



**Smart Prosperity
Institute**

SUBMISSION

To the Ministry of the Environment, Conservation and Parks
on the 10th Year Review of Ontario's Endangered Species
Act: Discussion Paper

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About Smart Prosperity Institute

Smart Prosperity Institute (formerly Sustainable Prosperity) is a national research network and policy think tank based at the University of Ottawa. We deliver world-class research and work with public and private partners – all to advance practical policies and market solutions for a stronger, cleaner economy.

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Review does not necessarily imply endorsement, and all errors and omissions remain the responsibility of Smart Prosperity Institute.

Introduction

Smart Prosperity Institute welcomes the opportunity to provide comments to the Ontario Ministry of the Environment, Conservation and Parks on the *Discussion Paper for the 10th Year Review of Ontario's Endangered Species Act (ESA)*.

Over the past several years Smart Prosperity Institute has undertaken extensive research and convening on policy tools for recovering Canadian species at risk.¹ Although tailored to the federal *Species at Risk Act*, many of the insights gleaned from this research are applicable to the Ontario statute and context.

The key message of our commentary is that while the Ontario government can significantly improve how it implements endangered species conservation in the province, the Ontario *Endangered Species Act* already contains the tools needed to stabilize and recover Ontario's endangered species – and so amendments to the legislation are not necessary at this time. Our submission instead focuses on how to use the existing legislation and associated policy instruments to more effectively and efficiently protect endangered species in Ontario, with an emphasis on:

- Promoting stewardship on private lands.
- Making better use of landscape (multispecies/ecosystem-based) management approaches, where appropriate.
- In cases where regulatory exemptions for industry are being considered, providing transparent and publicly accessible analysis of the harms to endangered species – and the relevant economic costs and benefits – that would likely accrue through these

¹ See for example Smart Prosperity Institute (2018a) [Species in the Balance: Partnering on tools and incentives to recover species at risk](#), Smart Prosperity Institute; Smart Prosperity Institute (2018b) [Economic Instruments for Protecting Species at Risk on Private Land](#), Smart Prosperity Institute.

exemptions.

Given that Ontario has a disproportionate responsibility for conserving and recovering species at risk² in Canada (many species at risk are concentrated in Ontario), improving implementation of the Ontario ESA is essential.

Although our commentary is based on a selection of issues where we have particular expertise, we share many of the concerns raised in the commentaries submitted by organizations such as the Wildlife Conservation Society Canada – that the Discussion Paper places far too much emphasis on expediting development, and as a result, risks weakening the ESA’s main purpose of conserving and recovering endangered species.

Our submission begins by highlighting what Smart Prosperity Institute considers to be a significant missed opportunity in the Discussion Paper – stewardship on private land – followed by our commentary on specific questions raised in Areas of Focus 1 (Landscape Approach) and 2 (Listing Process and Protections for Species at Risk) of the Discussion Paper.

Stewardship on private land – the missing opportunity³

Overview

Although the Discussion Paper makes several references to stewardship agreements, it is nonetheless striking that it never mentions the importance of promoting endangered species stewardship on private lands. The Discussion Paper has missed a vital opportunity for advancing cost-effective conservation and recovery of endangered species, and for addressing the needs and concerns of landowners (including rural landowners) – a stated area of concern for this government and a potential big win for effective endangered species conservation.

There is extensive evidence pointing to the important role of private landowners in recovering species at risk across Canada, and in Ontario in particular. This is attributable to two factors: first, many species at risk in Ontario (and elsewhere) have sizable portions of their ranges or habitat on private land. Second, many threats to species at risk also stem from activities on private land.

Concerning the first point, previous studies have shown that most species at risk are found in southern Canada, where private land ownership predominates.⁴ For instance, the mixed wood plains ecozone in southern Ontario and Quebec has the highest concentration of species at risk in the country.⁵ Another analysis of the digitized range maps of 513 imperilled species found that approximately 90% of them occur within Canada’s agricultural extent.⁶ And an earlier study

² Throughout this document, we use the term ‘species at risk’ when referring to species listed under the federal *Species at Risk Act*, and ‘endangered species’ when referring to species listed under the Ontario *Endangered Species Act* (there is substantial overlap between the two groups of species).

³ This section synthesizes material from Smart Prosperity Institute (2018b), *op. cit.*

⁴ Kerr, J.T., and Cihlar, J. (2004) [Patterns and Causes of Species Endangerment in Canada](#), *Ecological Applications*, 14(3): 743-753.

⁵ Kerr and Cihlar (2004), *op. cit.*; Déguise, I.E., and Kerr, J.T. (2006) [Protected Areas and Prospects for Endangered Species Conservation in Canada](#), *Conservation Biology*, 20(1): 48-55.

