities in Atlantic Canada and Quebec tops \$100 million annually with most activity occurring in rural and remote areas.

In some areas, like South Newfoundland, corporate agents and government officials are working to expand open net-pen salmon aquaculture despite knowledge of its environmental consequences, including a recent finding from **Johnsen et al.** (2020) that sea lice from aquaculture sites can cause the death of more than three in 10 Atlantic salmon post smolt when they leave home rivers and spend time in coastal waters where the industry is present. Anglers and people who value wild salmon are one of the only organized oppositional forces to the expansion of this harmful industry.

People who fish are the foundation of salmon conservation and closing fisheries damages the model of shared stewardship. Few if any habitat conservation projects underway in Eastern Canada are being conducted by government staff, though many are supported by government grants and guided by shared priorities. Most groups carrying out the work have connections to salmon fisheries, Indigenous and recreational, an example of the positive feedback loop between engagement and support for conservation.

Johnson et al.

<https://academic.oup.com/icesjms/advance-article/doi/10.1093/icesjms/fsaa202/6026111>

VII. Planned Action

ASF will engage with our members and supporters, political leaders, and DFO officials in order to influence the Minister to provide “Do Not List” advice for the designatable units in question. Our campaign will be hosted at www.peopleforsalmon.com. We intend to maintain the campaign through 2021 or until a listing decision is finalized.