



**SPECIES IN
THE BALANCE:
PARTNERING
ON TOOLS AND
INCENTIVES FOR
RECOVERING
CANADIAN
SPECIES AT RISK**

Canadians care about wildlife and recognize its importance. Recent polling shows that the overwhelming majority of Canadians support the federal government's efforts to recover species at risk (SAR). However, they want it to be done in a way that is broadly consistent with their economic aspirations and that respects private property rights (McCune *et al.* 2017). This is both the challenge and the opportunity — to improve outcomes for imperilled species while allowing responsible levels of development and respecting the rights of private property owners.

More than a decade has passed since Canada's *Species at Risk Act* (SARA) passed into law. The time is right to take stock of current progress and challenges. The Schad Foundation initiated this research to help identify the policy tools that could enable governments, industry and civil society to prioritize conservation decision-making and investments, and improve recovery outcomes.

There are many signs that Canada's imperilled species are in trouble, with one recent study finding that, of the more than 350 imperilled species in Canada which have had status reassessments by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), over 85% have either seen no status change or deteriorated in status (Favaro *et al.* 2014). While many provinces and territories have strengthened SAR recovery by enacting their own SAR legislation or regulations, the extent to which these efforts have improved recovery outcomes is unclear.

The shortcomings in recovering SAR are linked to several long-standing barriers, including inadequate financial resources, insufficient incentives for stewardship among private landowners and industry, patchy efforts to protect SAR on provincial and territorial crown land and private land, a lack of information on the effectiveness of different recovery actions, and not making the most of available data and tools to inform decision making.

This report proposes effective and actionable solutions to these challenges. It draws upon multiple sources of insight including a workshop with key stakeholders, a literature review, interviews with over 35 SAR recovery experts, a presentation and discussion at a Canadian Wildlife Director's Committee meeting, and an online survey administered to over 100 informants in academia, government, industry and ENGOs. The research uncovers a collection of management practices, incentives and policy tools that, while underused to date, show significant promise for better engaging stakeholders in solutions that are broadly compatible with both species recovery and private economic interests.

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An essential first step to recovering SAR lies in understanding and addressing priority threats. The scientific literature clearly indicates that residential and commercial development, human disturbance, and natural systems modification are the main drivers of imperilled species loss in Canada (Prugh *et al.* 2010; McCune *et al.* 2013). Invasive and problematic species, genes and diseases, point and nonpoint source pollution, biological resource use, energy production and mining, transportation and service corridors, and agriculture are other important threats to SAR.

While the Government of Canada has made some important advances in implementing the *Species at Risk Act*, a number of significant challenges remain. These include gaps in SAR protection on provincial and territorial land, which are not being addressed by provincial/territorial legislation or federal backstop measures, and a lack of incentives for SAR management on private land throughout the country (where a critical mass of SAR are located). Recovery on provincial and territorial crown land and private land is also hindered by stakeholders — primarily governments, but also industry and ENGOs — failing to adopt complementary tools for managing SAR on these lands, such as economic instruments and place-based (multispecies and ecosystem) recovery strategies and action plans. Stakeholders have also noted some issues with the timeliness, flexibility and incentive basis of federal stewardship programs such as the Habitat Stewardship Program and the Species at Risk Farm Incentive Program.

Collecting, harmonizing and sharing quality data is critical for evidence-based public policy, and SARA is no exception. However, nearly all of the actors involved in SAR recovery have noted that governments and other stakeholders need to better coordinate on data collection and sharing in order to make sure that decision-makers are getting the most out of this information.

There are also several outstanding issues surrounding how to manage impacts to SAR on federal, provincial and territorial crown land, such as a lack of clarity on interactions between SARA and the *Canadian Environmental Assessment Act* (CEAA 2012), and their implications for regulatory compliance (including cumulative effects management). Greater clarity is also needed on compliance measures for addressing impacts to species at risk on federal crown land (including cumulative effects).

Finally, nearly all stakeholders acknowledge that addressing the challenge of SAR recovery will require considerable increases in overall financial resources relative to today's levels, combined with a disciplined and prioritized approach to how these funds are spent.

In order to address the challenges outlined above, understanding how recovery actions can address threats to SAR or compensate for their effects is essential. Using data on actual species abundance and range trends for species listed under the United States *Endangered Species Act* and changes in threat status of species listed under SARA, we identify several key threats, implemented recovery actions, and threat remediation actions associated with endangered species recovery. Although the findings need to be interpreted cautiously due to the relatively small within-taxon sample sizes and the coarse resolution of the data, we find that recovery actions generally designed to mitigate indirect or direct sources of mortality, including “take” (either direct or indirect), invasive or problematic species, and pollution, are most likely to have detectable positive impacts on SAR recovery. This implies that policy tools or incentives are more likely to be effective if they target threats that induce substantial direct or indirect mortality, such as point and nonpoint source pollution, or transportation infrastructure leading to road or rail mortality.

