AT RISK OR DISMISSED? MAKING THE CASE FOR DESIGNATED SPECIES AT RISK LEGISLATION IN BRITISH COLUMBIA

by

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Abstract

There is an ongoing worldwide extinction crisis linked primarily to human activity. One of the most important tools for combating biodiversity loss is species at risk (SAR) legislation. British Columbia has no such legislation despite being the Canadian province with the most biodiversity and the highest number of SAR. In this thesis, I argue that BC should implement designated SAR legislation, as the current laws in the province are not providing sufficient protection to vulnerable species. I compared BC's SAR conservation efforts to those of other Canadian provinces using existing legislative regimes, species listing decisions, and recovery action plans as proxy effectiveness indicators. BC scored near the bottom of all provinces on all these measures. The provinces without legislation also performed worse on average than those with legislation in most of the tests. I also examined court decisions concerning SAR and found that provinces without legislation had slightly more favourable court decisions than provinces with legislation. Focusing on the situation in BC, I analyzed the history of the province's legislature relating to SAR. I found that any progress towards enacting new SAR legislation in the near future is unlikely. Finally, I interviewed stakeholders from the conservation community about their experiences with BC's SAR. These findings suggested that most were dissatisfied with the current state of conservation in the province.

Table of Contents

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List of Figures

List of Tables

Glossary of Terms

BC	British Columbia
BC NDP	The BC New Democratic Party, a political party forming the current provincial government (circa 2023)
CanLII	The Canadian Legal Information Institute, an open-access database of legislation and case law
Case law	The body of common law based on precedents comprising previous legal decisions
COSEWIC	The Committee on the Status of Endangered Wildlife in Canada
Designated Legislation	Used in this research to mean a piece of legislation that is specifically aimed at a particular area (in this case, species at risk)
ESA	The United States of America's *Endangered Species Act*
IUCN	The International Union for the Conservation of Nature
Jurisdiction	The area (either physical or in terms of content) where government or court can make legal decisions
Legislation	In this research, legislation encompasses laws (statutes and acts) as well as the regulations created under those laws
MLA	A Member of the Legislated Assembly, BC's legislative body
MP	A Member of Parliament, the Canadian federal legislative body
Policy	An organization's non-legislated approach to a particular topic
SAR	Species at risk
SARA	The federal Species at Risk Act
Species at risk	The term for any endangered, threatened, or otherwise vulnerable species in Canada
Westlaw	A subscription based legal research database

Chapter 1 – The Extinction Crisis and Setting the Scene for Legislative Intervention

Extinction is a natural part of the life cycle of a species that has always existed, the reverse side of the coin to evolution and speciation. However, when the balance swings too far in the direction of extinction, biodiversity is lost. When species go extinct faster than expected, it is considered an extinction event or, in severe instances, a mass extinction (Pievani, 2014). While historical mass extinction events are familiar topics in many science classes, the unfortunate reality is that we are likely living through one – the Holocene extinction event (Barnosky et al., 2011; Cafaro, 2015; Ripple et al., 2017). Unlike the competing hypotheses about what killed the dinosaurs in the most recent mass extinction event (Chiarenza et al., 2020), there is little room for argument that the Holocene extinction event is human caused (Ceballos et al., 2015; Pievani, 2014). Human impacts on other species include habitat loss and degradation from increased development of wild spaces, the accidental or intentional introduction of invasive species to ecosystems, overexploitation of species and ecosystem resources, and the effects of global climate change (which is itself linked to human activities) (Pimm et al., 2014).

Where the cause of a problem is known, there is a chance to mitigate the damage. Beyond any altruistic incentive to course-correct the detrimental effects humans have had on other species, there are many practical (and selfish) reasons to be concerned about widespread biodiversity loss. Global food security, access to clean water, and mitigation of extreme weather events are all tied to healthy and diverse ecosystems (Ehrlich & Ehrlich, 2013; Terraube et al., 2017). Intact ecosystems also benefit mental and physical health (Fisher et al., 2009).

Many jurisdictions have enacted legislation increasing protections for vulnerable species (Waples et al., 2013). The Canadian federal government and most of the provinces have designated species at risk (SAR) legislation. Unfortunately, despite having by far the most significant number of SAR, British Columbia (BC) is in the minority of Canadian provinces without dedicated SAR legislation.

The scientific community, Indigenous groups and leaders, and legal professionals have called for dedicated SAR legislation in BC (Westwood et al., 2019). The provincial government

has even acknowledged the importance of establishing designated legislation. In 2017, the BC NDP campaigned on a platform that promised SAR legislation (BC New Democratic Party, 2017). The current Minister of Environment and Climate Change was charged with developing legislation in their 2017 mandate letter (Horgan, 2017), but the timeline for enacting that legislation has been repeatedly postponed (Sarah Cox, 2019). Despite the calls for establishing provincial SAR legislation in BC, there has been very little research on whether, and to what extent, the lack of dedicated legislation affects BC's most vulnerable species. The project researches the relationship between legislation and conservation.

Defining the Distressed: A Note on Species at Risk

Different jurisdictions and administrative bodies may use their own classification terms and categories to reflect the risk urgency for each species. In Canada, and for this research, the general term used is "species at risk" (*Species at Risk Act*, 2002). The most common classification systems used in this research are the Canadian List of Wildlife Species at Risk under the *Species at Risk Act* (*SARA*)*;* the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status assessments; and BC's Red, Blue, and Yellow Lists (as well as other provincial equivalents).

Literature Review

Extinction Rates and the Biodiversity Crisis

Background extinction rates estimate how many species would go extinct over a given timeframe without additional pressures (Pimm et al., 2014). Extinction events occur when species go extinct at a higher rate than the background extinction rate (Pimm et al., 2014). For mass extinction events, some researchers set the threshold at more than three-quarters of all extant species going extinct within a short time (geologically speaking) (Barnosky et al., 2011). There have been five major mass extinctions, referred to the "Big Five", in addition to numerous smaller extinction events (Bond & Grasby, 2016). The most recent, and perhaps most famous, mass extinction was the Cretaceous-Tertiary, or K-T, extinction event about 66 million years ago (Chiarenza et al., 2020). In addition to the extinction of non-avian dinosaurs,

the K-T extinction is known for how it dramatically altered global biodiversity, leading to the rise of mammals as the dominant species (Bond & Grasby, 2016).

While it is relatively easy to point to the fossil record and agree that the Big Five were mass extinction events, it is more challenging to definitively say one of those global catastrophes is unfurling (Barnosky et al., 2011). Despite this, the consensus is that we are in the midst of a sixth mass extinction, the Holocene extinction event (Ceballos et al., 2015; Pievani, 2014; Ripple et al., 2017). Current extinction rates are significantly elevated, with estimates ranging between 100 to 1000 times higher than the background extinction rate (Ceballos et al., 2015; Pimm et al., 2014).

While the long-term outcome of this elevated extinction rate may remain uncertain, the cause is much more apparent than with historical mass extinction events (Bond & Grasby, 2016; Chiarenza et al., 2020). Humans are the primary cause of the current accelerated extinction rate, both directly and indirectly. This is reflected in the alternative name for the Holocene extinction event: the Anthropocene extinction event (Ceballos et al., 2015; Pievani, 2014).

This loss of biodiversity is of great concern. The loss of a single species, whether pollinator or predator, can cause multi-trophic domino effects that impact entire ecosystems (Terraube et al., 2017). Of particular importance, healthy ecosystems supply services that directly and indirectly support human health. These range from access to potable water, to the availability of resources for food or medicine, to decreasing disease transmission (Dirzo et al., 2014; Terraube et al., 2017). Additionally, humans derive psychological and mental health benefits from spending time in nature (Fisher et al., 2009).

When discussing biodiversity loss and SAR, there is a tendency, both in research and in calls to action, to focus on preventing extinctions (Dirzo et al., 2014; Gaston & Fuller, 2008). However, decreases or disappearances of populations at more local scales can have equally devastating impacts on ecosystems (Gaston & Fuller, 2008). While the continued existence of a keystone species elsewhere in the world may be comforting in the abstract, it does nothing to restore ecosystem functions to an area where that species has been lost (Gaston & Fuller, 2008; Raymond et al., 2018).

Where Science Meets Law: The Difficulty of Assessing Conservation Effectiveness

Assessing the effectiveness of conservation measures is notoriously difficult and imprecise (Geldmann et al., 2013). When dealing with SAR, there are ethical reasons why using pure experimental design and implementing a "treatment" of conservation measures in one area while leaving another unprotected as the "control" is not viable. Additionally, conservation measures must be applied *in situ,* which makes it functionally impossible to eliminate all other variables that could influence a species' survival, such as disease, severe weather events, and shifts in public opinions about nature.

As an alternative, environmental science has a history of using other measurements and data as proxy indicators for conservation effectiveness. Popular proxies have included changes to canopy and foliage cover over time (Leverington et al., 2010); assessments of corruption in governing bodies (Eklund & Cabeza, 2016); and counter-factual models that compare a species' persistence against projections of how the population would have fared without intervention (Akçakaya et al., 2018). Proxy indicators of particular interest to this research include species listing status decisions (Favaro et al., 2014) and analyses of protection plans developed for SAR (Haines et al., 2013). Previous research has compared the effectiveness of Canada's *Species at Risk Act* to the American *Endangered Species Act,* both through purely qualitative comparisons of the language of the two acts (Waples et al., 2013) and by scoring the actions taken under each act to protect species (Olive, 2014a). However, there is a significant gap in research comparing SAR legislation between Canadian jurisdictions.

Contextualizing Current Species at Risk Protections

Focus-Fire on the Federal System: A Note on the Colonial Legal Practices

The legislation that governs SAR protections in Canada encompasses laws from multiple sources and levels of government. For this project, I focussed on two pieces of the puzzle: provincial and federal legislation within the Canadian colonial legal system. It is essential to acknowledge that these are only two layers of the complex tapestry of how SAR are governed and protected. This system does not account for the Indigenous laws of the

nations whose territories overlap with the same geographic areas, which may also contain protections for species conservation.[1] Additionally, municipal bylaws, internal regulation by industries, and private land-owner agreements can all contribute or detract from SAR conservation (Hill et al., 2019; Olive, 2014b; Reid, 2013).

Legislation or Policy: Why Make a Distinction?

Throughout this research, I use the term "legislation" to refer to both legislation and regulations. As a distinction, policies, even those published publicly, were not included in the analyses of legislation. Legislation, regulation, and policy are three terms often used in close conjunction, so it is helpful to distinguish between them.

Legislation is what most people think of as "laws". Each piece might more precisely be called a statute, act, or code (Department of Justice of Canada, 2021a). A legislative body enacts legislation. For Canada, this is the House of Commons, comprising elected Members of Parliament. BC's equivalent is the Legislative Assembly. There is a process to enact proposed legislation, usually involving several steps of debate and opportunities for amendments before the final vote (Department of Justice of Canada, 2021a). Once enacted, legislation remains in effect until it is repealed or replaced, typically involving further discussion and another vote.

Regulations are similar to legislation but are made by the administrative body responsible for each act rather than the entire legislature (Department of Justice of Canada, 2021a). As with legislation, there is an official process to enact regulations. Typically, this requires notice to the public, allowing for amendments to draft regulations, although there are usually no rounds of public voting (Department of Justice of Canada, 2021a). Regulations, like legislation, remain in effect until repealed.

Policies establish a plan of action or guidelines for operation (Canadian Heritage Information Network, 2021). Policies can be formal or informal. They may be public or kept

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[1] Language around the Indigenous peoples of Canada, particularly the legal language that is adopted and imposed by the colonial legal system, has changed over time. While this research will predominantly employ the term Indigenous, some of the outdated language remains in effect in various pieces of legislation and in relation to different organizational structures and may be employed when directly referring to those situations.

internal to an organization. Government policies must align with existing legislation (Canadian Heritage Information Network, 2021). In contrast to legislation, there is no specific required process to draft, amend, or remove policies. A government's policies might inform new legislation but cannot create additional restrictions or prohibitions (Department of Justice of Canada, 2021a).

All three tools serve important purposes in governance. Legislation and regulations set legal rights and provide a means of enforcing those expectations by establishing offences and penalties. Legislated protections benefit from stability and certainty, as they cannot be changed without due process. However, due process also makes enacting or adapting legislation and regulations in response to changing circumstances slow and inefficient. Conversely, policy can be altered or changed quickly, making it flexible and responsive (Canadian Heritage Information Network, 2021). The trade-off is that protections and expectations established under policy do not have the same guarantee of persisting, as they can be removed or altered with less input or oversight than repealing legislation. Indeed, government policies are often changed following an election to reflect new priorities and mandates.

The Constitution and the Division of Powers

Canada has a federal legal structure. This means that the national, or federal, government shares power and the responsibility to create and enforce laws with provincial governments. Part VI of the *Constitution Act* establishes the division of these powers (1867). As another piece to this puzzle, Canada also comprises three jurisdictions that are territories, not provinces, where the federal government retains some of the legislating and enforcement rights that would otherwise belong to provincial governments.[2]

While some areas fall solely to one level of government or the other, they share jurisdiction for the environment. In practice, this shared jurisdiction has made the federal

[2] Of note, I use the term "jurisdiction" throughout this research to refer to the provinces and the federal jurisdiction collectively. I use "provinces" when I do not include the federal jurisdiction.

government cautious not to infringe on provincial jurisdiction (Becklumb, 2013). Wildlife conservation and species protection are primarily under the jurisdiction of the provinces.

The Federal Species at Risk Act (SARA)

The federal *Species at Risk Act* (*SARA*) is the national legislation protecting SAR (SC 2002, c. 29). Protections under the act include requirements to create action and recovery plans for *SARA*-listed species and to identify and preserve critical habitat. However, listed species are not guaranteed protection everywhere in Canada. *SARA* applies only to federal species: migratory birds, aquatic species, and any species on federal crown lands (see Figure 1). Non-federal species must rely on other sources to be assured those same protections.

There are override provisions in *SARA* that allow the federal government to step in if a province is not taking sufficient conservation measures for a *SARA*-listed species or their habitat (*Species at Risk Act,* SC 2002, c.29 at s. 34)**.** In practice, these override provisions have rarely been exercised (Palm et al., 2020).

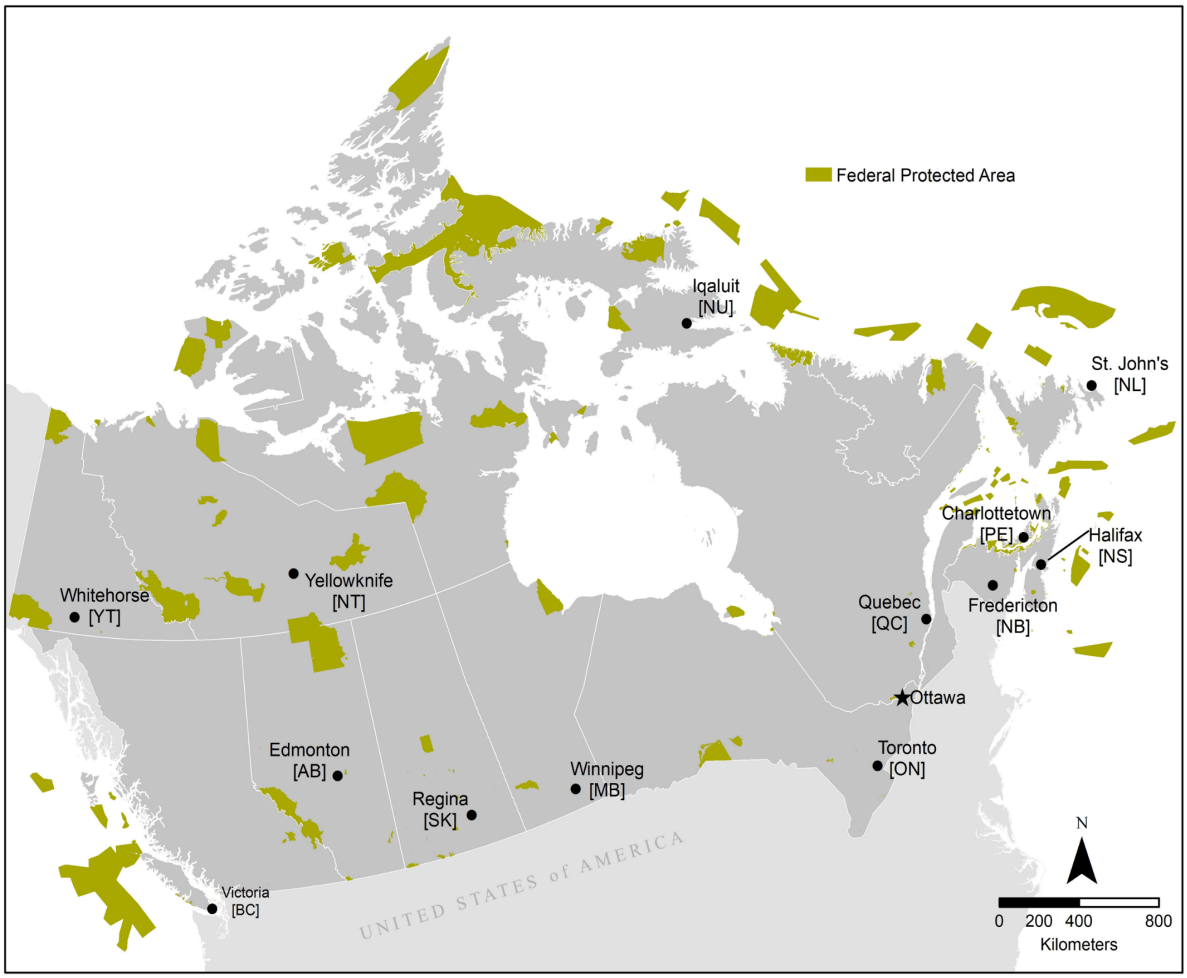

Figure 1 - Map of Canada showing federal crown lands. Readers will note the relatively small area identified, particularly in western provinces. (Map by Olea Vandermale.)

Provincial Species at Risk Legislation

Currently, there are six provinces with designated SAR legislation: Manitoba (*Endangered Species and Ecosystems Act*, CCSM c E111 (1990)), Ontario (*Endangered Species Act*, SO 2007, c 6), Québec (*Act Respecting Threatened or Vulnerable Species*, CQLR c E-12.01 (1989)), New Brunswick (*Species at Risk Act*, RSNB 2012, c 6), Nova Scotia (*Endangered Species Act*, SNS 1998, c 11), and Newfoundland and Labrador (*Endangered*

Species Act, SNL 2002, c E-10.1). The Northwest Territories also has designated territorial legislation (*Species at Risk Act*, SNWT 2009, c 16).

On the other side of the equation, BC, Alberta, Saskatchewan, and Prince Edward Island all rely on provisions in non-designated legislation to provide provincial protection to SAR. Yukon and Nunavut also have no designated SAR legislation.

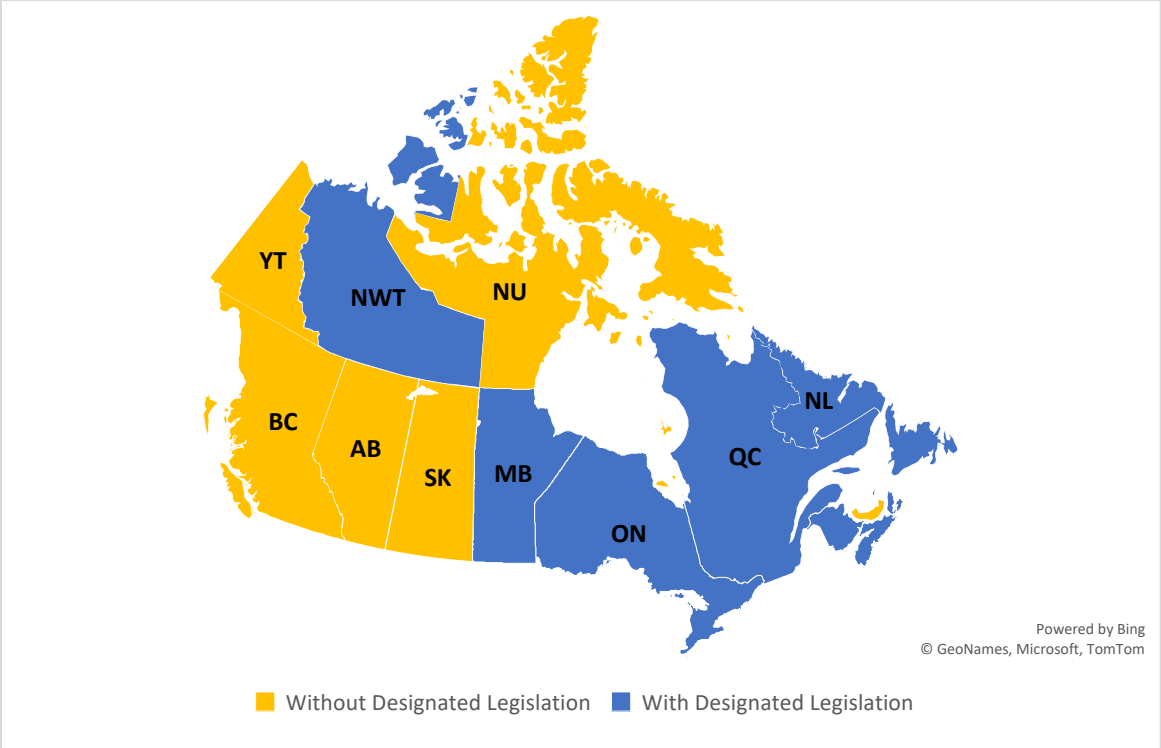

Figure 2 – Map of Canadian jurisdictions with and without designated SAR legislation. (Created using Microsoft Excel.)

Narrowing the Field: Why Nine Provinces?

Readers will note that of the thirteen jurisdictions in Canada, this research focuses on only nine. Since laws do not exist in a vacuum, or even in controlled laboratory conditions, it is not feasible to isolate the impacts of legislation while eliminating all external variables. To reduce variables that could arise from different relationships between jurisdictions, I looked at only the nine provinces that share a legal system. Yukon, Northwest Territory, and Nunavut, as territories, have a different relationship to the federal government and the division of powers than the provinces (Becklumb, 2013). The other notable exclusion is the province of Quebec, which operates under a civil law legal system, in contrast to the common law system employed across the rest of Canada.

BC's Approach to Species at Risk

BC's current approach to SAR protection relies on provisions spread across a several statutes and regulations. The Ministry of the Environment and Climate Change lists the following provincial statutes as having protections for SAR:

Wildlife Act (RSBC 1996, c 488);
Forest and Range Practices Act (SBC 2002, c 69);
Oil and Gas Activities Act (SBC 2008, c 36);
Ecological Reserves Act, (RSBC 1996, c 103);
Park Act, (RSBC 1996, c 344); and
Land Act, (RSBC 1996, c 245).

In addition, the province lists *SARA* (SC 2002, c 29) and the international *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (1973) as providing protections to SAR.

Designated species at risk legislation has been an ongoing topic of conversation in BC. Bills introducing SAR legislation have been proposed in 2010 (Bill M 207), in 2011 (Bill M 211), and three times in 2017 (Bill M 208; Bill M 224; Bill M 226). These bills have never been proposed by a member of the governing political party, and none have passed the first reading (Westwood et al., 2019).

Thesis Statement and Research Questions

This research aimed to examine what impact species at risk legislation has on conservation. I looked at two main areas of inquiry: how BC's approach to SAR compares to other provinces in Canada and how BC's approach to SAR is operating within BC. The research questions that guided this project are:

1. Do provinces with designated SAR legislation perform better on an assortment of proxy indicators of conservation effectiveness when compared to provinces without designated SAR legislation?
2. Do courts side more favourably with SAR in litigation matters in jurisdictions with designated SAR legislation compared to those without legislation?

3. Are there gaps in BC's current approach to SAR conservation and protection?
4. What barriers and opportunities affect SAR legislation development and implementation in BC?

I argue that the presence of designated SAR legislation will positively affect conservation. Provinces with legislation will perform better than those without across all proxy indicators assessed, including court decisions. I also demonstrate that BC's current SAR legislative approach leaves gaps in protecting and conserving vulnerable species.

Research Direction, Methods, and Methodological Approach

The approach used in this research is broadly separated into two categories: 1) a large-picture legal and archival research-based examination of SAR protections across the country and 2) more detailed interview-based case studies of how SAR are being protected in BC.

For the first part, I sourced information from official government publications and databases and used that information to create data sets. I used proxy indicators for conservation effectiveness to compare provinces with and without designated legislation. These proxies looked at the completeness of legislative protections, decisions to list or not list species as at risk, and the number of conservation plans produced for listed species. I also used case law from courts and tribunals to look at trends in judicial decisions relating to SAR.

For the second part of the study, I drew from elements of a community-based participatory research methodology (CBPR). CBPR is a methodology that works with, and for, the communities that the project is meant to help (Ashok et al., 2017). It is a common methodology in health sciences but can add value to research across many disciplines (Stanley et al., 2015). In a CBPR project, the researcher works with participants from the community throughout the research process to ensure that interview questions and the research direction are tailored to reflect the experiences and concerns of those participants (Jagosh et al., 2015).

The six principles of CBPR are:

1) promoting active collaboration and participation at every stage of research,
2) fostering co-learning,
3) ensuring projects are community-driven,

4) disseminating results in valuable terms,
5) ensuring research and intervention strategies are culturally appropriate,
6) and defining community as a unit of identity (Ablah & Bronleewe, 2016).

Benefits of this approach include developing research questions that are more relevant to the communities most affected, increasing the use and applicability of the data beyond the research project, and translating research into policy (O'Fallon & Dearry, 2002).

Given the time constraints of this project, CBPR was more a guiding principle than a fully implemented one in this research. These constraints include the fact that I split my time and the research into two distinct categories, as well as additional challenges that came with finding participants and scheduling interviews, particularly during the global Coronavirus pandemic. Consequently, I did not do an initial round of interviews with community participation to develop the research questions and direction of the interviews and research as would have been ideal when applying a CBPR methodology. Instead, I sourced the initial interview framework from existing resources, including an open letter to the BC government from Indigenous leaders, scientific and legal professionals, conservation groups, and other affected communities (Hume et al., 2012; Westwood et al., 2019).

I recruited initial participants through an emailed open call for interest that was kindly supported by Dr. Tom Dickinson, a professor emeritus at Thompson Rivers University. At the end of each interview, participants were encouraged to recommend additional possible participants, following a snowball sampling method (Naderifar et al., 2017). The semi-structured interviews allowed participants to express their thoughts and experiences without constraint and in their own words. The interviews also included questions to participants about what areas they saw as valuable for further research. Responses from earlier interviews informed follow-up and additional questions in later interviews. Interviews were recorded, and participants received the written transcripts and the opportunity to correct or clarify any information, add additional comments, or retract any statements they no longer wished to have included. Participants were also offered the option to have the completed research forwarded to them.

