SPECIES AT RISK ACT

Annual Report to Parliament for 2019

Environment and Climate Change Canada
Environnement et Changement climatique Canada

Canada

Cat. No.: En1-45E-PDF
ISSN: 1926-4135

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1. INTRODUCTION

The *Species at Risk Act* (SARA) is the Government's key tool for assessment, listing, recovery planning, protection, recovery action, and reporting on recovery for species at risk. Every year the Minister of Environment and Climate Change Canada (the Minister) is required to table in Parliament the SARA annual report.

Greater sage-grouse

This year's report summarizes key activities carried out in 2019 under SARA and fulfills the Minister's obligation to report annually on the administration of the Act.

Section 126 of the Act states the report must include a summary of the following:

(a) any assessments done by the Committee on the Status of Endangered Wildlife in Canada and the Minister's response to each of them

(b) the preparation and implementation of recovery strategies, action plans, and management plans

(c) all agreements made under sections 10 to 13

(d) all agreements entered into or renewed and permits issued or renewed under section 73 as well as all agreements and permits amended under section 75 or exempted under section 76

(e) enforcement and compliance actions taken, including the response to any requests for investigation

(f) regulations and emergency orders made under SARA

(g) any other matters that the Minister considers relevant

[1] Referred to as the Minister of the Environment in the *Species At Risk Act*

1.1. Background on SARA

SARA is a key tool for conserving and protecting Canada's biological diversity, and fulfills the Government of Canada's international commitments under the Convention on Biological Diversity. It also supports federal commitments under the 1996 Accord for the Protection of Species at Risk to prevent species in Canada from becoming extinct from human activity.

The purpose of the Act is:

- 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
- to manage species of special concern to prevent them from becoming endangered or threatened

The Act establishes a process for conducting scientific assessments of the status of individual wildlife species and a mechanism for listing extirpated, endangered, threatened and special-concern species. SARA includes requirements for the protection, recovery and management of listed wildlife species, their critical habitats[2] and residences.[3]

The responsibility for conservation of species at risk is shared by federal, provincial and territorial governments in Canada. The Act recognizes this joint responsibility and that all Canadians have a role to play in the protection of wildlife.

[2] "Critical habitat" is defined as the habitat that is necessary for the survival or recovery of a listed wildlife species and is identified as the species' critical habitat in the recovery strategy or in an action plan for the species (see section 4.1.1).

[3] "Residence" means a dwelling place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating.

The federal government, provinces and territories, Indigenous Peoples, and other partners and stakeholders are all stewards of wildlife, habitat, and ecosystems, undertaking conservation measures to care for the natural resources with which they are entrusted. Recognizing shared responsibilities, complementary roles, and co-dependent outcomes, the Government of Canada is committed to implementing its statutory obligations and international responsibilities for conserving nature in collaboration with its partners.

1.2. Implementation of SARA

The Minister is responsible for the overall administration of SARA, except insofar as the Act gives responsibility to another minister (i.e. another competent minister).

The Parks Canada Agency (PCA)[4], Fisheries and Oceans Canada (DFO), and Environment and Climate Change Canada (ECCC), often referred to as the "competent" departments, share responsibility for the implementation of SARA. The ministers responsible for these organizations are known as the "competent" ministers under SARA. The Minister of the Environment is the minister responsible for both ECCC and Parks Canada.

Figure 1: Competent ministers

[4] The Parks Canada Agency is referred to as Parks Canada throughout this report.

1.3. Canada's approach to transforming species at risk conservation

The Nature Legacy for Canada Initiative, announced in Budget 2018, sets out a roadmap to protect Canada's biodiversity through protection of lands and waters, and conservation for species at risk. This new approach to species at risk conservation has shifted from a single-species approach to conservation, to one that focuses on collaborative, multiple-species, and ecosystems approaches, and prioritizing investments. Actions to implement this new approach are supported by contributions under the Nature Legacy Initiative's Canada Nature Fund, including:

- $155 million over five years for conservation actions to protect and aid in the recovery of up to 200 terrestrial wildlife species under the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada.
- $55 million over five years for aquatic species through the Canada Nature Fund for Aquatic Species at Risk.
- Up to $175 million over 4 years under the Canada Nature Fund's Target 1 Challenge program to make a significant contribution to conserving 17 percent of Canada's land and fresh water, as well as support the expansion of a connected network of protected and conserved areas across Canada which may contribute to the recovery of species at risk. (Canada's $175 million investment in nature kicks off conservation projects in every province and territory - Canada.ca)

As the lead minister on biodiversity protection and species at risk protection and recovery, the Minister of Environment works with other federal ministers in delivering on these objectives, including Parks Canada, and the Minister of Fisheries, Oceans and the Canadian Coast Guard, who has a key role with respect to aquatic biodiversity and species at risk.

1.3.1. Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada

In June 2018, the Federal, Provincial and Territorial (FPT) Ministers responsible for Conservation, Wildlife, and Biodiversity agreed to the implementation of the *Pan-Canadian Approach to Transforming*

Species at Risk Conservation in Canada[5], which sets out principles to guide transformation to multi-species and ecosystems approaches for conserving Canada's protected terrestrial and freshwater spaces and for terrestrial species. The Government of Canada has been working closely with provinces and territories, Indigenous Peoples, and other partners on species at risk conservation to transform its approach to terrestrial species at risk conservation through advancing the implementation of the Pan-Canadian Approach and related policy and program improvements.

Minister of Environment and Climate Change Mandate Letter

In the December 13, 2019 mandate letter to the Minister of Environment and Climate Change, the Honourable Jonathan Wilkinson, the Prime Minister included the commitment to "continue to work to protect biodiversity and species at risk, while engaging with provinces, territories, Indigenous communities, scientists, industry and other stakeholders to evaluate the effectiveness of the existing *Species at Risk Act* and assess the need for modernization."

The Minister's mandate commitment on the evaluation of SARA and assessment of the need for modernization creates an opportunity to examine key policy and program changes to the implementation of SARA, including those that may help advance the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada.

Subsequent actions will be reported in the SARA Annual report for 2020.

Priority places, species, sectors and threats

In collaboration with the provinces and territories, Indigenous peoples, and other partners, implementation of the Pan-Canadian Approach was initiated through cooperative action for identified terrestrial and freshwater priority places, terrestrial species, and sectors and threats.

[5] Quebec has not signed the Accord for the Protection of Species at Risk and has its own Act on Threatened and Vulnerable Species. It actively collaborates with the federal government on the conservation of endangered species of common interest through the Canada-Quebec Agreement on Species at Risk. For example, Quebec does not participate in the development of Canada-wide policies and mechanisms for the conservation of species at risk, and as such, will not implement the proposed Pan-Canadian Approach. Quebec intends to work in complementarity with the federal government in setting priorities for the recovery of species in precarious situations, within already existing mechanisms.

- Priority places – A priority place is an area of high biodiversity value that is seen as a distinct place with a common ecological theme by the people who live and work there. There are now 11 priority places identified under the Pan-Canadian Approach.
- Priority species – The federal, provincial and territorial governments have identified six shared priority terrestrial species. These species serve as cultural keystones for a significant number of Indigenous peoples. They also hold a special meaning for many other Canadians. Collaborative approaches focused on single-species may be necessary to implement conservation actions when the species are faced with complex threats, are ecologically important and widely distributed. Delivering conservation outcomes for shared priority species can also have significant co-benefits for other species at risk and biodiversity in general.
- Priority sectors and threats – Effective conservation of species at risk requires identifying and alleviating threats to their existence. Determining high impact sector activities or threats at the national or regional scale, where there is an opportunity to have a positive impact through sector-based or threat-based mitigation initiatives, is one of the key strategies to improving conservation outcomes across Canada. Partners and stakeholders will collaborate to implement mitigation measures and identify opportunities to improve conservation outcomes for species at risk.

At the end of December 2019, the following priority places, species, sectors and threats for terrestrial species at risk had been confirmed by the FPT Deputy Ministers' responsible for Conservation, Wildlife and Biodiversity:

- **Priority Places**:
    - Nova Scotia – Kespukwitk/South West Nova Scotia
    - New Brunswick – Wolastoq/Saint John River Valley
    - Prince Edward Island – Forested landscape
    - Quebec – St Lawrence Lowlands
    - Ontario - Long Point Walsingham Forest
    - Manitoba – Mixed Grass Prairie

- Saskatchewan – South of Divide
- Alberta – Summit to Sage
- British Columbia – Dry Interior
- British Columbia – South West British Columbia
- Yukon – South Beringia

- **Priority Species**:
  - Boreal Caribou
  - Southern Mountain Caribou
  - Peary Caribou
  - Barren-Ground Caribou
  - Greater Sage Grouse (Alberta and Saskatchewan)
  - Wood Bison (Alberta, Yukon and Northwest Territories)
- **Priority Sectors**:
  - Agriculture
  - Forestry
  - Urban development
- **Priority Threats:**
  - Invasive alien species
  - Wildlife disease
  - Illegal wildlife trade

Wood bison

Investments in priority places (investments include those made in 2018-2019 and 2019-2020)

Across the 11 federal-provincial-territorial Priority Places, partners and stakeholders were engaged, governance frameworks were established, multi-species and ecosystem-based conservation action planning was advanced, and early actions were implemented.

In 2019, the federal government invested up to $7.6 million in 52 projects across the country. Thirty-seven of these projects are being carried out in partnership with provinces and territories in 11 priority places: southwest Nova Scotia, Saint John River Valley, Prince Edward Island forested landscapes, Saint Lawrence Lowlands, Ontario's Long Point Walsingham Forest, Manitoba mixed-grass prairie, Saskatchewan south of the divide, Alberta's Saskatchewan River watershed, dry interior of British Columbia, southwest British Columbia, and Yukon's south Beringia.

Fifteen of these projects are under the Community-Nominated Priority Places program. In each community, multiple partners will take action together to protect and recover species at risk. These projects will complement ongoing species at risk conservation in the 11 Priority Places. One of the projects targets the Land Between bioregion, which covers almost 3 million hectares from Georgian Bay to the Ottawa Valley. This project (carried out in collaboration with 10 partners) is expected to benefit 57 species at risk, including the little brown bat, the eastern (Algonquin) wolf, and the golden-winged warbler.

In addition, in 2018-2019 under the International Threats component of the Priority Species Stream, $200,000 was invested in eight international projects that address threats outside of Canada to the recovery of migratory birds. A contribution to the Nature Conservancy of Canada (NCC) allowed the addition of 567 hectares to their Cockburn Island Nature Reserve resulting in almost 62% of the island being protected, one of the largest protected intact hardwood forest ecosystems in southern Ontario. Additionally, 23 hectares of ecologically significant habitat was secured by NCC adjacent to the existing 3284 hectare Long Point National Wildlife Area. This new property provides habitat for a remarkable 25 species at risk, and includes critical habitat for several of them.

Initiatives with the forest and agriculture Priority Sectors engaged partners and stakeholders to initiate the co-creation of conservation action plans that seek to align conservation and sector policy and practice with positive outcomes for species at risk and sector sustainability.

Parks Canada places play a unique role in the Pan-Canadian Approach, as entry points that can be leveraged to anchor and strengthen protection for species and biodiversity in the broader landscape. National parks are in or near many Priority Places, and Parks Canada has active conservation programs for a number of Priority Species including, but not limited to the Greater Sage-Grouse, Barren-Ground Caribou, and Wood Bison.

Parks Canada has been using a site-based, multi-species approach to action planning to achieve broad conservation gains. Parks Canada has completed 21 multi-species action plans addressing over 200 species of conservation concern, including 127 SARA-listed species across 42 places it administers. As part of the work under the Nature Legacy for Canada Initiative, Parks Canada allocated approximately $2.5M in 2019-2020 to projects across the country that initiated more than 60 actions identified in SARA action plans.

Investments in priority species (investments include those made in 2018-2019 and 2019-2020)

Significant progress has been made for the six Priority Species, particularly through the implementation of collaborative stewardship-based arrangements. To date, twelve conservation agreements under SARA have been finalized or are in negotiation for three Priority Species (Southern Mountain Caribou, Boreal Caribou and Wood Bison) with provinces, territories, and Indigenous peoples. Approximately $6.3 million was committed for the 2019-2020 fiscal year to support the implementation of seven conservation agreements.

Investments made under the Canada Nature Fund, including matching investments from partners, are supporting on-the-ground projects for the recovery of the six Priority Species across the country. Ongoing collaborative conservation planning arrangements with partners, including Indigenous peoples and multi-partner tables, will further ensure implementation of high-priority conservation measures for each Priority Species.Projects supporting this collaboration included:

- A one-day workshop held by the Athabasca Chipewyan First Nation with Indigenous knowledge holders to collect information and direction on the protection of the Ronald Lake Bison Herd (wood bison are another priority species identified under the Pan-Canadian Approach).
- The establishment of a transboundary forum for the Detour/Kesagami boreal caribou population (Quebec and Ontario border), which brings together multiple partners including industry, Indigenous groups, and ENGOs to support the recovery of the species.

Indigenous partnerships

Indigenous peoples have authority over more than 40% of Canada's lands and waters. Recognizing and supporting the ongoing leadership of First Nations, Inuit, and Métis peoples as long-standing stewards of Canada's biodiversity is critical to making measurable progress on species at risk conservation. Enabling Indigenous leadership in the implementation of the Pan-Canadian Approach and SARA has been a focus, providing support to enhance Indigenous peoples' capacity to design and deliver species at risk conservation action in a manner that reflects their unique needs, priority, rights, and knowledge.

In 2019, relationship-building with Indigenous peoples was advanced through projects that supported the urgent need to act to recover Boreal and Southern Mountain Caribou; increased capacity for the collaborative management of Polar Bear, leveraging Indigenous knowledge; and enabled leadership for species conservation through certified forest management, mapping, and stewarding and restoring species at risk and their habitat on Indigenous lands.

In 2018-2019, under the Indigenous Partnerships component of the Priority Species stream, over $780,000 was invested in 14 projects. These projects enabled Indigenous-led initiatives for the conservation of Boreal and Southern Mountain Caribou, meaningful participation of Indigenous peoples in SARA implementation activities to conserve cultural keystone species, and the collaborative conservation of multiple listed species present on reserve lands. This included:

- $230,000 in contributions provided collectively to five Indigenous partners to support Indigenous-led activities under the National Boreal Caribou Knowledge Consortium, established in accordance with the commitments made within the federal Action Plan for Boreal Caribou.
- A contribution to Wuskwi Sipihk First Nation supporting the collection of Indigenous Knowledge and engagement of community members in land-use planning activities.
- A contribution to Cold Lake First Nations supporting conservation measures within the conservation agreement for boreal caribou, including commitments to landscape restoration and population monitoring.

1.3.2. Fisheries and Oceans Canada implementation of the Nature Legacy Initiative

Fisheries and Oceans Canada (DFO) is implementing the Nature Legacy of Canada Initiative through multi-species, place and threat-based approaches to transform the way that aquatic species at risk are protected and recovered. DFO is undertaking this work and other key assessment, listing and recovery actions with the renewed capacity provided in the Nature Legacy Initiative. This Initiative provided DFO with additional resources to engage with partners from across the country, through the $55M Canada Nature Fund for Aquatic Species at Risk (CNFASAR).

CNFASAR aims to build relationships with Indigenous peoples, provinces and territories, industry, and other partners for aquatic species at risk by supporting and encouraging stewardship actions through the implementation of multi-species, threat, and place-based approaches to recovery and protection. With this approach, the CNFASAR is funding 57 projects over 5 years, which target over 75 populations of aquatic species at risk in seven priority freshwater places and over 50 populations of aquatic species at risk associated with two marine threats.

Bay of Fundy, New Brunswick

The seven freshwater places selected as priorities under CNFASAR are:

1. Fraser and Columbia Watersheds Priority Area (BC)
2. Rocky Mountains' Eastern Slopes Priority Area (AB)
3. Southern Prairies Priority Area (AB, SK, MB)
4. Lower Great Lakes Watershed Priority Area (ON)
5. St. Lawrence Lowlands Priority Area (QC)
6. Southern Gulf of St. Lawrence Rivers Priority Area (NB, NS, PEI)
7. Bay of Fundy and Southern Uplands Watersheds Priority Area (NS, NB)

The two marine priority threats which remain a focus for relevant projects under CNFASAR are:

1. Fishing interactions – this threat includes entanglements and bycatch of aquatic species at risk (geographic scope: all Canadian oceans)
2. Physical and acoustic disturbance – this threat includes vessel collisions and marine noise.

Species at risk conservation and recovery is also a key consideration in implementation of other DFO initiatives, including those that involve attaining marine conservation targets and stock rebuilding.

