Invasive Species Centre
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May 18th, 2019

Public Input Coordinator
Ministry of Environment, Conservation, and Parks
Species Conservation Policy Branch
300 Water St, Floor 5N
Peterborough, Ontario
K9J 3C7

Dear Public Input Coordinator,

Comment on the 10th Year Review of Ontario's Endangered Species Act; Proposed changes ERO Number 013-5033

The *Endangered Species Act* (ESA) has been an important piece of legislation safeguarding Ontario`s most vulnerable species. As with all legislation, it is important to regularly assess areas for improvement and the Invasive Species Centre (ISC) welcomes the Ministry of Environment, Conservation and Parks' effort to improve protections for species at risk (SAR). SAR are ecologically, socially and economically important to society. For example, in the United States, native pollinators such as bees provide ecosystem services valued at $3.07 billion USD annually (Losey and Vaughan, 2006). Unfortunately, these critically important pollinator species, such as the American bumblebee, gypsy cuckoo bumble bee, macropis cuckoo bee, rusty-patched bumble bee, and others have been designated as at risk in Canada by COSEWIC (Committee on the Status of Endangered Wildlife in Canada). A loss of native bee species can be devastating for food production. For this and many other reasons, it is essential to protect SAR against threats that have caused the loss of species and are continuing to lead to their decline. Invasive species have repeatedly been cited as one of the leading causes of species extinctions globally. In fact, a report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019) found that up to 1 million species across the globe are threatened to extinction and introduction of invasive species are recognized as one of the main drivers. Invasive species pose serious threats to SAR because they have the potential to outcompete native species and spread rapidly in a new, compatible environment with minimal predators. They can also invade ecosystems and impact SAR populations that are protected in provincial parks and other conservation lands. For example, many of Ontario's bat and ash species are at risk because of the introduction of invasive, non-native species. Ontario's provincial policy, such as the *Made in Ontario Environment Plan* also makes clear that protecting SAR from invasive species through partner collaborations and implementation of management tools for invasion prevention, detection and control are imperative.

There are 4 sequential categories of invasive species management (prevention, eradication, containment, and resource protection and long-term management; Figure 1). The further along the invasion curve a species is, the more time, money and resources are required to manage the invasive species and protect associated SAR and their critical habitat. Therefore, timely management is essential for protecting SAR

from invasive species, and our comments on the ESA proposal changes will focus primarily on opportunities to bridge the fields of addressing the substantial threats that invasive species pose to Ontario's SAR.

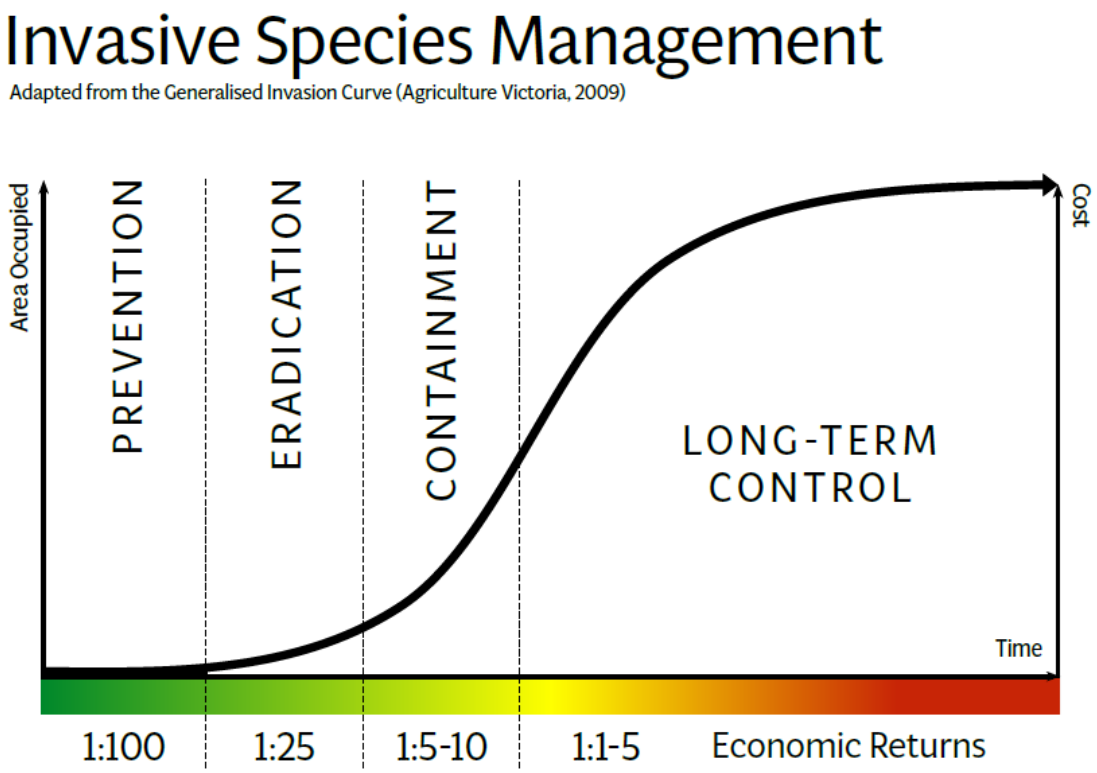

Figure 1. Generalized invasion curve; The invasion curve represents stages of invasive species management from pre-arrival (prevention) to post-arrival. Returns on investment are up to 100x higher in preventing invasive species than in managing them after arrival.