Research Methods and Analyses

Since each part of this thesis employs complementary methods to source information and data, the relevant chapter will include detailed description of the methods. The following section contains a brief overview of the methods employed and a description of the data analysis processes.

The On-Paper Protections: Legislation, Listing Decisions, and Databases

The first portion of this project focussed on comparing BC's SAR governance approach to other Canadian provinces. The objective was to compare qualitatively and quantitatively whether the absence of designated legislation means BC is less effective at conserving SAR conservation than provinces with designated legislation. Data for this portion of the research was obtained from each jurisdiction's legislation database, the official government website for the relevant ministry or department in each jurisdiction, and any linked databases such as the COSEWIC database. Further details on how the information was collected and quantified are available in Chapter 2.

The In-Court Enforceability: Case Law and Court Decisions

The second portion of this project focused on whether courts uphold the protections in each jurisdiction. The objective was to collect and analyze the relevant case law for trends in court decisions. I collected the cases using two Canadian legal databases: Westlaw and CanLII.[3] I then reviewed the results for content before finalizing the collection of cases. Further information on case law collection and analysis is available in Chapter 3.

The In-Practice Applications: Interviews and Case Studies

The final portion of this research focussed on how protections are implemented on the ground. The objective was to hear from participants involved with protected areas or SAR risk

[3] Westlaw has a Canadian legal database that covers not only the standard courts, but also many tribunals and administrative bodies, but requires a paid subscription to access. CanLII, short for the Canadian Legal Information Institute, is an open-access database that covers Canadian courts and legislation.

in BC about their experiences with where protections are, and are not, working. I obtained data for this from semi-structured interviews with participants connected to at least one of two case study sites in BC: Lac Du Bois Protected Area and Wells Gray Provincial Park. Participants signed consent forms and were offered anonymity, although most declined choosing to have their quotes and opinions attributed to them by name. Ethics approval for participants' interviews was obtained from Thompson Rivers University #102828.

This section also examines the policies and actions surrounding SAR in BC not covered by legislation. Additional information for this chapter was obtained from BC's legislature regarding proposed SAR bills. Further information about the participant interviews and case studies is available in Chapter 4.

Data Analysis – Statistics and Significance

As this research shows how the SAR protections and conservation compares across different jurisdictions in Canada, there are practical limitations to which statistical analysis methods are appropriate. I used non-parametric tests for the statistical analyses of the quantitative data. I used these as I mainly worked with small population sizes (the nine provinces in the research).

The standard practice of setting the threshold for rejecting the null hypothesis at $\alpha = 0.05$ is difficult to employ with such small populations. There is also some precedent in the scientific discourse about moving away from relying on threshold significance levels (Agathokleous, 2022; Vidgen & Yasseri, 2016; Wasserstein & Lazar, 2016). A primary reason for this shift is a critique of the arbitrary decision to base significance on tradition and common practice rather than biological or functional thresholds (Agathokleous, 2022; Kennedy-Shaffer, 2019). Proposed alternatives include reporting actual p values without reference to a significance threshold and including effect size or confidence intervals when reporting statistical analyses (Gardner & Altman, 1986; Halsey, 2019; Nakagawa & Cuthill, 2007; Sullivan & Feinn, 2012).

As a further complication, this research blends scientific and legal analysis principles. Statistical significance has a history of being challenging to translate into judicial or legal significance (Carden, 2006; Moore et al., 2018). *Proof* is a word that is practically taboo in

science, where space is always held for uncertainty. Hence, the language of rejecting a null hypothesis even when the results meet high statistical significance thresholds rather than proving the alternate hypothesis. However, courts do deal in proof. The standard of proof for legal decisions can range from "on a balance of probabilities" for most civil matters to the much more stringent criminal standard of "beyond a reasonable doubt" (Department of Justice, 2021). These murky waters become further muddied in areas like administrative law, where instead of using a standard of proof, courts judicially review administrative decisions according to standards of review that range from reasonableness to correctness (*Canada (Minister of Citizenship and Immigration) v Vavilov*, 2019). These differences in language and perspective mean that translating what is considered proof (or the absence of disproof) in science to legal standards has been difficult in the past (*Clements v Clements*, 2012). This task is challenging enough that the legal profession puts out advice and guidelines for lawyers and judges on interpreting the testimony of expert witnesses and scientific reports in court (Mcleod-Kilmurray, 2013).

Given the limitations of this research, I have adopted the approach of reporting *p* values rather than setting a significance threshold (Agathokleous, 2022; Halsey, 2019). I have also included effect sizes for statistical tests (Maher et al., 2013; Nakagawa & Cuthill, 2007; Sullivan & Feinn, 2012).

Analyses and Statistical Tests Used

Because the data sets were relatively small and manageable, I used basic statistical software for the analyses, which were performed using Microsoft Excel's Analysis ToolPak or done by hand.

Mann-Whitney U-test

I used the Mann-Whitney *U* test most frequently in analyzing the data, otherwise known as the Wilcoxon rank-sum test. The Mann-Whitney *U* test is a non-parametric test that compares two independent populations with small sample sizes, analogous to a two-sample t-test (Nachar, 2008). The advantage over a t-test for this research are that the Mann-Whitney *U* test can be employed with both smaller *n* sizes and for ordinal data (Karadimitriou & Marshall,

n.d.). In this research, the two populations are provinces with and provinces without designated SAR legislation.

The Mann-Whitney *U* test is calculated by assigning a numerical rank to all the data points from smallest to largest, beginning with 1 (tied groups are given the mean of their rankings). The formulae to calculate the *U* value are:

$$U_1 = R_1 - \frac{n_1(n_1+1)}{2} \qquad \textit{and} \qquad U_2 = R_2 - \frac{n_2(n_2+1)}{2}$$

where R_1 is the sum of the ranks for population 1 and R_2 is the sum of the ranks for population 2. The smaller of U_1 and U_2 is the *U* value (Nachar, 2008).

To calculate the value of *p* in Excel, the *U* value needed to be converted to a *z*-test statistic using the formula:

$$z = \frac{U - \left(\frac{n_1 n_2}{2}\right)}{\sqrt{\frac{n_1 n_2 (n_1 + n_2 + 1)}{12}}}$$

(Karadimitriou & Marshall, n.d.).

The *p* value can then be found using the following equation in Microsoft Excel:

$$p = \text{NORM.DIST}(z, 0, 1, \text{TRUE}) * 2$$

The null hypothesis, H_0, for a Mann-Whitney *U* test is that there is no difference between the two populations, and H_A is that the two populations are different from each other. The smaller the *p* value, the less likely that H_0 is true.

Effect Size: Common language effect size and rank-biserial correlation

I used a rank-biserial correlation to find the effect size for the comparisons that used the Mann-Whitney *U* test. A rank-biserial correlation is related to the common language effect size, where *f* represents the proportion of all possible pairings that are favourable to a conclusion. In this research, for example, *f* might represent the total number of pairings where a province with designated legislation outperformed a province without designated legislation

(Kerby, 2014). The formula to calculate the common language effect size from a Mann-Whitney *U* test is:

$$f = \frac{U_1}{n_1 n_2}$$

Rank-biserial correlations report the effect size by taking the proportion of favourable pairs, *f,* minus unfavourable pairs, *u* (equal to 1 – *f).* Rank-biserial correlations range from -1 to 1. The further the value is from zero, the larger the effect size and the stronger the relationship between the data (Kerby, 2014). The formula to calculate a rank-biserial correlation is:

$$r = f - u$$

For the Mann-Whitney *U* test, the rank-biserial correlation formula can be rewritten as:

$$r = \frac{2U_1}{n_1 n_2} - 1 = 1 - \frac{2U_2}{n_1 n_2}$$

(Kerby, 2014).

Researcher Positionality

I am a non-Indigenous woman in my early thirties from a middle-class background. I grew up in Kamloops. I moved away after high school for university, returning to do a Master of Environmental Sciences at Thompson Rivers University. The protected areas I selected for the case study portion of this research, explored in Chapter 4, are ecosystems familiar to me and important to forming my relationship with nature. My earliest connections to ideas of endangered species are arguably the two most recognizable species from Lac Du Bois and Wells Gray, burrowing owls, and caribou.

My interest in this area of research comes out of my educational background. I did an undergraduate degree in ecology before transitioning to law. I attended law school at the University of Victoria, where the curriculum allows for a focus on environmental law. After law school, I completed legal articles with the Department of Justice, the federal government. My article experience was litigation based, primarily in relation to public law. I did have the opportunity to work on files that dealt with environmental issues. After being called to the Bar

by the Law Society of British Columbia, I felt that working in law, even in environmental law, was not the right fit for me. By the time an issue makes it to environmental litigation it is because there is a conflict that could not be resolved without legal intervention. Environmental law work is a critical step to have in place to uphold and enforce environmental protections, but legal practice is reactive rather than proactive by nature. I decided to return to environmental science to complete a Masters. My goal with this research is to integrate my educational background to explore how environmental science informs law and how law directs conservation.

Thesis Overview

This thesis is divided into six chapters. Chapter 1 gives an overview of the background and context regarding SAR legislation in Canada and presents this project's research questions and objectives.

Chapter 2 begins to answer the objectives of this research by looking at the large-scale picture. In this chapter, I compared provinces with and without designated legislation using proxy indicators for conservation effectiveness. This corresponds to research question 1.

Chapter 3 brings in an analysis of the role of case law in upholding and enforcing SAR protections. I compare judicial and tribunal decisions relating to SAR across different jurisdictions. This corresponds to research question 2.

Chapter 4 shifts the scale of the research to focus on the situation in BC as it currently stands. This chapter focuses on the political reasons for and against SAR legislation development. This is done by examining public records of political debates, mandate letters to ministers, and assessing proposed legislation for BC. It begins to answer research question 4.

Chapter 5 deals with the observed experiences of SAR conservation in BC. This is done through participant interviews. This corresponds to research question 3 and continues to answer research question 4.

Chapter 6 summarizes the research findings and includes recommendations about how to proceed with SAR legislation development in BC.

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Chapter 2 – Legislation, Listing Decisions, and Conservation Plans Across Canada

Canada is a country that covers a large area, encompassing many climates and ecosystems within its borders. Despite the vast size and sparse population density, Canadian ecosystems are no exception to the global phenomenon of increased extinction rates and climate change-driven biodiversity loss. Canada is experiencing the effects of global climate change at an increased severity compared to the global average, warming at over two times the global average rate (Bush et al., 2022).

The seriousness of the risk to global species is widely accepted. Governments, organizations, and institutions from 170 countries are members of the International Union for Conservation of Nature (IUCN). How species at risk (SAR) are protected differs from country to country (*Members Directory*, n.d.). In some cases, as with Canada, SAR protections may vary within national borders.

Canada's legal structure is a federation. The constituent parts, the provinces and territories, operate alongside the federal, or Canadian, government and share responsibilities, obligations, and the power to govern (*Constitution Act*, 1982). The *Constitution Act* establishes the division of powers between each level of the government (1982 at ss. 91 & 92(10)).

Both levels of government share jurisdiction over some areas. One such area is matters relating to the environment (Becklumb, 2013). Wildlife is a provincial responsibility, apart from federal species, which includes migratory birds, fish, and any species on federal crown land (Becklumb, 2013). This means provinces have primary responsibility for SAR, and each province makes its own decisions on protecting, conserving, and managing vulnerable species (Waples et al., 2013). The result is that SAR protections are not uniform across the country.

This chapter compares how the nine common-law provinces approach SAR conservation and management. These provinces can be divided into two groups: those with designated SAR legislation and those without legislation. This chapter evaluates how provinces without designated SAR legislation, including BC, compared to provinces with designated SAR legislation. I demonstrate, qualitatively and quantitatively, that provinces without designated legislation are less effective at SAR conservation than provinces with

designated SAR legislation. I show that provinces with designated legislation have more robust protections and more effective conservation of SAR.

Methods

The ideal indicator to test the effectiveness of conservation legislation would be long-term population changes for species before and after the implementation of protective legislation (Favaro et al., 2014; Findlay et al., 2009). This approach has been used in research looking at the effectiveness of the American *Endangered Species Act* (Gerber & Hatch, 2002; Hoekstra et al., 2002; Taylor et al., 2005)**.** However, implementing legislation will never be an instantaneous fix, and for this type of data to be collected, the legislation in question must be in effect long enough to allow time for species to be evaluated and re-evaluated. Given the range of dates when the various pieces of Canadian SAR legislation were enacted, as well as the absence of legislation in several of the jurisdictions, looking at changes to population size would introduce new variables to the analysis (Appendix I)**.** Additionally, the jurisdictions do not have the same extent of available data for SAR populations.

Instead, I used other measurements as a stand-in for conservation effectiveness, what I refer to as proxy indicator measurements in this research. For this chapter, I looked at three proxy indicators for each province: the completeness of the legislation governing SAR; decisions to list or not list species as at risk; and whether there were conservation plans setting out the next steps for protecting listed species.

Legislation

Collection

I collected the legislation that governs SAR protections for each jurisdiction using official government websites as the starting point. I then used CanLII, an open-access Canadian legal database, to search for any legislation in each jurisdiction containing the terms “species at risk”, “endangered species”, “threatened species”, or “listed species” to find any legislation not included on official websites. Finally, I used CanLII to find all regulations made under each statute. Legislation was collected on March 1, 2021.

Next, I screened out any legislation that did not contain provisions or protections for all SAR in that jurisdiction. For example, regulations that established a list of endangered species, such as Saskatchewan's *Wild Species at Risk Regulations,* remained in the data set. However, regulations that established protected habitat boundaries for a single species were excluded, such as the federal *Critical habitat of the Woodland Caribou (Rangifer tarandus caribou) Boreal Population.* This left 27 pieces of legislation, including those explicitly incorporated by reference in another statute. The results were unevenly distributed across the provinces, with BC as the outlier with 13 separate pieces of legislation covering SAR protections. A table of all the legislation is available in Appendix I.

Scoring

To compare the legislation, I first needed to "score" the contents of the statutes and regulations. To do this, I made a scoring rubric to assign numerical values to evaluation criteria (Hoekstra et al., 2002; Murray et al., 2018). The evaluation criteria for this rubric were pulled from existing research, commentary, and recommendations for developing SAR legislation from legal and scientific professionals (Hume et al., 2012; Westwood et al., 2019)**.** This left a "wish list" of what ideal SAR legislation would contain, which became the criteria for the rubric (Appendix II).

I assessed each criterion on a six-point scale from 0 to 5 for how well it was incorporated into a jurisdiction's legislation (Hill et al., 2019; Pawluk et al., 2019). The scale reflected both the completeness of the legislation and whether it was discretionary or non-discretionary. A score of 0 meant that the criterion was not included anywhere in the legislation, while a score of 5 meant that it was included in full and was non-discretionary (Appendix II). A separate scale was used to score each piece of legislation for how searchable it is when looking for SAR information, and the average searchability was added to each jurisdiction's score (Appendix II). Finally, to account for not all criteria being equally important in conserving and managing SAR, I weighted the final scores using a 1-3 multiplier. An explanation of the scoring scales and multipliers is attached to the rubric in Appendix II.

This gave each jurisdiction an unweighted and weighted score for their legislation, expressed as a percentage of the total score available. The total score was 340 for the

unweighted rubric and 775 for the weighted rubric. The higher a jurisdiction scored, the more complete the legislation. As indicated below in the analysis, jurisdictions with designated SAR legislation outscored those without designated legislation.

Listing Decisions

Collection

A decision to list or not to list a species as at risk is the first step to conservation. Listing decisions have been used as a proxy for the effectiveness of legislation, particularly when not enough time or data are available to assess conservation outcomes from biological indicators (Findlay et al., 2009). Previous research has found biases against listing certain species in Canada at the federal level, particularly species with economic implications arising from protected status (Findlay et al., 2009; Mooers et al., 2007).

The language of listing categories varies slightly between jurisdictions, but it generally reflects the threat levels using terms that would be easily discernible to anyone who is familiar with SAR. The exception is BC's listing system, which uses colour coding: Red for extirpated, endangered, or threatened species; Blue for species of special concern; and Yellow for secure or apparently secure species. BC does, however, have another list that designates species as either "endangered" or "threatened" rather than using the colour-coded system. There are only three species on the endangered list: the white pelican (Blue Listed), the burrowing owl (Red Listed), and the Vancouver Island marmot (Red Listed). The sea otter (Blue Listed) is designated as "threatened" in the same document, making a total of four species that are protected on that list (*Designation and Exemption Regulation*, BC Reg 168/90 (1990)). For this research, I used the colour-coded database for BC. Unlike the *Designation and Exemption Regulation,* it is updated frequently and linked directly on the BC government webpage, suggesting that it is the government's preferred SAR classification system.

I obtained the lists for each jurisdiction directly from official government websites, regulations or schedules within government legislation, and online databases (Appendix III). Given the number of species in BC's database, and the fact that many jurisdictions do not track species that *are not* at risk, I excluded BC's Yellow Listed species. PEI has no provincially listed species and was excluded from all listing decision analyses. For federal listing, I used

the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) database. COSEWIC is the body responsible for initial assessments and recommendations of species listing status at the federal level. The database reflects both the COSEWIC recommended status and the official federal listing status under *SARA*. Listing decisions were obtained on October 18, 2022.

Scoring

As it is unlikely that SAR are spread evenly across the country, and it is impossible to infer information from how two provinces list different species, I needed to convert the lists into a different form of data. I did this by comparing each province's listing decisions against federal listing decisions for the same species using habitat range information from the COSEWIC database, which also provides *SARA* listing status. As COSEWIC is a national committee that assesses species across Canada and reports where species occur, each province's list could be compared against the federal ones for species within their jurisdictional borders.

I assigned a score to the listing status for each species: 1 – Not at Risk (equivalent to an unlisted or unevaluated species, or to BC's Yellow List); 2 – Special Concern (equivalent to Sensitive, Vulnerable, and to BC's Blue List); 3 – Threatened; and 4 – Endangered (equivalent to BC's Red List). As BC's Red List status includes threatened and endangered species, I gave the province the benefit of the doubt and assigned all Red List species a score of 4. To get the provincial-federal comparison score, I subtracted either the *SARA* or COSEWIC score from the provincial score for each species that both had listed and found the average. Comparing provinces to *SARA* scores looked at whether provincial protection status was higher or lower than legislated federal protections. Comparing the provinces to COSEWIC was to assess whether provincial listing is more aligned with conservation recommendations before economic and other interests are taken into account in the final *SARA* listing process. As the federal list included species assessed as "not at risk" but the provinces did not, this created a bias towards the provinces which could never have a score of 1. To account for this, I removed all species with a score of 1, as well as extirpated and extinct species.

This gave me both a provincial-*SARA* and provincial-COSEWIC comparison score for each province. I could use these scores to compare between provinces. A positive comparison score meant that the province listed species at a higher level of risk than COSEWIC, or the *SARA* listing decision. A negative comparison score indicated the opposite. The absolute value of the comparison score reflected the extent of differences in listing decisions, with a score of 0 meaning they were the same and a larger score showing that they were further apart.

Provinces only look at species populations within their borders, while the federal score would reflect the status of the species across the country. The larger the geographic area, the more chance there is for a SAR in some parts of its habitat to still have a healthy population elsewhere that "saves" the overall listing status. The federal listing decision would therefore be less severe than provincial decisions. For this reason, I expected all provinces to have a positive score. Because I argue that provinces with designated legislation will be more effective and proactive at conservation, I also expected them to have higher listing scores than provinces without designated legislation.

Conservation Plans

Collection

After a species has been listed, the next step is to implement protection and management strategies. Depending on jurisdiction and specific content requirements, these may be called conservation, management, or action plans. For simplicity, I refer to these collectively as "conservation plans". While most jurisdictions require conservation plans under their legislation, the reality is that many of these plans are published well after legal deadlines or remain outstanding (Hume et al., 2012). I used the number of conservation plans created in each province as my third proxy indicator for the effectiveness of SAR legislation, taking it to be a measure of implementing protection. For each province, I compared the number of conservation plans to the total number of listed species. I collected the plans using official government websites and databases (Appendix III). I obtained the plans on February 20, 2023.

Two provinces, Manitoba and PEI, did not have conservation plans listed on their official websites. I found one Manitoba conservation plan for Boreal Woodland Caribou through a Google search. I called the wildlife offices for both provinces to inquire whether they

had any additional conservation plans. The Manitoba office confirmed they had only one plan, although a second one was in development. The PEI office confirmed that while they unofficially adopt federal plans, they have no official provincial conservation plans. These confirmations were obtained on March 1, 2023.

Scoring

I found the percentage of listed species with conservation plans for each province. Because some provinces' requirements for conservation plans omit species that are listed as only "special concern" or equivalent (e.g., "sensitive"), I also obtained the percentage of only the species listed as "endangered" or "threatened" (or their equivalents) that had conservation plans. I did not consider the content of the conservation plans, only whether one existed or not.

BC's database for conservation plans included federally produced plans in addition to provincial ones. There is no indication from the database listing whether the federal plans are officially adopted, but to give the province the benefit of the doubt, I used the percentage of species that had at least one conservation plan, regardless of the level of government. In contrast, New Brunswick's database mentions when the province has adopted a federal conservation plan instead of creating a provincial one.

Because conservation plans set out government commitments to act on SAR, a higher percentage of listed species with conservation plans suggests that a province is more willing or more able to implement and follow-through on SAR management. I argue that provinces with designated SAR legislation will have higher percentages of conservation plans than those without legislation.

Statistical Analyses: Mann-Whitney *U* test and Rank-Biserial Correlation

To compare between the two groups of provinces, those with and those without designated SAR legislation, I used the Mann-Whitney *U* test (Karadimitriou & Marshall, n.d.). This is a nonparametric statistical analysis which can be used with smaller sample sizes and ordinal data ((Karadimitriou & Marshall, n.d.). I did this for all three proxy indicators:

legislation scoring, listing comparison scores, and the percentage of conservation plans. I calculated the effect size of these analyses with the rank-biserial correlation (Kerby, 2014).

Results

Legislation

When all jurisdictions' scores were ranked from highest to lowest, the rankings remained consistent regardless of whether the unweighted or weighted rubric was considered (See Figures 3 and 4). Even before statistical analysis, there is a clear pattern when comparing jurisdictions with and without designated SAR legislation. The average score for provinces with designated legislation was much higher than that for provinces without designated legislation, 62.8% to 33.2% for the unweighted scoring rubric and 65.9% to 37.6% for the weighted rubric. The federal *Species at Risk Act* had the highest overall scores (78.2% unweighted and 78.5% weighted). Saskatchewan was the only jurisdiction without designated legislation to score higher than one with legislation, outscoring Manitoba (46.0% to 37.7% unweighted, and 47.0% to 40.4% weighted).

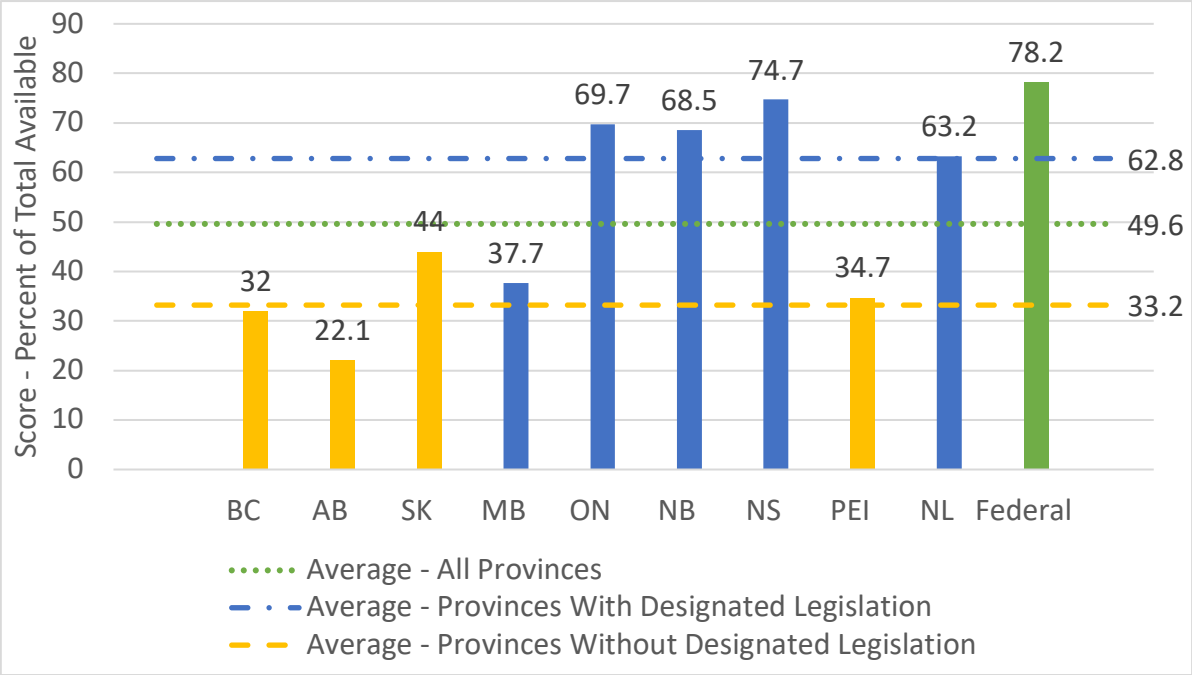

Figure 3 - Unweighted legislation score as a percentage of total possible by jurisdiction. Average score for all provinces does not include the federal score.