In 2018-2019, Fisheries and Oceans Canada supported projects that advanced work to support priority places, threats, Indigenous partnerships, and collaboration with provincial partners. These include:

- With the Gespe'gewaq Mi'gmaq Resource Council identifying and restoring priority habitats for three at-risk fish species in the Restigouche River watershed and its estuary in New Brunswick by engaging with Indigenous communities and academic institutions to develop an understanding of Mi'gmaq Ecological Knowledge (MEK) systems which will allow for co-development of a sustainable habitat restoration strategy based on available biological data, GIS tools and MEK.
- With the Peskotomuhkati Nation at Skutik, a project to support the reconnecting the Skutik/St. Croix River and Passamaquoddy Bay ecosystems in the East Coast – Bay of Fundy and Southern Uplands by identifying fish passage issues at sites and recommending approaches to improve efficiency for passage, including fishway designs and flow requirements while considering site constraints and impacts on energy and existing infrastructure.

- With the Province of Alberta and ALUS Canada, partnering with farmers and ranchers within the Saskatchewan River and the Assiniboine River watershed basins to restore or enhance riparian buffers and construct wetlands; project activities are reducing agricultural run off and sedimentation thereby improving the surrounding aquatic habitats.
- With the Province of Manitoba, examining how select species at risk use the Assiniboine and Lower Qu'Appelle rivers in Saskatchewan by undertaking animal movement tracking, genetic assessment, and evaluation of key habitat features that aquatic species at risk rely on.
- With the British Columbia Conservation Foundation, completion of restoration activities, including riparian habitat restoration and the installation of a cross channel riffle in the Guichon Creek to help reduce sediment loading and increase fish habitat for spawning and rearing habitat for Thompson River salmon.
- With the Group for Research and Education on Marine Mammals (GREMM), initiating development of a network of connected land-based observation sites to replace at-sea observation of at-risk marine mammals.
- With the Wildlife Conservation Society Canada, assessing and managing acoustic disturbance to bowhead whales by determining the summer distribution of the Bering-Chukchi-Beaufort (BSB) population of Bowhead Whales and measuring their exposure to underwater noise, assessing how they react to underwater noise, and developing model management strategies to reduce underwater noise in BCB and Eastern Canada-West Greenland areas. In 2019, acoustic recorders were successfully deployed at Cape Parry, Franklin Bay, Cape Bathurst (two sites) and Herschel Island.

MULTI-SPECIES PLANNING AND RECOVERY INITIATVE FOR THE SAINT JOHN RIVER WATERSHED

The Saint John, or Wolastoq, River is Eastern Canada's longest river and its drainage basin is one of the largest on the East Coast. The watershed is home to a number of species at risk making it ecologically significant, as well as historically, socially, culturally and economically significant. Through a Canada Nature Fund for Aquatic Species at Risk project, World Wildlife Fund (WWF)-Canada and the University of British Columbia are working together to apply a Priority Threat Management (PTM) approach in the Saint John River watershed in New Brunswick.

PTM is an integrated, ecosystem-based approach that aims to maximize the persistence of species of conservation concern. By taking a "return-on-investment" approach, the most cost-effective actions that can be taken to benefit the greatest number of species can be determined. There are more than 40 species at risk in the Saint John River watershed that have been included in the analyses, including six aquatic species at risk (American Eel, Atlantic Salmon, Atlantic Sturgeon, Shortnose Sturgeon, Stripped Bass, and Yellow Lampmussel).

Through a series of workshops hosted by WWF-Canada, input has been gathered from regional experts on the ecology and conservation of species. These expert workshops included evaluations of costs, benefits and the feasibility of implementing various strategies. The project team then completed the final series of data analysis, including cost-benefit analysis, complementarity analysis and uncertainty analysis. The result is the identification of a series of priority recovery actions to be taken within the Saint John River watershed.

In the next stages of the project, WWF-Canada is working alongside partner organizations to implement the identified priority actions. Through these direct conservation efforts, WWF-Canada and its partners are aiming to enhance freshwater habitat within the Saint John River watershed and to have a lasting impact on the aquatic species of conservation concern in New Brunswick.

American eel

2. ASSESSMENT OF SPECIES AT RISK

SARA defines the process for conducting assessments of the status of individual wildlife species. The Act separates the assessment process from the listing decisions, ensuring scientists provide independent assessments and that decisions affecting Canadians are made by elected officials who are accountable for those decisions.

2.1. COSEWIC assessments

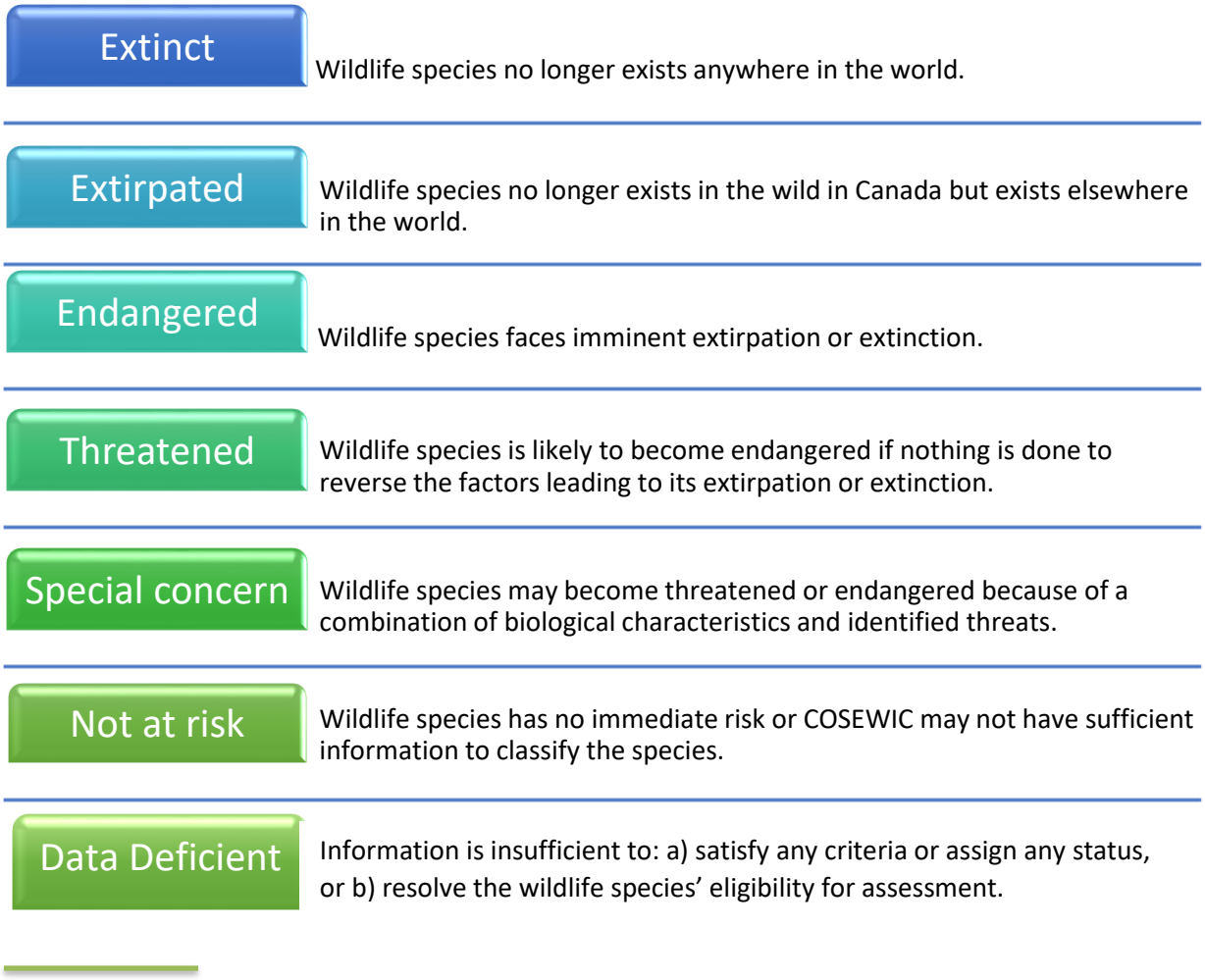
The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is made up of independent wildlife experts from government, academia, Indigenous organizations, non-governmental organizations and the private sector. It assesses the status of wildlife species in Canada that it considers to be at risk and identifies existing and potential threats to the species.

The federal government provides financial support to COSEWIC. ECCC provides COSEWIC with professional, technical, secretarial, clerical and other assistance via the COSEWIC Secretariat, which is housed within ECCC.

COSEWIC assesses the status of a wildlife species using the best available information on the biological status of a species, including scientific knowledge, community knowledge and Indigenous Knowledge. COSEWIC prioritizes species for assessment and, as one of its sources of information, uses the general status ranks that are outlined in the report called *Wild Species – The General Status of Species in Canada*. This report is required under section 128 of the Act and is published every five years by ECCC and the National General Status Working Group. COSEWIC provides assessments and supporting evidence annually to the Minister.

Wild Species reports

Figure 2: Categories of wildlife species status used by COSEWIC



Note: More information on risk categories and COSEWIC can be found online.

ECCC, Parks Canada, and DFO gather and provide scientific input and Indigeous knowledge into the assessment process through staff experts as members of COSEWIC. These staff experts act independently from their organizations. Additionally, these experts contribute information to status reports from scientific activities and surveys conducted by ECCC, Parks Canada and DFO. They also conduct peer review of COSEWIC status reports, which are carried out by government scientists, experts from academia, and other stakeholders.

ECCC reviews all status reports for terrestrial species and reviews most or all reports for aquatic species.

DFO reviewed 26 COSEWIC status reports and three Designatable Unit[6] reports in 2019 for aquatic wildlife species before they were finalized. Parks Canada reviewed 41 COSEWIC status reports in 2019 for both terrestrial and aquatic species that are found in the lands and waters it administers.

BABY BOOM FOR BARN SWALLOWS AT FORT RODD HILL IN 2019

Barn swallows, listed as Threatened under the *Species at Risk Act*, build their mud nests in the shelter of human-built structures like houses or barns. At Fort Rodd Hill & Fisgard Lighthouse National Historic Sites of Canada, in Victoria, British Columbia, Barn Swallows have for decades nested under the eaves of or inside of the concrete buildings and the underground magazines (historically used to store ammunition and explosives).

Many of these structures at Fort Rodd Hill date back to the late 1800s and represent some of the only intact coastal fortifications from this time period remaining in Canada. Beginning in 2015, the three batteries at Fort Rodd Hill underwent major restoration. Prior to nesting season, artificial nest ledges and perching wire were installed in select suitable areas to encourage Barn Swallows to nest, while access was limited to nesting areas in buildings undergoing restoration by closing doors or installing physical barriers.

When a Barn Swallow pair established a nest on one of the new ledges, a sign was installed to give staff and visitors a friendly reminder to observe the nesting Barn Swallows from a safe distance. This was complemented with roving interpretation to explain the initiative to visitors.

Barn swallows

While the goal of these species conservation actions was to maintain the same level of nesting success that the site supported in previous years, the initiative has resulted in a remarkable increase in the number of successfully fledged Barn Swallow chicks at the historic Fort. Prior to installation of the nest ledges, Fort Rodd Hill Sites saw an average of 6 nests built per year, which fledged an average of 20 chicks. By comparison, in 2019 staff counted 42 chicks fledge from 16 nests, with 67% of these chicks from the 12 nests built on the artificial nest ledges. The Barn Swallows inspired Parks Canada staff to find the delicate balance between protecting natural and cultural heritage using creative solutions.

[6] A designatable unit refers to a taxonomic entity below the species level (subspecies, varieties or geographically or genetically distinct populations).

2.1.1. COSEWIC sub-committees

COSEWIC's Species Specialists Sub-committees (SSCs) provide species expertise to COSEWIC. Each SSC is led by two co-chairs and members are recognized Canadian experts in the taxonomic group in question with a demonstrated knowledge of wildlife conservation. Members are drawn from universities, provincial wildlife agencies, museums, Conservation Data Centres, Indigenous experts, and other sources of expertise on Canadian species. SSC members support the co-chairs in developing candidate lists of species to be considered for assessment, commissioning status reports for priority species, reviewing reports for scientific accuracy and completeness, and proposing to COSEWIC a status for each species. Currently, COSEWIC has 10 SSCs:

- Amphibians and reptiles
- Arthropods
- Birds
- Freshwater fishes
- Marine fishes
- Marine mammals
- Molluscs
- Mosses and lichens
- Terrestrial mammals
- Vascular plants

COSEWIC also has an Aboriginal Traditional Knowledge (ATK) Sub-committee. In 2019, this committee continued its efforts to produce:

- ATK Source Reports (which compile potential sources of ATK)
- ATK Assessment Reports (which summarize the relevant content of documented ATK sources)
- ATK Gathering Reports (which compile non-publicly available documented and non-documented ATK that is shared directly from Indigenous communities)

In 2019, the ATK Sub-committee also:

- held a two-day workshop in Richmond, British Columbia, to build a stronger network with Indigenous communities in BC, including the gathering of ATK related to the assessment of status of thirteen aquatic and terrestrial species;
- completed a number of ATK reports for wildlife species such as Muskox, Greenland Shark,

five different bat species (Tri-coloured Bat, Spotted Bat, Pallid Bat, Fringed Bat, Keen's Long-eared Bat), eleven different shorebird species (American Golden-Plover, Black-bellied Plover, Dunlin, Pectoral Sandpiper, Ruddy Turnstone, Sanderling, Semipalmated Sandpiper, Whimbrel, Buff-breasted Sandpiper, Long-billed Dowitcher, and Stilt Sandpiper), and Steelhead;

- completed a Planning Framework[7] on Steelhead within the Secwepemc territory of the Thompson River watershed of British Columbia; and
- completed a ATK Gathering Report on Steelhead in the Nlak'apamux Nation traditional territory in the Thompson River watershed of British Columbia.

Ongoing work includes the prioritization and selection of wildlife species for ATK reports, as well as the review of COSEWIC status reports to ensure that available ATK is appropriately and accurately integrated.

In 2019, DFO hosted two pre-COSEWIC peer-review meetings, one on Northern Abalone and another on American Plaice. The objective of the pre-COSEWIC meeting is to peer-review existing DFO information relevant to the COSEWIC status assessment of a given species in Canadian waters. Data related to the status of, the threats to, as well as the trends related to this species inside and outside of Canadian waters, are considered, along with the strengths and limitations of the information.

2.2. Wildlife species

From 2002 to 2019, COSEWIC assessed and classified more than 900 wildlife species in 16 batches. Batch 17, consisting of 56 wildlife species, was assessed between November 2018 to April 2019. COSEWIC forwarded these assessments to the Minister of the Environment in October 2019, which included:

- Two wildlife species examined and found to be data deficient

[7] The Planning Framework is a guide for Secwepemc community engagement in the SARA process, specifically, the sharing and integration of ATK into salmon status assessments.

- Two wildlife species assessed as not at risk
- No wildlife species assessed as extinct
- 52 wildlife species assessed as at risk, of which 15 were confirmed at the classification already attributed to them on Schedule 1 of SARA

As of April 2019, COSEWIC's assessments include 799 wildlife species in various risk categories, including 356 endangered, 189 threatened, 232 special concern, and 22 extirpated. In addition, 18 wildlife species have been assessed as extinct. As of April 2019, 59 wildlife species have been designated as data deficient and 199 have been assessed and assigned not at risk status.

3. LISTING OF SPECIES AT RISK

Dwarf Hesperochiron

The Act establishes Schedule 1 as the official List of Wildlife Species at Risk. Species are listed as extirpated, endangered, threatened or of special concern.

3.1. Listing process

The listing process refers to the addition (or non-addition), the reclassification, or the removal of a species from Schedule 1. Once the Minister receives the COSEWIC assessment, the Minister has 90 days to post a response statement on the Species at Risk Public Registry indicating how they intend on responding to each assessment and, if possible, providing timelines for action.

The Government of Canada has a duty to consult and, where appropriate, accommodate Indigenous groups when actions might adversely impact potential or established Aboriginal or Treaty Rights. Therefore, during this 90-day period, the relevant competent minister carries out an internal review to determine the level of public, stakeholders and Indigenous consultation required. The relevant competent minister also conducts the socio-economic analysis necessary to inform the listing decision.

Timelines for action and the scope of consultations included in the response statement are based on the results of this initial review.

All of the species that COSEWIC assessed as being at risk prior to October 1999 were included at proclamation on SARA's Schedule 2 (endangered and threatened) and Schedule 3 (special concern). COSEWIC reassesses these species using current criteria as part of the process to determine if they should be considered for the addition to Schedule 1. All Schedule 2 species have since been reassessed by COSEWIC. For Schedule 3, taxonomy for the four remaining species needs to be clarified before they can be reassessed by COSEWIC.

Figure 3: Species listing process under SARA

Note: More information, can be found on the SAR Public Registry.

Prior to undertaking public, stakeholders and Indigenous consultations and socio-economic analyses, DFO develops science advice in the form of a Recovery Potential Assessment (RPA) for aquatic species that have been assessed by COSEWIC as threatened, endangered or extirpated. The scientific information in an RPA includes species status, threats and limiting factors to the survival and recovery of the species, recovery targets, and feasibility of recovery in given scenarios. The RPA informs the development of advice to the Minister of Fisheries and Oceans regarding the listing of aquatic species under SARA and is used when analyzing the socio-economic impacts, and during subsequent consultations. The RPA also provides advice needed to meet other requirements of the Act, including recovery planning and permitting decisions.