However, this does not imply that habitat conservation or restoration measures (often a focus of recovery efforts) are of little value. Rather, with existing data, the systemic effects of such measures are difficult to detect. Objectively evaluating the effects of these measures on recovery will require substantially improved data collection, particularly with regards to: (a) identifying habitat elements directly and strongly related to fecundity or survival (e.g. breeding sites, overwintering sites); and (b) using systematic monitoring to assess the extent to which habitat conservation, rehabilitation, enhancement or restoration measures have affected population abundance and distribution. For many species for which habitat conservation measures have been implemented in the past, neither of these conditions is satisfied. This analysis of factors correlated with SAR recovery provides a foundation for understanding the impacts of current recovery practices and, potentially, for prioritizing SAR recovery interventions.

In light of the challenges listed previously, recovering SAR will require bold leadership and collaboration between governments, conservation organizations and industry. This report recommends that policymakers consider eight cross-cutting actions. They are:

- I. Governments should fully implement existing SARA provisions (such as section 11 conservation agreements, safety net orders, and emergency orders). This would help ensure backstop protections to SAR on non-federal land and encourage private sector participation in SAR recovery.
- II. Harness a suite of economic instruments to promote stewardship on private land and crown land. In the case of provincial and territorial crown land, establishing rigorous and precautionary offset policies for SAR is an important priority. These could be enabled through SARA's permitting policy, parallel provincial/territorial permitting policies, or signed section 11 conservation agreements between federal, provincial, territorial and Indigenous governments, landowners and industry.
- III. Our stakeholders identified three further areas where economic instruments and related tools have the greatest potential for cost-effective impact:
 1. leveraging opportunities to restore degraded landscapes;
 2. using economic instruments to protect CH on private land — including conservation easements and payment for environmental service schemes;
 3. tailoring economic instruments to manage broader threats in the landscape, such as point and nonpoint source pollution and invasive species.

This being said, additional studies which explicitly evaluate how economic instruments affect SAR's abundance and distribution, as well as the quantity and quality of their critical habitat, are essential. Ideally, evidence for the effectiveness (or lack thereof) of these instruments will come from policy interventions that are designed and implemented as experiments, or quasi-experiments. Governments should explicitly prioritize these experimental approaches when funding SAR recovery actions.

Harnessing a suite of economic instruments to recover species at risk has a strong potential for cost-effective impact.

Governments should strongly consider using innovative funding tools to increase resources for species at risk conservation.

- IV. Use place-based (multispecies and ecosystem) approaches as appropriate, to improve the biological effectiveness or cost-effectiveness of recovery strategies and action plans. In general, we find that most recovery strategies should continue to proceed on a single-species basis, while action plans should focus on place-based approaches. This being said, several opportunities remain for effective place-based recovery planning that are worth considering.
 - V. Enhance existing SAR conservation initiatives on private land by making government-funded stewardship programs more directed, flexible, and incentive-based.
 - VI. Strengthen data collection, sharing, management and dissemination to improve multiple dimensions of SAR decision-making and program implementation. Federal, provincial, territorial and Indigenous governments, academic, industry, and civil society actors should develop a database that would be shared among all stakeholders collecting and housing data relevant to SAR management. This includes data on SAR population abundance and distribution, SAR ranges, habitat associations and critical habitat, signed section 11 conservation agreements, recovery actions implemented in recovery strategies, as well as projects triggered under section 73 of SARA or section 5 of the *Canadian Environment Assessment Act* (2012) (and successor legislation).
 - VII. Complement project-level impact assessments with broader regional impact assessments — as recommended by the *Federal Expert Review Panel on Environmental Assessment* and currently under consideration by the federal government — to help address the assessment of cumulative effects for projects triggered under section 73 of SARA or section 5 of CEAA (2012). We discuss how the processes required to meet SARA’s legislative requirements, such as recovery strategies and action plans, can also make a positive contribution to these regional impact assessments.
- We also propose an iterative process for assessing cumulative effects under SARA and CEAA (2012), in which project-scale impact assessments (and other information sources such as action plans) can inform regional impact assessments. These regional impact assessments can subsequently be used to inform future project-scale assessments, action plans, etc.
- VIII. Finally, governments should strongly consider increasing overall funding for SAR conservation. These additional funds could be raised through a combination of innovative funding instruments and increased public expenditures. These resources should be guided by an ethos of prioritization and targeted towards action planning and incentives on private land.

While conserving and recovering species at risk will not be easy, using the *Species at Risk Act’s* legislative provisions, creative policy and funding tools, and a prioritized approach to conservation, can go a long way towards ensuring the longevity of Canada’s species at risk for generations to come.

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