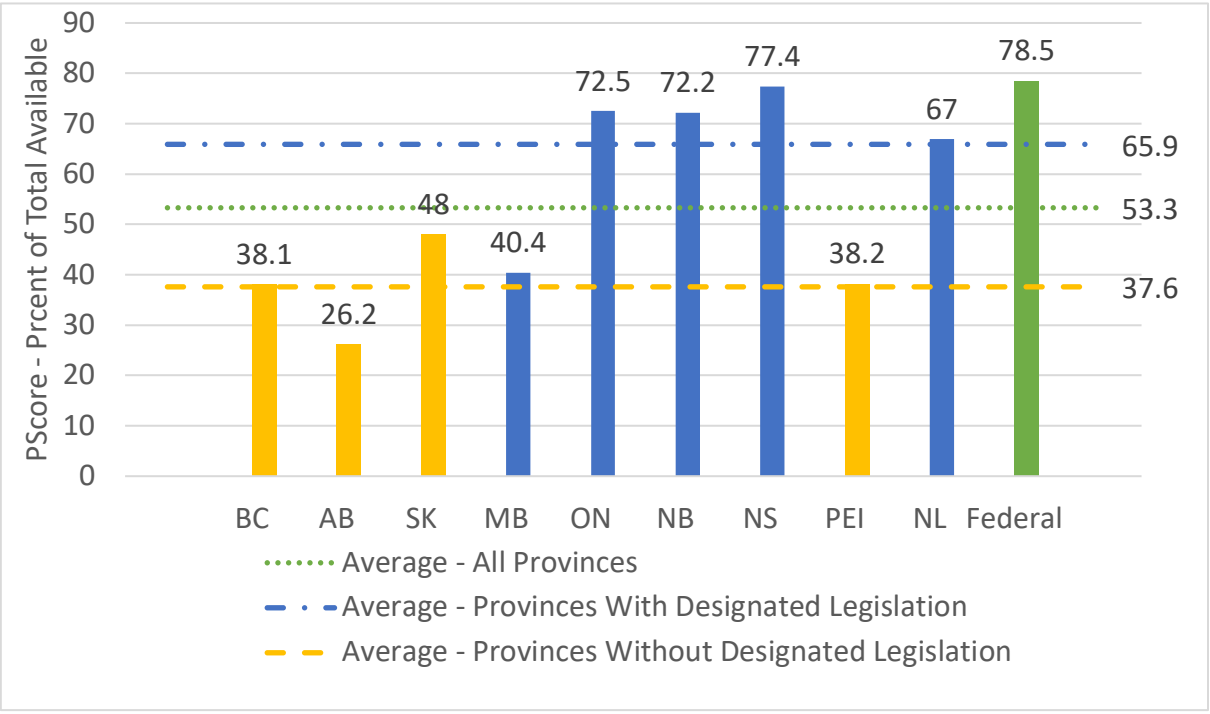

Figure 4 - Weighted legislation score as a percentage of total possible by jurisdiction. Average score for all provinces does not include the federal score.

The H_0 for the Mann-Whitney *U* test showed no difference between the scores for provinces with and without legislation. The H_a is that there is a difference between the two

groups. As the rankings of the provinces did not change, the results for the test were the same for weighted and unweighted legislation: $U = 1$, which equates to $p = 0.027$. The effect size from the rank-biserial correlation for the difference between jurisdictions with and without designated legislation was $r = -0.9$.

The scores for every jurisdiction increased when the rubric was weighted compared to their unweighted scores, although lower-scoring jurisdictions increased more than those that started with higher scores. BC had the largest difference in the score when weighting the rubric, a 6.0% increase. The federal *SARA* had the least increase difference, with only a 0.2% increase over the unweighted score. Nova Scotia had the smallest change to their score for any province, a 2.7% increase. The average increase in score for provinces with designated legislation was 3.1%, compared to 4.4% for provinces without designated legislation. I used a Mann-Whitney U test to compare the increase in scores for the two groups, giving a result of $U = 2$ and $p = 0.05$. The effect size was $r = -0.8$.

Listing Decisions

After this quantitative analysis, it is apparent that there are vast differences between the provinces regarding how many species are listed as at risk. BC has 1909 Red and Blue List entries, by far the most for any province, exceeding even the 1230 species considered for listing (not necessarily listed) by COSEWIC and *SARA.*[4] Part of this difference is the diversity of climates and ecosystems within the province reflected in a higher total number of species. Another contributing factor is that, unlike other jurisdictions, BC extends listing status to habitat and ecosystem types, not only species.

Province	BC	AB	SK	MB	ON	NB	NS	PEI	NL
# of listed species	1909	145	17	64	256	92	63	0	51

Table 1 - Number of species listed at any threat level, including extirpated or extinct, by province.

[4] Of interest, if looking at BC's species listed as either "endangered" (3) or "threatened" (1) it would have the second fewest number with only four.

The listing comparison scores were positive for all provinces except Alberta, indicating that most provinces on average listed species at a higher threat level than *SARA* or COSEWIC (see Figures 5 and 6). Manitoba had the highest scores for both provincial-*SARA* (0.40) and the provincial-COSEWIC (0.47) comparison, indicating that it assessed higher threat levels for species on average than federal listing and COSEWIC recommendations. Saskatchewan had the highest scores for a province without designated legislation across both comparisons (0.27 for both). Ontario's score was closest to 0 for the provincial-*SARA* comparison (0.03), and second-closest to 0 for the provincial-COSEWIC comparison (0.05). This indicates that Ontario's listing decisions are more closely aligned with federal assessments than other provinces.

Provinces with designated legislation had a higher average score than those without, with 0.19 to 0.08 for the provincial-*SARA* comparison and 0.24 to 0.11 for the provincial-COSEWIC. This suggests that provinces with designated legislation are more likely to assess species at a higher threat level compared to federal listing and recommendations than those without designated legislation. However, the analyzing the two groups of provinces using a Mann-Whitney *U*-test suggests that there is not a meaningful difference, particularly when looking at the provincial-*SARA* comparisons ($U = 5.5$ and $p = 0.55$ for provincial-*SARA,* $U = 4$ and $p = 0.30$ for provincial-COSEWIC). There is also less of an effect size between the two groups of provinces for the provincial-*SARA* comparison ($r = -0.27$) compared to provincial-COSEWIC ($r = -0.47$).

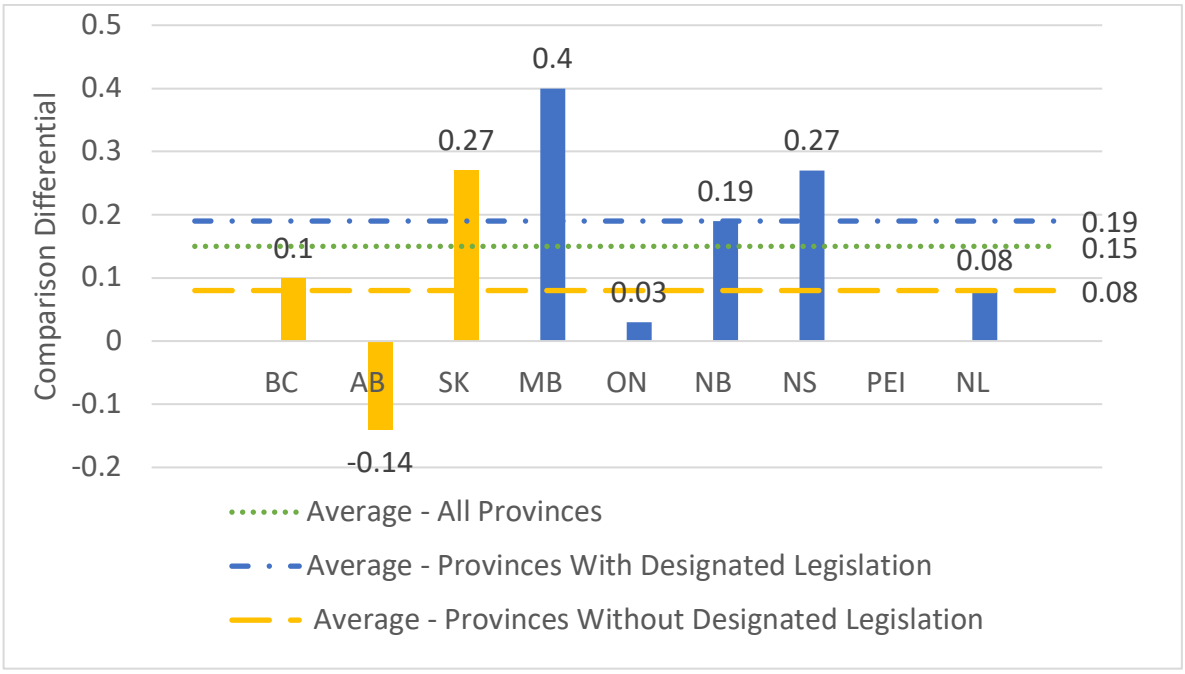

Figure 5 - Provincial-SARA listing comparison scores by province. PEI has no provincially listed species.

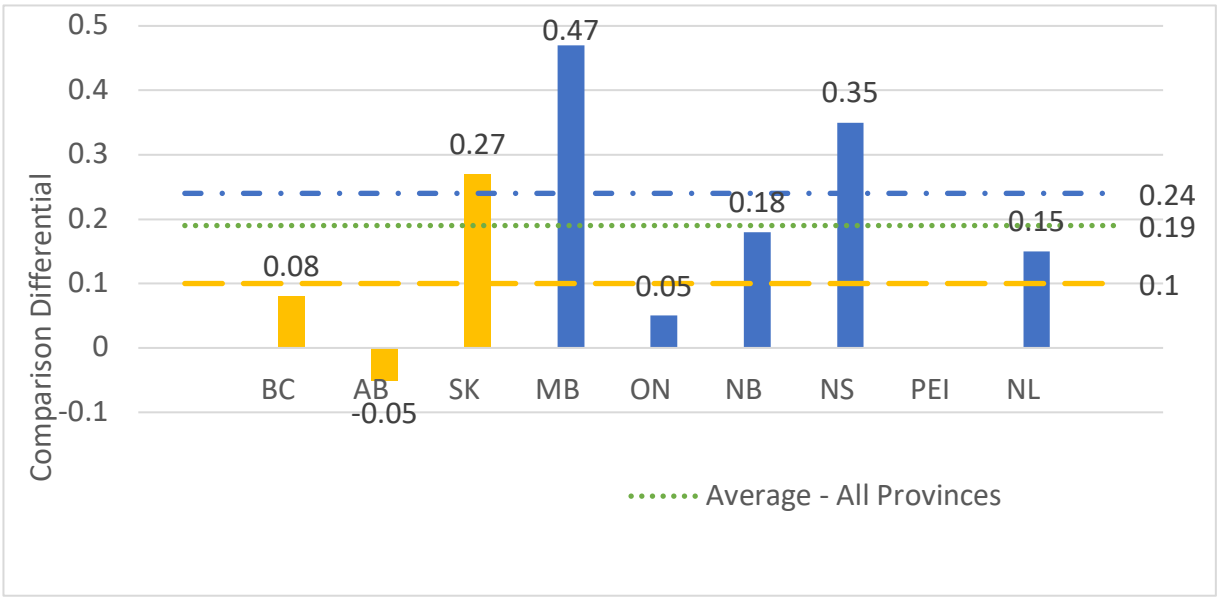

Figure 6 - Provincial-COSEWIC listing comparison scores by province. PEI has no provincially listed species.

Conservation Plans

The percentage of species with conservation plans increased for all provinces except Saskatchewan when only considering “endangered” and “threatened” species rather than all

listed species. Saskatchewan and Manitoba had the lowest percentage of conservation plans outside of PEI, with fewer than 6% of listed species having conservation plans. Ontario and Nova Scotia had the highest percentage of conservation plans, with over 60% of all listed species having conservation plans and over 80% of threatened and endangered species having conservation plans. BC had the third lowest percentage of conservation plans (11.5% for all species, 19.8% for Red-listed species).[5] Collectively, provinces with designated legislation had a higher average percentage of species with conservation plans than provinces without: 43.4% to 15.9% for all species and 49.1% to 33.1% for endangered and threatened species.

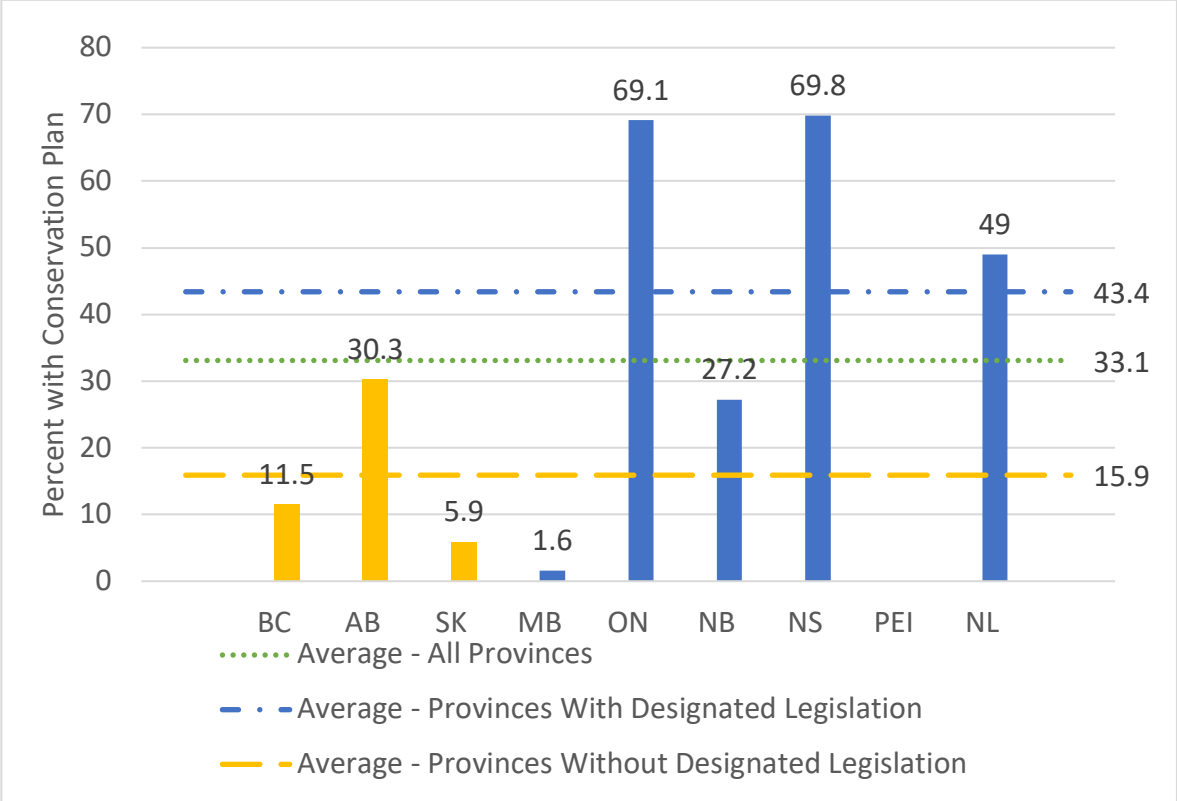

Figure 7 - Percent of all provincially listed species with conservation plans by province. PEI has no provincially listed species

[5] Of interest, when looking at only the four species designated as "endangered" or "threatened" in BC, the Vancouver Island marmot and the burrowing owl have conservation plans. This would increase BC's percentage of conservation plans to 50%, (75% of endangered species).

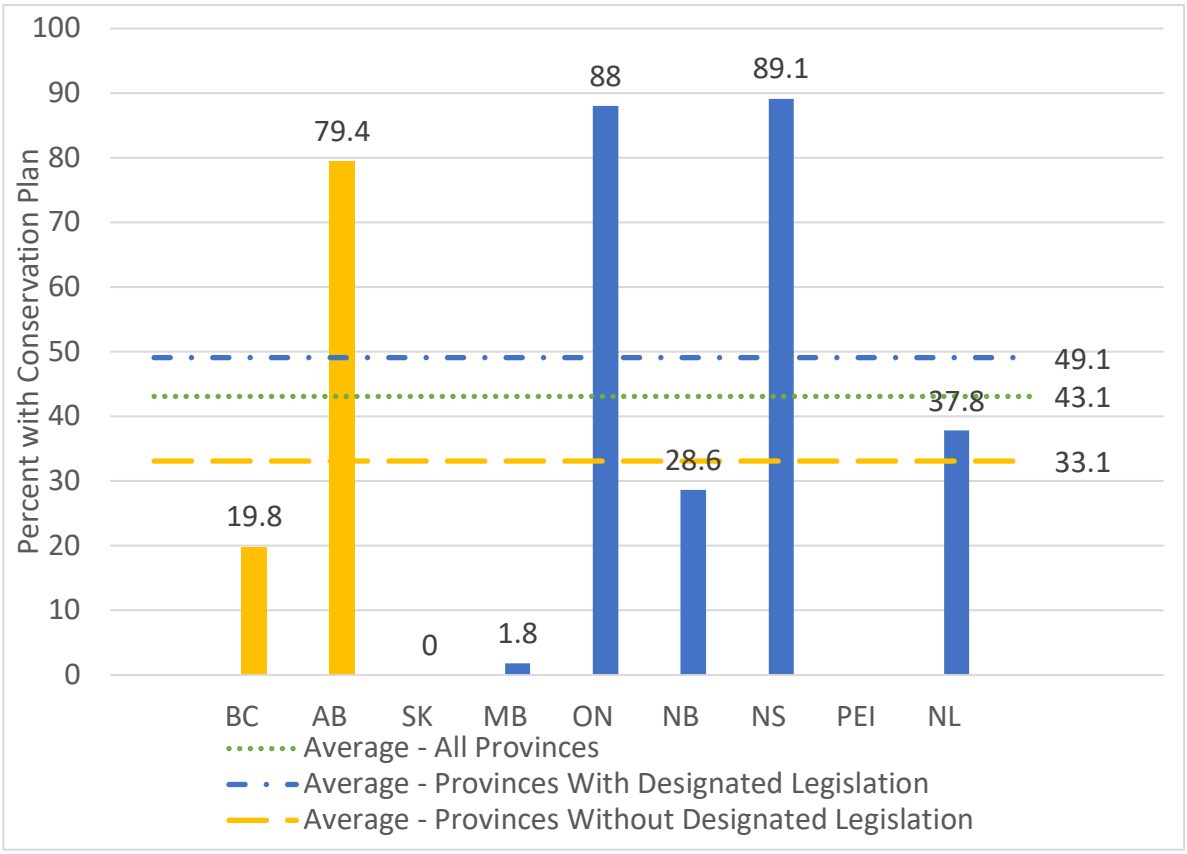

Figure 8 - Percent of provincially listed endangered and threatened species with conservation plans by province. Saskatchewan has no conservation plans for endangered or threatened species. PEI has no provincially listed species.

I used a Mann-Whitney *U*-test to compare the percentages of the provinces with and without designated legislation. The rankings of the provinces do not change whether considering all listed species or only endangered and threatened species. Either parameter results in $U = 4$ and $p = 0.2967$. The effect size using rank-biserial correlation of the comparison is $r = -0.4667$.

Discussion

Trends in Legislation

The Provinces in Context: Politics and Economies

For this research, it is critical to at least mention the economic and political differences between Canadian provinces. Economies have a significant influence on conservation. Some

industries, particularly resource-extraction industries, have a negative impact on ecosystems and the species whose habitats overlap the resource area.

The three western provinces without designated SAR legislation have economies heavily reliant on non-renewable resource extraction industries, particularly oil, gas, and mineral mining. BC also has a significant forestry industry, which must disturb ecosystems and species' habitat to harvest lumber (Canadian Immigration Law Firm, n.d.). While trees are technically a renewable resource, harvested forests can take decades or centuries to return to pre-harvest ecosystem functions, if at all. They do not renew within any practicable human measurement of time. In contrast, the provinces with designated legislation have been less reliant on extraction. Ontario's economy is weighted more towards manufacturing and production than resource extraction. The Atlantic provinces have traditionally had strong fishing industries – a resource that requires healthy ecosystems and food webs to replenish yearly (Canadian Immigration Law Firm, n.d.).

These generalizations are not complete distinctions, and economies evolve and adapt to new circumstances just as species do. BC employs nearly as many people in the fishing industry as New Brunswick (Canada Action, 2023). Resource extraction occurs across all Canadian jurisdictions, not only in Western Canada. Forestry is a significant part of New Brunswick's economy, just as oil extraction is in Newfoundland and Labrador, and coal mining has been in Nova Scotia[6] (New Brunswick, n.d.; Newfoundland and Labrador, n.d.; Nova Scotia, n.d.). Agriculture and animal husbandry are also widespread industries and, depending on the management practices employed, have the potential to devastate natural ecosystems (Barbosa et al., 2021; Gibbs et al., 2009). Tourism, particularly adventure tourism, is a rising economic force, especially in BC, which relies on protecting wild spaces at least enough to continue profiting from them (BC Government, n.d.).

Legislating protections for SAR means implementing restrictions on how and where industries operate. As legislation is a political instrument, governments must decide how to

[6] Donkin Mine, Nova Scotia's only active coal mine, has been under a stop work order since July, 2023. It was lifted in December 2023, but as of February, 2024 there are no updates that production has resumed (Nova Scotia, 2023).

balance the equation of economies and environments. In Canada, right-leaning political parties have been more likely to prioritize industry and economic concerns over environmental issues. This is reflected in the SAR legislation that does exist in Canada, with the majority enacted by left-leaning political parties (Appendix I). The Canadian jurisdictions without designated SAR legislation have also had long stretches of right-leaning governments.

Legislation Breakdown

The rubric I used to score the legislation showed a difference in the completeness of SAR legislation for provinces with designated legislation compared to those without. In almost all instances, provinces with designated legislation had higher scores than those without, with average scores nearly twice as high for provinces with designated legislation. All jurisdictions' scores improved after the rubric was weighted, although the rankings remained unchanged. This suggests that even jurisdictions with incomplete legislation focus what protections they do have on the more critical aspects of SAR legislation.

However, with a sample size of only nine provinces, even one exception from the pattern should be considered. Saskatchewan scoring higher than Manitoba is evidence that merely having designated SAR legislation does not inherently equate to better protections and more complete laws relating to SAR. The content of the legislation matters more than the title of the act, and notable gaps or absences from legislation are just as telling as the protections in place.

Lawmakers often model legislation off existing laws from another jurisdiction. Based on the language and organization, there are three groups of SAR legislation in Canada. The first, chronologically, is Manitoba's *Endangered Species and Ecosystems Act*. Enacted in 1990, it scored poorly, putting it closer to BC and PEI's legislation than to other designated SAR acts. No other jurisdiction uses this model for their current SAR legislation. Of the many gaps in Manitoba's legislation, perhaps the most egregious is the complete absence of incorporating Indigenous knowledge. While truly meaningful integration and incorporation of Indigenous knowledge and perspectives in SAR legislation is an important and complex enough topic to warrant its own thesis, Manitoba is the sole jurisdiction considered in this research that does not even pay lip service to meeting these expectations. There is not a single mention on the

terms Indigenous, First Nations, Aboriginal or Indian[7] throughout Manitoba's legislation (*Endangered Species and Ecosystems Act*, CCSM c E111 (1990)).

The next legislative model is used by the Atlantic provinces of Nova Scotia, New Brunswick, and Newfoundland and Labrador. Nova Scotia has the oldest legislation of the three, dating back to 1998 (Appendix I). It also scored the highest for any province. New Brunswick's more recent *Species at Risk Act* from 2012 follows the same model but falls slightly short in scoring. Newfoundland and Labrador's legislation is related, although the language and provisions are less similar than the other two provinces. Benefits of this model include mandatory, single-step listing based off scientific knowledge. The downside is that these provinces tend to have less inclusion of Indigenous Traditional Ecological Knowledge integrated into the legislation.

The last category is the Federal *Species at Risk* model of legislation. By its score, this is the most complete SAR legislation in Canada. However, its limited area of application diminishes the benefits of the legislation. While *SARA* does at least include mentions of considering Indigenous Traditional Ecological Knowledge alongside scientific information as a source of expertise on SAR throughout the act, the act itself leaves a lot of room for discretion. This weakens the provisions and the integration of expert opinions on SAR, particularly regarding the two-step system for listing a species under *SARA*. Ontario's *Endangered Species Act* (SO 2007, c 6) seems to be modelled on the Federal legislation, although it falls behind Nova Scotia in terms of scoring.

The federal *SARA* and Nova Scotia's act were the two highest-scoring acts. The fact that they are different models of legislation suggests that both models have strengths, but more importantly, both have legislative gaps that the other model might more effectively cover. While *SARA* can be considered the benchmark for SAR legislation in Canada, it should not be the end goal when developing designated SAR legislation. None of the existing models of legislation in Canada is perfect, and if BC were to enact new legislation, the aim should be to exceed what is in place elsewhere in the country rather than to meet it.

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[7] These are the current and historic terminology used in Canadian legislation when referring to the First Peoples of North America.

It is more complicated to group the provinces without designated legislation. Most provisions protecting SAR in these provinces are contained in each jurisdiction's variation on a *Wildlife Act.* Saskatchewan scored high for a province without designated legislation, with a separate Part of the *Wildlife Act* dedicated entirely to SAR provisions (SS 1998, c W-13.12). Notably, Saskatchewan's legislation suffers from an excess of ministerial discretion, with listing decisions, recovery plans, and even seeking advice from an advisory committee all things the Minister "may" do (*Wildlife Act*, SS 1998, c W-13.12, at Part V). Alberta's legislation, in contrast, does not include additional protections for endangered species beyond those provided to any wildlife that is not in season (*Wildlife Act*, RSA 2000, c W-10). The absence of additional protections is of particular concern because while plants may be classified as an "endangered species" under Alberta's act, protections for wildlife only extend to "big game, birds of prey, fur-bearing animals, migratory game birds, non-game animals, non-licence animals and upland game birds" (*Wildlife Act*, RSA 2000, c W-10, at s.1.1(II)). Among all provinces that rely on *Wildlife Act* protections for SAR, only Alberta's definition of "wildlife" is this restrictive.

On paper, PEI's legislation slightly edges out BC's in terms of scoring. However, any protections afforded by the province are largely theoretical, as there are no provincially listed species. BC had the second-lowest scoring legislation, although it did beat Alberta by nearly 10%. BC's regime was the most complicated to assess as it is spread across thirteen statutes and regulations. Compare this to New Brunswick, which had the second-highest number of pieces of legislation considered, with three. Beyond this lack of centralization, there are two major weaknesses in BC's legislation. The first is a complete absence of any requirement, or even mention, of conservation plans for listed species (*Wildlife Act*, RSBC 1996, c 488). This significant oversight was shared only with PEI. This means that any conservation, recovery, management, or action plans made in BC are done only through government policy, rather than any legislative impetus or imperative.

The second deficiency in BC's legislation is less immediately apparent but may have greater negative impacts. Technically, any additional protections afforded to SAR under BC's legislation apply to species designated as "endangered" or "threatened", not to Red or Blue Listed species. As mentioned earlier in this chapter, there are only four "endangered" and

"threatened" species in BC: the white pelican (endangered), the burrowing owl (endangered), the Vancouver Island marmot (endangered), and the sea otter (threatened) (Designation and Exemption Regulation, 1990). This means that BC's legislative protections, which already score low on paper, may be even weaker and less effective in practice.

Listing Decision Trends

For listing decisions, I argued that provinces with designated legislation would take threats to SAR more seriously than those without designated legislation. A comparison score of 0 would mean that the provincial and federal listing severity were balanced. The further away from that neutral point of 0 a score was, either positively or negatively, the larger the average difference in listing. While the average comparison scores for provinces with designated legislation were higher than those without designated legislation, applying a Mann-Whitney *U* test gave less than compelling results. There was no clear pattern between provinces with, and those without, designated legislation when it came to listing decisions.