River Darter
Photo:© D.A. Watkinson

In 2019, DFO held 12 RPA peer-review meetings:

1. River Darter: Great Lakes-Upper St. Lawrence populations
2. Pacific Grey Whale: West coast/ Lumpfish: Atlantic Ocean
3. Lake Sturgeon: Western Hudson Bay populations
4. Lake Sturgeon: Saskatchewan-Nelson River populations
5. Lake Sturgeon: Great Lakes-Upper St. Lawrence populations
6. Lake Sturgeon: Great Lakes-Upper St. Lawrence populations (second meeting)
7. Coho Salmon: Interior Fraser River population/ Chinook Salmon: Okanagan population
8. Channel Darter: Lake Erie and Lake Ontario populations
9. Fraser River Sockeye Salmon: Ten designatable units
10. Pygmy Whitefish: Great Lakes-Upper St. Lawrence population
11. Fraser River Chinook Salmon: Eleven designatable units
12. Westslope Cutthroat Trout: Saskatchewan-Nelson River population

3.2. Federal government response to COSEWIC assessments

In November 2017, the Minister posted the new SARA policy, *Timeline for amendments to Schedule 1 of the Species at Risk Act*. This policy applies to all species assessments received by the Minister from the date of publication of the policy onward. The policy includes a commitment to report when timelines cannot be met. The report is to explain the status of the species assessments that the Minister received and that have not yet been submitted to the Governor in Council. The response statements for the first batch of species to which this policy will apply (Batch 16) were posted on January 11, 2019. This included the response statements for 26 confirmations of status for species already on Schedule 1. The response statements for the remaining 49 species at risk explained that they were eligible for a change on Schedule 1 and provided timelines for action, to the extent possible.

In October 2019, the Minister received COSEWIC's assessments for 52 out of the 56 assessed species in Batch 17. Of these assessments, 27 terrestrial and 25 aquatic wildlife were assessed as species at risk.

Table 1: List of species for which assessments and risk status were received from COSEWIC in October 2019 (Species are grouped by the type of consultation the departments will undertake.)

COSEWIC Risk Status	Taxon	English Legal Name	Scientific Name
Normal Consultations			
Endangered	Mosses	Carey's Small Limestone Moss	*Seligeria careyana*
Endangered	Mosses	Dalton's Moss	*Daltonia splachnoides*
Endangered	Mosses	Drooping–leaved Beard–moss	*Oxystegus recurvifolius*
Endangered	Vascular Plants	Columbia Quillwort	*Isoetes minima*
Endangered	Vascular Plants	Dwarf Hesperochiron	*Hesperochiron pumilus*
Endangered	Vascular Plants	Hairy Valerian	*Valeriana edulis ssp. ciliata*
Endangered	Vascular Plants	Hairy Paintbrush	*Castilleja tenuis*
Endangered	Vascular Plants	Ute Ladies'–tresses	*Spiranthes diluvialis*
Threatened	Fishes (freshwater)	Lake Chub (Liard Hot Springs populations)	*Couesius plumbeus*
Threatened	Fishes (freshwater)	Lake Chub (Atlin Warm Springs populations)	*Couesius plumbeus*
Threatened	Lichens	White–rimmed Shingle Lichen	*Fuscopannaria leucosticta*
Special Concern	Arthropods	American Bumble Bee	*Bombus pensylvanicus*
Special Concern	Arthropods	Yellow Scarab Hunter Wasp	*Dielis pilipes*
From Endangered to Special Concern	Reptiles	Greater Short-horned Lizard	*Phrynosoma hernandesi*
From Threatened to Special Concern	Mammals (marine)	Fin Whale (Pacific population)	*Balaenoptera physalus*

From Threatened to Special Concern	Vascular Plants	Goldenseal	*Hydrastis Canadensis*
Extended Consultations			
Endangered	Fishes (Anadromous)	Chinook Salmon (Lower Fraser, Stream, Summer (Upper Pitt) population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (Anadromous)	Chinook Salmon (Middle Fraser, Stream, Spring population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (Anadromous)	Chinook Salmon (Middle Fraser, Stream, Fall population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (Anadromous)	Chinook Salmon (Upper Fraser, Stream, Spring population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (Anadromous)	Chinook Salmon (South Thompson, Stream, Summer 1.2 population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (Anadromous)	Chinook Salmon (North Thompson, Stream, Spring population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (Anadromous)	Chinook Salmon (North Thompson, Stream, Summer population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (Anadromous)	Chinook Salmon (East Vancouver Island, Stream, Spring population)	*Oncorhynchus tshawytscha*
Endangered	Fishes (marine)	Shortfin Mako (Atlantic population)	*Isurus oxyrinchus*
Endangered	Mammals (marine)	Sei Whale (Atlantic population)	*Balaenoptera borealis*
Threatened	Birds	Hudsonian Godwit	*Limosa haemastica*
Threatened	Fishes (Anadromous)	Chinook Salmon (Lower Fraser, Ocean, Fall population)	*Oncorhynchus tshawytscha*
Threatened	Fishes (Anadromous)	Chinook Salmon (Lower Fraser, Stream, Summer population)	*Oncorhynchus tshawytscha*
Threatened	Fishes (Anadromous)	Chinook Salmon (Middle Fraser, Stream, Spring (MFR+GStr) population)	*Oncorhynchus tshawytscha*
Threatened	Fishes (Anadromous)	Chinook Salmon (Middle Fraser, Stream, Summer population)	*Oncorhynchus tshawytscha*
Threatened	Vascular Plants	Black Ash	*Fraxinus nigra*
Special Concern	Fishes (Anadromous)	Chinook Salmon (Lower Fraser, Stream, Spring population)	*Oncorhynchus tshawytscha*
Special Concern	Vascular Plants	Yukon Draba	*Draba yukonensis*
From Special Concern to Threatened	Lichens	Cryptic Paw Lichen	*Nephroma occultum*
Status change for which there will be no consultations			
From Threatened to Endangered	Fishes (freshwater)	Rainbow Smelt (Lake Utopia small-bodied population)	*Osmerus mordax*
From Threatened to Endangered	Fishes (freshwater)	Rainbow Smelt (Lake Utopia large-bodied population)	*Osmerus mordax*
Status confirmed – no consultation			
Extirpated	Arthropods	Frosted Elfin	*Callophrys irus*
Extirpated	Arthropods	Karner Blue	*Plebejus samuelis*

Extirpated	Fishes (freshwater)	Gravel Chub	*Erimystax x-punctatus*
Extirpated	Fishes (freshwater)	Paddlefish	*Polyodon spathula*
Extirpated	Reptiles	Pygmy Short-horned Lizard	*Phrynosoma douglasii*
Endangered	Arthropods	Rapids Clubtail	*Phanogomphus quadricolor*
Endangered	Fishes (freshwater)	Nooksack Dace	*Rhinichthys cataractae*
Endangered	Mammals	Vancouver Island Marmot	*Marmota vancouverensis*
Endangered	Vascular Plants	Brook Spike-primrose	*Epilobium torreyi*
Threatened	Reptiles	Wood Turtle	*Glyptemys insculpta*
Special Concern	Arthropods	Pale Yellow Dune Moth	*Copablepharon grandis*
Special Concern	Arthropods	Pygmy Snaketail	*Ophiogomphus howei*
Special Concern	Mammals	Polar Bear	*Ursus maritimus*
Special Concern	Mammals (Marine)	Fin Whale (Atlantic population)	*Balaenoptera physalus*
Special Concern	Mammals (marine)	Sowerby's Beaked Whale	*Mesoplodon bidens*

3.3. Public consultations

Public consultations provide the Minister with a better understanding of the potential social and economic impacts of possible changes to Schedule 1, and of the potential consequences of adding or not adding a species to the List. Information collected during consultations is used to inform the Minister's recommendations to the Governor in Council on amending Schedule 1 of SARA.

In 2019, ECCC carried out consultations for 21 terrestrial species for which status assessments had been received from COSEWIC as part of Batch 16. The document titled Consultation on Amending the List of Species under the *Species at Risk Act*: Terrestrial Species – January 2019 was posted on the Species at Risk Public Registry.

In 2019, DFO consulted Canadians on the possible listing on Schedule 1 of eight aquatic species. Consultations included those with other government departments, wildlife management boards, stakeholders, Indigenous groups and non-governmental organizations. Public consultations were also facilitated by inviting respondents to contribute to a web-based, species-specific survey hosted on the Species at Risk Public Registry.

3.4. Listing decisions

Governor in Council decisions on whether or not to amend Schedule 1 according to the COSEWIC assessments are published as orders amending Schedule 1 of SARA in the *Canada Gazette*, and include Regulatory Impact Analysis Statements. Decisions to not add a species at risk to Schedule 1 of SARA or to refer the matter back to COSEWIC are published in the *Canada Gazette* with an explanatory note.

In 2019, final listing decisions were made for 40 terrestrial species. There were two orders amending Schedule 1 of SARA published in the *Canada Gazette* in 2019. Of the 40 terrestrial species included in these orders, 22 wildlife species were newly added to Schedule 1. There were 15 wildlife species whose status on Schedule 1 changed. Another wildlife species (Toothcup), which had previously been on Schedule 1 as one designatable unit (or wildlife species), was split into two wildlife species. One of these retained the same status as the previously listed parent; the other was added at a lower risk level. Another species, the Pygmy Pocket Moss, was removed from the Schedule 1 of SARA because it had been re-assessed as "not at risk."

Table 2: Number of species at each stage of the listing process at year- end 2019 (Batches 1 to 17)

Batch (year) of Minister's receipt of assessments	Total number of species assessed [a]	Species at risk	Confirmation of current status	Added to Schedule 1	Uplisted (to a higher risk category)	Downlisted (to a lower risk category)	Not listed	Referred back	Decision pending
(Proclamation)	–	233	–	233	–	–	–	–	–
Batch 1 (2004)	115	95	4	75	0	0	8b	8b	0
Batch 2 (2004)	59	51 (+9)	0	47	0	0	13	1	0
Batch 3 (2005)	73	59	4	45	0	0	6	1	4
Batch 4 (2006)	68 (+5 c)	59	4	39	2	0	1	2	6
Emergency Assessment (2006)	1	1	0	0	0	0	1	0	0
Batch 5 (2007)	64	53	8	30	2	3	0	0	8
Batch 6 (2008)	46	39	14	20	3	0	1	0	2
Batch 7 (2009)	48	46	17	20	3	1	0	0	5
Batch 8 (2010)	79	78	34	18	3	5	4	0	14
Batch 9 (2011)	92	81	31	13	5	6	1	3	16
Batch 10 (2012)	64	57	28	10	6	6	0	1	5
Emergency Assessment (2012)	3	3	0	3	0	0	0	0	0
Batch 11 (2013)	73	67	32	18	3	5	0	0	10
Batch 12 (2014)	56	56	21	16	2	3	0	0	12
Batch 13 (2015)	56	54	24	18	3	2	0	0	7
Batch 14 (2016)	45	38	7	6	5	8	0	0	12
Batch 15 (2017)	73	56	17	3	3	4	0	1	28
Emergency Assessments (2018)	2	2	0	0	0	0	2	0	0
Batch 16 (2018)	88	75	26	0	0	0	0	0	49
Batch 17 (2019)	56	52	15	0	0	0	0	0	37

a The total includes species assessed for the first time, species being reassessed and previously assessed species that have been split into more than one designatable unit.
b The totals listed as "Uplisted" (to a higher risk category) and "Downlisted" (to a lower risk category) also account for species that were subsequently split into more than one designatable unit with a corresponding change in status and were therefore treated as reclassifications ("uplisted" or "downlisted"). In addition, removals from Schedule 1 are counted here as "downlisted".
c Includes four wildlife species that were not listed for further consideration from Batch 1 and reconsidered in Batch 2, and five additional wildlife species when one designatable unit received by COSEWIC was split into six for listing.

Final listing decisions were made for 32 aquatic species via two orders published in the *Canada Gazette*, Part II. Based on a request from COSEWIC in light of new information received, one order referred the assessment of one species (Shortfin Mako) back to COSEWIC for further consideration. Of the 31 aquatic species included in the second order, which amended Schedule 1 of SARA: 18 species were newly added to Schedule 1; nine were reclassifications; and four were the subject of changes to their recognized designatable units. The decision on the reclassification of another species, which had been received with these, remains pending. The Governor in Council received the assessment of the Rocky Mountain Ridged Mussel in February 2019. It is on Schedule 1 as Special Concern, and COSEWIC assessed it as Endangered. During the public comment period that followed the proposed status change, stakeholders raised concerns. As a result, officials are gathering additional science information.

3.5. SARA Schedule 1 current status

When SARA was proclaimed in June 2003, Schedule 1 included 233 species. Starting in 2005, species have been added to the list every year, except in 2008, 2015 and 2016. As of December 31, 2019, Schedule 1 listed a total of 622 species.

- 23 extirpated species
- 273 endangered species
- 144 threatened species
- 182 species of special concern

Table 3: Numbers of species added (newly added or reclassified) to Schedule 1 each year, by risk status as of December 2019

Risk status					
Year	**Extirpated**	**Endangered**	**Threatened**	**Special Concern**	**Total**
June 2003 (proclamation)	17	107	67	42	233
2005	4	47	30	31	112
2006	0	18	14	12	44
2007	0	20	5	11	36
2008	0	0	0	0	0
2009	0	8	3	11	22
2010	0	11[a]	8	4	23[a]
2011	2	7	4	10	23
2012	0	11	2	5	18
2013	0	4	2	1	7
2014	0	3	0	0	3
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	1	18	15	20	54
2018	1	15	11	17	44
2019	1	10	10	19	40
Total	23	273	144	182	622[b]

[a] The Eastern Foxsnake was split into two populations. The new populations inherited the species' status on Schedule 1 of SARA before it was split, and both new populations were uplisted in 2010. For the purpose of this table, one of the new Eastern Foxsnake populations was treated as an addition to Schedule 1

[b] Although the total number of listed species (622) is correct, the totals for each risk category (i.e. extirpated, endangered, threatened and special concern) are slightly different than the actual number of species for each of the categories listed on Schedule 1 because the values presented in this table do not reflect status changes (i.e., uplisting or downlisting of a species).

Eastern Waterfan

RARE AQUATIC LICHEN MAKES A COMEBACK AT FUNDY NATIONAL PARK

Eastern Waterfan is a species of aquatic lichen listed on Schedule 1 of SARA. It is endemic to eastern North America, and in Canada it is only found in New Brunswick, Nova Scotia and Quebec. It is a good indicator of aquatic health as it requires cool, clean water, is sensitive to disturbance, and is slow to establish.

In 2013, the status report published by COSEWIC stated that the New Brunswick population of the Eastern Waterfan was believed to only be represented by four brooks, two being in Fundy National Park. The report also stated that the Canadian population was unlikely to exceed 2000 colonies. However, during the summer of 2019, Fundy National Park resource conservation staff conducted dedicated surveys in partnership with experts from the Atlantic Canada Conservation Data Centre (ACCDC). Fundy National Park and ACCDC staff went far off the beaten paths and deep into the park's interior, and were amazed to find the Eastern Waterfan almost everywhere they looked. The focused searches with ACCDC led to the discovery of Eastern Waterfan growing in 24 additional brooks, with more than 1000 colonies represented.

The results provided valuable habitat information that was incorporated into the Recovery Strategy and Action Plan for the species. As of the end of the 2019 season, Eastern Waterfan is known to be found in 28 brooks in Fundy National Park, and represents approximately 50% of the entire known Canadian population. Fundy National Park staff look forward to expanding the search for this rare aquatic lichen to further our knowledge of its population, extent, and habitat requirements.

4. RECOVERY ACTIONS FOR SPECIES AT RISK

Yellow scarab hunter wasp

Under SARA, the competent ministers must prepare recovery strategies and action plans for the species listed as extirpated, endangered or threatened, and management plans for those listed as special concern. Competent ministers must identify critical habitat in the recovery strategy or in an action plan to the extent possible based on the best available information. SARA defines "critical habitat" as the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species.

Recovery planning documents are developed in cooperation with federal, provincial and territorial jurisdictions, Indigenous communities, stakeholders and the public. The proposed recovery strategies, action plans and management plans are posted on the Species at Risk Public Registry for a 60-day public comment period. The competent ministers consider comments and make changes where appropriate. The final recovery strategy, action plan or management plan, as applicable, is to be published on the public registry within 30 days after the expiry of the public comment period. Five years after a recovery strategy, action plan or management plan comes into effect, the competent minister must report on the progress made towards achieving the stated objectives.