⁶ Dr. Carolyn Callaghan, Canadian Wildlife Federation, personal communication, April 25, 2018. Dr. Callaghan’s analysis used range maps for species that were either listed under schedule 1 of SARA, or assessed by the Status of Endangered Wildlife in Canada (COSEWIC) as threatened, endangered or of special concern. These range maps

estimated that Canada's agricultural land provides habitat for approximately half of Canada's listed species at risk.⁷

On the second point, recent studies broadly agree that the main threats to Canadian species at risk include habitat loss from residential and commercial development, natural systems modification, and human intrusion and disturbance.⁸ Many of these threats stem from land use changes and activities on private land. Other important threats occurring on private land include invasive and problematic species, genes and diseases, biological resource use (such as hunting and fishing), point and non-point source pollution, and agriculture.⁹

The good news is that the Government of Ontario already possess all of the necessary tools to make progress on this issue. For instance, the ESA contains a provision whereby governments can enter into stewardship agreements with other parties to recover endangered species (sec. 16), as previously mentioned. The ESA outlines specific regulatory exemptions for safe harbour habitat (sec. 23, art. 16), and the government has developed a complementary Policy on Safe Harbour Habitat.¹⁰ The government is also implementing and supporting programs that encourage endangered species conservation on private land (among other activities), such as the Species at Risk Stewardship Fund¹¹ and the Species at Risk Farm Incentive Program (SARFIP).¹²

But many of these measures are not living up to their potential due to insufficient prioritization and support from the government. For instance, the uptake of Safe Harbour Agreements has been limited, despite their being enabled through the legislation (and regulatory exemptions) and the aforementioned policy on safe harbour habitat.¹³

The above facts make clear that changes to the existing legislation are not what is needed. Instead, a coordinated and prioritized approach between government, ENGOs, land trusts, and landowners is required – along with a commitment to testing, monitoring and learning from the implementation of policies and programs – to ensure that Ontarians get the maximum conservation benefit per dollar spent.

Designing stewardship and outreach programs on private lands

To have the greatest likelihood of success, stewardship and outreach programs on private land

were overlaid with the Canadian Agricultural Extents map (provided by Agriculture and Agri-food Canada) in ArcGIS. Approximately 90% of these species occur within Canada's agricultural extent (i.e. within land areas primarily used for agriculture). However, this does not necessarily imply that these species occur exclusively on farmland, since they might occupy riparian or remnant forest patches, or other habitats within the agricultural extent.

⁷ Federal, Provincial and Territorial Governments of Canada (2010) [Canadian biodiversity: ecosystem status and trends 2010](#), *Canadian Council of Resource Ministers*.

⁸ Prugh, L.R., Sinclair, A.R.E., Hodges, K.E. *et al.* (2010) [Reducing Threats to Species: Threat Reversibility and Links to Industry](#), *Conservation Letters*, 3(4): 267-76; McCune, J., Harrower, W.L., Avery-Gomm, S., *et al.* (2013) [Threats to Canadian species at risk: An analysis of finalized recovery strategies](#), *Biological Conservation*, 166: 254-265.

⁹ *Ibid.*

¹⁰ Government of Ontario (2017) [Safe harbour habitat under the Endangered Species Act](#), *Government of Ontario*.

¹¹ Government of Ontario (2018) [Grants for protecting species at risk](#), *Government of Ontario*.

¹² Ontario Soil and Crop Improvement Association (2019) [Species At Risk Farm Incentive Program](#), *Ontario Soil and Crop Improvement Association*.

¹³ Dr. Anne Bell, Ontario Nature, personal communication, 01 March, 2019.

should accomplish three objectives:

1. They should be **evidence-based and generate new information** for informing subsequent conservation decisions. This means that programs should identify and monitor outcomes against a “counterfactual” – such as establishing treatment and control groups¹⁴, or specifying baseline trends of threats to endangered species¹⁵ – so that program effectiveness can be evaluated and continuously improved over time. Government (co)-funding of baseline development, data gathering and monitoring efforts can play an important role here.
2. They should **tap into landowners’ existing intrinsic motivations** for stewardship or conservation. Many Ontario landowners care about endangered species and are willing to protect them on their property, but they want to be adequately recognized and compensated for their efforts.¹⁶ In some cases, payments may not be necessary and other approaches might be sufficient to motivate endangered species stewardship on private land, such as providing: (1) information on *the Ontario Endangered Species Act*, how the law applies to private landowners, the endangered species in the surrounding area, and the measures that landowners can take to help them^{17,18}; (2) regulatory assurances such as Safe Harbour Agreements (further discussed below)¹⁹; (3) signs, certificates or awards in recognition of stewardship activities.²⁰
3. They should provide appropriately targeted **incentive payments** as a complement to strictly voluntary (unpaid) stewardship activities. While intrinsic motivations are often necessary for landowners to engage in conservation, in many cases they are not sufficient. Incentive payments can help shore up additional conservation in cases where landowners perceive the species or habitat as a nuisance (e.g. wetlands on agricultural properties), or where the conservation measures entail a net cost to landowners (whether in terms of time, effort, or money). The payments should be targeted to landowners who are known