Looking at individual provinces, only Alberta had negative comparison scores. This means that almost all provinces found that species faced a higher threat level than federal decision-makers. Manitoba had the largest scores in comparison to both COSEWIC and *SARA*, followed by Nova Scotia. Saskatchewan had the largest scores of the three provinces without designated legislation, tying Nova Scotia for the second-highest score for the *SARA* comparison. New Brunswick, Newfoundland and Labrador, and BC, in that order, made up the middle of the rankings.

For the smallest scores, Ontario and Alberta were roughly equally far away from 0 for the provincial-COSEWIC comparison, albeit in different directions. The Ontario-*SARA* comparison was also the smallest overall score, 0.0333. This indicates that Ontario's and *SARA's* listing decisions were the most closely aligned of any of the provincial-federal pairs considered. There are two possible explanations that come to mind for the low score. The first is that Ontario's SAR legislation is modelled after the federal *SARA,* and it would make sense that species listing criteria for the province would also follow the federal model and give similar outcomes. The other explanation may be that as the province in this research that covers by far the largest geographic area, it is possible COSEWIC and *SARA* decisions are weighted

more heavily towards Ontario's populations of species, with species that are doing well in that province also having healthy populations on a national level, and vice versa. Overall, species listing decisions demonstrated a less distinct difference between provinces with and without legislation than the other proxy indicators examined in this chapter, with analyses that showed relatively large *p* values and small effect sizes.

Conservation Plan Trends

Provinces with designated SAR legislation are more successful, on average, at producing conservation plans for their listed species. This aligns with the greater efficacy in conservation I argued would be present in those provinces. However, the difference between the two groups of provinces decreases drastically when looking at conservation plans only for species listed as threatened or endangered rather than all listed species. These results suggest that even though provinces without designated legislation are falling behind in terms of producing conservation plans, they are, at minimum, able to focus on their most critically endangered species.

An examination of the results for other proxy indicator measurements did not show a clear pattern for the percentage of conservation plans. Ontario and Nova Scotia, the provinces with the highest-scoring legislation, also had the highest percentage of conservation plans for listed species. Of note, Ontario produced a batch of conservation plans relatively recently – at the end of 2022 and the beginning of 2023 – shortly before the number of plans was collected for this research. If that pattern continued, Ontario may have a higher percentage of conservation plans than was reflected in this research. Alberta, the province with by far the lowest results on both other proxy measures, had the third highest percentage of conservation plans for "endangered" or "threatened" species. In contrast, Manitoba and Saskatchewan, in the middle for legislation scoring, had extremely low percentages of produced conservation plans.

As with Nova Scotia, BC placed consistently across all the proxy indicators, albeit at the opposite end of the spectrum. Following the same trend, BC had one of the lowest percentages of conservation plans. This poor outcome is understandable, although not excusable, given the number of listed species in the province and the sheer volume of resources

required to produce conservation plans for them all. However, BC considered the threats to those species severe enough to list them, and it is the province's responsibility to take actions beyond listing. Of interest is the fact that BC (and PEI) do not have any legislative provisions requiring conservation plans be developed for SAR. This may also contribute to the low percentage of plans produced by BC.

This project had clear limitations, which did not include an analysis of how detailed or accountable each conservation plan was. Further research on the contents of conservation plans, broken down by jurisdiction or by species classification, would be of value. Examples of similar work include research that compares recovery plan strategies and targets between Canada and the US (Olive, 2014a; Pawluk et al., 2019), and the research that emerged from a large-scale project to create a database of the contents of plans introduced under the US *Endangered Species Act* (Gerber & Hatch, 2002; Hoekstra et al., 2002; Taylor et al., 2005).

Conclusion

When looking at all the variables together, provinces with designated SAR legislation have more comprehensive legislative protections and have taken more action to implement those protections than provinces without designated legislation. However, the results for individual provinces do not follow as clear of a pattern. Nova Scotia scored highly on all the proxy indicator measurements assessed in this chapter, which is consistent with establishing and implementing high-quality legislation. Ontario also performed well, although it scored low on the listing decision comparisons. Alberta, at the other end of the spectrum, was well below the average on almost everything, with by far the lowest scores on legislation and the only negative listing decision comparison scores. However, Alberta has a much higher percentage of conservation plans for listed species than other provinces without designated legislation, particularly when only looking at endangered and threatened species. Manitoba was near the middle for most analyses but had decidedly poor results for a province with designated legislation. For two of the three proxy indicators**,** Manitoba scored roughly equal to, or worse than, Saskatchewan despite Saskatchewan not having designated legislation. The two neighbouring provinces had similar results in all the analyses, scoring in the middle on legislation, high on listing decisions, and at the very bottom for the percentage of conservation

plans. This demonstrates that simply having designated legislation does not guarantee a province will have strong protections and effective conservation measures.

Finally, BC has the second weakest legislative regime for SAR protection. Despite being the province with the highest number of listed species, BC's legislation is roughly on par with PEI's, the only province without any listed species. While BC appears to seriously consider listing decisions, the language in the legislation still assigns protection based on BC's old (and apparently defunct) listing system, rather than the current colour list. In addition, the province's follow-through is lacking, with one of the lowest percentages of conservation plans and by far the highest number of listed species without conservation plans of any variety.

On paper, it appears that having designated legislation increases the effectiveness of SAR protection and conservation. However, these proxy indicators of conservation are only one aspect of a complete effectiveness assessment. It is also important to investigate how protections hold up when challenged and how they translate to real-life applications. The following chapters address these issues.

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Chapter 3 – Species at Risk Case Law and Judicial Trends

Legislation that is not enforceable, or legislation that goes unenforced, is not much different than an absence of legislation altogether. Enforceable legislation, backed up by consequences for anyone circumventing the provisions, often is referred to as "having teeth" (McNally, 2022). Without teeth, legislation is functionally no different from a written wish list. One way to assess the enforceability is to examine how the courts ruled in cases relying on that legislation, and whether the provisions are being upheld. In this chapter, I compare how courts in different Canadian jurisdictions rule on species at risk (SAR) matters that come before them by assessing whether conservation interests are upheld or not. I argue that provinces with designated SAR legislation have stronger protections that hold up better in judicial proceedings.

An Overview of Canada's Courts

For readers unfamiliar with Canada's court system, this is a brief introduction to the different decision-making bodies in the country. Most of Canada uses a common law court system, where decisions are bound by precedent from earlier cases. Effectively, older decisions shape the law for new decisions. This creates a body of "case law". Following precedent ensures laws are applied consistently and predictably. Case law must agree with and reflect a jurisdiction's laws. New legislation can render established precedents irrelevant.

Case law is developed vertically in Canada. This means there is a hierarchy that sets precedents for each court (National Self-Represented Litigants Project, 2016). Decisions from higher courts set precedent, as do earlier decisions from the same court, but lower court decisions are not binding (National Self-Represented Litigants Project, 2016). Additionally, related case law from other jurisdictions can "persuade" a decision. However, in practice, each province assigns more weight to decisions from some jurisdictions than others. In BC, for example, it is not uncommon for courts to consider Alberta and Ontario cases, but case law from other Canadian provinces will seldom be raised. Appeals follow the court hierarchy from lower to higher levels of court.

Administrative tribunals are specialized decision-making bodies at the lowest level of the hierarchy. They usually deal with a single piece of legislation or with a few pieces of closely

related legislation. Depending on the establishing legislation, these tribunals may be federal or provincial (or territorial) (Department of Justice of Canada, 2021b). The next level up is the provincial (or territorial) court. The respective province or territories grants these courts the power to adjudicate. Most cases begin at this level, although provincial courts are limited on which matters they can hear. For example, cases with damages over a certain threshold and some significant criminal matters must begin in a superior court. There is no federal equivalent to this level of court (Department of Justice of Canada, 2021b).

Next are the superior courts. It is the BC Supreme Court in BC, but different jurisdictions may use other names, such as the Court of King's Bench of Alberta. Superior courts hear initial matters outside the limits of provincial and territorial courts, as well as appeals from lower courts. The Federal Court is equivalent to the Superior Courts but with jurisdiction over specifically federal matters (Department of Justice of Canada, 2021b). Above the superior courts are the courts of appeal, both provincial and federal. As the name suggests, they hear appeals from the superior courts. At the highest level is the Supreme Court of Canada (SCC), which is the final court of appeal in the country (Department of Justice of Canada, 2021b). The SCC hears appeals from every jurisdiction, and their decisions are binding on all jurisdictions and courts in Canada, regardless of where a case originated (National Self-Represented Litigants Project, 2016).

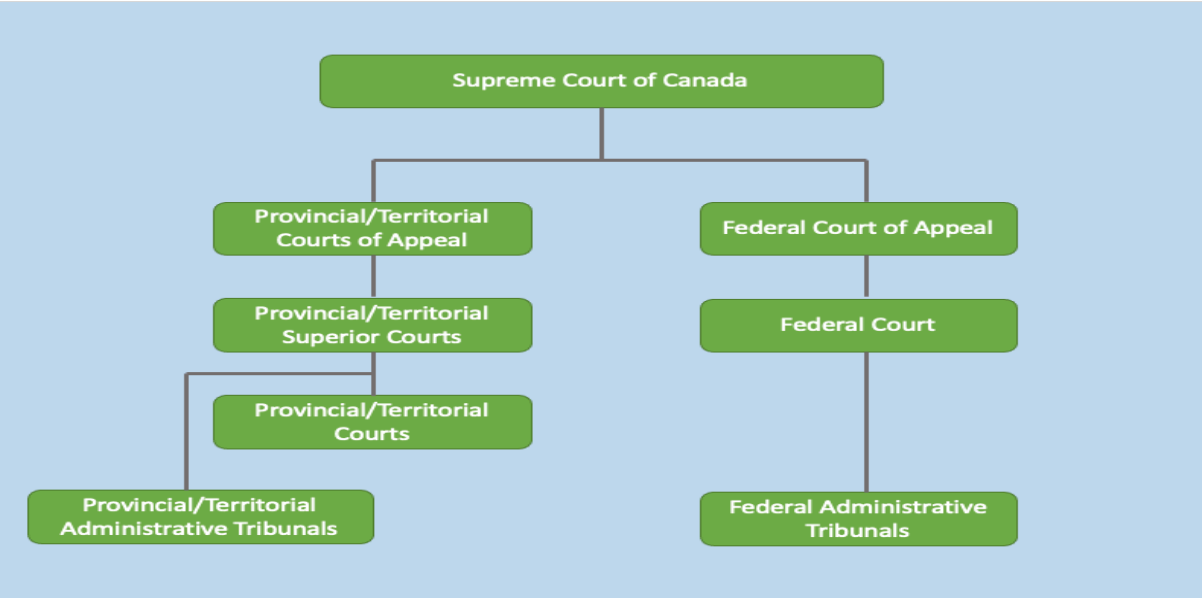

Figure 9 – Flow chart showing the hierarchy of Canada's court systems, with appeals moving from bottom to top.

Methods

For this chapter, I did a case law review of all federal and provincial decisions (except for Quebec) that dealt with SAR. I used Westlaw and CanLII as the search databases for the case law review, using two databases as a back-up to ensure results missing from one database were still included. Westlaw is a legal database that covers many administrative tribunal decisions not reported on other databases. However, it requires a paid subscription to access and it can be more challenging to note up[8] specific legislation. CanLII, short for the Canadian Legal Information Institute, is an open-access database that covers Canadian courts and legislation. It is easy to navigate but does not carry many tribunal decisions. I used a series of search inquiries in Westlaw with results filtered to show only cases. I compiled these results into a single list, eliminating any duplicates. The case list from Westlaw searches was obtained on March 14, 2022. I then cross-referenced this list against CanLII's search database and legislation note up functions, again eliminating any duplicates. Cases from CanLII were obtained on March 22, 2022. This left a total of 1129 distinct results. The list of search terms used is included in Appendix IV.

I narrowed the result list by eliminating all cases that were irrelevant to this research. This meant removing all Quebec, Yukon, Northwest Territories, and Nunavut jurisdiction results. I also removed cases that did not address SAR related matters in the decision. Some reasons I removed results include:

- the decision dealt with unlisted wildlife, captive-bred wildlife, or domestic species;
- the decision dealt with importing exotic species;
- the decision was an interim or related matter that dealt with non-SAR issues such as costs or applications for standing;

[8] "Noting up" is a legal term used when verifying if case precedent still stands. As an expanded use, it can also mean to find the relevant law on a specific point by searching all instances where a case, a piece of legislation, or a specific provision has been cited, relied on, or challenged.

- the decision mentioned SAR as part of the facts or background but did not address protection or offences relating to those species as part of the matter in question; and
- the decision passed responsibility for addressing SAR related issues to another decision maker.

I removed any results that were simply reports of initial policy-based decisions, primarily granting permits for zoning and Environmental Impact Assessment decisions. I did, however, include any appeals, judicial reviews, or other cases arising from those policy-based decisions. On March 14, 2023, I noted up all the included cases. As the final step in narrowing the results, I removed any case that was a lower court decision with an appealed decision that was in the data set. I kept lower court decisions that had appeals dealing only with matters unrelated to SAR issues (and therefore not in the data set). The final data set was 130 cases relating to SAR across nine provinces and the federal jurisdiction. For the complete data set, see Appendix V.

Next, I assigned scores to the cases. The scores are not a reflection of how "good" or "bad" the decision was, as there are usually a complex mix of moral and ethical arguments on both sides of a legal case. Instead, I based the scores on whether the party "for" or "against" the SAR was successful on relevant issues. Because the outcome of a legal case is often a spectrum of success, sometimes with each side succeeding on some of the issues, I assigned a score on a scale of 1 to 5 for how successful the case was regarding the species' interests: 1 – a wholly negative outcome (e.g. permit granted to develop habitat regardless of harm to SAR); 2 – a limited negative outcome (e.g. a finding of lack of evidence of harm to the SAR); 3 – a mixed or neutral outcome (e.g. case decided on unrelated points, or the issue was moot by the time of the decision); 4 – a limited positive outcome (e.g. successful overturn of a permit to develop while leaving the door open to reapply with improved mitigation); and 5 – a wholly positive outcome (e.g. a successful prosecution of a party that committed an offence under SAR legislation) (Glicksman et al., 2021).

I found the average scores for each jurisdiction. I also found the average scores for each type of case based on category of law. These categories were:

- criminal law cases;

- non-criminal cases where the government was enforcing or upholding SAR legislation or regulations;
- cases relating to challenges that a government was not sufficiently upholding legislation;
- cases relating to harvesting or hunting quotas of wildlife or plant species;
- cases relating to land use and designation;
- freedom of information requests and disclosure issues;
- appeals from decisions, permits, and exemptions relating to environmental impact assessments and development;
- one employment law case; and
- other civil law cases.

Analysis: Mann-Whitney U test and Rank-Biserial Effect Size

To compare provinces with and without designated legislation I used a non-parametric test as the numbers assigned to the case scores represented ordinal data, and the population was so small ($n = 9$).[9] I performed a Mann-Whitney *U* test to compare the average case scores for provinces with designated species at risk legislation to those without designated legislation (Karadimitriou & Marshall, n.d.). I also found the effect size of the difference using the rank-biserial effect size calculation (Kerby, 2014).

Results

By the Numbers

The 130 cases that made up the data set were not evenly distributed between the levels of courts and jurisdictions. By court level, nearly half of the cases were from a superior court (see Table 2). The second largest group was from administrative tribunals, primarily out of Ontario. There were no cases from the SCC included in the data set. A few cases in the data set did go to the SCC for issues unrelated to SAR. For example, *Clyde River (Hamlet) v TGS-*

[9] Two provinces, New Brunswick and PEI, had no case law, so the effective sample size was even smaller ($n = 7$).

NOPEC Geophysical Co. ASA, (*Clyde River (Hamlet) v TGS-NOPEC Geophysical Co. ASA*, n.d.) was overturned at the SCC, but only on grounds of duty to consult (*Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, 2017 SCC 40).

When examining the case law distribution by province, Ontario had the largest number of cases, 40 (see Figure 11). BC and the Federal jurisdiction followed closely, with 31 and 30 cases respectively. The numbers dropped off from there. Alberta and Nova Scotia had 12 and 8 cases respectively. Newfoundland and Labrador had 3 cases, and Saskatchewan Manitoba had a single case each. There were no cases from either New Brunswick or PEI.

Jurisdiction	BC	AB	SK	MB	ON	NB	NS	PEI	NL	Fed.	Total
Administrative Tribunals	6	2	-	-	29	-	2	-	-	1	40
Provincial Court	5	6	-	1	3	-	-	-	2	-	18
Superior Court	15	3	-	-	8	-	5	-	-	21	60
Court of Appeal	5	1	1	-	4	-	1	-	1	8	21
SCC	-	-	-	-	-	-	-	-	-	-	0
Total	31	12	1	1	44	0	8	0	3	30	130

Table 2 – Number of cases in each jurisdiction by level of court.

The average score for all cases in the data set was 3.34. The provinces were grouped tightly together, with average scores ranging from 3 to 4 (see Figure 12). Saskatchewan had the highest with a score of 4, followed by Alberta and Newfoundland and Labrador with 3.67 each. Manitoba and Ontario had the lowest average scores, 3 and 3.09 respectively. However, Ontario's score was averaged over 40 cases while Manitoba's reflects a single decision. BC had the lowest average for a province without designated legislation with a score of 3.16. The average scores for all provinces without legislation was higher than for those with legislation, 3.32 to 3.18. The average score for federal cases was 3.67. A Mann-Whitney *U* test comparison of the provinces with and without legislation gave $p = 0.22$, with an effect size of $r = -0.58$.

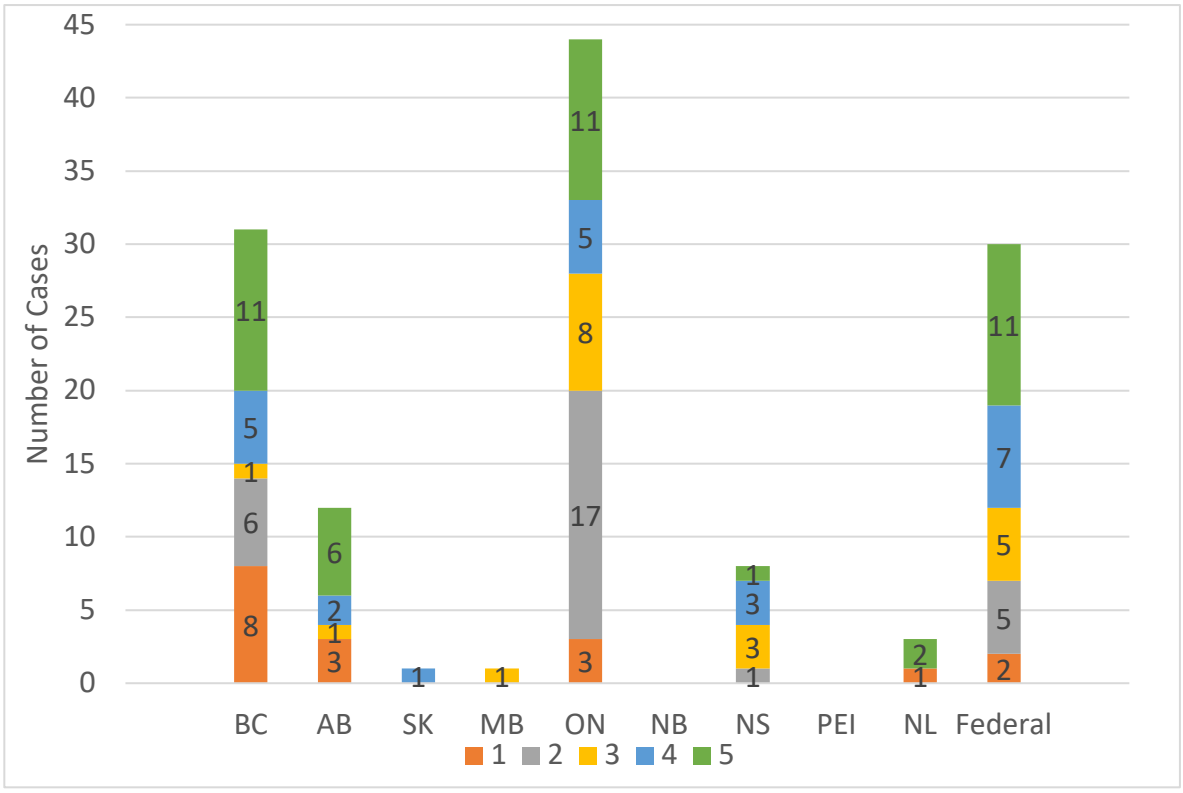

Figure 10 - Number of cases in each scoring category of aligning with SAR interests (1-5) by jurisdiction.

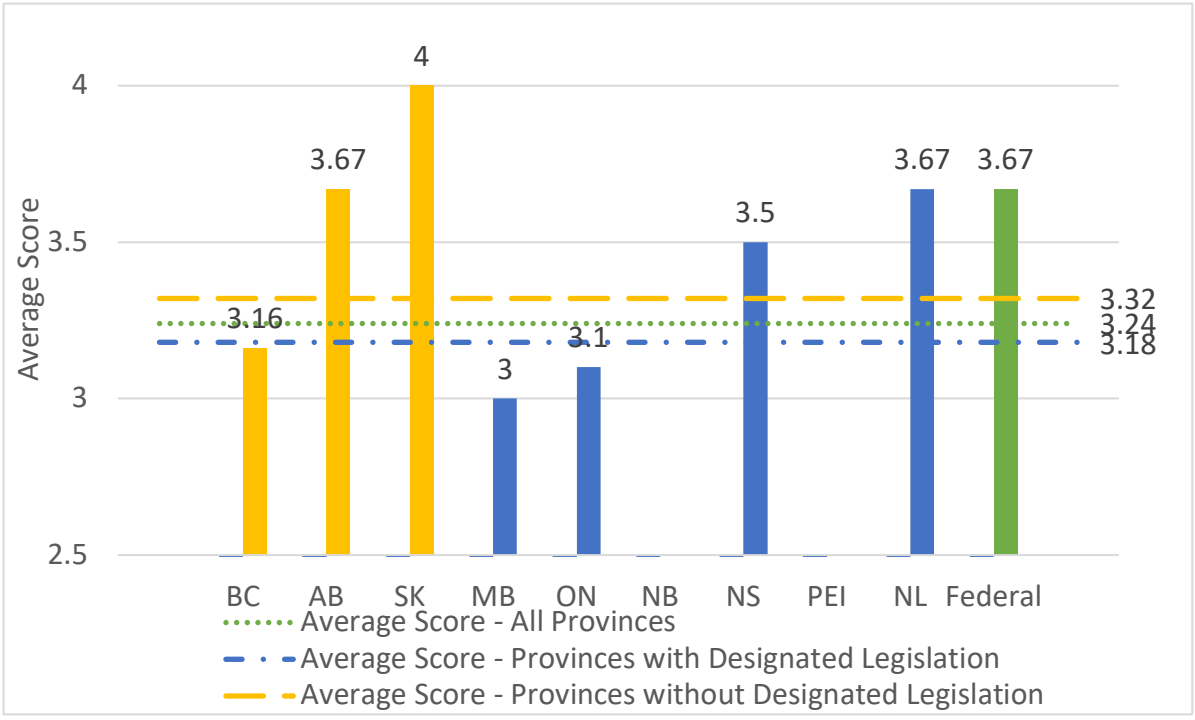

Figure 11 - Case score averages for SAR interests by jurisdiction.

Assessing cases by category of law rather than by jurisdiction, the highest average score was for public enforcement cases, with an average of 4.4 over 10 cases (see Figures 13 and 14). Harvest and hunting quota cases had the lowest average, 2.86 over 7 cases. The largest group was the environmental impact assessment, permit, and exemption decisions, with 59 cases. It also had one of the lowest scores, with an average of 3. The second-largest group of cases were criminal cases, with 25 cases and the second-highest average score of 3.72. At the other end of the scale, freedom of information requests and disclosure had only 3 cases, and employment law had a single case. Their average scores of 3.67 and 3 are therefore not particularly informative.

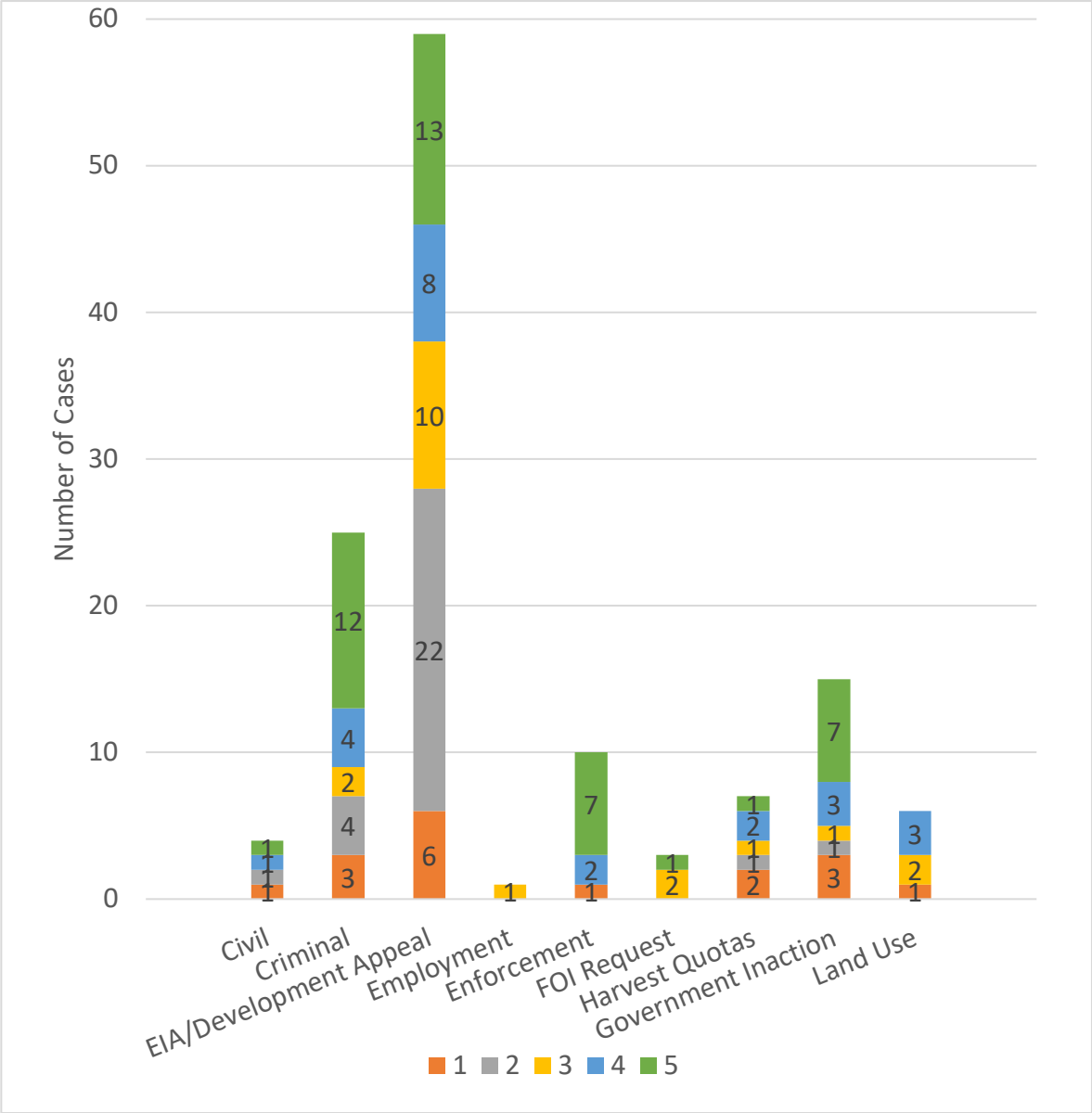

Figure 12 - Number of cases in each scoring category of aligning with SAR interests (1-5) by category of law.