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Concerns quote *10th Year Review of Ontario's Endangered Species Act,* followed by our recommendations for each area of concern.

Concern #1:

Category 1, point D "Allow the Minister to require COSSARO to reconsider the classification of a species where the Minister forms the opinion based on scientific information that the classification may not no longer be appropriate. For species that are not yet on the list or are listed as special concern, the proposed changes provide that the species would not be added to the SARO List or listed to a more endangered status during COSSARO's re-assessment."

AND

Category 3, point B "Clarify that recovery strategies are advice to government, and that Government Response Statements are the government's policy direction for species at risk."

Recommendation #1:

COSSARO's role to increase knowledge transfer in SAR science and policy should not be minimized or over-ridden by the Minister's opinion. Similar to how the ISC are experts in the invasive species field, the Committee on the Status of Species at Risk in Ontario (COSSARO) are a critical group of individuals with diverse academic and technical SAR background. Their contributions via science-based recommendations for SAR Recovery Strategies are critical to improving species rehabilitation. These Recovery Strategies are essential for timely and scientifically sound management of SAR and should be considered as more than advice to the Minister.

Concern #2

Category 1, point F "Broaden COSSARO member qualifications to include members who have relevant expertise in ecology, wildlife management, as well as those with community knowledge."

Recommendation #2

Increasing diversity in stakeholder contribution for COSSARO committee should include and be limited to experts well adept in SAR knowledge, wildlife management, and/or local Indigenous knowledge. Environmental economists with SAR knowledge can provide key information on SAR value to Ontario industries and analyze economic cost-benefit to the loss or gain in a species. Including this information in the Recovery Strategy or at a stage after the species assessment will provide the Minister information on SAR priorities and a thoroughly researched description of habitat profile and threats, thereby maximizing the probability of effective SAR restoration and minimizing inefficiencies.

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Concern #3

Category 4, Creation of regulatory charge and agency "Ontario is also proposing to create Canada's first independent Crown agency proposed to be called the Species at Risk Conservation Trust, to allow municipalities or other infrastructure developers the option to pay a charge in lieu of completing certain on-the-ground activities required by the act."

Recommendation #3

Regulatory charges should not be applicable to ecosystems that offer habitat to multiple SAR, improve landscape resiliency against climate change impacts or provide essential ecosystem services. The ISC insists environmental assessments be made for any SAR landscapes considered for development in exchange for a regulatory charge. An assessment of the landscape that evaluates the cost-benefit of protecting or developing on SAR habitat is essential prior to taking an irreversible and potentially destructive step. The ISC recommends extreme caution when developing on natural landscapes as importing new materials to an area can increase the likelihood of an invasive species introduction. Actions to mitigate invasive species introduction such as the "Clean Equipment Protocol" are necessary and will save money in the long run if followed. **The known invasive species expenditures by Ontario municipalities and conservation authorities is $38.8 million CAD annually (Vyn, 2018)**. Municipalities and conservation authorities are dedicating large sums of money to manage invasive species because of the serious threats they pose to Ontario industries (tourism, fisheries, etc) and biodiversity. Marbek (2010) conducted a cost-benefit analysis of natural landscapes in the Toronto area and discovered the 2008 net benefit value of wetlands and stream systems to be $1.2 billion CAD. For these reasons, by proactively protecting ecosystem biodiversity it can reduce the impacts and costs related to managing invasive species and protecting SAR.

> **Example 1:** Protecting ecosystems that provide habitat to multiple SAR, a case study in Ontario.
>
> For years the community of Long Point and its many visitors have valued the regions rare ecological features and their inhabitants, many of which are formally recognized in Ontario as species at risk. Phragmites, an invasive wetland grass, had become so pervasive throughout the area that many SAR inhabiting the region were believed to be at a "tipping point". One report estimated that 62% of the 23 SAR in Long Point and Rondeau region were directly threatened by Phragmites. To restore this internationally recognized landscape and create habitat for numerous SAR (e.g. spotted turtle, bent spike-rush, Fowler's toad, etc.), the Ministry of Natural Resources and Forestry along with Nature Conservancy of Canada and many other stakeholders initiated the most ambitious Phragmites control project in Ontario. Using efficient aerial and targeted backpack herbicide application techniques, combined with prescribed burns and other best practices, the project has begun to restore critical habitat for the many SAR which rely on the ecologically unique area. Since on-the-ground work began in 2016, Phragmites populations have been dramatically reduced, and the area and quality of available habitat required by the region's SAR have increased. It is evident that multiple resources along with several stakeholder contributions were required for the successful containment of phragmites to improve SAR populations at Long Point, Ontario.