¹⁴ Ferraro, P. J. and Pattanayak, S. K. (2006) [Money for nothing? A call for empirical evaluation of biodiversity conservation investments](#), *PLOS Biology*, 4: 482-488.

¹⁵ Newburn, D., Reed, S., Berck, P., and Merenlender, A. (2005) [Economics and Land-Use Change in Prioritizing Private Land Conservation](#), *Conservation Biology*, 19(5): 1411-1420.

¹⁶ Olive, A. (2016) [It is just not fair: The Endangered Species Act in the United States and Ontario](#), *Ecology and Society*, 21(3): 13.

¹⁷ See e.g. McCune, J. and Olive, A. (2017) [Wonder, ignorance, and resistance: Landowners and the stewardship of endangered species](#), *Journal of Rural Studies*, 49:13-22.

¹⁸ This being said, policymakers need to think carefully about how to frame the information provided to private landowners, the appropriate messengers for delivering this information (e.g. local government staff, ENGO staff, peer landowners), as well as the appropriate media for landowner outreach (e.g. website, mail, radio). Each of these decisions can affect the uptake and cost-effectiveness of stewardship programs. For a concise review of these issues, see Janusch, N., Palm-Forster, L.H., Messer, K.D. and Ferraro, P.J. (2018) [Behavioral Insights for Agri-Environmental Program and Policy Design](#), presentation to 2018 Allied Social Sciences Association (ASSA) Annual Meeting, January 5-7, 2018, Philadelphia, Pennsylvania 266299, Agricultural and Applied Economics Association.

¹⁹ Olive, A. (2015) [Urban and Rural Attitudes Toward Endangered Species Conservation in the Canadian Prairies: Drawing Lessons From the American ESA](#), *Human Dimensions of Wildlife*, 20:189-205; Sorice, M.G., Oh, C.O., Gartner, T., et al. (2013) [Increasing Participation in Incentive Programs for Biodiversity Conservation](#), *Ecological Applications*, 23(5): 1146-1155.

²⁰ Olive (2016), *op. cit.*

to have endangered species or their habitat on the property (or who are capable of restoring habitat on the property), and to conservation actions that have a high ratio of conservation benefits (and other benefits) relative to economic costs.

There are a host of tools that governments can use to promote endangered species conservation on private land, including information, outreach and extension services, safe harbour agreements, cost-share schemes, conservation easements (temporary or permanent)²¹, outright purchase, and reverse auctions. We offer some thoughts below on cases where each of these tools is more likely to be cost-effective.

- **Information, outreach and extension** schemes should be the primary conservation tool in cases where the private benefits of endangered species conservation to landowners (whether in financial terms, or through the satisfaction derived from stewardship activities) exceed the private costs to the landowner.²² In other words, they are most effective for stewardship measures that provide a net private benefit to landowners, or for which there is compelling evidence that landowners are willing to perform them without compensation.
- **Safe harbour agreements** are a crucial pillar because their adoption by private landowners is completely voluntary (and unpaid), thus representing a potentially low-cost way to increase conservation efforts on private land.²³ They are also a cross-cutting enabler of other policy tools²⁴, because landowners might not be willing to participate in a payment scheme in the absence of regulatory assurances (such as a safe harbour agreement) that they can return their land to a baseline state at the end of the agreement/contracting period.²⁵
- **Cost-share and temporary conservation easement** programs are best suited for conservation measures that have demonstrably high conservation benefits (or are likely to provide these benefits), but which impose net costs on private landowners. Due to the non-permanence of temporary conservation easements, they may be particularly well-suited for species with temporary or flexible habitat requirements.

As mentioned previously, payments for conservation actions should only be provided if there is a strong ratio of conservation benefit to private costs, and these payments should be made in proportion to the net public benefits (both endangered species and other benefits, e.g. water quality improvements) of the conservation action incentivized by the

²¹ For a discussion of how to improve the documentation and use of conservation easements for species at risk recovery, see Smart Prosperity Institute (2018a).