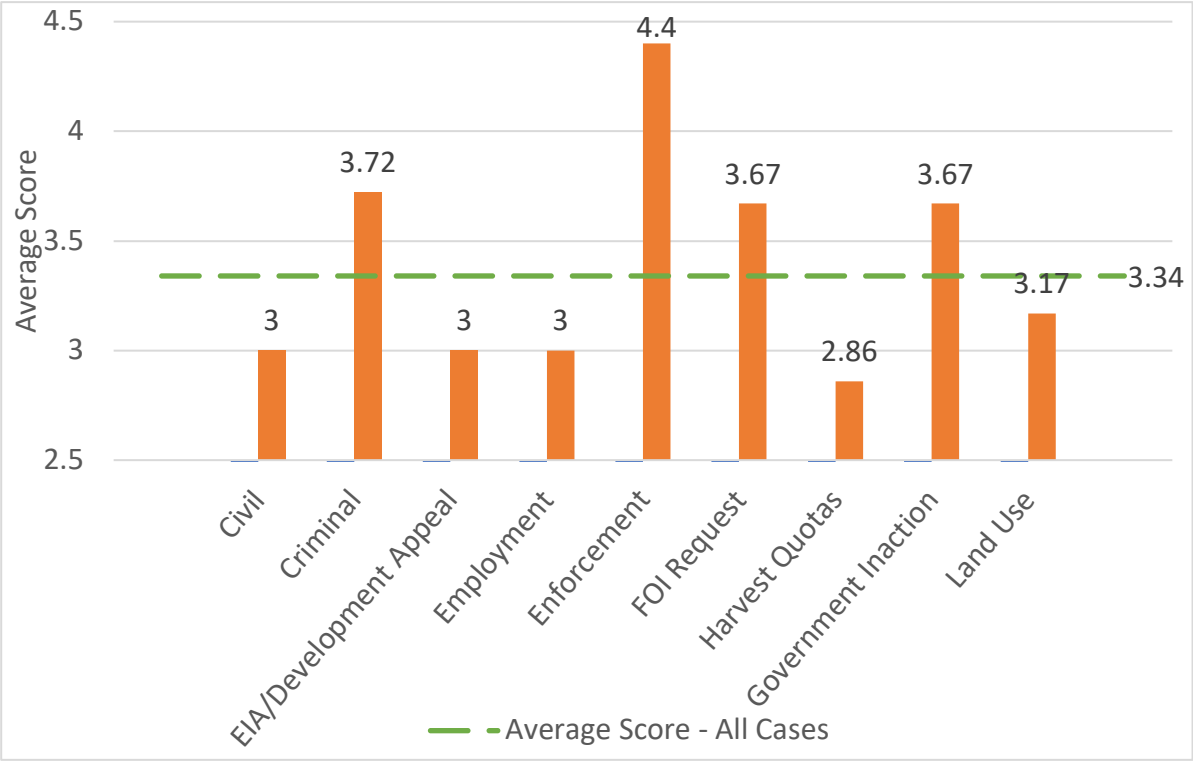

Figure 13 - Case score averages for SAR interests by category of law.

By the Words

While compiling the cases into data sets can give an overview of how courts are generally ruling on SAR matters, some trends from case law cannot be quantified by numbers. The reasons for decisions and the specifics on which cases turn are a crucial part of reviewing case law. These trends are best examined by category of law rather than by jurisdiction.

Civil

There were only four civil cases in the dataset, meaning cases where all parties were individuals or non-governmental corporations. This category had an average score of 3, perfectly in the middle of the scoring scale. This indicates that the decisions were balanced between deciding for or against SAR interests. The small number of cases meant that it was difficult to establish trends in the decision making. Two cases dealt with property restrictions aimed at conservation. In *Nature Conservancy of Canada v Waterton Land Trust Ltd.,* the plaintiff unsuccessfully sued the defendant for breaching a conservation easement. The Alberta

Court of Queen's Bench found that the terms were changed by an oral agreement when the property was purchased (2014 ABQB 303). In *Vida, Re,* the petitioner was unsuccessful at satisfying any of the conditions needed to cancel a restrictive covenant preventing development on land where SAR were expected to occur (2021 BCSC 1444).

The other civil cases dealt with injunctions. In *Westfor Management v Extinction Rebellion,* the Nova Scotia Supreme Court granted an injunction to remove blockades set up in protest of a clearcutting licence. The decision made it apparent that the blockades, as an act of civil disobedience, served an important purpose, but the protestors should have brought a judicial review of the decision to grant the clearcutting licence (2021 NSSC 93). Similarly, the court in *Thomas and Saik'uz First Nation v Rio Tinto Alcan Inc.* found that the plaintiffs had brought the wrong suit (2022 BCSC 15). The plaintiff's sought an injunction against the project proponent to stop development, on grounds that included negative impacts to SAR. The BC Supreme Court found that there was insufficient consultation with the First Nation, and that the Aboriginal right to fish was impaired by the project. However, the duty to consult was on the Crown and not on the third-party project proponent named as the defendant (*Thomas and Saik'uz First Nation v Rio Tinto Alcan Inc.*, 2022 BCSC 15).

Criminal

For criminal law cases, the courts tended to find more favourably towards the SAR risk's interests, with the second highest average score of any category. This high average is likely at least partially due to the nature of the types of offences in question. SAR offences, are, for the most part, strict liability offences. Strict liability differs from many other criminal offences by not having a *mens rea* component. This means that there is no need to prove that an accused meant to commit the offence (East Coast Environmental Law, n.d.). A strict liability offence means that the prosecution only must show that the offence happened, and it is on the defendant to show that they exercised due diligence, that they relied on an official authority that they were not committing an offence, or that the offence provision did not apply to them in the first place (East Coast Environmental Law, n.d.).

In the criminal cases from the dataset, only a portion dealt with whether the accused was at fault. In fact, only one case raised a question of whether it was the accused who

committed the offence. In *R v Newman,* the accused successfully raised reasonable doubt that someone else had activated their trapping line, which harmed an SAR (2018 ABPC 143). There were cases that turned on the defences available to strict liability offences. In *R v Shirey,* the accused shot two grizzly bears on their property, but did not raise either of the strict liability defences of due diligence or necessity. They were convicted by the BC Supreme Court (2014 BCSC 2204). Conversely, the defendant in *Podolsky v Caillac Fairview Corp.* was acquitted after showing they had done their due diligence to prevent window fatalities while designing their building, despite the death of endangered birds (2013 ONCJ 65). In *R v Morreau,* the accused was successful on appeal from a conviction for unlawful herring by arguing that they had relied on the authority of the government, which had incorrectly broadcast the boundaries of the fishing area (*R v Morreau*, [1997] 141 WAC 196).

Several of the criminal law cases related to Aboriginal Rights[10]. In *R v Breaker,* the defendant established that their First Nation had traditionally hunted in a wildlife corridor, and that there was no clear intent to extinguish the right to hunt when the area was protected. They were acquitted from an unlawful hunting charge (*R v Breaker*, 2000 ABPC 179). In *R v Guimond,* the Manitoba Provincial Court found that a fishing restriction regulation was an invalid infringement of the accused's Aboriginal Right to fish, despite the valid objective of conserving endangered sturgeon, and acquitted the accused [2001] 11 WWR 163). The Indigenous defendants in *R v Morris,* however, were unsuccessful in their defence for unlawful hunting as the band with treaty rights to the area in question had no pre-contact traditions of hunting elk, and therefore no Aboriginal Right to hunt elk (2010 BCPC 270).

Another group of criminal cases turned on procedural issues, including admissibility of evidence or sentencing appeals. While some sentences were reduced on appeal, the circumstances and contrition of the accused played a role. A notable example is *R v The Lake Louise Ski Area,* where the corporate defendant unsuccessfully appealed a $2.1 million fine penalty for cutting down 58 endangered whitebark pine trees. The court upheld the fine, finding that the accused had heightened culpability as a mid-sized corporation, operating in a national

[10] Aboriginal Rights are the legal term used to designate rights arising from traditional Indigenous practices and cultures (Government of Canada, n.d.).

park, that had failed to train their employees resulting in multiple offences against SAR (2020 ABQB 422).

Environmental Impact Assessments, Permits, and Exemptions

The largest category of cases dealt with Environmental Impact Assessment ("EIA") appeals, and decisions related to granting development permits, or to exempting projects from EIA. This category had an average score of 3.03, slightly above the middle of the scoring scale. Generally, if there was evidence that a SAR was present and would be directly impacted by a project, courts ruled in favour of halting or revising the project to protect SAR interests, reflected in higher scores. However, the standard for refusing to allow development often requires evidence of "serious and irreparable harm" to the SAR, which is a high burden to meet. The result is that in circumstances where reproductive or nesting habitat would be directly destroyed, or when a project was likely to cause direct injury to a SAR, the case scores were high. Conversely, when the negative impacts from a project were downstream effects, such as impacts to hunting habitat or prey, courts were more likely to decide that the standard had not been met and the project could continue, reflected in a lower case score.

Several of the EIA cases decided in favour of SAR involved challenges from First Nations or Indigenous groups alleging that proposed developments would impact traditional, treaty, or Aboriginal rights. In *Tsleil-Waututh Nation v Canada (Attorney General),* the Federal Court of Appeal overturned a National Energy Board ("NEB") recommendation to approve the Trans Mountain pipeline expansion. One of the reasons for the decision was a finding that the NEB had unjustifiably defined the scope of the project to exclude impacts to the Southern Resident Killer Whale population from tanker traffic (2018 FCA 153). In *Yahey v British Columbia,* the BC Supreme Court found that the province was unjustified in authorizing development without regard for the Blueberry River First Nation's treaty rights. The court found that there were gaps in the province's wildlife management regime, and that the cumulative effects from projects in the area had significant adverse effects on Mountain Caribou Herds, and other SAR (2021 BCSC 1287).

Courts also have ruled favourably towards SAR interests in relation to the impacts of aquaculture on wild fish populations. In *Northern Harvest Smolt Ltd. V Salmonid Association*

of Eastern Newfoundland, the Newfoundland and Labrador Court of Appeal upheld a lower court ruling that the Minister's decision to exempt a fish farming project from environmental assessment was unreasonable (2021 NLCA 26). In *Morton v Canada (Fisheries & Oceans),* the court found that the policy of not testing fish for two diseases before issuing an aquaculture licence was unreasonable, and ruled scientific uncertainty could not be interpreted as a conclusion that the risk of adverse effects was merely speculative (2019 FC 143).

In cases where courts decided against the SAR's interests, they often cited that sufficient mitigation measures were in place. In *Clyde River (Hamlet) v TGS-NOPEC Geophysical Co. ASA,* the Federal Court of Appeal found that granting a licence to conduct seismic surveys in Baffin Bay and Davis Strait was reasonable, despite potential impacts to at risk bowhead whales and narwals, because there were sufficient mitigation measures attached (2015 FCA 179). In *0707814 BC Ltd. V British Columbia (Assistant Regional Water Manager),* the court found that the mitigation measures of protecting a "replacement" parcel of land were sufficient to permit infill of a wetland area where four SAR had been identified ([2008] BCWLD 1993).

Another common issue was the balance of convenience, often regarding appeals of permits and applications for injunctions to pause or stop development. In many cases, the courts found that the balance of convenience favoured continuing ahead with the project if it already had permits. In *Shell Canada Ltd., Re.,* the Alberta Court of Appeal found that the balance of convenience favoured allowing exploratory wells in grizzly bear habitat, as the evidence that a grizzly den existed in the area had not been submitted in time to be considered in the initial impact assessment (2011 ABCA 159). In *David Suzuki Foundation v British Columbia (Minister of Environment),* ten run-of-river hydro projects were being built in a watershed. They were submitted separately, which did not trigger environmental assessments, although the combined project would have required an environmental assessment. Despite the watershed being home to SAR, the BC Supreme Court found that the balance of convenience favoured considering the project separately as submitted and did not require an environmental assessment (2013 BCSC 874). In *West Moberly First Nations v British Columbia,* the BC Supreme Court found that there were serious issues to be tried in court and the potential for irreparable harm relating to the impacts of the Site C dam project on the treaty rights of the

First Nations. However, the court also found that the balance of convenience did not favour an injunction to stop work from continuing the site pending trial of those issues (2018 BCSC 1835).

A significant subset of cases was appeals of development approvals for wind farms in Ontario. These cases were argued on similar grounds, with claims of damage to the environment, and of risk to human health. The appeals were only successful in instances where serious and irreparable harm to a SAR was likely to occur. The mere presence of a SAR on the land where the project was proposed was insufficient to stop development, as only some species were found likely to be affected by the wind turbines. For instance, when Blanding's turtles were found to nest on the project land, the courts overturned approval for the projects (*Prince Edward County Field Naturalists v Ostrander Point Go Inc.*, 2015 ONCA 269). Similarly, the presence of threatened bat overturned a wind farm approval, as the court found that the bats were susceptible to wind turbine strikes (*Wiggins v Ontario (Environment and Climate Change)*, [2016] 5 CELR (4th) 95). Conversely, mitigation measures in the form of compensation habitat for bobolink were sufficient to allow project development to continue (*Association for the Protection of Amherst Island v Ontario (Environment and Climate Change)*, [2016] OERTD No. 36). Finally, in *Lewis v Director, Ministry of the Environment,* bald eagles, a listed species in Ontario at the time, were identified in the area, but project approval was upheld as there was no evidence of direct mortality to eagles from wind turbines ([2013] OERTD No. 70).

Enforcement

The enforcement cases were brought in response to government decisions to protect SAR, or to disallow development or activity because of a SAR. These cases are related to EIA/permitting decision cases but differ as the initial decision was to disallow the project. Because these cases are instances where the government is actively upholding SAR legislation, it is unsurprising that it has the highest average score, with 4.4615.

In *Carhoun and Sons Enterprises Ltd. v Canada (Attorney General),* the plaintiffs claimed that they had been misled about the results of environmental screening that prevented them from developing land that was suitable habitat for ten SAR, causing them to lose their

company. The plaintiff's claims of negligence and misfeasance were dismissed by the BC Supreme Court (2018 BCSC 1675). In *Nelson Aggregate Co., Re.,* the Ontario Office of Consolidated Hearing dismissed an application to have provincially significant wetlands redesignated to allow the quarry to expand, finding that they had not demonstrated sufficient protections would be implemented for the SAR whose habitat was in the proposed area ([2012] 71 CELR (3d) 233).

There was a group of cases in this category relating to an emergency order protecting the Western Chorus Frog in Quebec. Several development corporations unsuccessfully challenged the order, claiming that it was *ultra vires* and that by disallowing development in the frog's habitat, the order constituted uncompensated expropriation from the government (*Le Groupe Maison Candiac Inc. v Canada (Attorney General)*, 2020 FCA 88; *Habitations Îlot St-Jacques v Canada (Attorney General)*, 2021 FCA 27; *9255-2504 Québec Inc.v Canada*, 2022 FCA 43). In all these cases the court ruled in favour of the Western Chorus Frog protection.

Employment, Freedom of Information/Disclosure Issues

Neither of these categories had enough cases to see trends in court decisions.

Harvest Quotas

The cases related to harvest and hunting quotas had the lowest average score for any category. It was also the only category with an average score below the mid-point of the scale, at 2.8889. One issue in these cases was statutory discretion. In *ANC Timber Ltd. v Alberta (Minister of Agriculture & Forestry),* a timber company sued the Minister for setting annual forestry operating plans with regard for a draft caribou range plan. The Alberta Court of the Queen's Bench[11] ruled that the Minister was exercising discretion, and that it was not for the court to pass judgment on how well they were governing (2019 ABQB 710).

Another area where the harvest cases occurred was in relation to wildlife harvest quotas related to traditional Indigenous hunting rights. In *Makivik Corporation v Canada (Attorney General),* the federal Minister of the Environment varied a polar bear harvest quota that had

[11] Now the Alberta Court of King's Bench.

been decided under a co-management regime for wildlife arising from the Nunavik Inuit Land Claim Agreement. The Minister varied the board's decision by decreasing the harvest quota in reflection of polar bear's SAR status. The Federal Court of Appeal allowed, in part, the appeal from the co-management board, and granted declaratory relief against the federal government (2021 FCA 184).

Government Inaction

While a relatively small category of cases, these cases reflect how the courts rule when the public brings challenges that SAR legislation is not being enforced. This category had an average score of 3.6667, reflecting that courts tend to be willing to enforce existing SAR protections even if governments are not upholding them. In *Alberta Wilderness Assn. v Canada (Minister of Environment),* the Federal Court ruled that it was unreasonable for the Minister to not identify any critical habitat in the Recovery Strategy for the Greater sage-grouse, despite not having complete research on the species (2009 FC 710). In *Georgia Strait Alliance v Canada (Minister of Fisheries & Oceans),* the Federal Court of Appeal found that it was unlawful for a minister to rely on discretionary provisions from the *Fisheries Act* in a protection statement instead of issuing a protection order, as the *Species at Risk Act* provisions required compulsory and non-discretionary protection (2012 FCA 40). In 2020, the Nova Scotia Supreme Court ruled in that the government had systemically failed to fulfill their obligations under the *Endangered Species Act.* The Nova Scotia government had begun activity to correct the failings before the judicial review, which meant that this case scored lower in this data set as the issue was moot by the time of the decision (*Sipkne'katik v Alton Natural Gas Storage LP*, 2020 NSSC 111).

Land Use

The land use category of cases includes decisions regarding rezoning land, altering public land, and habitat loss. This was a smaller category with the median score of 3.1667. In *Bancroft v Nova Scotia (Lands & Forestry),* the public brought a judicial review of a government decision to sell an area of land was habitat of a SAR and that had previously been treated as a protected area. At the Nova Scotia Court of Appeal, the case was dismissed for

being moot, as the agreement of sale was no longer in place and the land in question had been officially designated a public park (2022 NSCA 78).

In *West Kootenay Community EcoSociety v British Columbia (Ministry of Water, Land, & Air Protection),* an environmental group brought a judicial review of the decision to move the entrance road to a park, despite risks to painted turtle and great blue heron populations (2005 BCSC 784). Due to highway regulations about access roads needing to be directly across from each other, moving the entrance to the park would allow the owner of an adjacent parcel of land to put in an access road at a lower cost than if the park entrance remained where it was. The BC Supreme Court allowed the judicial review, finding that it the decision to move the park entrance was an unauthorized exercise of decision-making power, as it was not to benefit the park, but rather the private landowner (*West Kootenay Community EcoSociety v British Columbia (Ministry of Water, Land, & Air Protection),* 2005 BCSC 784).

Discussion

None of the jurisdictions had an average case law score below 3, which was the middle, or neutral, position on the case scoring scale. This suggests that courts are deciding with SAR when related issues are brought before them. The provinces without designated SAR legislation had higher average scores than those with designated legislation. This means that looking at the case law, courts in provinces without designated legislation are actually ruling more in favour of SAR interests than those in provinces with designated legislation. This is the opposite result of what I had anticipated, showing that there is not a connection between stronger SAR legislation and more favourable court decisions. However, the case law review can only consider cases and decisions that have been reported. It is possible that the difference in the averages of provinces with and without legislation is attributable to the types of issues that make it before the court. Provinces with legislation may allow more room to bring challenges and "weaker" arguments on the side of SAR, resulting in lower scores on those issues.

From the ratios of the cases included in the data set, it is apparent that when SAR protections exist, the courts are upholding them. However, the EIA cases demonstrate that when a species is not protected under legislated provisions there is no recourse available in the

courts. This means that a species' legal status is paramount to ensuring protection. The caveat is that courts require sufficient evidence of impacts to the species. In addition to SAR listing, it is also important to provide information about the species' history and biology. The standard of serious and irreparable harm means that indirect effects to the species, such as impacts to prey habitats, may be discounted by courts if these is insufficient evidence of the prey's importance to the species' continued survival.

This data set is limited, however, by the cases which have published decisions. SAR concerns that were resolved privately, such as through arbitration or mediation, would not appear in the search results. There is also an imbalance in the number of cases available for each jurisdiction, so commenting on trends from provinces with only a few cases is challenging.

Conclusion

From the data that was available, I found that the factors that determine whether courts rule in favour of SAR is not dependant on the presence, or the strength, of SAR legislation. In fact, the data showed an inverse correlation between court decisions and the completeness of SAR legislation. Courts in the jurisdictions without SAR legislation sided more strongly with the interests of species and conservation.

The case law demonstrates that SAR protections are generally being upheld, provided they exist in the first place. While strong precedents protecting SAR are a valuable tool in the conservation toolkit, legal decisions are by their nature reactive rather than proactive. Courts can only get involved when conflicts have occurred, or after something has gone wrong. To get a sense of how conservation proceeds in practice, outside of the contentious nature of litigation, in Chapters 4 and 5 I looked at how SAR protections are progressing, and how they are being applied.

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Chapter 4 – The Political Story of Species at Risk Legislation in BC

The BC New Democratic Party (NDP) forms the province's current government, coming to power in 2017 after an extended period of BC Liberal governance. Initially, the BC NDP were a minority government, only achieving the support necessary to form government through a Confidence and Supply Agreement with the BC Green Party (*2017 Confidence and Supply Agreement between the BC Green Caucus and the BC New Democrat Caucus*, 2017). Included in the agreement was the requirement to prioritize the development of species at risk (SAR) legislation for the province (*2017 Confidence and Supply Agreement between the BC Green Caucus and the BC New Democrat Caucus*, 2017). Following the provincial election in 2020, the BC NDP formed a majority government, and as a result the Confidence and Supply Agreement was no longer necessary to hold the legislature. As a result, the influence of the BC Green Party over government priorities would be expected to diminish following the 2020 election.

In this chapter, I examine the reasons why BC has not implemented designated SAR legislation. SAR legislation inevitably faces resistance from opposed interests, notably industry and economic interests. The result is that political parties are more likely to call for changes to SAR management when they are not able to implement those changes and face that opposition. I argue that interest and action towards enacting SAR legislation has decreased as the current government transitioned from opposition to a minority government working in a coalition with a party that is centered around environmental concerns, to a majority government.

Methods

I assessed the content of historical bills proposing SAR legislation as if they were part of the legislation analysis in Chapter 2. I also looked at the Hansard (the records of government debate) to follow the progression of political discussion surrounding SAR issues in BC. I also reached out to members of the legislative assembly (MLAs) who had either proposed SAR legislation in the past, or who hold positions in the cabinet that are responsible for SAR related

governance. Finally, I looked at the mandate letters to the cabinet, specifically the Minister of Environment and climate change, and at the existing policy related to SAR in the province.

Mandate letters and policies

I found three mandate letters from the Premier to the Minister of the Environment since the BC NDP government took office in 2017. The most recent mandate letter is available from the BC Government Website. I found the earlier letters using a Google search to find contemporary new articles that linked to previous mandate letters. Official policies relating to SAR management and conservation are posted on the Ministry of Environment and Climate Change website (Government of BC, n.d.). Policies were obtained on September 4, 2023.

Draft Legislation

SAR legislation was first proposed in BC in 2010. Five SAR bills have been proposed to the legislature. These bills came from members of the legislative assembly (MLAs) from two parties: the BC NDP and the BC Green Party. I found the proposed legislation on the BC Legislature website by searching for Bills with the keywords “species at risk” or “endangered species”. Draft legislation was obtained on September 6, 2023.

Hansard Discussions of Species at Risk

Hansard is the public record of all legislature sessions, available from the BC Legislature website. No bill proposing SAR legislation has proceeded to a second reading in the legislature. This means there are no official records of debates or voting on the draft legislation. However, there are other instances of SAR legislation in the Hansard. I searched the Hansard index for mentions of “species at risk”, “wildlife”, or “endangered species” in all legislature sessions since 2010. I selected 2010 as the starting parameter for the search as it was when the earliest proposed SAR legislation was introduced. I assessed the results for relevant discussions. Hansard records were obtained on August 15, 2023.

MLA Interview

I reached out to the MLAs responsible for proposing draft SAR legislation. I also contacted the current Ministers of Forests and Environment and Climate Change, and to the

current leader of the BC Green Party. For the list of MLAs contacted see Appendix VI. MLAs were contacted using their official public service emails, available from the BC Legislature website. The exception was Andrew Weaver, who is a former MLA for the BC Green Party, who's contact information I was able to find using a Google search. I used a similar email template for contacting each of the MLAs, an example of which is found in Appendix VII. Emails were sent to MLAs on October 14, 2022.

Analysis

Mandate letters and Policies

Mandate letters and policies are public documents that outline the government's stance on issues and priorities for the term of governance. They are also much more subject to change than legislation and are the most current reflection of the government's official position on SAR. I assessed the content of the mandate letters and official policies for SAR protections.

Draft Legislation

I evaluated the most recent bill proposing SAR legislation from both the BC NDP and the BC Green Party using the same legislation scoring rubric from Chapter 2 (see Appendix II) (Bill M 208, 2017; Bill M 224, 2017). I chose to only evaluate the most recent bills as they should represent the best available approximation of each party's current position on what SAR legislation could look like. It should be noted that these are still over five years old, and are likely outdated approaches to SAR legislation.

Hansard

Unlike an interview setting, I could not ask follow-up questions or clarify statements made in the Hansard. As a matter of public record, I presumed that all statements made in the Hansard could be taken at face value. I analyzed the Hansard for recurring themes relating to the development of SAR legislation.

MLA Responses

For the MLA responses, most were sent via email. I reviewed the emails for whether they answered any of the questions I had asked, or provided any additional information. In addition, I had one video call with a former MLA, which I recorded with the permission of the participant and produced a transcript of. I reviewed the transcript of this interview as if it were another emailed MLA response.