4.1. Recovery strategies

Recovery strategies have the following steps:

1. Identify threats to the species and its habitat
2. Identify critical habitat to the extent possible
3. Set population and distribution objectives for the species

In 2019, ECCC posted proposed recovery strategies for four species and final recovery strategies for 23 species. DFO posted amended proposed recovery strategies for four species and amended final recovery strategies for 12 species. Parks Canada contributed to the development of the recovery strategies where the Agency is competent for those species (indicated by asterisk * in Table 4 below). Parks Canada was not responsible for the posting of any recovery strategies in 2019.

Table 4: Species for which recovery strategies were posted in 2019, by lead competent department

Competent department	Final recovery strategies: species	Proposed recovery strategies: species
Environment and Climate Change Canada	Allegheny Mountain Dusky Salamander (Carolinian population)	Hine's Emerald
	American Chestnut	Hungerford's Crawling Water Beetle
	American Columbo	Red-headed Woodpecker*
	Batwing Vinyl Lichen	Vancouver Island Marmot
	Bent Spike-rush (Southern Mountain population)	
	Bird's-foot Violet	
	Blue Racer	
	Desert Nightsnake	
	Eastern Persius Duskywing	
	Five-lined Skink (Carolinian population)*	
	Five-spotted Bogus Yucca Moth	
	Fowler's Toad	
	Frosted Elfin	

	Gattinger's Agalinis Great Basin Gophersnake Juniper Sedge Karner Blue Non-pollinating Yucca Moth Prairie Skink Rapids Clubtail Western Rattlesnake Wild Hyacinth* Yellow-breasted Chat *virens* subspecies*	
Parks Canada	Nil	Nil
Fisheries and Oceans Canada	Recovery Strategy for Paxton Lake, Enos Lake, and Vananda Creek Stickleback Species Pairs (Gasterosteus aculeatus) in Canada: • Paxton Lake Benthic Threespine Stickleback • Paxton Lake Limnetic Threespine Stickleback • Enos Lake Benthic Threespine Stickleback • Enos Lake Limnetic Threespine Stickleback • Vananda Creek Benthic Threespine Stickleback • Vananda Creek Limnetic Threespine Stickleback Recovery Strategy for the Northern Riffleshell, Snuffbox, Round Pigtoe, Salamander Mussel, and Rayed Bean in Canada • Northern Riffleshell • Snuffbox • Round Pigtoe • Salamander Mussel • Rayed Bean Westslope Cutthroat Trout (Saskatchewan - Nelson River populations)*	Nooksack Dace Salish Sucker Striped Bass (St. Lawrence River population) Westslope Cutthroat Trout (Saskatchewan - Nelson River populations)*

* Parks Canada is also a competent department for this species, as it occurs in its lands/waters; and contributed to the development of the recovery strategy.

4.2. Action plans

An action plan identifies the conservation measures required to address the threats to the species and meet the population and distribution objectives outlined in the recovery strategy. An action plan may

include an identification of the species' critical habitat, to the extent possible, based on the best available information and consistent with the recovery strategy.

In 2019, ECCC posted a proposed action plan for one species and a final action plan for one species. DFO posted proposed action plans for four species and final action plans for four species. Parks Canada contributed to the development of action plans where the Agency is competent for those species (indicated by asterisk * in Table 5 below). Parks Canada was not responsible for the posting of any action plans in 2019.

Table 5: Species for which action plans were posted in 2019

Competent department	Final action plans	Proposed action plans
Environment and Climate Change Canada	Porsild's Bryum*	Blanding's Turtle, Nova Scotia population*
Parks Canada	Nil	Nil
Fisheries and Oceans Canada	Vancouver Lamprey Westslope Cutthroat Trout (Saskatchewan - Nelson River populations)* Atlantic Salmon - Inner Bay of Fundy population* Leatherback Sea Turtle (Pacific Population)*	Basking Shark (Pacific population)* Action Plan to Reduce the Impact of Noise on the Beluga Whale (*Delphinapterus leucas*) and Other Marine Mammals at Risk in the St. Lawrence Estuary Striped Bass (St. Lawrence River population) Westslope Cutthroat Trout (Saskatchewan - Nelson River populations)*

* Parks Canada is also a competent department for this species, as it occurs in its lands/waters, and the agency contributed to the development of the action plan.

4.3. Management plans

Species of special concern are those that may become threatened or endangered because of a combination of biological characteristics and identified threats. SARA requires competent ministers to prepare management plans for species of special concern. A management plan differs from a recovery strategy and an action plan, in that it identifies conservation measures needed to prevent a species of special concern from becoming threatened or endangered, but does not identify critical habitat. Where appropriate, these management plans may be prepared for multiple species on an ecosystem or landscape level.

In 2019, ECCC posted proposed management plans for one species and final management plans for five species. DFO posted one proposed management plan and one final management plan. Parks Canada contributed to the development of management plans for species the Agency is competent for (indicated by asterisk * in Table 6 below). Parks Canada was not responsible for the posting of any management plans in 2019.

Table 6: Species for which management plans were posted in 2019

Competent department	Final management plans: species	Proposed management plans: species
Environment and Climate Change Canada	Band-tailed Pigeon* Northern Map Turtle* Threaded Vertigo Weidemeyer's Admiral Western Blue Flag	Lake Erie Watersnake*
Parks Canada Agency	Nil	Nil
Fisheries and Oceans Canada	Shorthead Sculpin	Bigmouth Buffalo (Saskatchewan - Nelson River populations)

* Parks Canada is also a competent department for this species, as it occurs in its lands/waters, and therefore contributed towards the development of the management plan.

4.4. Critical habitat

Critical habitat is habitat necessary to support the population and distribution objectives which are set out to assist the recovery and/or survival of listed species in Canada and established in the recovery strategy or action plan.

4.4.1. Identification and descriptions of critical habitat

In 2019, ECCC published final recovery strategies in which critical habitat was identified for 19 species, and proposed recovery strategies in which critical habitat was identified for four species. Parks Canada did not identify any critical habitat in either its recovery strategies or action plans for 2019. DFO published three amended recovery strategies and one final action plan in which critical habitat was identified for 13 species. In addition, DFO published two proposed amended recovery strategies, and two proposed (combined) recovery strategy/action plans in which critical habitat was identified for four species.

In accordance with subsection 58(2) of the Act, ECCC published eight descriptions of critical habitat in the Canada Gazette Part I in 2019 to protect critical habitat for Fowler's Toad, Red Knot rufa subspecies, American Ginseng, Spotted Turtle, Great Basin Spadefoot, Pallid Bat, Western Tiger Salamander, and Northern Leopard Frog in a variety of federally protected areas, including Big Creek National Wildlife Area, Long Point National Wildlife Area, Moose River Migratory Bird Sanctuary, Boatswain Bay Migratory Bird Sanctuary, Akimiski Bird Sanctuary, Vaseux Bighorn National Wildlife Areas and Columbia National Wildlife Area.

4.4.2. Protection of critical habitat

In 2019, the Minister of the Environment and Climate Change, made orders to protect the critical habitat of the Woodland Caribou (Boreal population) and the critical habitat of the Barrens Willow on federally administered lands, pursuant to section 58 of SARA. In addition, a progress report was

published on the SAR Public Registry pursuant to s. 63 of SARA, to describe steps taken to protect critical habitat for the Woodland Caribou (Boreal population).

In 2019, Parks Canada protected critical habitat for ten species in 12 national parks, national park reserves and other lands/waters under the Agency's administration:

- Blanding's Turtle – Great Lakes / St. Lawrence population (Georgian Bay Islands National Park) (Point Pelee National Park) (Thousand Islands National Park)
- Five-lined Skink – Carolinian population (Point Pelee National Park)
- Little Brown Myotis (Banff National Park) (Fathom Five National Marine Park) (Fundy National Park) (Glacier National Park) (Jasper National Park) (Nahanni National Park Reserve) (Wood Buffalo National Park)
- Northern Goshawk laingi subspecies (Gwaii Haanas National Park Reserve and Haida Heritage Site)
- Northern Myotis (Banff National Park) (Fathom Five National Marine Park) (Fundy National Park) (Glacier National Park) (Jasper National Park) (Wood Buffalo National Park)
- Spiny Softshell (Point Pelee National Park)
- Spotted Turtle (Georgian Bay Islands National Park) (Point Pelee National Park)
- Tri-coloured Bat (Fathom Five National Marine Park) (Fundy National Park)
- Wild Hyacinth (Point Pelee National Park – Middle Island)
- Yellow-breasted Chat virens subspecies (Point Pelee National Park)

Yellow-breasted Chat

DFO published 15 orders to protect critical habitat for the following aquatic species at risk:

- Atlantic Salmon, Inner Bay of Fundy population
- Coastrange Sculpin, Cultus population
- Hotwater Physa
- Kidneyshell

- Northern Riffleshell
- Pugnose Shiner
- Rainbow Smelt, Lake Utopia small-bodied population
- Rayed Bean
- Round Hickorynut
- Round Pigtoe
- Salamander Mussel
- Salish Sucker
- Snuffbox
- Western Brook Lamprey, Morrison Creek population
- Western Silvery Minnow

In July 2019, DFO and the Canadian Coast Guard conducted a three-day ghost gear retrieval operation in the Gulf of St. Lawrence – Operation Ghost. Ghost gear refers to any fishing equipment that has been abandoned, lost, or even discarded in the oceans. The goal was to remove as much lost fishing gear as possible from the Gulf of St. Lawrence, which is considered to an area with known concentrations of ghost gear, in order to help prevent entanglements of marine mammals such as right whales and turtles. This resulted in DFO and the Canadian Coast Guard recovering over 100 snow crab traps and removing over 9 km of rope from the water.

To help in further protecting aquatic species at risk, DFO encourages people who are considering a project, to visit the Aquatic species at risk map website to locate these species and plan their project accordingly.

The provinces and territories are primarily responsible for the management of non-federal lands, natural resources and wildlife located on those lands. This includes the protection of the critical habitat of species at risk on non-federal lands (other than aquatic species) and implementation of protection measures through their own legislation and programs. In 2019, the Minister of the Environment and Climate Change published a report on steps taken and protection of critical habitat for species at risk in

Canada, to track and report on critical habitat protection for 213 terrestrial species at risk with critical habitat identified on non-federal lands.

4.5. Imminent threat assessments

Wood Bison (*Bison bison athabascae*)

Since 2003, Wood Bison has been listed as Threatened on Schedule 1 of SARA, occurring in 12 free-ranging herds (also known as local populations) in Canada and totaling approximately 9000 individuals. Currently, Wood Bison occupy only 6% of their original range. The Impact Assessment Agency of Canada and the Minister of Environment received requests from concerned First Nation communities seeking protection for the Wood Bison under SARA, specifically the Ronald Lake Bison Herd in Alberta. In July 2019, the Canada/Alberta Joint Review Panel (JRP) for the Frontier Oil Sands Mine Project recommended that ECCC complete the imminent threat assessment for the Wood Bison that was underway, so that the results of the assessment could inform federal decisions related to the Teck Resources Limited, Frontier Oil Sands Mine Project.

In response to the requests from Indigenous communities and the JRP recommendation, in 2019, ECCC was finalizing an assessment to determine whether Wood Bison are facing imminent threats to their survival or recovery, based on the best available information to the Department related to the status of Wood Bison and associated threats and incorporating Indigenous Knowledge.

Steelhead Trout (*Oncorhynchus mykiss)*

After consultation with the Minister of Fisheries, Oceans and the Canadian Coast Guard, the Minister of Environment determined, based on a 2018 emergency assessment by COSEWIC and other science information, that Steelhead Trout (Thompson River population) and Steelhead Trout (Chilcotin River population) were facing imminent threat to survival. These wildlife species are experiencing significant population declines resulting from threats including diminishing habitat quality, both in marine and freshwater environments; and bycatch mortality from Pacific salmon fisheries. In July 2019, the Minister of Environment recommended to the Governor in Council (GiC) that both populations be listed as

endangered under SARA. In considering a number of factors (including science advice, shared federal-provincial management and conservation, anticipated conservation outcomes and socio-economic costs and benefits under listing and not listing scenarios, and the results of consultations), the GiC decided not to list. Instead, actions to reduce the threats and recover these species are being taken under a comprehensive action plan developed collaboratively by the Government of Canada and the Province of British Columbia. In 2019, measures included: recreational fisheries closures in the Thompson and Chilcotin watersheds, rolling closures of commercial salmon fisheries along the steelheads' migratory route to avoid interceptions, and measures for better watershed management.

4.6. Recovery activities

In supporting species at risk recovery, Government of Canada biologists across Canada led or supported dozens of activities, including research projects, education and awareness, habitat restoration or enhancement initiatives, monitoring, assessment, and more.

4.6.1. Agreements and collaboration

In 2019, ECCC helped advance recovery activities for a wide variety of terrestrial species at risk, including the six priority species, with conservation measures focused on research and monitoring, partnership development, conservation planning and implementation of conservation agreements under the *Species at Risk Act*.

On March 21, 2019, two draft section 11 conservation agreements for the Southern Mountain Caribou in British Columbia were published on the Species at Risk Public Registry for an extended consultation period that ended on May 31, 2019: a Bilateral Agreement between the Governments of Canada and British Columbia; and, a Partnership Agreement between the Government of Canada, the Government of British Columbia, the Saulteau First Nations, and the West Moberly First Nations.

Together, the agreements will advance the recovery of Southern Mountain Caribou in the province, a Priority Species whose numbers are in serious decline. This iconic species is vital to Indigenous peoples in British Columbia. The draft agreements represent a historic collaboration between all levels of government, including Indigenous partners, to implement critical measures to support the species' recovery.

The draft Bilateral Agreement establishes a framework for cooperation, and includes commitments to science and Indigenous knowledge, monitoring, and herd planning, for the recovery of Southern Mountain Caribou throughout the species' distribution in the province. The draft Partnership Agreement focuses on three Central Group local population units of Southern Mountain Caribou within the Peace Region of British Columbia. It includes commitments to interim and long-term habitat protection and conservation (e.g., creation of protected areas), and to operational recovery activities (e.g., maternal penning) and habitat restoration.

To support the recovery of Boreal Caribou, conservation agreements were finalized with the Yukon Territory and the Na-Cho Nyäk Dun First Nation and the Gwich'in Tribal Council, the Northwest Territories, Cold Lake First Nations, Saskatchewan, Quebec, and Labrador, bringing the total number of conservation agreements in 2019 for Boreal Caribou to six. Negotiations were advanced for conservation agreements with Alberta, and Manitoba, as well as with two other First Nations. These agreements aim to support the conservation of the species and the protection of its critical habitat through concrete measures, including commitments to range-level planning, habitat protection, habitat and population management, and monitoring.

In addition, the proposed Amended Recovery Strategy for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal population, in Canada in 2019, was released for public consultation on June 28, 2019. The Strategy identifies critical habitat in northern Saskatchewan's Boreal Shield range (SK1), and updates population and habitat condition information for all ranges across the country.

In 2019, Parks Canada implemented recovery activities in and around the lands and waters it administers, including research, restoration activities, and public outreach and education. As part of the work under the Nature Legacy for Canada Initiative, Parks Canada allocated approximately $2.5M in 2019-2020 to projects across the country that initiated more than 60 actions identified in SARA action plans. Parks Canada conducted several projects in partnership with non-governmental organizations, academic institutions, private citizens and Indigenous communities. Conservation and restoration projects are recovering, restoring and enhancing ecosystems and species at risk across Canada, such as:

- evaluating and adapting proven methods in endangered salmon restoration for broad-scale benefits in Fundy National Park
- restoring rare species and ecosystems at Gulf Islands National Park Reserve and Fort Rodd Hill National Historic Site
- implementing eco-passages in Bruce Peninsula National Park
- enhancing the protection of Beluga Whale in Saguenay St. Lawrence Marine Park
- helping species at risk by controlling invasive plants to recreate open water habitats in Point Pelee National Park

ECO-PASSAGES AT BRUCE PENINSULA NATIONAL PARK

From 2016-2019, eight eco-passages (also known as wildlife tunnels) were installed at Bruce Peninsula National Park as part of the *On the Road to Recovery* Conservation and Restoration (CoRe) program. These eco-passages have been installed at road mortality "hotspots" – areas where at-risk reptiles and amphibians have been frequently hit by vehicles in the past. The installation of eco-fencing (wildlife exclusion fencing) has helped direct wildlife to use the passages with the help of dedicated volunteers and local school groups.

Parks Canada Resource Conservation staff are able to monitor the success of the eco-passages using trail cameras. In 2019, over 910 individuals were documented travelling through the eco-passages. 134 of the 910 "eco-passengers" were species at risk (SAR), including the Massasauga Rattlesnake, Midland Painted Turtle, Common Snapping Turtle, and Eastern Ribbonsnake.

In the coming years, Parks Canada will be working with the Saugeen Ojibway Nation, the Ontario Ministry of Transportation, and the local municipality of Northern Bruce Peninsula to expand SAR conservation efforts within the park and surrounding area. This will include four new eco-passages and eco-fencing along Highway 6 - an 80 km/h highway that runs directly through the center of the Bruce Peninsula, and consequently fragments habitat for reptiles, amphibians and other wildlife. Building off the *On the Road to Recovery* program success, a new Conservation and Restoration program will focus on sharing lessons learned, best practices, and expand SAR recovery across a broad landscape level in southern Ontario.