²² Pannell, D.J. (2008) [Public Benefits, Private Benefits, and Policy Mechanism Choice for Land-Use Change for Environmental Benefits](#), *Land Economics*, 84(2): 225-240

²³ However, safe harbour agreements are not necessarily appropriate or effective for all endangered species. Appendix A of the Ontario Safe Harbour Agreement Policy identifies the Species Considerations, Habitat Considerations and Timing Considerations which influence the appropriateness of Safe Harbour Agreements for endangered species.

²⁴ Excepting permanent conservation easements, since (by definition) these should not be permitted to revert the property to a baseline state.

²⁵ Sorice, M.G. *et al.* (2013), *op. cit.*

program.²⁶

- **Permanent conservation easements** are best suited for situations where more permanent habitat protection measures are required. Although landowners should be encouraged to donate easements, compensation will be necessary in some cases since permanent easements can depress landowner property values (at least on agricultural land).²⁷ Programs which offer tax credits to landowners in exchange for donating conservation easements to land trusts (such as the Ontario Conservation Land Tax Incentive Program and the Federal Ecological Gifts Program) continue to play an important role here.
- **Outright purchase** is one of the more expensive instruments, which suggests that it should be targeted to cases where the land has a high conservation value and requires intensive management²⁸; or in cases where the landowner is not interested in securing the property with a permanent conservation easement, but is willing to sell the property.²⁹
- **Reverse auctions** could be used as an alternative to cost-share, or as a means for the government or land trusts to obtain temporary or permanent conservation easements. They may be particularly well-suited for habitat restoration efforts that are more resource-intensive, such as wetlands. Under the right conditions, the competitive bidding entailed by the auction mechanism can realize significant cost savings compared to fixed payment programs – in the order of 16% to 315%.³⁰ However, there are trade-offs. The ‘transaction costs’ (time and effort for participating in the program) of reverse auctions can be high for landowners, which could potentially discourage participation³¹. Best practices for increasing participation in reverse auctions is an area of ongoing research.

As with all societal challenges, we should not expect a ‘free lunch’ when designing stewardship programs – all programs cost money to design and administer. Moreover, monitoring is

²⁶ Boxall, P. (2018) [Evaluation of Agri-Environmental Programs: Can We Determine If We Grew Forward in an Environmentally Friendly Way?](#) *Canadian Journal of Agricultural Economics*, 66: 171-186.

²⁷ Lawley, C., and Towe, C. (2014) [Capitalized Costs of Habitat Conservation Easements](#), *American Journal of Agricultural Economics*, 96(3): 657-672.

²⁸ Mallon, C., Cutlac, M. and Weber, M. (2016) [A Cost Assessment of Ecosystem Services Procurement Using Three Mechanisms: Outright Purchases, Conservation Easements, and ALUS](#), *Alberta Innovates Technology Futures, report to Alternative Land Use Services Canada*.

²⁹ In these instances, the government or land trust purchasing the property could consider restoring the relevant habitat, securing the property with an easement that prohibits activities harming endangered species or their habitat, and then reselling the land on the real estate market. Such “revolving conservation funds” are an emerging tool around the world (including in Canada) for strategically acquiring and securing land with high conservation value. For an overview, see Hardy, M. J., Fitzsimmons, J.A., Bekessy, S.A., and Gordon, A. (2018) [Purchase, protect, resell, repeat: an effective process for conserving biodiversity on private land?](#), *Frontiers in Ecology and the Environment*, 16(6): 336-344.

³⁰ The range of cost savings depends on the auction program design as well as other factors. For review and discussion, see Latacz-Lohmann, U., and Schilizzi, S. (2005) [Auctions for Conservation Contracts: A Review of the Theoretical and Empirical Literature](#), *report to the Scottish Executive Environment and Rural Affairs Department*.

³¹ Palm-Forster, L., Swinton, S.M., Lupi, F., and Shupp, R.S. (2016) [Too Burdensome To Bid: Transaction Costs and Pay-for-Performance Conservation](#), *American Journal of Agricultural Economics*, 98(5): 1314-1333.

absolutely essential to allow for continuous learning and improvement. Nonetheless, appropriately designed and targeted stewardship programs can go a long way towards cost-effective endangered species recovery. Given your government's focus on value for money, increasing efforts in this area are well worth considering.

Area of Focus 1: Landscape Approach³²

- *In what circumstances would a more strategic approach support a proposed activity while also ensuring or improving outcomes for species at risk? (e.g., by using a landscape approach instead of a case-by case approach, which tends to be species and/or site-specific.)*
- *Are there existing tools or processes that support managing for species risk at a landscape scale that could be recognized under the Endangered Species Act?*

We welcome the government's interest in landscape (multispecies or ecosystem-based) approaches to managing species at risk, but we note that these function as a complement to single-species management approaches – not a substitute.