Results

NDP Government Mandate letters

Over time, there is a shift in the language employed in the mandate letters over time. In 2017, when the BC NDP first formed the government with support from the BC Green Party, the mandate letter included an expectation to "make substantive progress on the following priorities: … [e]nact an endangered species law and harmonize other laws to ensure they are all working towards the goal of protecting our beautiful province" (Horgan, 2017). After the 2020 election, the BC NDP formed a majority government. In the 2020 mandate letter, the expectation regarding SAR had shifted to "make progress on the following items: … [c]ontinue to work with partners to protect species at risk and work collaboratively with other ministries to protect and enhance B.C.'s biodiversity" (Horgan, 2020a). The 2020 letter did not touch on developing SAR legislation. In 2022 Premier John Horgan retired. The new Premier, David Eby, updated the mandate letters to the Cabinet. In this most recent mandate letter, there is no mention of SAR or of wildlife (Eby, 2022).

Draft Legislation

Both bills I assessed scored substantially higher on the legislation rubric I used in Chapter 2 than BC's current SAR legislation. BC's current legislative regime scored 32.0% for the unweighted score, increasing to 38.1% when weighted. Bill M 226, the legislation proposed by the BC NDP in February 2017, scored 59.4% unweighted and 61.3% as a weighted score. Bill M 208, proposed by the BC Green Party in November 2017, scored even higher with 65.6% unweighted and 67.7% weighted. Even the BC NDP version would be sufficient to move BC from eighth to fifth highest scoring out of nine provinces (see Figures 15 and 16).

The BC Green Party version's score would increase an additional spot to the fourth highest scoring. This is before considering any further regulations or amendments that are often enacted to supplement a statute.

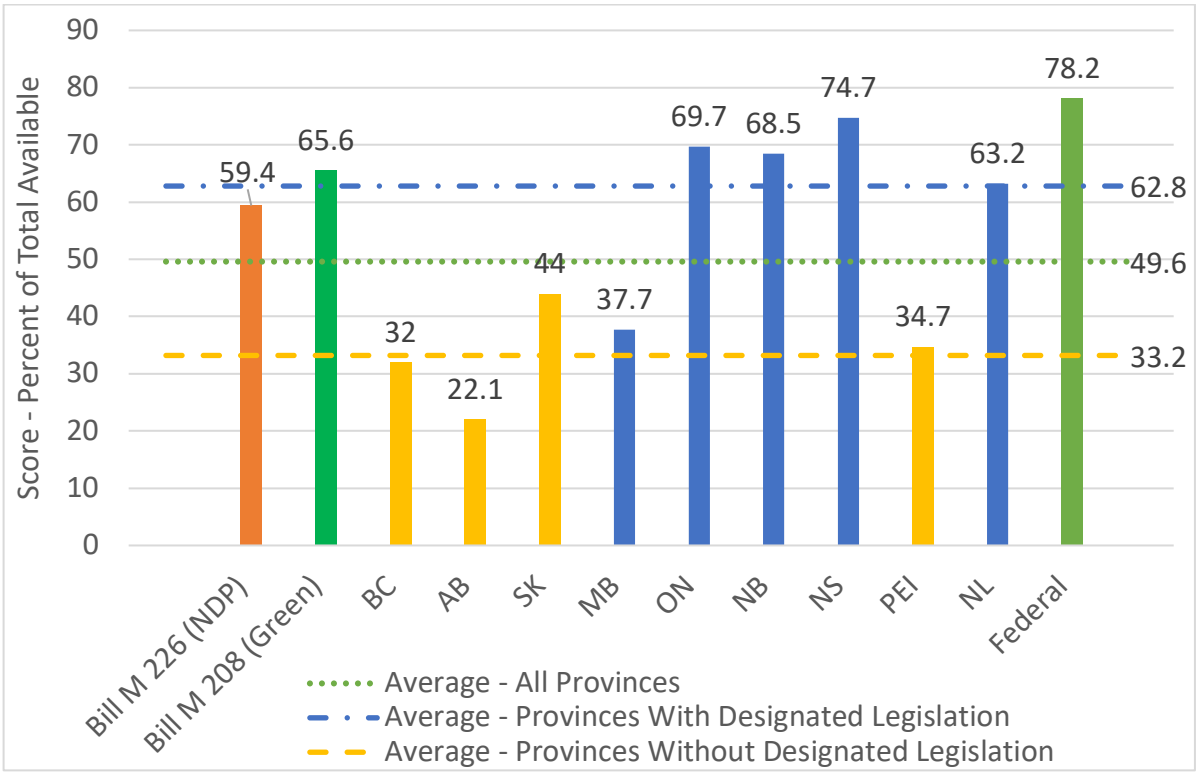

Figure 14 - Unweighted legislation scores including proposed draft SAR legislation for BC from the BC NDP and the BC Green Party.

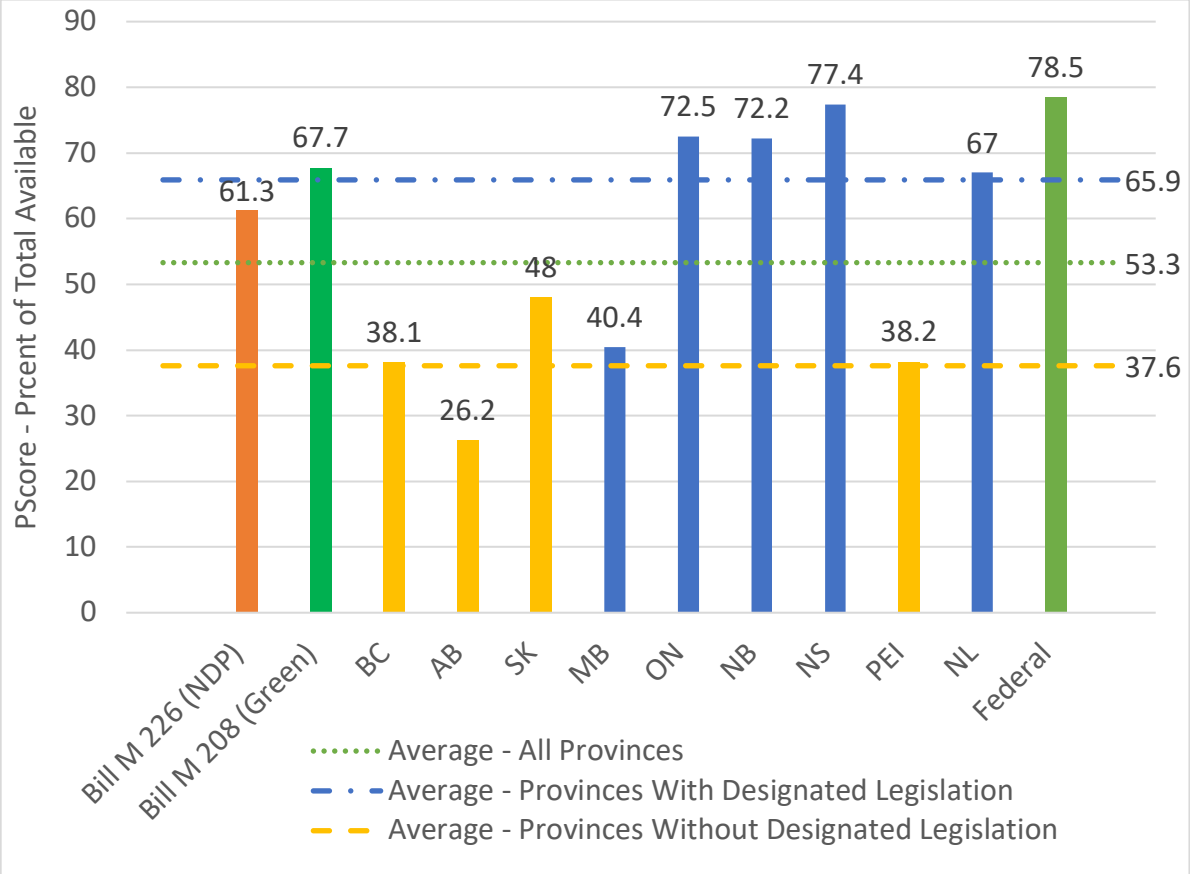

Figure 15 - Weighted legislation scores including proposed draft SAR legislation for BC from the BC NDP and the BC Green Party.

The two most recent versions of proposed legislation share many similarities in language and structure. In many instances, even the section numbers matched between the proposed Acts. This makes it possible to show direct comparisons. There are some slight, but significant, differences between the two bills. The legislation proposed by the BC Green Party placed greater emphasis on scientific information as the basis of decision making, and more holistic protections at the ecosystem level. This is apparent when looking at the listed purposes. For Bill M 226, proposed by a BC NDP MLA, the purposes listed are:

> 2. The purpose of this Act is to prevent species from becoming extirpated or extinct and promote the recovery of species at risk by:
>
> (a) identifying species at risk;
>
> (b) protecting species at risk and their habitats;

(c) promoting the recovery of species at risk; and

(d) promoting stewardship activities to assist in the protection, survival and recovery of species at risk.

Compare this to the purposes listed in the BC Green Party MLA's Bill M 208:

1. The purposes of this Act are

(a) to *prevent species from being extirpated or becoming extinct;*

(b) to identify species at risk based on the *best available scientific information, including information obtained from community knowledge and First Nations traditional knowledge*;

(c) to protect species that are at risk and their habitats, and to *provide* for the recovery of species that are at risk;

(d) to promote stewardship activities to assist in the protection and recovery of species that are at risk; and

(e) to *proactively protect healthy ecosystems* to prevent species from becoming at risk.

Bill M 208, the legislation proposed by the BC Green Party, continues to place more emphasis on public disclosure and science. For example, in s. 27(1), which sets out allowed exceptions to prohibitions against killing or harming listed species, Bill M 226 states the Minister "may enter into an agreement authorizing an activity that would otherwise be prohibited". The language of Bill M 208, however, is that the Minister "may enter into a *publicly disclosed* agreement authorizing an activity that would otherwise be prohibited". Additionally, s. 21, which sets out the requirements for recovery plans, begins with "[g]uided by the Scientific Committee on Endangered species" in Bill M 208, a stipulation that is not included in Bill M 226's version. Bill M 208 also includes expanded definitions for critical habitat and species of concern in comparison to Bill M 226. One other interesting difference between the language of the two proposed acts is that Bill M 208 uses both "First Nations traditional knowledge" (ss.1, 2, and 63) and "aboriginal traditional knowledge" (ss. 5 and 32) (2017). In contrast, Bill M 226 refers exclusively to "aboriginal traditional knowledge" (2017).

Hansard

I looked at Hansard mentions of SAR going back to the 2nd session of the 39th Parliament in 2010. On reading the Hansard for any mentions of SAR, a narrative thread begins to take shape. The earliest mentions to SAR in the Hansard I found were from 2010, when the BC Liberal party was in power. On May 19, 2010, Robert Fleming, an MLA for the BC NDP, asked the Minister of the Environment, Hon. Barry Penner, why the government did not "get to work introducing species-at-risk legislation that protects critical habitat of endangered species in British Columbia?" (British Columbia, 2010). Two weeks later, on May 31, 2020, Robert Fleming a draft *Species at Risk Protection Act* as a private members bill (Bill M 207, 2010).

The discussion surrounding species-at-risk generally followed this pattern until 2017, with MLAs from the BC NDP and BC Green Party inquiring whether the BC Liberals had any intention to implement SAR legislation. In response, the BC Liberal MLAs would point to other pieces of protective legislation or reference the BC Species at Risk Task Force[12] as the action being taken to protect SAR. During this time-period, draft species-at-risk legislation was put forward a further three times by MLAs from the BC NDP and the BC Green Party, always as a private member's bill (Bill M 211, 2011; Bill M 224, 2017; Bill M 226, 2017).

After the 2017 election, when the BC NDP formed the government in conjunction with the BC Green Party, the rhythm of the debates around SAR changed. Initially, the Minister for Environment and Climate Change brought up the work that would be done on SAR legislation as part of their mandate. On November 2, 2017, Minister of the Environment and Climate Change Strategy, Hon. George Heyman, stated that the new NDP Government:

> [would] also move in the coming months and years to introduce an endangered species law so that B.C. has a made-in-B.C. law, rather than being subject to actions from the federal government, to take the place of the gap that exists in B.C., which can take out ability to ensure that habitat, species

[12] The Species at Risk Task Force was implemented by the BC Liberal Party in 2010. The earliest mention I found in the Hansard was from May 18, 2011, from Minister Environment Hon. Terry Lake (British Columbia, 2011). The task force wrote a report that was published publicly in July 2011 (Fraser et al., 2011).

> and ecosystems are protected in a way that protects them and protects our industries (British Columbia, 2017).

On November 6, 2017, Andrew Weaver, then-leader of the BC Green Party, introduced Bill M 208, the most recent draft of SAR legislation (Bill M 208, 2017). Hansard discussion from early in the NDP Government is primarily a back-and-forth between the Minister of Environment and Climate Change Strategy, Hon. George Heyman, and BC Liberal Party MLAs about the necessity of SAR legislation.

As the BC NDP government aged, however, a new aspect to the discussions arose. These were challenges, primarily from BC Green Party MLAs, about the progress, or lack thereof, on SAR legislation. On November 21, 2019, Andrew Weaver asked the Minister of Environment and Climate Change Strategy:

> As the minister noted, in his mandate letter from the Premier, it states that the minister will 'enact an endangered species law and harmonize other laws to ensure they are all working towards the goal of protecting our beautiful province.' I reiterate. We're two years into this government, yet B.C. remains one of the only provinces without legislation dedicated to protecting and recovering species at risk (British Columbia, 2019).

After the 2020 election, when the BC NDP formed a majority government and the Confidence and Supply Agreement was no longer in effect, Hansard mentions of SAR became almost entirely challenges from the BC Green Party on the lack of legislation, and explanations from the Minister of the Environment and Climate Change.

On July 10, 2020, BC Green Party leader, Sonia Furstenau, asked:

> It was in the minister's mandate letter, at the beginning of his mandate, to bring in species-at-risk legislation. … I would like an update from the minister on where things are at with this legislation. Are there funds in the budget for producing this legislation? What are the barriers for why this legislation hasn't come forward? (British Columbia, 2020).

In response, Minister George Heyman stated:

> We engaged, shortly after I received the mandate, to create species-at-risk legislation. We did extensive consultation with industry, stakeholders, the public, environmental organizations, and Indigenous nations. We found, as would be expected, a lot of complexity. Particularly, one of the things that we took note of was the strongly expressed desire by Indigenous nations … to ensure that they were fully involved in both the legislation and in the

> processes established by the legislation, particularly the application of Indigenous knowledge. They said to us that they wanted to be sure that we took the time to get it right. (British Columbia, 2020).

Questions about the lack of progress on SAR legislation continue to be asked. On October 27, 2021, Jackie Tegart, MLA for the BC Liberal Party,

> On November 21, 2019, the Minister of Environment stood in this House and said: 'It is in my mandate, and has been since day one, to develop B.C.'s species-at-risk legislation.' I have here the minister's current mandate letter. There is no mention of legislation to protect steelhead [an endangered species]. It's gone extinct. To the Premier, why did he break his promise to protect an iconic species like steelhead? (British Columbia, 2021).

Minister Heyman's response was:

> The member is correct that a specific reference to species-at-risk legislation is no longer in my mandate letter, but what is in my mandate is to work with other ministers to take action to protect biodiversity in species (British Columbia, 2021).

The most recent reference to SAR I found in the Hansard continues to make this same enquiry. On February 27, 2023, Furstenau asked:

> I asked the question to the Premier – whether there would be biodiversity legislation or species-at-risk legislation. In fact, work on that legislation started in 2017. It was promised by this party, in the 2017 election, that they would introduce species-at-risk legislation, and the work started. The people that were working on that legislation were told to stop working. I'm very curious to know who told those people to stop working on the legislation, which was promised by this government to the people of British Columbia. My question again is to the Premier. Will he commit to introducing biodiversity legislation? (British Columbia, 2023).

The response from Minister Heyman, and therefore the most recent government response in the Hansard relating to SAR,[13] was:

> [W]hen we began working on, at that time, species-at-risk legislation for B.C., the first thing we did was begin a series of consultations with First Nations, who very quickly made it clear to us that they needed to be involved

[13] Note: This is as of August 2023. The BC Legislature resumed sessions in October 2023. It is possible that more recent debates on species at risk have occurred in the interim between when the Hansard information was gathered and now.

> in the development and discussion of the legislation at every stage of the way… [W]e entered into… the negotiation of a nature agreement, a comprehensive nature agreement, with the federal government by which we could take steps to deal with ecosystem integrity. Again, we are working with that, as we should, with First Nations around the province to ensure that it is government to government to government and that we get it right. Our government has committed to implementing all of the recommendations of the old-growth strategic review. That includes enacting biodiversity legislation. That is being done and worked on by my colleague the Minister of Water, Land and Resource Stewardship in conjunction with First Nations, as we must and as we should (British Columbia, 2023).

The second theme is the concerns brought up in opposition to developing SAR legislation for BC. In addition to any sub-textual concerns about impacts to economy, there were three major concerns explicitly identified:

1) that just because other provinces have legislation does not mean that BC needs it;
2) that focussing on SAR rather than ecosystems as a whole does not resolve the true cause of biodiversity loss; and
3) that laws and regulations already in place could be used to protect SAR if they were applied properly.

Interestingly, the most explicit statement of these concerns came from an extended exchange between Minister George Heyman, and Mike Morris, an MLA for the BC Liberal Party, on April 10, 2018 (British Columbia, 2018a). It regarded whether the necessity of implementing SAR legislation just because other provinces have it:

> **M. Morris:** [T]here are a plethora of these things scattered all over the place that not only make it very complicated for the enforcement side, make it complicated for government, make it complicated for the bureaucracy but especially make it very complicated for industry and the citizens as to what needs to be done. I don't think we're even aware of half the legislation that's out there at any given time because of the quantity that we have. … One of the pieces of legislation that's important in this province, as federal legislation, other than *SARA* … is the *Migratory Birds Convention Act*. I guess the first question is: what brought this idea forward? I'd never heard of provincial species-at-risk legislation before. … I'm wondering: what concern do we have, as a province right now, that initiated this idea?
>
> **Hon. G. Heyman**: I would say that underlying everything is the fact that British Columbia has the richest biodiversity in Canada, as well as the greatest number of endangered species. I think protecting that legacy, clearly and

> effectively, is an important goal of looking at legislation. I would agree with the member that having multiple, potentially conflicting, pieces of legislation is not an effective way to do that. … Environmental organizations, for many years, have pointed out that B.C. is one of the last jurisdictions in Canada to adopt legislation. …
>
> **M. Morris**: Just because other jurisdictions might have some legislation in place, it doesn't necessarily mean that we need to follow suit and that there's a deficiency within the legislation in British Columbia that addresses some of those same factors. … We're talking about species-at-risk legislation, but if we don't use the tools that are already in the toolbox to help us address some of these deficiencies that we have here, another act really won't matter, because we're not paying attention to the requirements of the Migratory Birds Convention Act. … Focusing in on one species really doesn't provide the effect that I think the minister might be looking for. … Is *SARA* going to offer some relief there, or is the province going to look at enforcing the *Migratory Birds Convention Act* and some of the existing legislation that's out there to protect the biodiversity that we have in the province? …
>
> **Hon. G. Heyman**: I would say that one of the reasons we're considering legislation in British Columbia is because a number of inadequacies have been identified with the federal legislation, including by the federal government themselves. …. One of the inadequacies that exists in the federal act is exactly, I think, the one the member identified, taking a species-by-species approach. … I think one of the things we want to achieve is having one clear piece of legislation, or pieces of legislation that are easily read together, as well as having the tools and resources on the ground to ensure that they're enforced fairly and effectively in a reasonable manner. …
>
> **M. Morris**: When I look at the *Migratory Birds Convention Act* … it's pretty specific on what it states with respect to the birds … The legislation is already in place. We don't need to invent any more. There's corresponding legislation under our provincial *Wildlife Act*, as well …There's a lot on the books already (British Columbia, 2018a).

The next recurring theme in the Hansard raises an apparent conflict with relying on the existing protections, particularly the federal *Species at Risk Act* and the *Migratory Birds Convention Act* mentioned in the above exchange. A concern expressed throughout Hansard by MLAs from all parties was preventing the federal government from stepping in and assuming responsibility for SAR management in the absence of provincial action. This was raised in relation to federal intervention in caribou protection, but more recently there are concerns about potential federal intervention in spotted owl conservation. In fact, Morris segued directly from the above conversation into questions about the federal government's

input in caribou conservation in BC. On April 9, 2018, John Rustad, a BC Liberal MLA, asked the Minister of Forests, Lands, Natural Resource Operations and Rural Development, Hon. Doug Donaldson, a question:

> Specifically around caribou, caribou management and caribou recovery in the various regions of the province, is the ministry still engaged in developing and promoting the work that they were doing associated with recovery and management to the federal government as a response to try to prevent the federal government from its application of SARA, the species-at-risk legislation?

In response, Minister Donaldson replied:

> Yes, we are working and remain fully engaged with the federal government on this issue. We don't want a section 80 order — I believe it's section 80 — under the *Species at Risk Act*, the federal act, to be implemented by the federal government, which means we lose much control of the management activities. They are only able under the *Species at Risk Act* to consider habitat considerations. We are able, in our process, to consider more than habitat, but social and economic implications of managing a population for sustainability (British Columbia, 2018b).

On April 17, 2018, Heyman had also expressed concerns with ensuring that the province maintained control over SAR conservation as part of the reasoning for developing provincial SAR legislation.

> We also want to ensure that we have B.C. legislation – rather than be forced, as we are in the case of caribou, to react to federal legislation in the absence of any provincial legislation that the federal government could, in turn, look to – and be assured that we have the mechanisms within British Columbia to address listed species (British Columbia, 2018c).

MLA Responses

I sent inquiries about the current progress on SAR legislation to five MLAs through email. I received an automated response from Robert Fleming's office and no response from George Heyman, the Minister of the Environment and Climate Change. I did receive emailed responses from the Deputy Minister of Land, Water and Resource Stewardship, on behalf of Katrine Conroy, then-Minister of Forests, and from Sonia Furstenau, the BC Green Party Leader. I also had the opportunity to speak to Andrew Weaver, former BC Green Party Leader, over video call.

The response from the Ministry of Land, Water and Resource Stewardship was that the government was "committed to delivering on its mandate to 'continue to work with partners to protect species at risk and work collaboratively with other ministries to protect and enhance British Columbia's (B.C.) biodiversity." I was also told that the government was continuing to work on "policy projects that benefit biodiversity and species at risk" including money invested in habitat restoration, and collaborating on a Nature Agreement (Cruickshank, 2023).

Outside of that, I was directed to "several laws and regulations that can be applied to help conserve, protect, and recover species at risk", notably the *Wildlife Act,* the *Forest and Range Practices Act* (2002)*,* and to protected area designations including parks and ecological reserves. What was not included in the email response was direct answers about the questions I had posed, including the absence of any mention of whether the development of SAR legislation was still in progress, or any explanation for why no draft legislation had been produced. The closest response I received was that "[t]he Province will be collaboratively developing the path forward to implement all recommendations with Indigenous Peoples, as well as engaging with stakeholders and communities. Engagement on the path forward will be launched in late fall 2022."

The email response from Sonia Furstenau's office did address the questions I had sent. In answer to why no draft legislation had gone forward beyond a first reading, I was given the unfortunate, but not unexpected, explanation that "Private Member's Bills… rarely, if ever, move past first reading and into debate." Additionally, in reference to why no new draft legislation has been proposed since 2017, the email explaine:

> [t]hings have shifted since we tabled the Endangered Species PMB in 2017, and stakeholders are now clearly recommending that biodiversity legislation is co-developed with First Nations, which is something that we could not do in a Private Member's Bill.

In the video call with Andrew Weaver, I was given more direct answers to some of my questions. In response to why the proposed SAR legislation had not gone forward beyond the first reading "there are only three private member's bills in the history of the BC legislature… that have ever made it to second reading and passed. … [I]n BC … the private member's bill is often done to trigger a discussion, and then hope that the public support it."

In response to a question about what the limitations were on SAR legislation development, he answered "the species at risk, ran up to natural resources really fast at some point, and I don't, that's clearly to me, the reason why it never proceeded for it. But I don't know what aspect of that it was the stumbling block."

Finally, he provided a more detailed idea of his perception on the apparent conflict between SAR legislation and industry perspectives:

> It's not developing in BC and the reason why is very clear to me, is that there has been a never-ending conflict between the natural resource sector and the environmental sector in British Columbia, and there is no need for there to be that tension … [T]ry to get people to recognize that every environmental challenge actually is an opportunity for innovation. You have to solve it. And when you solve these environmental challenges, it can be empowering for the individual, but also, you know, triple bottom line when social environmental and economic benefits.

Policies

BC's approach to SAR conservation is accessible primarily through the Ministry of Environment and Climate Change's website (British Columbia, n.d.-b). The non-legislative policy documents included the *Canada-British Columbia Agreement on Species at Risk* (2005). The purpose of this document was to allow for cooperation and coordination between the two levels of government when it comes to SAR management and conservation. The document itself does not set out many non-discretional requirements and did not establish any specific protections for SAR, rather it focusses on the working relationship between the two governments. Of note, considering the absence of any requirement for conservation or recovery plans under BC's provincial legislation, the Agreement calls for Parties to "endeavor to develop recovery strategies and action plans that meet timelines and other requirements set in federal and provincial legislation."

The Best Management Practices (BMPs) are specifically tied to natural resource stewardship on the government website, rather than to SAR (British Columbia, n.d.-a). They include lists of guidelines for industry on how to manage and mitigate impacts to species during project development. The BMPs are divided by type of species (amphibians and reptiles, bats, plants, etc.) and by region-specific guidelines (Thompson & Okanagan, Lower Mainland,

Cariboo, etc.). These BMPs are generally not aimed at SAR specifically and do not establish additional protections for SAR.

Discussion

Mandate letters

During the 2017 provincial election, the BC NDP platform included a promise to establish designated SAR legislation in BC (BC New Democratic Party, 2017). Following the election, the NDP formed the government with support from the BC Green Party to reach the majority (*2017 Confidence and Supply Agreement between the BC Green Caucus and the BC New Democrat Caucus*, 2017). The 2017 mandate letter from Premier John Horgan to the Minister of Environment and Climate Change Strategy, George Heyman, reflected this campaign commitment to developing SAR legislation.

In November 2020, BC had another provincial election during the height of the Covid-19 pandemic. There were no mentions of SAR legislation development in the 2020 campaign platform, and only passing references to "wildlife", "ecosystems", and "biodiversity" (Horgan, 2020b). The mandate letter that followed the 2020 election also reflected the downgrading of SAR protection as a priority for the government, with development of legislation being notably absent from the language of the letter.