In 2019, DFO helped advance recovery activities for a wide variety of aquatic species at risk, including finfish, shellfish and marine mammals. Collaboration with other federal departments, experts outside government and others was a key element of success.

For example, DFO's Marine Mammal Response Program implemented a range of new marine mammal response tools and continued to build relationships to improve response: research, strategic regulatory sign placement to inform the public about marine mammal conservation measures, partnering with

provincial wildlife conservation staff to share knowledge and build relationships in support of protecting species.

Program officials and external partner organizations carried out 399 responses nationally for species at risk including:

- disentangling whales from fishing gear
- refloating live stranded animals
- reuniting stranded animals with their pods
- warming cold, stunned sea turtles
- performing necropsies on dead animals to determine cause of death

The information collected during these response activities helps DFO monitor and evaluate the threat level from these forms of harm, and find ways to reduce entanglements and vessel collisions. Outreach activities help to educate the public on ways to help protect and avoid harming marine animals.

NEW PARTNERSHIP AND NEW HOPE FOR ATLANTIC WHITEFISH RECOVERY

In 1984, the Atlantic Whitefish became the first fish species in Canada to be assessed as 'endangered' by COSEWIC. It was listed under SARA when the Act came into force in 2003. The Atlantic Whitefish is a Canadian endemic species known historically to occur in only two watersheds in the world, both in southwestern Nova Scotia: the Tusket River and Petite Rivière. Extirpated from the Tusket in the early 1980s, the Atlantic Whitefish is currently only found in three small interconnected lakes in the upper Petite Rivière watershed.

Atlantic Whitefish
Photo: Bob Semple

Atlantic Whitefish are thought to be the sole living representative of the early form of Whitefishes and a basal lineage of the widespread northern hemisphere genus *Coregonus*. It represents a unique component of local, national, and global biodiversity and therefore is recognized to be of considerable evolutionary significance.

Despite ongoing efforts by DFO and the multi-partner Recovery Team since 1999, the species status has not improved and is at risk of extinction. Declines in abundance, range restriction, and identified threats (e.g., dams to fish passage and presence of invasive predatory Smallmouth Bass) have continued and a significant new threat has emerged in the presence of invasive predatory Chain Pickerel.

Since the discovery of Chain Pickerel in the Petite Lakes in 2013, the focus of DFO, the Province of Nova Scotia, and partner organization Coastal Action has been on mitigating the spread of Chain Pickerel to reduce its impact on Atlantic Whitefish. Although these efforts are vital, mitigating the impact of invasives alone will not lead to the recovery of Atlantic Whitefish.

Range expansion is the most viable option to prevent the species' extinction and facilitate its recovery. Dalhousie University, home to a world class aquatic research facility, expressed an interest in holding and raising larval Atlantic Whitefish to safeguard against the species' extinction and to eventually captive-breed mature individuals. Dalhousie's Aquatron facility currently holds approximately 110 Atlantic Whitefish. In anticipation of successful captive breeding planned for fall 2020, Coastal Action, through a Canada Nature Fund for Aquatic Species at Risk funded project, is building a streamside incubation trailer that it will operate to acclimatize young Atlantic Whitefish to a potential new waterbody; and, with support from the Habitat Stewardship Program, Coastal Action is collecting various physical, biological, and chemical water quality parameters on several lakes to help determine their suitability as Atlantic Whitefish habitat.

These individual and collective efforts provide an exciting new window of hope and promise for the future of Atlantic Whitefish survival and recovery.

A further example of efforts to advance recovery, is the expansion of measures for Southern Resident killer whales recovery. In May 2019, DFO, in collaboration with Transport Canada, signed a SARA Section 11 Conservation Agreement to Support the Recovery of the Southern Resident Killer Whale, with the Vancouver Fraser Port Authority (VFPA) and six other member organizations (collectively the "Parties") that are part of the VFPA's Enhancing Cetacean Habitat and Observation (ECHO) Program. There are nine signatories to the Agreement: the Vancouver Fraser Port Authority, the Chamber of Shipping of British Columbia, the Shipping Federation of Canada, Cruise Lines International Association, the Council of Marine Carriers, the International Ship Owners Alliance of Canada, the Pacific Pilotage Authority, Transport Canada and Fisheries and Oceans Canada. This five-year agreement will help support recovery of the Southern Resident Killer Whale (SRKW) by formalizing 1) the participation of the Parties in the ECHO Program, through which the Parties will work collaboratively on voluntary measures to reduce the contribution of Large Commercial Vessels (LCVs) to threats to SRKW; and 2) the role of the ECHO Program in advancing research and educational outreach to better understand how LCVs contribute to threats to SRKW and their critical habitat.

North Atlantic Right Whale
Photo: Nick Hawkins

COLLABORATIVE EFFORTS IN RESCUING A NORTH ATLANTIC RIGHT WHALE

On July 4, 2019, a North Atlantic Right Whale was discovered entangled in fishing gear by Transport Canada in the Gulf of Saint Lawrence. The entanglement involved rope around the body, head, and through the mouth. Despite the severe entanglement, the whale was highly mobile. After continuous monitoring of the area, the whale was spotted again on July 19 by both the United States based aerial surveillance team from the Northeastern Fisheries Science Center and by Fisheries and Oceans Canada. A team from the New England Aquarium was in the area and succeeded in attaching a telemetry buoy to the whale to track its movements for disentanglement.

The whale did not remain in the Gulf of Saint Lawrence for long and began moving towards the Cabot Strait. Members of the Newfoundland and Labrador-based Whale Release and Strandings group (Tangly Whales) were deployed to Sydney in Cape Breton to partner with DFO fishery officers in preparation to intercept and begin their disentanglement of the whale once it arrived in the area.

A plane from the DFO Fisheries Aerial Surveillance and Enforcement program provided support from the air, and the Canadian Coast Guard provided support in the form of a safety vessel in the area. After multiple attempts to disentangle the whale over the following days, Tangly Whales was able to confirm that one line of rope was cut, however the whale remained entangled and continued to be highly mobile. It moved 50 nautical miles offshore of Nova Scotia which was too far to safely perform further disentanglement activities.

The satellite tag provided continuous monitoring of the whale's location as it moved along the coast of Nova Scotia and into US waters, where it headed inland towards Cape Cod, Massachusetts. On August 2, a team from the Marine Animal Entanglement Response team (MAER) from the Center for Coastal Studies (CCS) was able to intercept the whale and were successful in disentangling the whale to the point where the remainder of the entanglement would be shed as the whale resumed feeding in a normal manner.

Without a collaborative approach from both countries, all departments, teams and organization, this positive result would not have been possible.

4.6.2. Habitat Stewardship Program

The Government of Canada's Habitat Stewardship Program (HSP) for Species at Risk was established in 2000 as part of the National Strategy for the Protection of Species at Risk. The overall goals of the HSP are to contribute to the recovery of endangered, threatened and other species at risk, and to prevent other species from becoming a conservation concern, by involving Canadians from all walks of life in conservation actions to benefit wildlife.

The most complete data available for the HSP at the end of 2019 is for the 2018-2019 fiscal year. ECCC administers HSP funds that support terrestrial stewardship projects while DFO is responsible for administering aquatic stewardship projects, both on a regional basis. Regional implementation boards include representatives from federal, provincial and territorial governments, and various stakeholders. These boards provide advice on priorities and project selection for their regions.

Funding under HSP in 2018-2019 was separated into two distinct streams:

- HSP Species at Risk Stream
- HSP Prevention Stream

Results under both streams are focused on the following:

- important habitat for species at risk recovery is secured or otherwise protected
- important habitat for species at risk recovery is improved (restored/enhanced) and/or managed to meet species' recovery needs
- threats to species at risk and/or their habitat that are caused by human activities are stopped, removed and/or mitigated, and
- project benefits are sustained over time, by engaging Canadians (landowners, resource users, volunteers) to participate directly in activities that support the recovery of species at risk.

The **HSP Species at Risk Stream** focuses on projects addressing the recovery of species at risk listed on Schedule 1 of SARA.

During the 2018-2019 fiscal year, 45 new projects and 105 previously approved multi-year projects involving 137 unique funding recipients contributed to the recovery efforts of over 170 unique SARA-listed species across Canada. A total of $9 million in HSP SAR Stream funding was awarded to these projects, and an additional $25 million (cash and in-kind) was leveraged from partners, for a total investment of $34 million.

These contributions provided support to stewardship efforts across Canada that resulted in the securement and protection of over 193 500 hectares (ha) of land, including 11 900 ha through legally binding means, such as acquisition or conservation easements. Non-legally binding protection was put in place through the use of written conservation agreements with landowners, which accounts for over 181 500 ha, including more than 149 300 ha through renewed conservation agreements and more than 32 200 ha through new conservation agreements. The program also supported the improvement or restoration of more than 33 400 ha of land and 82 km of shoreline.

The **HSP Prevention Stream** focuses on projects addressing species not listed on Schedule 1 of SARA, to prevent them from becoming a conservation concern.

During the 2018-2019 fiscal year the HSP Prevention Stream funded 26 new projects and 29 previously approved multi-year projects, which support work to prevent species from becoming a conservation concern. A total of over $993 300 in HSP Prevention Stream funding was awarded to these projects, and an additional $2.2 million (cash and in-kind) was leveraged from partners, for a total investment of over $3 million.

These contributions provided support to stewardship efforts across Canada that resulted in the securement and protection of more than 1400 ha of land, including more than 500 ha through legally binding means, such as acquisition or conservation easements. Non-legally binding protection was put in place through the use of written conservation agreements with landowners, which accounts for more than 900 ha. The program also supported the improvement or restoration of more than 2 600 ha of land and 4 kilometres of shoreline.

AWARENESS AND ACTION MEASURES TO PROTECT MARINE MAMMALS IN THE SALISH SEA: A MULTI-MEDIA, PUBLIC OUTREACH & EDUCATION PROGRAM

With support from the Government of Canada's Habitat Stewardship Program for Aquatic Species at Risk, the Saturna Island Marine Research and Education Society (SIMRES) led a two-year outreach project that raised public awareness of the current major threats hindering the recovery of the endangered Southern Resident Killer Whale (SRKW).

Through data collection, data analysis, and production of data-supported education and outreach materials, SIMRES delivered an interactive Outreach and Education program focused on Awareness and Action Measures, hosted at public venues, in tandem with real-time online streaming platforms. The flagship event: "SEA TALKS LIVE: The Top 5 Things that We Can All Do to Help Save SRKW" was delivered in collaboration with SIMRES's partners.

The SRKW population in British Columbia is recognized as being endangered under the Species at Risk Act due to their small population size, low reproductive rate and the existence of a variety of human-related stressors. Principal among these threats are the reduction in the availability and quality of their primary prey species Chinook Salmon, environmental contamination, and both physical and acoustic disturbances.

Building a multi-media, public outreach and education program increased public awareness of the threats facing SRKW and the action measures that the public can take to help reduce their impact and ensure the survival of this population.

DFO has administrative responsibility for aquatic HSP projects to improve support for proponents and partners to protect and recover aquatic species at risk and has consolidated the Species at Risk and Prevention streams for aquatic projects into a single funding stream. The **Habitat Stewardship Program for Aquatic Species at Risk** provides funding for projects submitted by Canadians that contribute directly to the recovery of endangered, threatened, and other aquatic species at risk and encourages engagement of Canadians from all walks of life in conservation actions to benefit wildlife. To guide the effective use of limited resources, national and regional priorities inform the selection of proposed projects. Activities that respond to program priorities are reviewed regionally and recommended for funding in six regions: Pacific, Central & Arctic, Quebec, Gulf, Maritimes, and Newfoundland & Labrador.

The HSP for Aquatic Species at Risk is committed to supporting Canadians in their efforts to help protect and recover aquatic species at risk; it is intended to not only remove human threats to the

habitats of aquatic species at risk but also to support their recovery and protect them in the future, so that the benefits of these efforts will be sustained for generations to come.

The Habitat Stewardship Program (HSP) for aquatic species invested nearly $4 million dollars in new and previously approved projects in 2018-2019. These contributions provided support to stewardship efforts across Canada that resulted in outreach activities that reached 159 503 people. Groups conducted 233 habitat/species surveys/inventories and completed 1332 monitoring studies.

RESTORATION OF HEADWATER STREAMS FOR THE PROTECTION AND RECOVERY OF THE REDSIDE DACE

The Habitat Stewardship Program for Aquatic Species at risk provided funding to the Saugeen Valley Conservation Authority in Ontario for a 1-year project that supported and promoted the protection, recovery, and restoration of the critical habitat areas along the Saugeen River and its tributaries for the endangered Redside Dace.

They promoted the conservation and recovery of the Redside Dace through the planting of cover crops on the project location area farms to decrease nutrient loading to the habitat of the Redside Dace which develops through agricultural practices. Riparian vegetation was planted in order to decrease threats to the species. The threats that were mitigated by these plantings included: changes in stream structure including widening; decreased pool depths resulting from flow alteration; and reduced sediment, nutrient and contaminant loading.

Overhanging vegetation is an important component of the species habitat as it provides a source of cover to protect it from aerial and terrestrial predators. By planting riparian vegetation, terrestrial insects also gained habitat resulting in becoming a food supply for the Redside Dace. By shading the waterway, riparian vegetation acted to maintain optimal cooler temperatures for the aquatic species. Tree planting further reduced nutrient loading and helped protect the water quality of the habitat area. A large section of the Main Saugeen River was cleaned of debris and waste to improve the ecosystem health within the project area. The restoration of eroded bank areas further promoted species recovery by offering increased protection from prey. Eroded banks increase the amount of silt that enters the waterway and consequently reduces water clarity. By decreasing the amount of erosion within the habitat, the Redside Dace will be able to see their prey and improve their chances of survival.

All of these activities undertaken by the Saugeen Valley Conservation Authority resulted in the promotion of conservation and recovery of the Redside Dace.

Redside Dace

Additional information on the program for ECCC is available on the Government of Canada's Habitat Stewardship Program for species at risk website and for DFO, on the Government of Canada's Habitat Stewardship Program for Aquatic Species at Risk Program website.

4.6.3. Aboriginal Fund for Species at Risk

The Aboriginal Fund for Species at Risk (AFSAR), established in 2004, supports the development of Indigenous capacity to participate actively in the implementation of SARA. The Act recognizes the important role that Indigenous Peoples play in wildlife conservation and the need to consider Aboriginal Traditional Knowledge (ATK) in the assessment of which species may be at risk, as well as in the development and implementation of protection and recovery measures. Additionally, AFSAR supports projects that will proactively prevent species, other than species at risk, from becoming a conservation concern.

ECCC administers AFSAR funds that support terrestrial stewardship projects while DFO is responsible for administering aquatic stewardship projects. Regional management teams include representatives from federal, provincial and territorial governments, Indigenous representatives, and various stakeholders. These teams provide advice on priorities and project selection for their regions.

The most complete data available for AFSAR at the end of 2019 is for the 2018-2019 fiscal year. Funding under AFSAR in 2018-2019 was separated into two distinct streams for terrestrial projects administered by ECCC:

- AFSAR Species at Risk Stream
- AFSAR Prevention Stream

The **AFSAR Species at Risk (SAR) Stream** focuses on terrestrial projects addressing the recovery of terrestrial species at risk listed on Schedule 1 of SARA, targeting the following results in four main areas:

- strengthen capacity in Indigenous communities for SARA implementation
- mitigate threats to species at risk, be they individuals or populations
- protect, improve or manage critical and important habitat of species at risk, and

- document and conserve Aboriginal Traditional Knowledge and Traditional Ecological Knowledge on species at risk and, where appropriate, help with their use in the development of recovery objectives.

During the 2018-2019 fiscal year the AFSAR SAR Stream:

- provided $2.3 million to 35 new projects and 14 previously approved multi-year projects
- leveraged additional funds that exceeded $2.3 million (cash and in-kind)
- involved 33 Indigenous organizations and communities as unique recipients

These contributions provided support to stewardship efforts across Canada that resulted in the protection of just over 32,200 ha of land which includes 583 ha through legally binding means, such as acquisition or conservation easements and just over 31,600 ha of land through non-legally binding means such as conservation agreements. The program also supported the improvement or restoration of more than 81,800 ha of land and 4 kilometres of shoreline.

The **AFSAR Prevention Stream** focuses on projects addressing terrestrial species, not listed on Schedule 1 of SARA, to prevent them from becoming a conservation concern. It targets the same results as the Species at Risk Stream.

During the 2018-2019 fiscal year: the AFSAR Prevention Stream provided over $422,000 to eight new, and four previously approved multi-year projects to prevent species other than listed species at risk from becoming a conservation concern; the AFSAR Prevention Stream leveraged additional funds that exceeded $1.1 million (cash and in kind).

These projects involved 13 Indigenous organizations and communities as recipients. These contributions also supported the improvement or restoration of more than 262 ha of land and 1 km of shoreline.