Multispecies and ecosystem-based approaches to recovery planning are already enabled under the Endangered Species Act (s. 13 and s. 14 respectively), so we see no need for any legislative changes to better enable them. We also see no principled reason why the application of landscape approaches could not be extended to other areas in the endangered species policy cycle. However, in actual practice, certain stages of the overall process for listing and recovering endangered species under the ESA are more amenable to landscape approaches than others. We see the strongest potential for adopting landscape (multispecies and ecosystem-based) approaches in Government Response Statements, followed by modest potential for landscape recovery strategies, and for landscape-scale species assessments by the Committee on the Status of Species at Risk in Ontario (COSSARO).

The discussion questions in the Government Discussion Paper also raise the possibility of landscape-scale authorization/permitting for a 'proposed activity' (e.g. a resource extraction project). We strongly advise against this approach to authorizations, since the effects of proposed activities on endangered species still need to be assessed on a species-by-species basis if they are to satisfy the requirement of providing an overall benefit to the species (as outlined under sec. 17, art. (2)(c) of the Act), or of not jeopardizing the survival or recovery of the species (as outlined under sec. 17, art. (2)(d) of the ESA).³³

This still leaves at least three stages in the endangered species policy cycle where increased uptake of landscape approaches would be worth considering under the appropriate circumstances: (a) COSSARO assessments; (b) Recovery strategies; (c) Government response statements. We comment on each of these in turn.

A. COSSARO assessments

While they can be scientifically rigorous and useful in some circumstances (such as for geographically overlapping species with shared biology and/or threats), practically speaking

³² This section summarizes and adapts material from Smart Prosperity Institute (2018a), *op. cit.*

³³ Of course, this is not the only piece of evidence needed to demonstrate an overall benefit to a species.

there is relatively limited scope for landscape (multi-species/ecosystem-based) COSSARO assessments. Most of COSSARO's activities consist of re-assessing already listed species³⁴ (and this is true for the foreseeable future), so there are relatively few species that could potentially be 'bundled' into a landscape-based species assessment.

Moreover, most of COSSARO's species assessments are adapted from those of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). So for landscape approaches to be viable, either COSEWIC itself would need to assess each of the relevant species within the same time frame, or COSSARO would need to conduct one or more original assessments that are not based on those of COSEWIC – which would certainly require additional resources. These caveats notwithstanding, it is helpful to retain the option of conducting original COSSARO assessments in cases where they would be scientifically defensible, cost-effective and logistically feasible. Relevant cases might include species with shared ranges³⁵ as well as overlapping threats and recommended recovery actions and/or taxonomic similarity.

B. Recovery strategies

As of January 2019, 27 of the species listed under Ontario's Endangered Species Act did not have recovery strategies completed within their legislated timeframes – a small-but-significant fraction of the approximately 170 species that have been listed as threatened or endangered under the Act.³⁶ While this might suggest an opportunity for increasing the role of landscape approaches in recovery planning, the actual track record of these approaches has been mixed, and they face barriers similar to those for landscape-based approaches to COSSARO species assessments.

Performance

Landscape (multispecies and ecosystem-based) recovery strategies are more likely to be biologically effective and cost-effective if they meet certain key requirements, such as a common geography, overlapping threats and recommended recovery actions³⁷ and shared habitat associations.³⁸ They also require adequate resources in order to ensure that each species' unique biological and ecological requirements are taken into account, as well as adequate monitoring to ensure that implemented recovery actions actually benefit endangered species on the ground and in the water.

In actual practice multispecies recovery strategies have led to rather uneven conservation

³⁴ See discussion in the WCS Canada submission.

³⁵ But for which Ontario only encompasses a small fraction of their range throughout the country, which could potentially justify an independent COSSARO assessment.

³⁶ See Ontario Nature (2019) [New Year, New Plea](#), *Ontario Nature Blog*.

³⁷ Clark, A.J., and Harvey, E. (2002) [Assessing Multispecies Recovery Plans under the Endangered Species Act, Ecological Applications](#), 12(3): 655-662; Evans, M.C., Possingham, H.P., and Wilson, K.A. (2011). [What to Do in the Face of Multiple Threats? Incorporating Dependencies within a Return on Investment Framework for Conservation, Diversity and Distributions](#), 17(3): 437-50; Auerbach, N.A., Ayesha I., Tulloch, T., and Possingham, H.P. (2014) [Informed Actions: Where to Cost-effectively Manage Multiple Threats to Species to Maximize Return on Investment, Ecological Applications](#), 24(6): 1357-1373.