As the 2022 mandate letter did not follow another election, there was no campaign platform to confirm what is apparent from the mandate letter – SAR protection has been relegated even further down the list of priorities for the government. The evolution of the language across the mandate letters shows a clear narrative that developing designated SAR legislation is no longer an official priority for BC's government. If the trend continues, it is unlikely the government will take any action on SAR legislation in the near future.

Draft Legislation

Despite the time gap of over half a decade, both bills I scored have significant advantages compared to the existing legislation in BC. The first is increased certainty in the listing process. Both bills require the Minister to list species according to the recommendations of an independent committee made up of individuals knowledgeable in either a scientific

discipline relating to conservation or in Indigenous Traditional Knowledge (ss.5(1), and 16(1) of each act). The other major advantage is the inclusion of conservation plan requirements, an area that is completely absent from the existing legislation.

However, neither of these bills were without fault, and on paper they still fall short of several provinces' existing legislation. This may be attributable to the additional regulations that often follow a new statute. However, legal ideology has shifted since the bills were proposed, and it is unlikely that either would be passed as is. In fact, changes to perceptions of what is needed in SAR legislation could partially explain why no new draft legislation has been proposed. Neither bill was developed with Indigenous input and collaboration and this component has been acknowledged as critical by MLAs from all parties in the Hansard discussions.

Hansard

BC NDP rhetoric while the Liberal Government was in power consistently pushed for SAR legislation development. After the change in government in 2017, the reports from the Minister of the Environment and Climate Change during the addresses from the ministers in the legislative budget sessions referenced the goal of developing species at rick legislation. This aligned with the 2017 mandate letter. At this time, Hansard discussions of the issue were primarily MLA's who were opposed to the idea of SAR legislation and questioned the necessity for the legislation.

Following the 2020 election, when the BC NDP gained a majority government and were no longer beholden to the terms of the Agreement with the BC Green Party, the tone of the Hansard shifted. Instead of confirming and defending work being done on SAR legislation, the BC NDP was put on the defensive from MLAs asking why progress on SAR legislation had stagnated. This pattern continues to the most recent Hansard accessed for this research.

Concerns that there are too many existing pieces of legislation do not inherently oppose, and may in fact be a point in favour of, enacting SAR legislation. Codifying all aspects of a specific area of law in one place, and repealing any prior provisions, is not a new concept in Canada. Well-known previous examples include the *Criminal Code* (RSC 1985, c C-46) and the *Forest Practices Code of BC Act* (RSBC 1996, c 159).

One specific objection to developing SAR legislation questioning the necessity, as existing legislation, both provincial and federal, already covers what would be included in a new statute. Ironically, another major concern, expressed at times by the same MLAs, was preventing federal interference in provincial SAR management. Under *SARA,* federal intervention only occurs when provincial action is insufficient. There is a direct conflict between wanting to retain provincial authority over SAR management and wanting BC to rely on protections under *SARA* (SC 2002, c 29) and the *Migratory Birds Convention Act* (SC 1994, c 22). Holding up the *Migratory Birds Convention Act* as an example of existing protection measures is particularly counterproductive, as the lauded habitat protections under that act apply only to migratory bird species and only during specific times of the year. The *Migratory Birds Convention Act* is not a reason provincial SAR legislation is unnecessary, but rather an example of what protections could, and should, be afforded to all SAR, at all times of the year, in all areas of the province.

Finally, the current NDP government's reasons for the delay in acting on SAR legislation have become focussed on taking the time to get it right. There is a repetition of needing to take the time to include Indigenous perspectives. While it is positive that the government is acknowledging the necessity of collaborating and consulting with Indigenous groups in developing SAR legislation, it is hard not to read repeated references to consultation as a means of deflecting responsibility for government inaction. Reading the Hansard all together sets out an unfortunately common narrative in politics. A party in opposition has the luxury to advocate strongly for drastic changes, particularly those that go against economic interests. However, if that same party is elected to office, even on a campaign platform that promises to enact those changes, the reality of governing and balancing many different interests can lead to a failure to act on those promises. The result is a full circle where the previous opposition finds themselves in the position of repeating, and defending, the same inaction they had previously criticized.

MLA Responses and Input

The responses I received from the MLAs to my inquiries about SAR legislation did not answer all my questions about the barriers to SAR legislation development but did align with responses I anticipated. Perhaps unsurprisingly, the MLAs who are members of the current

government were unwilling or unable to provide context on why progress on SAR legislation development had stalled. Additionally, the Green Party MLAs I reached out to confirmed that private member's bills do not typically progress in the BC Legislature and that the reason for putting them forward is to draw attention to an issue and garner public support. Neither seemed surprised that legislation had not been developed, nor were they particularly hopeful that new legislation was on the horizon.

Conclusion

The story of SAR legislation development in BC is not a triumphant one, nor is it even a slow grind towards a distant summit. Instead, it is a story of big promises and a slow slide into inaction as the pressure to fulfill those promises eased and other interests took priority. Of note is a recurring theme that came up throughout the Hansard and could explain the lack of progress on this issue. The inclusion of Indigenous perspectives and input for SAR development is an essential component of achieving good legislation, as will be reflected in the next chapter. However, there is a concern that pointing towards Indigenous involvement and taking the time to "get it right" does not address the gaps and absences that are currently being felt by the lack of SAR legislation in BC. In the next chapter, I interviewed individuals who have knowledge and connections to two of BC's protected areas about their perspectives on how SAR protections are, and are not, working in the province.

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Chapter 5 – Species at Risk Protections in Practice: Conservation Community Perspectives

While legislation is vital to conservation, what matters to a species, and to the people involved in their protection, is how those laws are applied in practice. To assess how well BC's species at risk (SAR) protections operate *in situ,* I interviewed participants from the conservation community who have experience with BC protected areas or SAR. The purpose of this chapter is to highlight perceived strengths and weaknesses in the province's current approach, as well as to identify any barriers to implementing improvements. I found that most participants interviewed were dissatisfied with current SAR protections and all participants felt there was a need to improve existing conservation approaches.

Methods

I chose to interview individuals with connections to SAR through protected areas in the province. I selected protected areas as they should represent the regions of the province that are the safest for SAR and should be the best examples of BC actively putting conservation measures and actions in place. In essence, if SAR protections are not functioning in BC's protected areas, then where are they? I selected two protected areas, Lac Du Bois Grasslands Protected Area and Wells Gray Provincial Park, as the basis for the interviews. I contacted

individuals with a connection to one or both of those areas to inquire whether would participate in an interview about their experiences with SAR protection in BC.

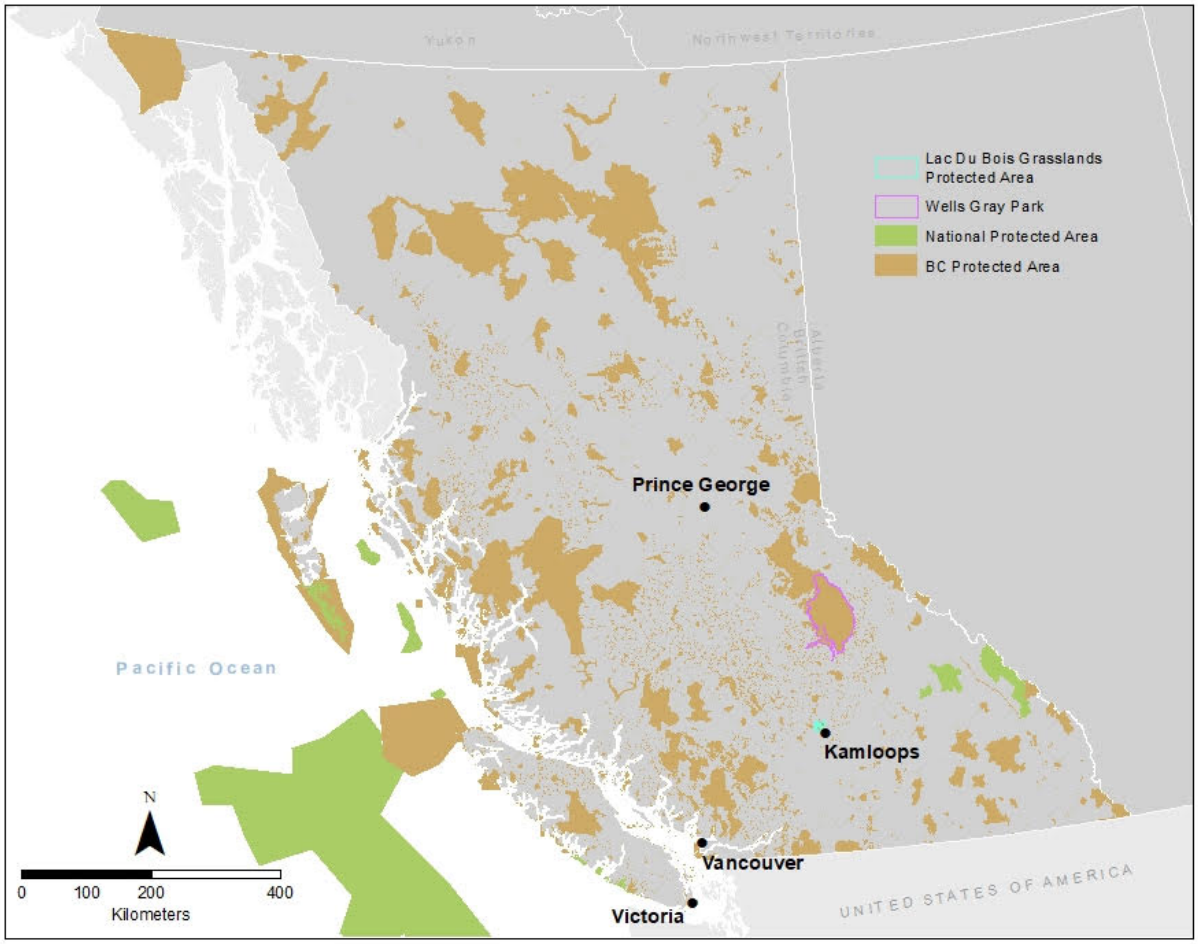

Figure 16 - Map of BC showing provincial and national protected areas. The locations of Lac Du Bois Grasslands Protected Area and Wells Gray Park are highlighted on the map. (Map by Olea Vandermale.)

Protected Areas Selected

The two areas were selected for their proximity to each other and to Thompson Rivers University. They represent two different protected designations in BC. The following are brief overviews of each site.

Lac Du Bois Grasslands Protected Area

Lac Du Bois is situated just north of Kamloops, BC, on the unceded traditional territory of the Tk'emlúps te Secwépemc. It was established in 1996, covering 15,712 hectares. The protected area designation grants some protection while still allowing activities prohibited in a provincial park (BC Parks, n.d.-a). Some of these activities include hunting, range cattle grazing, and, notably, the building of the Trans Mountain Pipeline that passes through the protected area. However, the boundaries of Lac Du Bois include two areas designated as ecological reserves, which have the strictest level of protection for land designations in the province (British Columbia, n.d.-m). These are the McQueen Creek and the Tranquille ecological reserves, located in the northeast and southwest of Lac Du Bois, respectively. Outside of the protected area, Lac Du Bois abuts municipal and private property, and private conservancy land operated by the Nature Conservancy of Canada, an environmental not-for-profit. This gives a variety of land designations and protections across a relatively compact area.

Even compared to the rest of BC, the interior grassland ecosystems have an incredible amount of biodiversity and a proportionally higher number of SAR (Grasslands Conservation Council of BC, n.d.). Lac Du Bois encompasses suitable habitat for many grassland SAR, including rattlesnakes, sharp-tail grouse, burrowing owls, and Western long-billed curlews (BC Parks, n.d.-a). Regarding human resources and infrastructure, Lac Du Bois does not have full-time park staff (BC Parks, n.d.-a). Much of the area is managed collaboratively through local wildlife groups and volunteer efforts. Additionally, Lac Du Bois has existing ties to Thompson

Rivers University, with the protected area being the site for past and ongoing research conducted through the university.

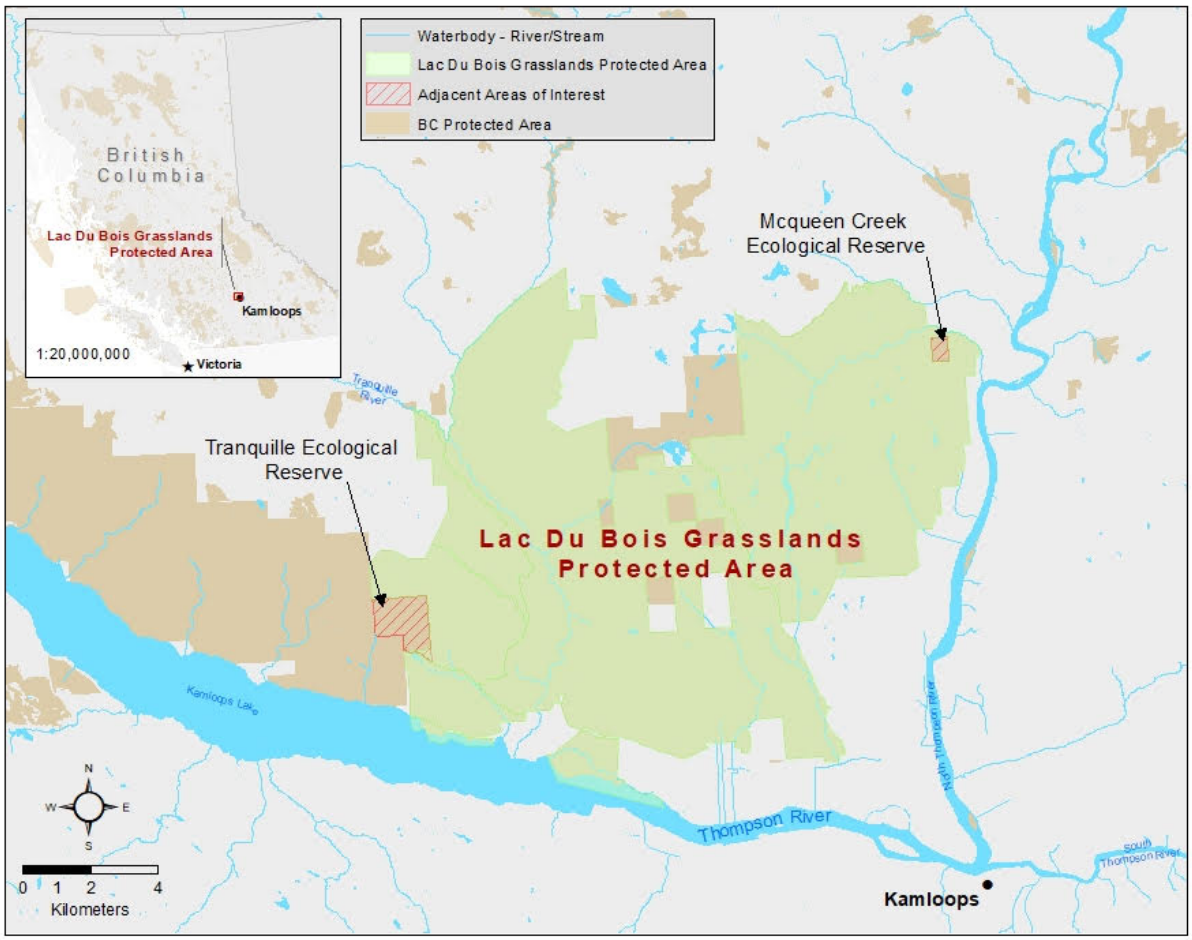

Figure 17 - Map of Lac Du Bois Grasslands Protected Area, including the boundaries of McQueen Creek and Tranquille Ecological Reserves. (Map by Olea Vandermale.)

Wells Gray Provincial Park

Wells Gray Provincial Park is a Class A Park near Clearwater, BC. It is just over 100km north of Kamloops, on the unceded traditional territory of the Simpcwúl'ecw (Simpcw) and Tsq'escenemc (Canim Lake Band). Established in 1939, it covers 541,516 hectares (BC Parks, n.d.-b). Directly adjacent to the northern end of Wells Gray is Cariboo Mountains Park, comprising a further 113,470 hectares. This makes over 650,000 hectares of continuous protected area.

As a Class A Park, development within Wells Gray is limited to supporting recreational use of the area. Additionally, activities such as commercial logging and resource extraction are

prohibited. If an activity detrimental to conservation predated the formation of the park, it may be allowed to persist. Wells Gray allows some hunting within the park's boundaries (BC Parks, n.d.-b). SAR within the park include martens, grizzly bears, and, most notably, deep-snow mountain caribou (BC Parks, n.d.-b).

Compared to Lac Du Bois, Wells Gray has far more infrastructure and personnel support. It is a major tourist destination with a dedicated information centre located in Clearwater. The park is staffed and patrolled by Provincial Parks employees. Private recreation and tourism companies also operate within the park year-round (BC Parks, n.d.-b). Additionally, the park hosts the Wells Gray Education and Research Centre, operated by Thompson Rivers University.

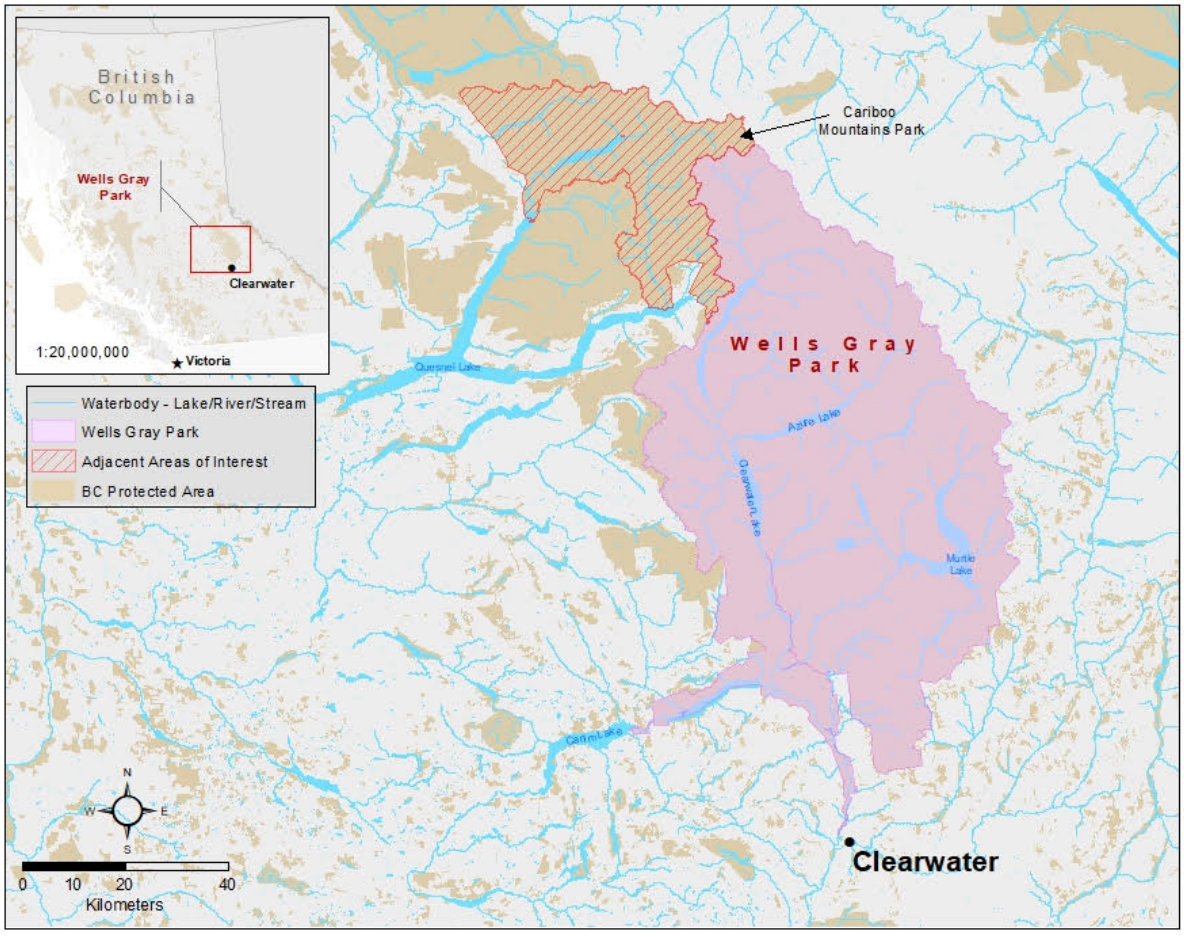

Figure 18 - Map of Wells Gray Provincial Park, showing adjacent Cariboo Mountains Provincial Park. (Map by Olea Vandermale.)

Participant Interviews

Participant interviews of approximately 30 minutes in length were conducted in person, over video call, and by telephone. Interviews took place between April 29 and December 7, 2022. Participants were not randomly selected from the general population. I chose instead to focus on participants who had close connections to areas with known SAR measures, as they would be more likely to have experience with how SAR conservation operates in BC and to have opinions based on their knowledge about the strengths and weaknesses of the current system. Participants were initially recruited through an email sent by Dr. Tom Dickinson, a professor emeritus at Thompson Rivers University, to individuals we believed may be interested in the project. Participation was voluntary based on those who responded to the initial request. While I had initially planned to include a wider perspective base and reached out to industry-associated stakeholders, the individuals who agreed to participate self-identified as being members of the conservation community in BC. Additional participants were recruited using a version of snowball sampling (Naderifar et al., 2017), where participants suggested others that might be interested in the project.

I sent participants a consent letter that explained the purpose of the interview and the general topics to be covered. The consent form also gave an option to remain anonymous (Appendix VIII). Seven participants chose to be cited in the research, with only one participant electing anonymity. Three potential participants declined to participate, or ceased responding, after receiving the consent letter outlining the purpose and the content of the interviews. A total of eight participants took part (Appendix IX).

I used a framework of questions developed from existing commentary on SAR to conduct the interviews (Appendix X). The interviews were semi-structured, allowing participants to express their concerns in a flexible manner. Interviews were recorded, with participant permission, and a written transcript of the recording was made after each interview. These transcripts were sent to the participants to review, allowing them to make corrections, expand on any points, or to retract any statements.

Analysis

Participant Interviews

Participant interview transcripts were coded by reviewing each transcript and categorizing participant responses into broad themes and more specific sub-topics. Interviews were then analyzed to look for consensus or diverging opinions between participants in relation to each topic, and to highlight recurring themes across multiple participants. To promote trustworthiness and collaboration with the participants following the CBPR model, results of the analysis are presented using direct quotations and the participants own words (Elo & Kyngäs, 2008). Except where a participant chose to remain anonymous, the quotations are also attributed to each participant.

Interview Analysis

Categories and interview themes

I grouped the participant responses by topic and category. There were seven themes encompassing categories of topics. These were:

- knowledge of SAR legislation and protections in BC;
- changes or differences observed over time and between locations;
- the importance of including Indigenous perspectives and input when developing SAR protections;
- the role of management vs. protection;
- the effects industry has on conservation;
- communicating with the public and with industry-reliant communities likely to be affected by SAR legislation; and
- improvements to SAR protections they would like to see moving forward.

Knowledge of Species at Risk Legislation and Protections in BC

This first theme dealt with participants' familiarity with the legislation that governs how SAR are managed and protected in BC. Participants were asked how familiar they are with the protections that do (or do not) exist in BC for SAR. Ian Barnett worked on

conservation and restoration projects in Lac Du Bois with conservation non-profits. He expressed some experience with the legislation, both federal and provincial:

> Somewhat, yes, I'm familiar. There's the federal legislation, which I wasn't directly involved with, but I remember it was in the late 90s, early 2000s, that it came into the public domain, where they started to talk about it and develop it. I think I understood some of it. And then on the provincial legislation, I have a moderate amount of familiarity with the legislation.

Tom Dickinson has connections to both Lac Du Bois and Wells Gray in a volunteer capacity, and professionally through his work with Thompson Rivers University. He also had some familiarity with SAR legislation, although primarily within the federal rather than the provincial context:

> It was the federal *Species at Risk Act* that I tracked when I was teaching, and I haven't paid much attention to what's been happening provincially. I know that the listing process was pretty much taken within the Ministry of Environment in those days. … [T]here's no single [provincial] act that identifies the actions that have to be taken. Unlike in the federal act, even though in the federal act is limited on the grounds that it actually pertains to - federal parks and things like that.

Of the participants familiar with SAR protections in BC, most expressed a perception of the absence of legislation rather than its presence. The participant who chose to remain anonymous said:

> Because of the lack of species at risk legislation in the province of British Columbia, what I would be relying on is the *Wildlife Act*. And depending on what kind of critters I'm dealing with, could be the federal *Fisheries Act* as well. … I'm very familiar with the pieces of legislation that are out there that both protect and provide guidance as well as best management practices.

Tay Briggs owns and operates Wells Gray Adventures, a company aimed at sustainable adventure tourism within Wells Gray Park. She went a step beyond noting the absence of legislation in the province, finding that the provincial protections were lacking:

> I would say I'm somewhat familiar. One of the reasons we're in the position we're in, it seems, is because we don't really have legislative protection provincially. … But there's no teeth in anything the province has to protect species at risk, in my personal opinion.

Tay was not the only participant who expressed dissatisfaction with the absence of provincial legislation. Trevor Goward is a lichenologist and an expert on deep-snow mountain caribou, Wells Gray's most well-known SAR. He also expressed that he felt there was insufficient provincial SAR legislation:

> I'm not really aware that there are any laws that protect mountain caribou in BC. I mean, of course there is no hunting of deep-snow caribou. I guess you could say that's a law if you like. But as for conservation? I'm not aware of any laws. I'm aware of the … recovery implementation strategy for British Columbia, which I think came out in 2007. … But again, that's not law. I would say if there is a law that protects them, I don't know about it. And certainly it's not working.

When asked if they were satisfied with how SAR are being protected in BC, participants mostly answered negatively. The most positive response was from the participant who elected to remain anonymous, but even that was tempered with some reservations:

> I think the province has relied quite a bit on the federal government to meet the needs of the federal act and the needs of the protection of federally listed species. … The province could still do a lot more, I think, in providing guidance and such. What's interesting is, after 20 years, or 15-20 years of the *Species at Risk Act*, the federal government has chosen not to enact and not to enforce their act on BC legislation. Because there's always that trigger that the federal act can apply if the province doesn't do their thing. … To me that says that BC is doing enough to keep things in good check. But I think they could do more. And once you do see a species at risk act, you will see more guidance and more defined direction. And especially better direction.

Tay Brigg's response was less positive about BC's protections:

> I guess as a summary I would say that no, in my personal belief, and my personal experience, there's nothing in BC that guarantees protection for species at risk. It's a lot of lip service.