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Concern #4

Category 4, Creation of regulatory charge and agency "The proposed changes would also authorize the creation of a new board-governed provincial agency. The agency would receive the funds and ensure informed, unbiased and expert decisions are made to disburse the funds to third parties that will undertake the activities in accordance with the purposes proposed to be set out in the statute."

Recommendation #4

Smart parameters that prioritize resources to protect species at risk at the landscape-level must be developed. The unfortunate reality is that there are fewer resources allocated to implementing the Endangered Species Act than are required to achieve positive outcomes for all species listed as SAR. Given these constraints, compromises should be made to maximize the benefits obtained by some species. We see prioritizing species protection at the landscape approach to be a valuable means to deliver more meaningful, on-the-ground results for Ontario's endangered species given the finite resources that are available. Funding and resource prioritization tools are essential when tasked with protecting SAR that span across Ontario. Developing a prioritization system that enables decision makers (e.g. the Minister or COSSARO) to swiftly make a well-informed decision will allow for timely protection for critical landscapes harboring multiple SAR. Similar prioritization parameters should be in place for the newly proposed Species at Risk Conservation Trust, which aims to strategically support large-scale projects that assist in the recovery of SAR.

> **Example 2:** Prioritization tools for SAR decision makers
>
> A study by Martin et al., (2018) found that by applying Priority Threat Management (PTM); a process that assists decision makers on which management strategy will offer the best return on investment per dollar for SAR recovery, can increase the number of species protected as well as increase the likelihood of species recovery. In this study, several management strategies were analyzed, including development and infrastructure management strategies, invasive species management strategies, integrated pest management strategies, habitat conservation and more. Per management strategy, factors such as the likelihood of success, feasibility, cost over 20 years and annual equivalent value was calculated. Results provided clear recommendations for SAR recovery strategy based on available budget, timeframe, and magnitude of success required from the project. This type of approach for SAR actions can be invaluable to decision makers when juggling multiple SAR-cases and can allow for maximized species protection per available resources.

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Concern #5

Category 5, point B "Update provisions related to enforcement officers by removing identification of specific classes of persons (e.g. conservation officers) as enforcement officers and retain the Minister's authority to designate officers"

Recommendation #5

The Minister should publicly list the qualifications required to become an Officer. Complete transparency will increase trust between the public and the Officers, allowing for more open communication and critical SAR knowledge transfer. The ISC strongly recommends that Officers have technical expertise in SAR knowledge.

Concern #6

Category 2, point A "De-couple the listing process from automatic protections and provide greater Minister's discretion on protections while keeping the assessment as a science-based process at arm's length. While the role of classifying species would remain with COSSARO and listing of classified species would continue to be required, the proposed changes would provide the Minister with authority to temporarily suspend species and habitat protections for up to three years for some newly-listed species when the following specified criteria are met…"

Recommendation #6

De-coupling automatic habitat protection and SAR protection must only occur if supported by SAR experts (e.g. COSSARO). As mentioned in *Recommendation 1*, COSSARO consists of knowledgeable experts in SAR science and their science-based assessments and recommendations should be implemented. If a species or habitat protection is suspended for up to 3 years, increased damage to the ecosystem is possible due to lack of upkeep and protection. Damage may include worsening of species population and habitat conditions through anthropogenic causes or the unnoticed introduction of invasive species. These damages may cost more in the long-run and the ISC strongly recommends de-coupling of species and habitat protection be made public prior to its implementation.

Concern #7

Category 4, point A "Remove the requirement for the Minister to consult with an independent expert in the 'D' permit process and replace the requirement for LGIC approval with Minister approval."

AND

Category 4, point A "Remove the requirement for the Minister to consult with an expert if the Minister forms the opinion that a proposed regulation is likely to jeopardize the survival of the species in Ontario or to have any other significant adverse effect on the species"

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Recommendation #7

The Minister should consult with SAR experts when making decisions regarding permits and regulations. Transparency in SAR management and regulation is necessary considering the complex nature of ecosystem interactions. Increased collaboration will allow for better knowledge transfer to create effective SAR Recovery Strategies and overall better protect SAR and their habitats. The ISC believes SAR experts or COSSARO must be consulted prior to issuing a permit or removing/adding a species regulation.

In closing, the Invasive Species Centre looks forward to continued discussion on improving Ontario's Endangered Species Act, resulting in improved outcomes for species at risk. We hope that a review of this legislation will enable more direct action on all major threats to species at risk, including invasive species, as our province continues to do its part in species at risk action.

Sincerely,

Invasive Species Centre

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