³⁸ Poos, M.S., Mandrak, N.E. and McLaughlin, R.L. (2008) [A Practical Framework for Selecting among Single-Species, Community-, and Ecosystem-Based Recovery Plans](#), *Canadian Journal of Fisheries and Aquatic Sciences*, 65(12): 2565-2566.

outcomes – possibly because they were not always designed and implemented in line with the above recommendations. Within the United States, single-species recovery strategies were found to be several times more likely to improve recovery outcomes relative to multispecies plans.³⁹ U.S. multispecies recovery strategies were also less likely to contain information on species' specific biology and were updated less frequently than single-species plans.⁴⁰ Multispecies recovery strategies under Canada's Species at Risk Act were also less likely to identify species' critical habitat compared to single-species plans.⁴¹ An older review study commissioned by WWF Australia⁴² found that single-species and multispecies plans were approximately equivalent in terms of improvements to species' status; however, species close to extinction showed more improved statuses under single-species plans. The study authors recommended using single-species approaches if habitat requirements (especially critical habitat) are the focus of recovery planning.

Hurdles to implementation

In practical terms, the largest hurdle to using landscape approaches in species recovery strategies lies in the fact that recovery strategies must be completed within the timelines prescribed by the ESA. Given that COSSARO typically uses COSEWIC assessments as the basis for its own Ontario-specific studies, this means that the former must closely coordinate with the latter to ensure that COSEWIC assesses two or more candidate species for a landscape recovery strategy within the same year. Alternatively, COSSARO could independently assess one or more candidate species instead of basing their assessments on COSEWIC. As mentioned previously, this would require additional resources and capacity from COSSARO, which is already under-resourced (see the commentary from Wildlife Conservation Society Canada for discussion).

Recommendations

Despite the challenges outlined above, there may still be some opportunities for developing judicious landscape recovery strategies within the legislated timeframes. First, in cases where these approaches have a strong presumption of being more cost-effective than single-species approaches, the government could better enable landscape recovery strategies by providing COSSARO with additional resources for 'bundling' candidate species together in a landscape-scale species assessment (as referenced in the discussion above).

³⁹ See Boersma, P.D, Kareiva, P., Fagan, W.F. *et al.* (2001) [How Good Are Endangered Species Recovery Plans? The effectiveness of recovery plans for endangered species can be improved through incorporation of dynamic, explicit science in the recovery process, such as strongly linking species' biology to recovery criteria](#), *BioScience* 51(8): 643-649; Clark and Harvey (2002), *op. cit.*; Taylor, Martin F.J., Suckling, K.F., and Rachlinski, J.J. (2005) [The Effectiveness of the Endangered Species Act: A Quantitative Analysis](#), *BioScience* 55(4): 360-367. However, this may simply be a result of selection bias — in other words, it's possible that species at greater risk of extinction are more likely to be included in multispecies recovery strategies. For discussion, see Schwartz, M.W. (2008) [The Performance of the Endangered Species Act](#), *Annual Review of Ecology, Evolution, and Systematics*, 39(1): 279-299.

⁴⁰ Clark and Harvey (2002), *op. cit.*; Moore, S.A. and Wooller, S. (2003) [Review of Landscape, Multi- and Single Species Recovery Planning for Threatened Species](#), WWF Australia.

⁴¹ See Brassard, C. (2014) [Recovery planning under Canada's Species at Risk Act](#), Thesis submitted to the Faculty of Graduate and Postdoctoral Studies in partial fulfillment of the requirements for the degree of Master of Science, Department of Biology, University of Ottawa. However, the author notes that, after the Supreme Court of Canada's decisions regarding Sage Grouse and Nooksack Dace, multispecies recovery plans appear just as likely as single-species plans to identify critical habitat.

⁴² Moore and Wooller (2004), *op. cit.*

Second, governments could consider piloting recovery strategies in which poorly understood endangered species are bundled together with well-studied species into multispecies and ecosystem-based recovery strategies, provided that they meet the criteria of shared geographies as well as taxonomic similarity and/or overlapping threats and recovery actions (as discussed previously). The United States has already experimented with this approach⁴³ for several poorly understood endangered species, which could help safeguard against the risk that gaps in our scientific knowledge will lead to further delays in implementing recovery actions that have a reasonable likelihood of benefitting these species.

This approach would require dedicating sufficient resources to monitoring all of the species included in the recovery strategy, to verify whether the implemented recovery actions are actually benefitting each of the relevant species. Policymakers could always retain the option to ‘unbundle’ the less understood species from the recovery strategy if further scientific information becomes available – e.g. on its abundance and distribution, life processes, threats to its survival, or recommended recovery actions – and this new information is enough to warrant a separate recovery strategy.