Beginning in 2019, DFO consolidated the SAR and Prevention streams for aquatic projects into a single funding stream targeting species ranging from COSEWIC-assessed as a minimum eligibility to those listed on Schedule 1 of SARA. The DFO consolidated AFSAR funding stream targets the same key results as the terrestrial species at risk stream administered by ECCC.

During the 2018-2019 fiscal year the DFO-administered **AFSAR Aquatic Stream**:

- provided over $2.1 million to 39 new projects and 8 previously approved multi-year projects
- leveraged additional funds that exceeded $1.5 million (cash and in-kind)
- involved 37 Indigenous organizations and communities as recipients.

Additional information on the program is available on the Government of Canada's Aboriginal Fund for Species at Risk website and for DFO, on the Government of Canada's Aboriginal Fund for Species at Risk website.

4.6.4. Interdepartmental Recovery Fund

Established in 2002, the Interdepartmental Recovery Fund (IRF), administered by ECCC, supports species at risk projects undertaken by federal government departments, agencies and Crown corporations (other than ECCC, DFO, and Parks Canada). Funded projects predominantly occur on lands owned or administered by federal organizations and directly relate to the implementation of activities identified in recovery strategies or action plans, or surveys of species at risk.

Between its inception in 2002 and the end of March 2019, the IRF has invested over $23.7 million in more than 730 projects which supported recovery efforts annually, on average, for 50 species at risk. In the 2018-2019 fiscal year, the IRF supported 14 projects in five federal departments and one Crown corporation. Collectively, $587 000 in program funding and $666 583 in leveraged funds (cash and in-kind) from project leads and other partners, supported recovery efforts for 54 SARA-listed species. In 2018-2019, 75% of program funds supported recovery actions, and 22% supported surveys, and 3% supported program planning and development.

4.7. Outreach and education

In 2019, ECCC produced and delivered information in various forms to educate Canadians about the role they can play in protecting species at risk and their habitats. There was also a strong focus on

engaging other government departments to provide training on SARA for employees who work directly with the Act.

ECCC continues to educate Canadians about species at risk through its long-standing partnership with the Canadian Wildlife Federation in delivering the Hinterland Who's Who wildlife education program, and by developing and publishing species profiles on the Species at Risk Public Registry.

Parks Canada continues to promote species at risk protection through the Integrated Compliance and Law Enforcement Planning Process. The process maintains its focus on proactive communication with visitors to highlight the connection between their actions and the effect they can have on the protection and recovery of species at risk and their habitat.

Public engagement activities related to species at risk occur in national parks, national historic sites and national marine conservation areas across the country. These activities include interpretative programs, field trips, social media campaigns, special events and volunteer activities, including participation in restoration and monitoring projects (i.e., citizen science). Moreover, the Protecting Wildlife merchandise collection was launched in 2018 to raise awareness for species at risk in Canada. Annually since 2017, the National Merchandise Program has been reinvesting proceeds from the online sale of official merchandise to support species at risk and ecosystem conservation. To date, proceeds have helped multiple projects, including turtles in Point Pelee National Park, Kokanee Salmon in Kluane National Park Reserve, and Greater Sage-Grouse in Grasslands National Park.

In addition, Parks Canada has a number of outreach programs that focus on reaching youth, families and new Canadians in urban areas in order to increase awareness, understanding, and foster support for species at risk protection and recovery. In 2019, this included outreach programs at special events and festivals, and at several partner venues (e.g., zoos and aquariums) in large cities such as Toronto,

Montréal, Vancouver, Winnipeg, Edmonton, Calgary, Halifax and Ottawa. Information about species at risk was also shared through the Government of Canada's PCA website, social media, traditional media and organizations that reach out to the public with various programs, articles and websites.

DFO's outreach and education efforts ranged from school visits to information booths at important gatherings, participation at trade shows, workshops and community meetings, promotion of awareness, and species at risk identification and disentanglement training, production of information materials and static displays in DFO offices. Highlights of these activities included:

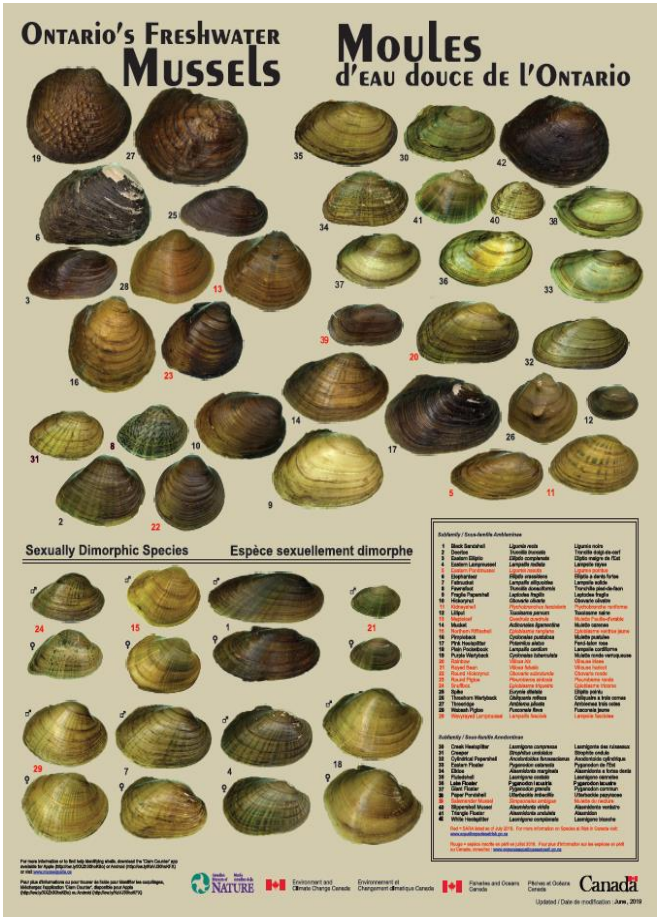
- DFO hosted a booth in the Government of Canada pavilion at the Congrès mondial Acadien (World Acadian Congress) in Moncton, New Brunswick in August 2019, where staff from Science and Species at Risk shared information about species at risk including North Atlantic Right Whales. The Government of Canada pavilion was visited by over 2000 visitors over eight days.

- DFO Program staff in the Maritimes Region participated in a relationship building workshop between DFO and the community of Glooscap First Nation. Highlights included an interactive display to showcase local freshwater and marine species at risk, which included a touch tank, as well as informational material. The event was organized by interns through the DFO- Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) Nova Scotia Mi'kmaq Internship Program and was designed to facilitate shared learning and relationship building.

- In June 2019, DFO collaborated with other federal agencies, the Government of Newfoundland and Labrador, environmental non-government organizations, Indigenous groups, academia and other groups to organize and host World Oceans Day events around Newfoundland and Labrador. These events were held to raise public awareness and education of issues related to our oceans including Species at Risk and plastic pollution, highlighting the global "better bag challenge".

- Developed by a student from the University of Waterloo, the Spotted Gar 'I don't want to be a dinosaur' logo with QR code (matrix barcode) was used to raise the profile of aquatic species at risk at Ontario's Latornell Conservation Symposium in November 2019, and will continue to be used during Spotted Gar critical habitat outreach. This provocative design attracts attention, opening the door for broader conversations about aquatic species at risk and the positive actions people can take to reduce threats and promote conservation and recovery.

- Updates to DFO's "Ontario's Freshwater Mussels" poster to promote awareness of Ontario's high mussel diversity as well as identifying some 42 species in all. The poster was a teaching tool and reference for attendees of the Ontario Freshwater Mussel Identification Course held at the Canadian Center for Inland Waters in Burlington, and a public education tool distributed widely at the 2019 Latornell Conservation Symposium. The mussel poster has been so successful, that work is underway to expand coverage to include all Canadian species.



4.8. CESI species at risk indicators

For many wildlife species at risk, population objectives are set out in a recovery strategy or management plan and are periodically reassessed. By looking at population trends and changes in the status category of at risk species, it can provide a preliminary assessment of whether recovery efforts are working, recognizing that recovery may take many years. The following summary is taken from the Canadian Environmental Sustainability Indicators (CESI) program and current results are available on the Environmental indicators website.

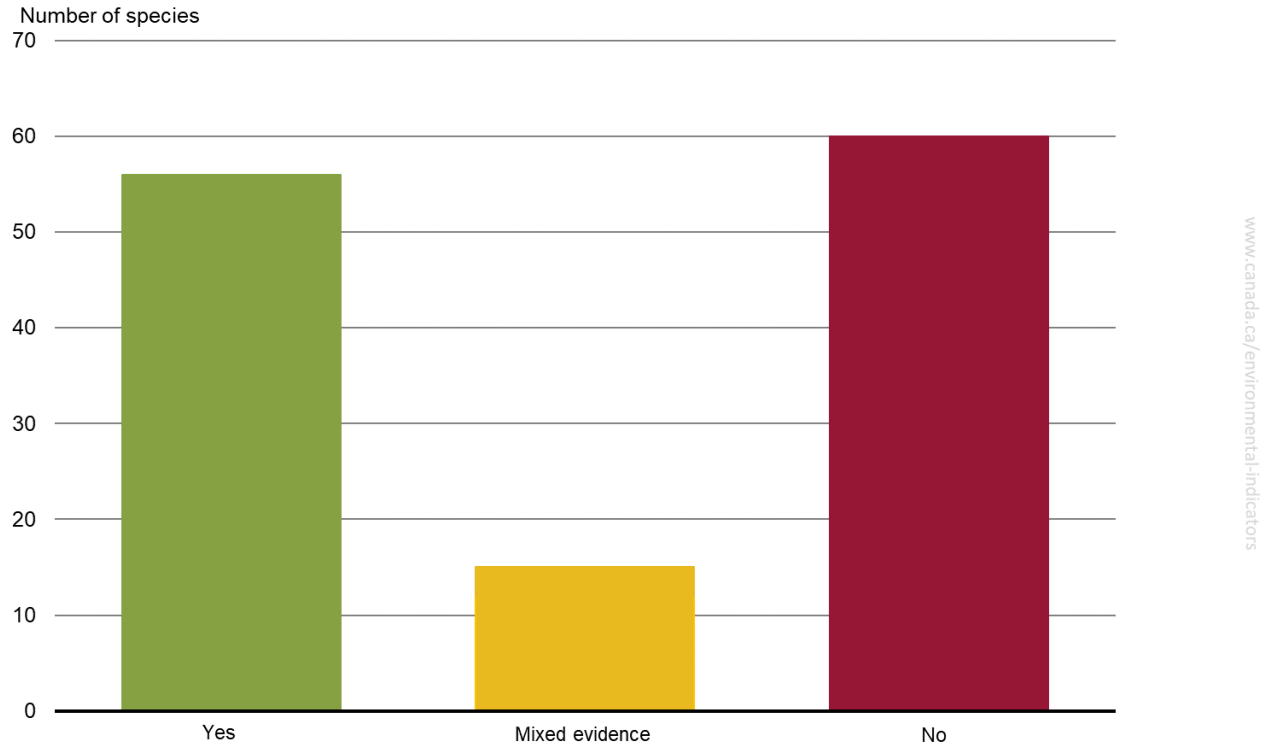
4.8.1. Species at risk population trends indicator

The Species at risk population trends indicator shows whether population and distribution trends of species at risk are consistent with the objectives in final recovery strategies or management plans.

As of May 2019, final recovery strategies were published for 329 extirpated, endangered or threatened species and management plans were published for 109 species of special concern. Of those 438 species, 186 species with population and distribution objectives were reassessed since their recovery strategy or management plan was finalized, with 55 that did not contain enough information to determine population and distribution trends. Of the 131 species for which trends could be determined: 56 species (41%) show progress towards their population and distribution objectives, 60 species (47%) do not show progress and 15 species (12%) show mixed evidence, meaning that some information suggests improving trends, but that there is also some evidence of decline.

In 2019, four animal species and one plant species were added to the indicator. Of the four animal species added, three showed trends consistent with their recovery or management objective and one did not show a trend consistent with their objective. The one plant species added did not show a trend consistent with its recovery or management objective.

Figure 4: Are population and distribution trends of species at risk consistent with objectives? Canada, May 2019



Note: There are also 55 species for which recovery or management objectives and reassessments exist, but insufficient evidence is available in the reassessment to assess trends. Information on these species can be found in the detailed data table. Categories account for the amount of time that has been available for recovery. "Mixed evidence" means that some information suggests improving trends, but that there is also some evidence of decline.

Source: Environment and Climate Change Canada, Fisheries and Oceans Canada, Parks Canada, and the Committee on the Status of Endangered Wildlife in Canada Secretariat (2019). As reported in Environment and Climate Change Canada (2019) Canadian Environmental Sustainability Indicators.

Recovery of species is affected by many factors, including life span, reproductive cycle, and the state of their habitat. It can also be affected by threats such as habitat loss and pollution. In addition, recovery of rare species can be difficult to detect, particularly if the species is hard to find and identify. It takes time for a species' response to recovery management actions to become apparent. Indicator results should not be interpreted as a measure of success in recovering or maintaining species until sufficient time has passed to allow species to respond and to collect enough information for assessment.

4.8.2. Changes in the status of wildlife species at risk indicator

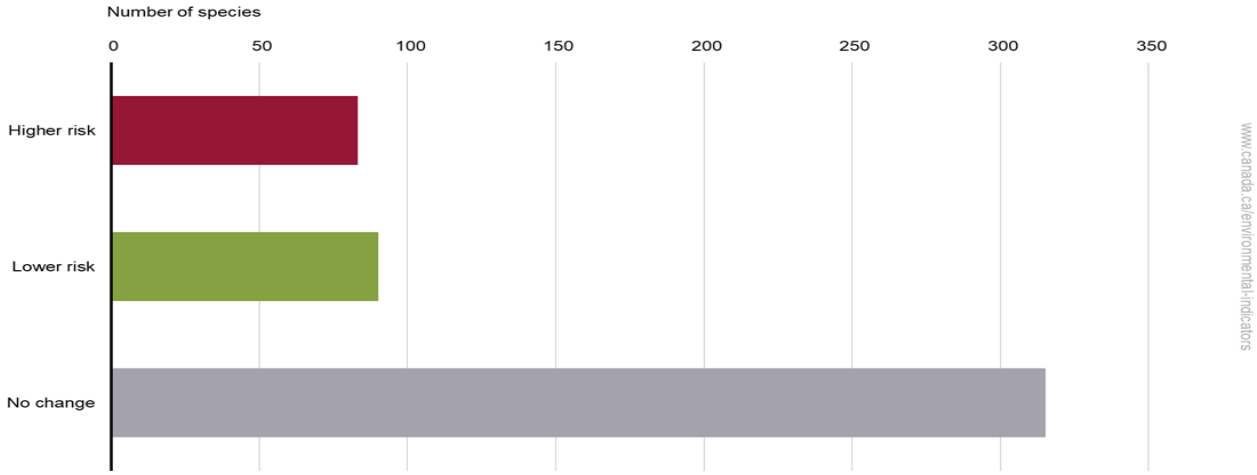
Identifying wildlife species at risk is the first step towards protecting them. Wildlife species previously designated as being at risk are reassessed, usually after 10 years, to determine if there is a change in status. The Changes in the status of wildlife species at risk indicator reports on changes in wildlife species designations for wildlife species assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

As of May 2019, of the 488 wildlife species reassessed and for which sufficient data are available to determine if there has been a change in status:

- 315 (65%) show no change in status
- 90 (18%) are in a lower risk category
- 83 (17%) are in a higher risk category

Of the six wildlife species ranked as endangered in the previous assessment, that were recently reassessed (November 2018 and May 2019), the majority (4 wildlife species or 67%) remained in the endangered status category and the remaining two wildlife species changed to a lower risk category and were no longer categorized as endangered. In addition, three wildlife species that were from a lower-risk category in the previous assessment were designated endangered in the reassessment.

Figure 5: Changes in status of wildlife species at risk from Canada, May 2019



Note: In this analysis, wildlife species refers to a species, subspecies or a genetically or geographically distinct population. Wildlife species disappearance may refer to extinction or extirpation (an extirpated species no longer occurs in the wild in Canada). Lower risk consists of species reassessed as no longer at risk as well as species in a lower risk category compared to the previous assessment.

Source: Committee on the Status of Endangered Wildlife in Canada, May 2019. As reported in Environment and Climate Change Canada (2019) Canadian Environmental Sustainability Indicators: Changes in the status of wildlife species at risk.

5. PERMITS

The competent minister may enter into an agreement or issue a permit under section 73 of SARA for the following activities:

- scientific research related to the conservation of a listed species, conducted by qualified persons
- activities that benefit a listed species or enhance its chance of survival in the wild
- activities that incidentally affect a listed species

Under section 74, the Act states that an agreement, permit, licence, order or other similar document authorizing a person or organization to engage in an activity affecting a species at risk authorized by the competent minister under another Act of Parliament can have the same effect as an agreement or permit under section 73 of SARA if certain conditions are met, such as meeting the purposes and pre-conditions. These permits are considered, "SARA-compliant." SARA compliant permits are issued under other federal Acts of Parliament, such as the *Fisheries Act*, the *Canada National Parks Act*, the *Migratory Birds Convention Act, 1994* and the *Canada Wildlife Act* and can have the same effect as a SARA permit.