C. Government Response Statements (and related analyses)

In our view, Government Response Statements present the major opportunity for mainstreaming landscape (multispecies and ecosystem) approaches into endangered species policy. Landscape approaches to Government Response Statements would enable the government to address conservation challenges for multiple species in a shared geographic area. They would transparently outline the recovery goals for each of the species, the recovery actions that they plan to implement (or will be subjecting to further analysis – see next paragraph), and how much overall funding they intend to commit to recovering the suite of species. While this goes beyond what is currently required of Government Response Statements to some extent, we believe that the benefits of both increased transparency and improved efficiencies from landscape approaches would outweigh the costs of the increased resources needed to prepare them. Moreover, closer coordination between the authors of recovery strategies and Government Response Statements could help mitigate some of these costs (see the commentary from WCS Canada for more information).

In the many cases where a commitment to endangered species recovery is likely to have far-reaching implications for economic development and land-use planning, Government Response Statements should pledge to commission detailed analyses (and publish the results on the web) of the recovery actions that they intend to prioritize, with precise timelines attached. This would provide the government with the opportunity to conduct more detailed analyses while relieving the pressure of rushing them through to meet the nine-month timeline mandated for Government Response Statements.

Harnessing insights from decision theory has considerable potential for enhancing the efficiency

⁴³ Leonard, P. (2003) [Letters](#), *Conservation Biology*, 17(3): 655-656; Evans, D.M., Che-Castaldo, J.P., Crouse, D. et al. (2016) [Species Recovery in the United States: Increasing the Effectiveness of the Endangered Species Act](#), *Ecological Society of America*, 20: 1-28.

gains from landscape approaches to endangered species management. In addition to basic information on how different recovery actions will benefit (or harm) the relevant group of endangered species and the cost of recovery actions, the decision framework should consider incorporating other key variables such as the likelihood that a given recovery action will be adopted by the relevant actors (e.g. private landowners), the expected failure rate of different recovery actions, as well as any time lags before benefits accrue.⁴⁴ Failing to incorporate critical economic and social scientific variables into decision-making could prove to be costly, both for endangered species and for government budgets. For instance, one study reviewed 129 environmental projects (not limited to endangered species recovery) in Australia, New Zealand and Italy, and found that neglecting to incorporate cost information compromised the expected environmental benefits of projects by as much as 35%.⁴⁵

Area of Focus 2 – Listing Process and Protections for Species at Risk

- *Should there be a different approach or alternative to automatic species and habitat protections? (e.g., longer transition periods or ministerial discretion on whether to apply, remove or temporarily delay protections for a threatened or endangered species, or its habitat.)*
- *In what circumstances would a different approach to automatic species and habitat protections be appropriate? (e.g., there is significant intersection between a species or its habitat and human activities, complexity in addressing species threats, or where a species' habitat is not limiting.)*

Smart Prosperity Institute fundamentally supports the Ontario ESA's listing process, which is scientifically driven and provides automatic protection for listed species. The question of whether to grant any regulatory exemptions is – and ought to be – a decision about *how* the government intends to conserve or recover the endangered species in question, not whether the government should commit to conserving or recovering them altogether.

The decision to exempt certain industries from the Act's fundamental prohibitions has been one of the most controversial aspects of ESA implementation.⁴⁶ And with good reason, since the ESA already contains ample flexibility provisions (such as the overall benefit permits under sec. 17, art. 2.d or the social and economic benefit permits under sec. 17, art. 2.d of the Act, respectively).

We are not opposed in principle to judiciously using these exemptions in cases where there is clear and compelling evidence that they would lead to significant costs to industry (and they are

⁴⁴ While it is beyond the scope of this commentary to recommend a specific decision framework, for helpful insights see Martin, T.G., Kehoe, L., Mantyka-Pringle, C., *et al.* (2018) [Prioritizing recovery funding to maximize conservation of endangered species](#), *Conservation Letters*, 11(6):e12604; Pannell, D.J. (2015) [Ranking environmental projects](#), *Working Paper 1506*, School of Agricultural and Resource Economics, University of Western Australia, Crawley, Australia; Auerbach, Tulloch, and Possingham (2014), *op. cit.*

⁴⁵ Pannell, D.J., and Gibson, F.L. (2015) [Environmental Costs of Using Poor Decision Metrics to Prioritize Environmental Projects](#), *Conservation Biology*, 30(2): 382-391.