Table 7: Permits, agreements and licences issued or enabled under SARA in 2019

Competent department	SARA permits and agreements (Under s.73 of the Act)	Licences and other documents that act as SARA permits (Enabled under s.74 of the Act)	Grand total
Environment and Climate Change Canada	57	354	**411**
Parks Canada Agency	12	17	**29**
Fisheries and Oceans Canada	191	21,115	**21,306**
Total	**260**	**21,486**	**21,746**

ECCC, Parks Canada and DFO jointly issued a total of 21,746 SARA permits and SARA compliant permits in 2019.

ECCC issued 53 SARA section 73 permits to allow for activities affecting over 30 species, including reptiles, amphibians, birds, vascular plants, arthropods, molluscs and mammals. Seven permits were

issued for activities carried out in the area affected by an emergency protection order. Of the 53 permits issued:

- 11 were for scientific research related to the conservation of a species
- 4 were for activities benefiting a species or required to enhance its chance of survival in the wild
- 32 were for activities incidentally affecting a species
- 6 were for more than one of these three purposes

ECCC also issued 354 SARA-compliant permits affecting, or with the potential to affect, threatened and endangered migratory bird species under the *Migratory Birds Convention Act, 1994*. Details regarding delivery of permits against ECCC service standards are available online.

Parks Canada issued a total of 29 permits, some of which were SARA compliant permits issued under the *Canada National Parks Act*. Of the 29 permits issued:

- 14 permits, covering at least 13 listed species, were issued to academic and government researchers, as well as Parks Canada scientists, for conservation research affecting species at risk (e.g. inventory, population monitoring, habitat use and restoration, and conservation genetics)
- 4 permits were issued for an activity necessary or beneficial to 4 listed species
- 15 permits were issued for activities that may incidentally affect at least 21 listed species

Parks Canada maintains an online research permitting system to enhance services to researchers, and to ensure that the agency is informed of research being conducted on the lands and waters it administers. The system incorporates a mandatory peer-review mechanism that ensures that SARA requirements are considered for every research activity.

DFO issued a total of 191 permits in 2019. Under the *Fisheries Act*, DFO also issued 120 fishing licences for experimental, scientific, and educational purposes under section 52 of the *Fishery (General) Regulations*, three authorizations under section 38 of the *Marine Mammal Regulations*, and eight authorizations under paragraph 35(2)(b) of the Act that serve as SARA permits.

Of the 322 permits, licences and authorizations described in the paragraph above:

- 83 were for scientific research related to the conservation of an aquatic species
- 27 were for other activities that benefit the species or enhance its chance of survival in the wild (e.g. monitoring surveys or marine mammal rescue)
- 212 were for activities that incidentally affected the listed species (examples include accidental capture while undertaking research on other non-listed species or fish or mussel relocation during construction activities)

Some commercial fishing licences issued under the *Fisheries Act* where incidental bycatch of a species at risk is a possibility, are issued to be SARA-compliant licences in accordance with section 74 of SARA. In 2019, DFO issued 20 984 commercial fishing licences under the *Fisheries Act* where incidental catch of white shark and loggerhead sea turtles were recognized to be a possibility.

Conditions have been added to fishing licences that require mandatory reporting of interactions in logs books, and a requirement to release individuals in the manner that causes the least harm. While there are a large number of such licences, actual interactions are very rare.

Explanations for all SARA permits issued by ECCC, Parks Canada and DFO are posted on the Species at Risk Public Registry.

6. ENFORCEMENT

ECCC, Parks Canada and DFO work jointly and in partnership with Indigenous, provincial, territorial and international authorities to protect SARA-listed species and their critical habitat.

ECCC enforcement officers are responsible for ensuring compliance with SARA, as well as related conservation statutes: the *Migratory Birds Convention Act*, *1994* (MBCA), the *Canada Wildlife Act* (CWA), *the Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act* (WAPPRIITA) and the provisions of the *Antarctic Environmental Protection Act* concerning wildlife. In general, these laws aim to protect species at risk, migratory birds, and terrestrial species on federal lands. Throughout Canada, ECCC enforcement officers enforce the prohibitions, emergency protection orders and permit conditions found in these Acts.

100TH ANNIVERSARY OF WILDLIFE LAW ENFORCEMENT

Robie Wilfred Tufts

This year marked the 100-year anniversary of wildlife law enforcement for ECCC. One century ago in 1919, Robie Tufts of Nova Scotia became Canada's first Chief Federal Migratory Birds Officer under the *Migratory Birds Convention Act* enacted in 1917. With relentless vigour and legal backing from new migratory bird legislation, his first 13 years of work resulted in 679 charges and convictions. Tufts also focused on providing education about migratory bird conservation. Over the past century, wildlife law enforcement has evolved under various departments, including the Royal Canadian Mounted Police. Today, ECCC's enforcement officers share the same passion for conservation and protection, as did their predecessors.

In 2019, ECCC focused on two enforcement priorities:

- Canadian species at high risk for conservation loss and for non-compliance, such as illegal hunting or trade; and
- habitats or protected areas at high risk for conservation loss and for non-compliance, such as destroying nests or polluting land.

ECCC operated with 82 frontline Wildlife Enforcement Officers and 12 intelligence staff to ensure compliance with SARA and related conservation statutes.

ECCC enforcement officers patrol 146 protected areas (National Wildlife Areas, Migratory Bird Sanctuaries) and other lands to ensure compliance with SARA. The protection of these habitats, which include critical habitat identified in SARA recovery strategies, is important for the conservation, recovery and survival of species.

Informed by the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada, enforcement focused on non-compliance of MBCA, CWA and SARA priority areas. Enforcement efforts pertain to SARA species listed as endangered or threatened and for which critical habitat is identified. Prohibitions against the destruction of particular critical habitat are applied through protection orders (e.g., Woodland Caribou - Boreal population, Piping Plover). Enforcement also verified compliance with Emergency Orders to protect listed wildlife species on both federal and non-federal lands (i.e., Western Chorus Frog, Sage Grouse).

ECCC conducted 164 inspections under SARA in 2019. About 87% of the inspections concerned Canadian species at high risk for conservation loss or at high risk for non-compliance and 13% were related to habitats or protected areas at high risk for conservation loss or at high risk for non-compliance. Inspections focused on enforcing the emergency protection order which came into force in July 2016 for the protection of the Western Chorus Frog in Quebec (Great Lakes/St. Lawrence –

Canadian Shield population). Inspections also focused on Sage Grouse, Bank Swallow, American Ginseng, as well as Piping Plovers and their critical habitat.

As a result of these inspections, 29 alleged violations of SARA were recorded. Several warnings were issued to address non-compliance due to nest destruction of Bank Swallow, as well as Compliance Orders issued under the MBCA to prevent or stop damage. In 2019, fifteen new investigation files were opened. Half of these investigations involved Bank Swallow allegations and the remaining portion were related to Western Chorus Frog, Piping Plover, and Boreal Caribou protection orders. There were two new prosecutions and no court convictions from previous years' incidents by ECCC under SARA in 2019.

While this report speaks to actions taken under SARA, ECCC relies on other laws to protect species at risk before the prohibitions in SARA apply. This involves proactive activities under other legislation but focused on species of special concern, which are not subject to SARA prohibitions. For example, undertaking patrols to verify compliance and provide deterrence and crime prevention in protected areas (i.e. Long Point NWA, Cap-Tourmente NWA) and critical habitats where several SARA species are found, and inspecting and clearing regulated goods at border ports for Canadian SARA protected species found in trade (i.e. wild American Ginseng, Polar Bear). So, while this report captures the enforcement activities directly under SARA, it is not necessarily indicative of all work undertaken to protect species at risk.

RESPONSE TO CONCERNS OF BANK SWALLOW NEST DISTURBANCE

In June 2019, an ECCC Officer in the Vancouver, BC office received a public complaint of possible nest destruction of Bank Swallows at a gravel sand pile in Kelowna, BC. Bank Swallows are a migratory insectivorous bird listed under the *Migratory Bird Convention Act, 1994* (MBCA) as well as listed as a threatened species under SARA.

ECCC officers conducted an onsite inspection to verify compliance with SARA and MBCA at the company's location in Kelowna. Accompanied by a biologist, the enforcement officers met with the owner of the company. The officers observed over 150 active nests (residences) in the gravel sand pile as well as Bank Swallows entering and exiting their residences. Officers also observed bulldozing and excavation of sand and gravel which may have led to destruction, harassment, harm and disturbance of Bank Swallows.


Bank Swallow

Since the activity was ongoing, the lead ECCC officer issued a Compliance Order under the MBCA to the owner of the company directing him to stop any activities within the 25 metre radius of the sand pile that would destroy, disturb, harm, or harass Bank Swallow burrows and colonies, including blocking the road access to the top of the sand pile and putting up clearly visible signage of no entry or access to the sand pile. A written Compliance Order followed shortly afterward. In addition, a written warning was issued to the owner for non-compliance with subsection 32(1) and section 33 of SARA and subsection 6(a) of the MBCA.

DFO's enforcement actions for species at risk are carried out by fishery officers who have been trained and designated as enforcement officers under SARA. They incorporate SARA enforcement activities alongside their duties under the *Fisheries Act* and other federal statutes and regulations. The Nature Legacy Initiative has enabled DFO's Conservation & Protection (C&P) program to increase its capacity to verify compliance with, and enforce SARA in freshwater ecosystems from Ontario to British Columbia.

In 2019, DFO's fishery officers dedicated almost 24,000 hours to patrols, inspections, investigations, court cases, public relations and other duties related to enforcing the prohibitions of SARA. This was an increase of 4000 hours from the year before. Fishery officers also initiated over 129 investigations and

spent over 2700 hours on investigative work related to species at risk. The Department recorded a total of 67 SARA violations involving species at risk that resulted in fines, seizures, charges and warnings.

Western Chorus Frog

WESTERN CHORUS FROG EMERGENCY PROTECTION ORDER PROSECUTION

In enforcing the Emergency Protection Order for Western Chorus Frog in La Prairie, Québec, ECCC officers observed that a residential building was under construction nearby. A fence, which served as an established boundary to delineate the critical habitat, was partially dismantled to allow a backhoe to pass through the legally protected zone. The grass and habitat were crushed by two industrial trucks and rock had been deposited in the protected area's disturbance zone. The Order prohibits activity that might threaten the Western Chorus Frog within the established protected area's boundaries. As a result of the patrols and a subsequent general inspection, officers obtained the necessary evidence using GPS coordinates, photo(s) and confirmation from an ECCC biologist to conduct an investigation. The investigation culminated in a summary charge and guilty plea with a penalty of $2000 imposed.

In Ontario, 31 SARA permits were issued by DFO for conducting work in areas where listed species may be found. Inspections of 19 of these permits by fishery officers resulted in the identification of four violations related to specific licence conditions. As a result, four warnings were issued and all parties involved in the permitted work now have a clear understanding of the importance of following all conditions of licensing within a SARA permit.

DFO continued its extensive aerial and vessel surveillance searching for whales and patrolling fisheries closures specific to North Atlantic Right Whale (NARW) mitigation strategies in the Gulf of St. Lawrence and the Bay of Fundy. In total, fishery officers conducted more than 900 hours of patrols on the water and more than 1100 hours in air surveillance. Fishery officers also spent more than 8000 hours ensuring compliance with and enforcing the NARW management measures. They also provided assistance to experts working under the DFO Marine Mammal Response Program that lead to the partial disentanglements of two NARW.

In 2019, DFO notably increased its efforts to protect the Southern Resident Killer Whale (SRKW). Conservation and Protection in the Pacific region dedicated four new fishery officers to whales and they patrolled over 500 hours on-water, educating and enforcing the newly implemented SRKW management measures from June through to October. These officers also conducted opportunistic dock walks to promote the importance of understanding best practices for boating around whales. The Fisheries Aerial Surveillance and Enforcement (FASE) plane, the Mid-Shore Patrol Vessel (MSPV), and coastal detachments also supported monitoring and enforcement activities of the SRKW measures when patrolling within the SRKW critical habitat.

Parks Canada's Law Enforcement Branch is responsible for enforcing all legislation related to the Agency's mandate, including SARA, on all lands and waters it administers. In 2019, there were 88 operational park wardens dedicated to law enforcement activities on lands and waters administered by Parks Canada. Parks Canada's SARA-related enforcement activities included targeted patrols and investigations of reported violations of the SARA prohibitions. Park wardens recorded a total of 77 law enforcement incidents related to the protection of species at risk in Parks Canada-administered places. These incidents led park wardens to issue two warnings under SARA as well as to lay 37 charges and to issue 25 warnings under other legislation.

7. MONITORING

Red Knot being released
Photo: Yves Aubry © ECCC

Monitoring of wildlife species provides the scientific foundation for all aspects of the species at risk program, from assessment and recovery planning, to implementing and evaluating conservation actions. For assessment, monitoring programs provide information on the distribution, abundance and population trends of species, which are key parameters in the COSEWIC assessment process.

Recovery planning depends upon data from monitoring programs to determine the current distribution and identify critical habitat for listed species at risk. Conservation actions accompanied by appropriate monitoring, allows the evaluation of their effectiveness and guides further actions through an adaptive management process.

ECCC manages or coordinates monitoring programs for all species of migratory birds in Canada, as well as selected other wildlife. The North American Breeding Bird Survey, which completed its 54th year of

surveys in 2019, provides the foundation for monitoring the status of most species of landbirds across Canada and the USA. This survey, like many others in North America, depends upon thousands of skilled volunteers who can identify all the bird species in their area by sight and sound. Data from this survey have been instrumental in identifying major population declines in many species of birds. The State of Canada's Birds 2019 report, which relied heavily upon this survey, identified grassland birds, shorebirds, and aerial insectivores (birds that feed on flying insects, like swifts, swallows and nightjars) as species in particular need of conservation concern. Several species in each group have been listed under SARA as threatened or endangered, as a result of concerns related to these rapid population declines, while others are still being evaluated. Another 2019 report based on these monitoring programs, co-authored by ECCC scientists in conjunction with many colleagues from the USA, found that overall bird populations in the USA and Canada have declined by 30%, representing a net loss of about three billion breeding individuals. This suggests that the capacity of North America's ecosystems to support wildlife has deteriorated significantly, highlighting a need for conservation action.

Canada Jay
Photo: Nick Saunders

In 2019, ECCC biologists in Saskatchewan, the Yukon, and Newfoundland continued pilot surveys to develop a new sampling approach to monitor birds in the vast boreal forests that extend across northern Canada. These forests provide the breeding grounds for billions of birds, many of which migrate each year to Central and South America. These birds may be experiencing a range of threats from loss of habitat on their stopover or wintering areas to climate related impacts to their breeding grounds. Currently, most monitoring data for these species come from the southern edge of the forest, where there is road access, but population trends in these areas may differ from those in less disturbed areas. The ECCC sampling approach uses a sophisticated design to ensure spatial representativeness

and obtain good coverage of all habitat types, while minimizing costs. Results to date indicate this is an effective sampling approach.

ECCC is also making increasing use of autonomous recording units (ARUs) to monitor bird populations. They can be attached to a tree or post and programmed to record bird sounds (as well as other wildlife) on a predetermined schedule. For example, by recording over multiple days, with recordings at peak times throughout the morning, it is possible to estimate detection probabilities and thus improve accuracy of surveys. They can also be programmed to record at dusk or at night, thus detecting species such as owls or nightjars with confidence. In remote areas which cannot be easily accessed during the breeding season, ARUs can be deployed in winter, using snowmobiles or winter roads to access sites, and then programmed to record repeatedly through the spring, summer and autumn, thus providing information not only on numbers of breeding birds, but also when they arrive and depart.

ECCC also continued investment in the Program for Regional and International Shorebird Monitoring (PRISM), a monitoring program which involves a combination of surveys on the Arctic breeding grounds, migration stopover sites and wintering areas, primarily in South America. The migration surveys, which have been in place since the early 1970s, are currently the main source of information on population trends for shorebirds, and have provided the data for concluding that many species are in serious decline. The Arctic PRISM surveys are particularly challenging to implement as they involve crews of typically four people working at a variety of remote arctic camps, using helicopters to access the sample plots. Over the course of about 20 years, finishing in 2018, ECCC biologists managed to complete a first round of surveys sampling all potentially suitable shorebird habitats across all of arctic Canada. These data are currently being analyzed to estimate the total breeding population size of each species, and to map their breeding distributions across the Arctic. Another round of repeat surveys was initiated in 2019 to start to determine how the abundance and distribution may be changing in the face of climate change and other threats. These data will be considered in conjunction with the migration trend data and other information to determine whether any species should be listed under SARA.

Breeding Bird Atlases are another important suite of monitoring programs that contribute to assessment and conservation of species at risk. These projects typically involve an intensive effort over about five years using a combination of skilled volunteers and professional staff to obtain detailed information on the distribution and abundance of birds across a region. Data are typically collected at the scale of 10 x 10 km squares based on a Universal Transverse Mercator grid, but precise locations are also recorded for colonial species and species of conservation concern, including SARA listed species. These data thus contribute to mapping of critical habitat and identifying areas to focus conservation actions. ECCC has worked in collaboration with the non-governmental organization Birds Canada, as well as many other partners, to deliver atlases in British Columbia, Saskatchewan, Manitoba, Ontario, southern Quebec and the Maritimes. The southern Quebec atlas completed data collection in 2014, but marked a major milestone in 2019 with publication of the results in a book "*Second Atlas of the Breeding Birds of Southern Québec*", which won the co-authors the award "Scientifique de l'année de Radio-Canada" (Radio-Canada's Scientist of the Year). Ongoing work is continuing to produce an atlas of northern Quebec. A third year of data collection was completed in 2019 for the Saskatchewan atlas, obtaining data from the prairies in the south to the boreal forests in the north (in collaboration with the boreal project mentioned above). Plans are currently underway to initiate a new atlas in Newfoundland (starting in 2020) as well as the third breeding bird atlas in Ontario (starting in 2021).

Federal funding programs administered by ECCC and, in some cases, co-managed by the Department, DFO and Parks Canada (including the Habitat Stewardship Program, the Aboriginal Fund for Species at Risk and the Interdepartmental Recovery Fund), also support monitoring activities. Information from these initiatives, along with information from partner organizations and researchers, allows the tracking of progress towards meeting recovery goals.

DFO collects data on species at risk through scientific work, and supporting citizen science through its grants and contributions programs. DFO has heavily focused monitoring activities on marine mammal

populations and distribution, with particular focus on the endangered Southern Resident killer Whales, North Atlantic Right Whales, and St. Lawrence Estuary Beluga.

In 2019, DFO advanced several areas of monitoring work including:

- Expanding the use of existing technologies and approaches to monitor and track whales in Canadian waters as well as developing, testing, and implementing new ones, for several purposes including to inform vessel slowdown and fisheries management measures
- Monitoring contaminants levels in whales and their prey
- Monitoring populations of North Atlantic Right Whale (Atlantic Canada), Bowhead Whale (Bering-Chukchi-Beaufort Sea population), St. Lawrence Estuary Beluga Whale, Cumberland Sound Beluga Whale
- The distribution, movements and habitat use of Northern Bottlenose Whales on the Scotian Shelf
- Sea Otter distribution and abundance in the Pacific
- Recovery Potential Assessment – Grey Whale, Pacific Coast Feeding Group population, Western Pacific population
- Distribution, movements, and habitat use of Northern Bottlenose Whales on the Scotian Shelf

Parks Canada monitors various ecosystem indicators and species at risk in the places it administers. In 2019, the progress of activities in Parks Canada's final multi-species action plans continues to be tracked in Parks Canada's national ecological monitoring database system. The information obtained from monitoring activities and action plan targets is used to determine progress towards achieving both the population and distribution objectives and recovery measures, as outlined in the multi-species action plans.

In 2019, Parks Canada continued to track the distribution of the species found within the lands and waters it administers. This information contributes to the Wildlife Species reports, COSEWIC status reports, and the development of multi-species action plans.

8. CONSULTATION AND GOVERNANCE

8.1. SARA policies

In 2019, ECCC, DFO and Parks Canada finalized and published two SARA policies on the Species at Risk Public Registry:

1) Identification of anthropogenic structures as critical habitat
2) Identification of critical habitat: habitat loss or degradation is not a significant threat to recovery or survival

SARA policies address key areas of the SARA cycle. They are designed to provide clarity for provinces and territories, Indigenous organizations and peoples, stakeholders and the Canadian public on the requirements of the Act and to clarify how the competent ministers fulfill their obligations under SARA. The two policies posted in 2019 inform and support the protection and management of critical habitat, as well as provide information to Canadians to support recovery by proactively avoiding harming and destroying critical habitat.

This calendar year also marked advancement towards finalizing policies on Recovery and Survival, and Permitting. In 2019, progress was also made on development of a draft policy for public consultation on Imminent Threat Assessment.

8.2. Species at Risk Advisory Committee

The Species at Risk Advisory Committee (SARAC), a multi-stakeholder advisory body, was established under section 9(1) of SARA. The Committee advises on the administration of the Act, and promotes and encourages the effective stewardship of Canada's biological diversity. It also provides advice to support the federal government in achieving the purposes of SARA.

Its current membership of 28 includes a balanced representation of non-governmental organizations

from industry, business, academia, agriculture and environment, and invites participation of Indigenous partners from the Assembly of First Nations, Métis National Council and Inuit Tapiriit Kanatami.

SARAC met in Ottawa on January 24 and 25, 2019, to ensure a shared understanding of various federal initiatives and priorities, including, among other issues, progress under Canada's Nature Legacy, and ECCC's approach to implementation of the Pan-Canadian Approach to Species at Risk Transformation in Canada. SARAC members had the opportunity to assess their work to-date and identify opportunities to develop recommendations that support federal priorities. During the meeting, SARAC met with Parliamentary Secretary Sean Fraser (ECCC) and Parliamentary Secretary Sean Casey (DFO). The Committee took this opportunity to present summaries of its developments under its five working groups: places, species, sectors and threats; the knowledge plan; imminent threats; survival and recovery; and conservation agreements. In doing so, the Committee offered its observations about some of the limitations impeding SAR Recovery, including the need to ensure a broad engagement with jurisdictions and stakeholders alike; the importance of incentivizing the use of conservation agreements as a viable conservation tool under SARA; encouraging the development of a national, spatially explicit database for species; and the benefits of establishing a full-cost accounting system for species that recognize the impact of species decline on various communities and partners. SARAC encouraged the Government to consider how it may leverage the strength of its members and their networks, to achieve maximum results for species at risk in Canada. SARAC's messages were well-received by both Parliamentary Secretaries, who suggested meeting with SARAC Co-Liaisons bilaterally to further encourage the momentum of this dialogue.

On March 28, 2019, SARAC Co-Liaisons attended a bilateral meeting with Parliamentary Secretaries Fraser and Casey in Ottawa. They further elaborated on issues discussed in January, and all parties present agreed that success for SAR would depend in part on continued, collaborative engagement.

8.3. Indigenous Peoples and SARA

The National Aboriginal Council on Species at Risk (NACOSAR) is composed of six representatives of

Indigenous peoples of Canada, appointed by the Minister. It was created under section 8.1 of SARA to advise the Minister on the administration of the Act and to provide advice and recommendations to the Canadian Endangered Species Conservation Council (CESCC).

In 2019, NACOSAR met on April 10 and 11, at which time they adopted a Terms of Reference and developed a detailed workplan for four priorities: Socio-Economic Analysis (including full cost accounting); Indigenous Engagement in SAR Recovery; SARA s.64 (compensation); and Conservation Agreements (considering s.64). The Council also penned their first ministerial recommendations letter.

In 2019, the Council focussed on ensuring indigenous consideration in the federal socioeconomic analysis processes. Throughout the course of the fall and winter, NACOSAR members, together with collaborative federal partners, began work to secure a contract to advance their inquiry. The contract, to be executed by ECCC on behalf of NACOSAR, will seek research, analysis, and reporting services to support the Council's development of advice to identify gaps in current Cost Benefit Analysis (CBA) modelling - as it applies to the broader socio-economic analysis framework. The contract is expected to be begin and end in early 2020. Its resulting report will be used to guide NACOSAR's future work on including Indigenous perspectives, considerations and impacts to socioeconomic and cost benefit analyses under SARA.

Although no other full Council face-to-face meetings occurred in 2019, NACOSAR did have opportunity to participate in various bilateral meetings. Such engagements included discussions with the COSEWIC ATK Sub-Committee, to ensure dialogue on knowledge sharing and assessment process. They also had various meetings with departmental partners at DFO, PCA and ECCC. Notably, NACOSAR co-chairs, along with the First Nation Advisory Committee on Species at Risk (FNACSAR) representatives, had the opportunity present their perspectives at the Canadian Wildlife Directors' Committee (CWDC) on October 30, 2019. They spoke on the importance of engagement with NACOSAR, in terms of the value of sharing experiences on the challenges of SARA from varying perspectives (indigenous, jurisdictional, etc.).

Moving into 2020, NACOSAR will continue efforts on their prioritized workplan. The Council will also continue to promote and advance collaborative engagements with other forums, committees, and partners, who share an interest in species at risk conservation and protection.

In 2017, ECCC co-developed with the Assembly of First Nations (AFN) the First Nation Advisory Committee on Species at Risk (FNACSAR) under section 9 of the Act. Managed by AFN and co-chaired by AFN and ECCC, 2019 saw progress for this committee through working to engage First Nations in finding solutions to SARA implementation as it relates to First Nations peoples in Canada.

FNACSAR met twice in 2019, on January 29 and 30 in Victoria, British Columbia and on June 26 and 27, in Ottawa. At these meetings, FNACSAR gained information on various federal issues including the state of play for Indigenous engagement on Boreal Caribou; the status and direction of SARA policy progress on Imminent Threat and Section 11 Contribution Agreements; and the impact of changes to the *Fisheries Act* on aquatic SAR. FNACSAR also discussed opportunities for First Nation engagement in the implementation of the Pan-Canadian Approach among other things. By the end of 2019, FNACSAR had drafted its workplan to advance the efforts of its working groups on socio-economic analysis, caribou, conservation agreements, and aquatic species. Moving forward into 2020, it is expected the Committee will continue to consider advancements for First Nations engagement in SAR, and how to translate FNACSAR's workplan to further develop collaborative mechanisms for SAR conservation on First Nation lands.

In January and June of 2019, FNACSAR penned two ministerial recommendations letters, emphasizing the need for cooperation and partnership for SAR that is inclusive of First Nation perspectives and voices.

8.4. SARA Ministerial Round Table

On April 11, 2019, the Honourable Minister Wilkinson, who was the Minister of Fisheries and Oceans at that time, provided opening remarks for the 7th SARA Ministerial Round Table (MRT). Minister Wilkinson

acknowledged the importance and value of contributions from the advisory bodies, and the need for new and innovative solutions to support positive outcomes for SAR.

Delegates from the Assembly of First Nations, the Inuit Tapiriit Kanatami and the Metis National Council shared their perspectives on Indigenous engagement and SAR, highlighting the importance of Indigenous people as leaders in conservation, and the critical value of their partnership for SAR conservation and recovery. The need to ensure Indigenous rights are considered and respected, and of the necessity for harmony between Indigenous and federal processes, was reinforced.

Minister Wilkinson deputized the remainder of the meeting to Parliamentary Secretaries Casey (DFO) and Fraser (ECCC). The SARAC, FNACSAR and NACOSAR Committees shared their perspectives on previously-agreed upon priorities, and called for federal interdepartmental integration to ensure success in a multi-species and ecosystem based approach. A summary of their respective messages follows:

Caribou – working together, considering Indigenous Knowledge, and including Indigenous people in the decision making process, are key to helping Indigenous communities across Canada maintain access to the fundamental species

Aquatic – solutions that horizontally transcend across all levels of government are required to overcome the challenges of aquatic SAR; an aquatic working group could further this discussion

Enabling framework and Federal/Provincial/Territorial engagement – strong FPT coordination, inclusive of Indigenous participation, will support an effective path forward for engagement

Effective use of stewardship tools – collaboration is required to ensure data is accessible and inclusive of ITK, and to ensure clarity on distribution of the Nature Legacy's allocated funding

Plenary discussions ensued with senior executive officials of ECCC, Parks Canada, and DFO, focusing on

the conservation agenda; the need for a national vision and approach for interdepartmental connectivity; inclusive horizontal engagement with FPT governments; and a knowledge platform to make data readily available. All three Departments acknowledged and recognized the importance of these points, and indicated a desire to continue working with its partners to make advancements.

Following the MRT, the three Committees provided advice and recommendations to the Ministers via respective letters. Each Committee echoed their collective and coordinated comments at the SARA MRT and the essences of these letters, as well as the Ministerial response, are available on the SAR Public Registry.

8.4.1. Joint SAR Committee meeting

On April 9 and 10, 2019, the first ever Joint SAR Committee meeting offered a forum for the three active committees established under the sections 8 and 9 of the Act, SARAC, FNACSAR and NACOSAR, to meet together for the first time.

The Committees discussed synergies to identify areas of shared interests, and in turn where they diverge, in recognition of each Committees' unique perspectives. Together, they acknowledged common areas of focus that could offer the most impactful benefits to all three Committees, including collaborative focus on advancing outcomes for:

- Caribou;
- Conservation Agreements;
- Knowledge Sharing and Indigenous Knowledge;
- Socio-Economic Analysis; and
- Aquatic Species

8.4.2. Aquatics working group

During the April 2019 SARA MRT with external stakeholders and Indigenous groups meeting, the Parliamentary Secretaries to the Ministers of Fisheries and Oceans and Environment and Climate Change received a joint proposal from the SARAC, NACOSAR and FNACSAR representatives to establish a joint aquatics working group under the auspices of the SARAC. Each of the SAR Committees appointed members to aid in the establishment of the working group and in the determination of key priorities. The group also met in September and December of 2019 to further define the purpose and focus of the group.

8.5. Bilateral administrative agreements

The federal government has bilateral administrative agreements on species at risk with individual provinces and territories. The agreements set out shared objectives, as well as commitments for how governments will cooperate on species at risk initiatives. Agreements are in place with the governments of Quebec and Ontario. Agreements with the government of British Columbia and Saskatchewan are in the process of being renewed. Discussions are underway to renew a Memorandum of Understanding between the federal government and the Nunavut Wildlife Management Board that covers the listing process for species at risk in Nunavut.

8.6. The National General Status Working Group

The National General Status Working Group (NGSWG) is composed of representatives from each province and territory, and the federal government. Members of the working group are responsible for completing the general status assessments of species in their jurisdictions, which the group then uses to produce the Wild Species – The General Status of Species in Canada reports required under section 128 of SARA. The working group is under a five-year schedule. In 2019, the working group issued several contracts which are ongoing. In the current schedule cycle, the working group is assessing 46 taxonomic groups. ECCC is co-chair and coordinator of the NGSWG, and the other co-chair in 2019 was

the Government of Northwest Territories. The next report, Wild Species 2020, is scheduled to be completed and published in 2021, and will present information for about 40,000 species.

8.7. Species at Risk Public Registry

The online Species at Risk Public Registry fulfills the requirement under SARA for the Minister to establish a public registry to facilitate access to SARA-related documents. The Registry is an important tool for engaging and informing Canadians on species at risk issues. In addition to providing access to documents and information related to SARA, it provides a forum for Canadians to submit comments on SARA-related documents being developed by the Government of Canada.

Section 123 of SARA identifies documents that must be published on the Registry, including:

- regulations and orders made under the Act
- agreements entered into under section 10 of the Act
- COSEWIC's criteria for the classification of wildlife species
- status reports on wildlife species that COSEWIC has prepared or has received with an application
- the List of Wildlife Species at Risk
- codes of practice, national standards or guidelines established under the Act
- agreements and reports filed under section 111 or subsection 113(2) of the Act, or notices that these have been filed in court and are available to the public
- all reports made under sections 126 and 128 of the Act

Other documents prepared in response to the requirements of SARA include recovery strategies, action plans, management plans and reports on the progress of recovery strategy implementation are also published on the Public Registry.

In 2019, 587 documents were published on the Registry, including 355 permit explanations and 52 documents for public consultation. These documents include SARA and COSEWIC annual reports,

consultation documents, COSEWIC status reports and status appraisal summaries, ministerial response statements, permit explanations and recovery documents.

9. ADDITIONAL INFORMATION

To obtain further information or publications and to submit questions or comments concerning species at risk programs and activities, please contact any of the following departments:

Environment and Climate Change Canada
Public Inquiries Centre
7th Floor, Fontaine Building
200 Sacré-Cœur Boulevard
Gatineau QC K1A 0H3
Telephone: 819-938-3860
Toll Free: 1-800-668-6767 (in Canada only)
Email: ec.enviroinfo.ec@canada.ca

Fisheries and Oceans Canada
Communications Branch
200 Kent Street
3rd Floor, Station 13228
Ottawa ON K1A OE6
Canada
Tel.: 613-993-0999
Fax: 613-990-1866
Email: info@dfo-mpo.gc.ca

Parks Canada Agency
National Office
30 Victoria Street
Gatineau QC J8X 0B3
Canada
Tel.: 888-773-8888
TTY: 866-787-6221
Email: pc.information.pc@canada.ca

For more information on the Species at Risk Public Registry, and to submit questions or comments on the Public Registry, please contact:

SARA Public Registry Office
351 St. Joseph Boulevard, 20th Floor
Gatineau QC K1A 0H3
Canada
Email: ec.registrelep-sararegistry.ec@canada.ca