⁴⁶ See the discussion in Environmental Commissioner of Ontario (2013) [Laying Siege to the Last Line of Defence: a Review of Ontario's Weakened Protections for Species at Risk](#), *Environmental Commissioner of Ontario*; David Suzuki Foundation, Ontario Nature and EcoJustice (2017) [Without a Trace? Reflecting on the 10th Anniversary of Ontario's Endangered Species Act, 2007](#), *David Suzuki Foundation, Ontario Nature and EcoJustice*.

unable absorb the majority of costs by passing them on to consumers).⁴⁷ But we are concerned by the precedent that has been set through the broad exemptions granted to industry as a result of the 2013 amendments to the ESA. We are also concerned with the dramatic increase in authorizations, the lack of compliance monitoring and enforcement, and the lack of transparency and public accountability in implementing the ESA, all of which have been amply documented by the Environmental Commissioner of Ontario and others.⁴⁸ Granting additional regulatory exemptions in the absence of any publicly accessible analysis of the relevant tradeoffs will only make these problems worse.

Regulatory exemptions – whether along the lines considered in the discussion questions listed above or under sec. 55, art. (1)(b) of the ESA – should be the exception rather than the rule. Especially since the ESA already incorporates the previously mentioned flexibility provisions through its permitting processes. Any regulatory exemptions granted by the government should be the result of credible, independent and transparent analyses which compares the conservation benefits and net economic costs (or benefits) incurred by the prohibitions under sec. 9 and sec. 10 of the Act (‘the fundamental prohibitions’), along with the expected impacts of relaxing these prohibitions on the above-mentioned outcomes. These studies should be subject to independent external review by qualified experts, regardless of the organization authoring or commissioning them. Moreover, the fundamental prohibitions should remain in place until the trade-off analysis has been completed and the government has made a decision on whether the prohibitions should be relaxed – in other words, species protection should remain the default for the period wherein the government is contemplating any regulatory exemptions.

Unfortunately, the *Endangered Species Act* contains no legislative requirement for the government to undertake or publicly circulate any analysis of the regulatory impacts imposed by the fundamental prohibitions for any given species. The result is that there is a paucity of publicly available studies that assess these trade-offs and inform public debate, whether authored by governments, ENGOs or academia.⁴⁹ Without these studies, the public simply cannot make informed decisions about whether any potential trade-offs between habitat protection and economic development are appropriate and feasible. Instead, concerned citizens must take the government and industry at their word when they claim that the regulatory prohibitions imposed by the ESA are too onerous and therefore require exemptions.

While such trade-off analyses are not necessarily required for every endangered species for which the government is considering a regulatory exemption, we strongly encourage the provincial government, ENGOs and the academic community to do their part in conducting and facilitating the necessary analyses in cases where the ESA’s fundamental prohibitions are reasonably anticipated to be costly.⁵⁰ If the government ultimately decides to grant a regulatory exemption to industry, then the government should release a public statement which explicitly justifies their reasons for making the decision (drawing from the trade-off analysis), as well as the

⁴⁷ *Ibid.*

⁴⁸ *Ibid.*

⁴⁹ The closest approximation to a peer-reviewed, public analysis of the socio-economic implications of endangered species conservation for Ontario’s resource sector that we are aware of is Boan, J.J., Malcolm, J.R, Mallory, D.V., Euler, D.L., and Moola F.M. (2018), [From climate to caribou: How manufactured uncertainty is affecting wildlife management](#), *Wildlife Society Bulletin*, 42(2): 366-381.

⁵⁰ These might include wide-ranging species occupying large tracts of crown land, for instance.

likely consequences for the survival and recovery of the endangered species in question.

Finally, it should be noted that instead of granting regulatory exemptions to negatively impacted industries (as a result of the transparent analyses outlined above), the government always has the option of providing other kinds of financial support, such as concessional loans or tax credits.⁵¹ Such financial supports should be transparently accounted for, and they should be no greater than what is necessary to compensate industry for the costs imposed by the ESA's prohibitions.

While this recommendation does run afoul of the 'polluter pays' principle, it's important to keep two caveats in mind. First, in the case of habitat protection regulations on crown land, the costs of endangered species protection are nonetheless borne by the public (in the form of foregone natural resource royalties, taxable firm income, and employment) even if industry is responsible for adhering to the fundamental prohibitions imposed by the ESA.⁵² Second, given that the public benefits from natural resource activities on crown land⁵³, and in some cases is concerned about geographically concentrated economic hardships that might be created by the ESA's prohibitions (e.g. resource-dependent communities in northern Ontario), in some cases it may be reasonable to ask the public to directly shoulder at least some of the costs of endangered species protection, by financially compensating negatively impacted industries.

⁵¹ C.f. Canada's Ecofiscal Commission (2018) [Responsible Risk: How putting a price on environmental risk makes disasters less likely](#), Canada's Ecofiscal Commission.

⁵² C.f. the discussion in Bošković, B. and Nøstbakken, L. (2017) [The cost of endangered species protection: Evidence from auctions for natural resources](#), *Journal of Environmental Economics and Management*, 81: 174-192.

⁵³ Canada's Ecofiscal Commission (2018), *op. cit.*