Trevor Goward responded using a numerical scale: "On a scale of one to ten? I would say, zero. Which means I'm very, extremely, unsatisfied." Ian Barnett used a similar system:

> I would say if ten was great and zero was terrible, I don't think we're midway. I'd say more of four or five. I think that it's not taken as seriously, because I think it's still not well understood. And it's not a black and white thing … it can be very gray.

Differences Observed Over Time and Across Locations

This theme deals with participants' personal experiences, and changes they observed over time, as well as any changes that participants had observed over time, as well as with perceived differences or similarities between protected areas and surrounding lands. Dave Low is a retired government biologist and the director of Lac Du Bois for the Burrowing Owl Conservation Society of BC. He has lived in Kamloops since he was a boy, has observed changes to the wildlife present within the city, as well as up in Lac Du Bois.

> I used to see, I lived on the river, and I used to hear the nighthawks all the time. … Very little productivity in the water nowadays. I think it has to do with motorboats and oil, and disturbance.
>
> …
>
> The only place sharp-tail grouse are doing well is where the Strawberry Hill Fire was in 2003. That's got a lot of sharp-tails up there. … There's not much use on the Lac Du Bois grasslands anymore. I saw the most sharp-tail chicks where the cows were grazing. … And they want to protect the nesting sites. Well, you've got nesting sites for a million female sharp-tail up there. But you don't have a million sharp-tail.

Nathan Matthew was the Chief of the Simpcw First Nation for twenty years. Simpcw are of two nations whose traditional territory includes the area of Wells Gray Park. He commented on changes to the caribou herd in Wells Gray:

> I was doing some research back in the 70s … my grandfather, he said that North of *[note: audio unclear]* the caribou were just like cattle. There were herds of them. That was hard to believe because I have not seen one caribou in my life. I've seen their tracks.

When it comes to changes to the protected area, Tom Dickinson went into the management and zoning for Lac Du Bois.

> There was a bit of a debacle when Tranquille changed ownership and they wanted to develop it. … And one of the things that was interesting is that the line for where the city boundary was is the area that defines the edge of where Lac Du Bois is. And so there was always this unwritten agreement that what there'd be is this buffer between the city owned lands and the developed lands and this Crown land park, and that any of the lands that were in between wouldn't be developed. … So there have been little issues surrounding the management of it. … Government hasn't taken it to the next steps for all of these protected areas, to revisit the management plans, and to come up with

> public interest groups that could talk about what are the best interests for public to serve for the management?

When asked about how well the protected areas are doing when it comes to SAR conservation, participants had more information to share. Referring to Lac Du Bois, Ian Barnett said:

> Well, there's some challenges. There are rattlesnakes getting run over by mountain bikes, we know that. There's the pipeline that's being put in, and I can't comment on whether I think they've done a good job or not, I don't know. But I would hope that there's a lot of effort that goes into … species, snake dens, knowing where they are and trying to avoid them. And hopefully there's measures being taken.

Nathan Matthew's experience was with Wells Gray Park, in relation to the caribou herds:

> We're [Simpcw] dealing with the herd that's up in that Wells Gray area. And there's a number of groups that are doing studies, and there's planning happening in terms of how to best protect caribou in terms of just staying away from the areas. I know we're deactivating some roads up there to make the habitat a little more natural, so that the wolves … sight lines are diminished, and the roads are roughed up so that the wolves don't just have really easy access to their advantage if they're hanging around caribou.

Tom Dickinson, having connections to both protected areas, could comment on differences he had observed between them in dealing with SAR conservation:

> It's hard to say, they've changed the ministry so often with regard to land uses and land planning. But it's hard to put a finger on what resources are, in fact, available in any one time. I think in Lac Du Bois it really has fallen into the realm of citizen groups that are working as a cooperative to try and find solutions and working with other groups like the Nature Conservancy … at trying to come up with management of scenarios and plans and identify where the critical pieces of the habitat are. … To actually do what government I feel should have a greater involvement in. … And again, I think up in Wells Gray, it's even hard to get some of the managers in a provincial park to identify things that are critically important to keep up. … And so things are not being maintained in the way that they should be. I think the staff that runs [Wells Gray] is a skeleton staff compared with the number of people in the public that are actually using it. … I heard at one point that the Information Center in Clearwater that is a gateway to Wells Gray Park had more visitors than the information center in the harbor in Victoria.

I asked participants whether they had observed ay differences in how conservation efforts operated within the boundaries of Lac Du Bois or Wells Gray compared to outside of the protected area. The anonymous participant spoke to the situation at Lac Du Bois, and the challenges that arise from the land outside the protected area not being one type of land designation, but rather a mixture of Crown, municipal and privately owned land:

> [P]eople do treat it differently. The challenge you have at Lac Du Bois is that beyond that boundary because it's Crown land, or it's municipal owned land, the protection for grassland ecosystems is so weak. … Municipalities have an obligation to protect the species under the *Wildlife Act*. But when it comes to ecosystems, they don't have to. … So that's a big challenge. The other challenge, you have private property that allows the ATV zone right next to the park. The class of park also has a big impact. … [T]hat class of park allowed the twinning of Trans Mountain to go through. … I don't care if you take the seed source and put it aside and put it back in two years, you're still going to have a disrupted landscape. … Even as a protected park, you're still depending on the class of the park, your land use designation is going to have a big impact. And your neighbors, what you do and don't allow, it has an impact.

When it comes to Wells Gray, one of the recurring themes was the presence of industrial logging in the area outside of the park boundary. Participants found this of particular concern because caribou, the most notable SAR in Wells Gray, have extensive ranges that go beyond the park boundaries. Tay Briggs spoke from the perspective of someone who had been involved with the forestry industry in the area:

> In a protected area, they can't log. …To be honest with you, in all of my work with forest companies and the Forest Service trying to gain some kind of acknowledgement of the waning Wells Gray herd, which spend a lot of their time outside provincial park boundaries, there is nothing that guarantees any protection, or any consideration even, aside from vague, semi-professional assurances that it would be okay.

Similarly, Trevor Goward expressed concerns about the absence of biologically meaningful protections in industry standards, in particular logging:

> There are number of lichen species that are threatened and or endangered in Canada. … And what happens … if there's a patch of forest that has a rare species, sometimes if it's a pipeline or something, it might get routed around that particular patch. But that has no bearing whatsoever on whether the species will live or cease to exist. That's not how it works. … So no, there's nothing really practically meaningful that's happening, I would say. People

> … are educated to believe that they're doing some good, but … it's really painting the roses red in a way. … Species outside are basically at risk, and the actions that have been taken, for species I'm familiar with, will not prevent their disappearance over time. They might last for a while in a particular stand, but there's so much industrial incursion going on[.]

Nathan Matthew also spoke to the noticeable difference in wildlife presence within Wells Gray, and spoke about expanding protected designations to other areas to hopefully ensure the same increased biodiversity elsewhere:

> Oh, absolutely. There is no comparison. Once you get inside the park it's a different world. … I do a fair bit of hunting outside the parks. And I may have seen one grizzly bear track on the outside. But I've seen a number of grizzly bear tracks inside the [Wells Gray]. Same with caribou and other wildlife species - if you're quiet long enough a moose will walk by. … I know with the Simpcw we're interested in areas within our territory that still have relatively intact ecological areas. One of them being the Roche Valley up in the Robson. And we're moving toward having that put aside as an Indigenous Protected Area. And it's almost a bit of a scrap because the logging companies often have licenses that would suggest they could go in there, miners want to get in there do their mineral exploration, and such. But it's an area that's relatively untouched. We thought, well, wouldn't it be great to be able to set this aside? For more educational purposes and protection of natural values.

Inclusion of Indigenous Voices in Developing Species at Risk Protections in BC

The next theme dealt with the role that Indigenous values and perspectives should play in protecting and managing SAR, including developing any new SAR legislation. It is a theme that arose throughout interviews, not necessarily in response to one specific question or prompt. Nathan Matthew (Sécwepemc) was the only participant I was able to recruit who self-identified to me as Indigenous. As such, his perspective on this theme was of particular importance.

> We are taking measures, the Simpcw First Nation, we're doing a bit of landscape planning, in terms of the Raft River watershed, and thinking about what kinds of operational guidelines will be changed to make that area a whole lot more compatible with the health of the animals. …Trying to look at it a little more holistically, rather than just the prime activity being get in there and knock all the trees down and get out and move on. The same with the old growth areas, they're looking at the relative value of that from an Indigenous perspective. … I think that that whole notion of establishing the

> value of wildlife. Period. And from where we are, in a Sécwepemc or the Shuswap culture, we have quite a different perspective on our natural world.
>
> Out there, and in our territory, and every other territory in the province, the government and the legislation that has developed over the last 100 or so years has always been around extraction of natural resources, namely timber and minerals, to the disadvantage of wildlife. They see it as having a higher value, the conversion of timber or minerals into cash to feed the larger economy. … I think that that's the perspective, and that the decision making, a good part of it, should be made by those that live in the area where the resources are.
>
> In the Sécwepemc tradition, we have our own laws that we're looking at applying. And we're actually doing that in terms of establishing some of those basic values that are within our culture. … And one of the big ones is we have an obligation to protect the plants and the animals and the water in our areas, because we depend on them so much. … When the government says they want to reconcile provincial laws with Indigenous laws, we have our big ideas that we slide across the table, and say well, if we're going to reconcile this, how do you square what you're doing with our ideas. We see the natural resources in the area, and it's all one thing, it's a big idea. … And we don't pull it apart and say, we'll have a law for trees, and we'll have a law for rocks, and a law for water. … I think that in terms of, you know, if we know that there's species that are being stressed out, then we have an obligation to protect them. So that's sort of creating that balance. … Where we're attempting to have either an impact on the way that those laws are changed, or have our laws work alongside those laws to create a more balanced approach.

Dave Low addressed the key role Indigenous peoples and practices have historically played in ecosystem maintenance and restoration, by using fires as a restoration process, through an experience that was shared with him:

> I haven't mentioned Dr. Mary Thomas… She was an elder for the Shuswap. When I was in the grazing committee, on the Task Force, she invited me to a gathering at the mouth of the Salmon River, near Chase there. There she told me a story that I'll never forget. … As a little girl she used to go with her grandparents into the mountains and into the lake country. She said in the spring they used to gather different plants… But she said when they went to a site, they would gather food. And as they left, got packed up camp to move, her grandfather used to light fires. They'd go to the next site, forage around that. And as they left that the grandfather would light up fires. And they went, it continued through the summer like that. I look back at the sites she had described. … I doubt the grandfather's fires were successful maybe three years out of every 20 at these different locations, but he was always trying to

> provide forage that they needed for future years. And that's, that to me, struck a chord.

Trevor Goward brought up the importance of Indigenous involvement when asked about what changes he thought needed to be made to how SAR are being protected:

> If Indigenous people in First Nations got involved creating Indigenous Parks, protected areas that were used in conjunction with existing protected areas on behalf of threatened and endangered species. Yeah, I don't think it's going to happen in our culture. I think it would take somebody working from another mindset. And I don't by any means believe that all Indigenous people have the answer. But I think there are some who are very earnest about recapturing and re-enlivening their cultures, and this will be part of it.

Tom Dickinson also emphasized that Indigenous people needed to be included in any changes or improvements to SAR legislation:

> I think it's important to do it in collaboration with First Nations. When you take a look at the sea change that's happened in the last five years, maybe 10 years, since the Truth and Reconciliation and calls to action, I think there's been a real emphasis on making sure that there is a consultation with First Nations. And I think that's one thing that was totally lacking, even in the federal work on the *Species at Risk Act.* Federally, the consultation with First Nations simply didn't occur. And it was at that funny juncture of time when First Nations wanted to be recognized as government, but government didn't know how to recognize them. … And now I think revisiting it at a provincial level, that's something that is a real obligation.

Management vs. Protection

One theme that I had not included in the initial interview framework, but that arose repeatedly, was making a distinction between simply protecting an area versus actively managing that area. Participants who made a distinction generally considered managing to be a more hands-on, active process, compared to a more passively described process of simply setting boundaries around an area and declaring it protected. Dave Low, who has a professional history of actively intervening to promote ecosystem health, felt that managing and area would have better outcomes than simply protecting it, but was not being done. In particular, he emphasized the looking at the cause and effect of impacts to ecosystems, and understanding the land and species in question:

> The only thing that operates in Lac Du Bois is people management, and they do a poor job of that. There is no resource management. … I think sometimes

> that's the only thing that managers understand is protect, protect, protect. Not manage. … [A]nd that's been the downfall of wildlife management. … You've got to learn how to manage. That's the bottom line… It's almost like we're only rationing rather than managing.

The absence of a continued and updated park management plans and land use planning was brought up by Tom Dickinson, speaking specifically about Lac Du Bois, but more generally about protected areas within BC:

> I think people count on these parks, as being the reservoirs for [species at risk]. I think there's not nearly enough funding put forward … following up on the management. ... And it goes right beyond just the parks side of things, it goes right to the land use planning side of things as well. … I think there was a lot of hope, that by putting a good representative collection of protected areas in place, and to put in place the protections necessary to make them work, that that would be the thing that would keep our species that were threatened outside the parks.

The anonymous participant also expressed that active management and more intervention could have a positive impact, but tempered this with the reality that this level of management requires resources that are likely not in the budget for protected areas:

> I would like and hope, given the lack of firm direction on species at risk legislation by the province, that a Provincial Park section would take the lead on best management practices for conservation. Maybe not active management, because you never have money for active management in a park. But even if you had something, either more teeth or more means of identifying, serving what you've got. Even knowing what the heck you've got in your park. And being at the forefront of protecting, other than just saying, "Oh, here's a land use designation or park zone designation, its natural heritage or natural whatever, and we're just going to walk away and let it be". … I'd like to see more of that. More active management, more research. … And then once you know the values, you know what to protect, you know why it's special, you know what you can do with it. … [Y]ou can't conserve something you don't know.

Industry Effects on Conservation

The next theme centered on the effects that industry has on conservation and SAR protections. Generally, participant's experiences have been that industry operates in opposition to SAR conservation. Dave Low found that industry played a role in the shift towards less future-focused management of natural resources in the province. He described the types of

industry with the biggest impact as: “Industry, agriculture. Forestry and agriculture are our two biggest land users in BC.” Expanding further on this:

> [W]hen industry took over in the 1980s, industry forced the politicians to shut down forest service almost. That's what happened. The managers in the forest service were told to just basically always approve what industry says they want. And that's where the resources went to hell because there was an endpoint on the supply load.

Ian Barnett also brought up the influence of industry, in relation to discussion about the harvesting of old-growth forest at Fairy Creek[14]:

> It's a little bit of a farce, we’ve got legislation in place, and then you've got activities that are still actively and likely impacting those species. So that's a challenge. [A]nd I think people would argue well, the economics is what's dictating it. I'm surprised in 2022 that that is still happening.

The economy driving SAR protections in the province was also echoed by Nathan Matthew:

> I think that there should be a change in attitude about our economic activities, and our recreation activities in the territory just to make it more comfortable for species that are having a tough time.

Trevor Goward also pointed to the strong influence of industry and economic interests over the best interests of the SAR.

> [A]s they’ve admitted within the last two years, that can’t possibly save mountain caribou. They’re doomed. The very people whose function it is, societal function, which is to look after the well-being of these animals, have sold out to industry, and are behaving in league, basically, with industry to keep the old growth forests needed by these caribou being logged. …
>
> I think the larger picture is that we live in a neoliberal world where what's important, ultimately, is the short-term economy. And anything that gets in the way of that, will, just like the bison in days of yore, will be sacrificed in the way. … It's structural. It's not the fault of any one person. It's buy-in by people in power. … There are no tweaks possible. It's the entire system that needs to be revamped. And very few people have the stomach for what that would take. And so in the meantime, species are doomed.

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[14] Located in Pacheedaht First Nation Territory, northeast of Port Renfrew, BC.

Tay Briggs has experience working with forestry companies in the Wells Gray area, and with the industry regulations and standards for logging in SAR habitat:

> I had actually seen a caribou print in a place I had not seen one in forever, in the wintertime, in the alpine. In the park, but quite close enough to the park boundary as the crow flies from some of the proposed cut blocks. And I had a professional forester tell me, 'Seriously, why should we manage when they're probably extinct anyway?' And another one tell me 'Yeah, but that was just a track'. … And the other thing that was interesting about Canfor is they informed me that they were certified through a stewardship program. … [A]nd they had to meet those standards, which is great. … But when you go and you ask them, where are the standards being applied, company-wide, they can say that they're applying them in this place down here, and that place over there, and they still get their certification. … They're meeting some sort of a loophole … all the audits were done through the company themselves. There's no independent audits of this standard, of this certification.

Because of her experience in the area, Tay Briggs was able to expand more on the forestry industry guidelines and legislation, and how accessible and complete it was.

> I think it's quite obtuse. And I would like to give you a bit of an example. When I was working with Canfor, when they were trying to develop high elevation blocks, they said they would get a biologist in to do a character study on the area, because we had expressed concern, because historically, that area saw caribou. ... The biologist did a study and our committee asked for access to it. And Canfor wouldn't give us access to the study. They wouldn't let it be looked at in any way. And finally, after some pressing, they said they would allow somebody to go to their office to look at it. … And I was made to sit at the forester in charge's desk to read that study, which was less than a page and a half. And he wouldn't let me photograph it. And when I started to take notes, he said I was taking too many notes. I would say that the way that those issues were handled through forest companies, and I'm using quotes now, the "Forest Practices Act", was abysmal.

To expand further on the recourses that exist within the forestry industry to protect SAR, I asked Tay Briggs about whether the industry was self-regulated or not:

> What happens is … the culture of the industry. And what the industry values, their set of values, are very, very different than the values of other users on the land base. So basically, what you've done is given professional foresters who are working for companies or even the government sole provenance to manage according to their values. And the mechanism for bringing in public input, which would bring in other values, not just wildlife but tourism, … or water, industries that are concerned about watersheds. … But once that Act was passed, none of those consultation, none of those other values are

> required to be brought into the decision-making process. So, what happened was there was corruption, of course, because they were logging in places where other people's values weren't met. And what's the recourse? Once a stream is destroyed, once a visual quality objective is not met, there is no recourse. There is nothing.

Unlike with the conflicting interests between forestry and SAR described by other participants in relation to Wells Gray, Tom Dickinson shared a look at how a different industry, the cattle industry, had worked to reach a compromise about protecting the area of Lac Du Bois:

> On this land and resource management planning group, there were about 40 seats … and the biggest group that was relevant to Lac Du Bois were the cattlemen and people associated with the cattle industry. … [I]n cattle industry, one of the things that's most important … is the crown leases that they have to go out and graze their cattle in different places. So, there was this conflict that developed between the cattle industry on the one hand … and folks like myself [that] wanted to protect the area. If you look at Lac Du Bois, it's called Lac Du Bois Grasslands Protected Area not Lac Du Bois Grasslands Provincial Park. And that was the compromise that we came to, the existing leaseholders on the lands that were included within the boundaries of Lac Du Bois could continue to run their cattle on those leases, they couldn't increase the number of head of cattle on them. And they had to monitor what the impact on the grasslands were. … I think that was that was a sort of compromise situation. But as it turned out, it was a pretty good win-win situation, because what it did is it put aside any commercial development for things like gravel pits, or housing or other things. Lac Du Bois is an area that would stand on its own for the values that it has to biodiversity.

Communicating the Importance of Species at Risk Protections

The next theme had to do with addressing concerns and interests that are apparently in conflict with SAR conservation. In particular, the effect that implementing new SAR regulations, and limiting natural resource industry, would have on communities that rely on those industries. Ian Barnett spoke about the importance of communicating and sharing information with the public when it comes to SAR conservation:

> The public, maybe I'm naive, but I think the public, if spoken to with some degree of honesty and accuracy, would be supportive, of either helping support themselves, or helping the government's support, or helping the university support or helping private NGOs, become more active in conservation. I do believe it, but the public needs to have these cases brought in front of them. Some way of doing that is having more information at

> strategic sites. … I think it could be more readily available to people and could be more accurate, more compelling.

Tay Briggs works out of Clearwater, a community that had strong connections to forestry and lumber industries. She also has, as part of her work with SAR, been at meetings with rural communities where SAR and industry conflicts have been discussed:

> People in small communities, by and large, are not being spoken to in the way they need to be spoken to, to understand the issue facing them. … I said, 'Here's the way I look at it. We can either make some sacrifices now and have caribou or we can make those exact same sacrifices in five years and not have them'. And the guy at Canfor who ran that mill stood up at that meeting and told me 'I'm here to tell you Canfor's here for the long run' because I had said in five years, there will be no Canfor here. We do not have the timber base. … And a week later, I kid you not, Canfor permanently shut down their operations here. So basically, resource towns in BC are being led to think that by sacrificing the caribou they will have sustainable sources of timber, and that is not the way it works. We are busy wiping our timber out whether we try to save the caribou or not. … And I think that's partially our land managers fault because we've never been really, really honest about what's happening in our timber industry.

Tay Briggs also suggested that one option to lessen the impacts that would be felt by restricting resource extraction would be to invest in the communities most affected, including helping them to diversify the local economy:

> Here's the thing to me is that the hard decisions, especially for charismatic megafauna that are like caribou … are going to take larger pieces of the land-base out of resource extraction, impact small community. And I remember … when they came out with the $20 million, which they set aside for caribou recovery in BC … saying the best thing you could have done was not give that to a bunch of land use managers who are just trying to justify their choices on the ground, but pick out the communities that would be most impacted by making the hard decisions that would have to be made to save those species, and giving the money to them. Giving them the resources they need to pick whatever industry might help save their small town and push it. … The great irony is it's coming to all resource towns anyways, already hit most of them. … But those sorts of decisions, and the reasons why the province has not made those decisions yet, the reason why the province has no provincial legislation is because the resource industry is a very strong lobby. And as soon as the resource industry says, "oh, gosh, that is going to involve habitat, which is going to involve trees". Then they're going to call up every small town, and every small town MLA, and the shit's going to hit the fan. … So to me, there has to be a component that helps give resources back to small communities because the fact of the matter is, these are the communities that all the

> resources around their areas have been drained to feed urban areas in BC and they all know it, and they resent it. Without that kind of buy in, it's very, very hard.

Nathan Matthew shared the importance of not just communicating with communities, but with building understanding about SAR and ecosystems into education.

> But we're doing it, we have the same general idea. From the same First Nation's perspective, we want to protect the local economy, the small towns and villages up and down the Thompson and the Robson Valleys just to make them economically viable. So, to do more planning where the people that live in the area have more say in how their resources are used. And of course, having ourselves, as an Indigenous group, have a very clear say. Another piece I think that's really important is just education. What we educate our kids to. … [J]ust learning about them and gaining a better appreciation as young people. I think it's really important in terms of ultimately developing ideas about how all the natural resources can be better respected and preserved.

Suggested Improvements to Species at Risk Conservation Moving Forward

The next theme dealt with changes the participants would like to see if new SAR legislation was developed, and key areas that needed to be included in any attempt to do so. It also dealt with shifts to public discourse and education in relation to conserving vulnerable ecosystems and species in BC. Nathan Matthew placed an importance on education:

> I think I mentioned it, but I would emphasize education, get the public onside and get them to know about stuff. Particularly younger people, and not just those that live in the country, but those who listen in the towns. And lots of research, spend more money that you make out of converting the resources out there into cash, using more of that cash to do research on animal, and even plant species. Just to keep up sort of a good database on what's happening out in the world and actually doing what works. I think everybody's pretty concerned about the caribou. But nobody's really doing what it takes. They say, well, we'll do everything but stop logging. Or we'll do everything except stop running our snowmobiles around the mountains where the animals are. So, something has to give if we're going to give a full respect to those animals that we feel have a place in this world too.

He also emphasized the importance of increasing knowledge about what is happening to species and their habitats:

> I think, certainly, we need good evidence to show the relative numbers of endangered or listed species and in terms of where they are, and how many, and whether or not the numbers are going up or down or whatever. … I know, it's a lot of work, but I think a lot more research should go into the relative health of the number of species that are out there. Don't wait till suddenly somebody realizes, 'Oh, my goodness, we haven't seen any more whooping cranes' or something. … So you need, in some cases, quite a broad based spectrum, or an area to do research in, because if you just stand in one place, you don't get much of a picture.

Ian Barnett similarly expressed the importance of sharing and disseminating information about SAR, and how they are being protected:

> In general, I think we've come a long way, but I still think we need to take it a lot more seriously. And that means having more information in these areas that we're looking at. For instance, we know that Lac Du Bois has X number of species at risk. And yet, at the same time, there's a significant increase in invasives. Plus we've got fires, and we've got climate change. So do we have any predictive models for the future? What should we be doing to try to conserve the areas for either the present species or the future. I do think that we need to continue … understanding the values of the areas.

Tom Dickinson also felt that expanding and improving research and knowledge bases around SAR was key to effective conservation:

> I really don't think we know very much about these rich natural resources in supernatural BC at all, we haven't really had an ongoing set of biologists on the ground, who are recording in detail what is necessary to understand whether or not populations are increasing or decreasing. I think there has to be attention paid to what those resources are, and what are the threats, and whether or not, over time, we've seen changes that are appreciable. And I almost guarantee that if we did that, we'd be amazed at the diversity that we didn't know was out there. …

Tay Briggs felt that even when there is research and information known about a species, there has not been enough action taken in response to that information:

> Well, speaking for caribou because that's what I know best right now, the research is there. As a matter of fact, even the federal site says the main reason for the loss of caribou is the loss of habitat. And yet, since that was written, there's been very little effort, in my personal opinion, or very little sacrifice of terrain or forest practices in an effort to accommodate that. Certainly not enough. You know, it all comes down to money. … Somehow, there has to be a change, and that has to be changing a couple of things. And one of them is enforce legislation. … Right now, nobody sacrifices. Or what people perceive

> as a sacrifice we have to make to ensure the survival of some of these species, people aren't willing to make, and the great irony, great irony of all of that is we are going to be in the same place between five and 10 years either with caribou, or without caribou. Whether somebody has the ovaries or the balls to do something about it now or not.

The anonymous participant expressed that one gap that needed to be filled in when it comes to SAR conservation is enforceability:

> [T]his province doesn't necessarily need a species at risk act if they can put in place policies, procedures, or best management practices that have enough teeth to protect, identify, and conserve the species at risk. I don't know if that's really the case in this province. So maybe they do need a species at risk act. The challenging part is once you build something like that, you do have to maintain it, you do have to work at it, it's not just build it and walk away. … So, even if you get a species at risk act, it's not the panacea.

They also stated that there should be greater protections for ecosystems as a whole:

> The one thing I think we don't see very good protection on that I think needs greater oversight is ecosystems. We have Blue and Red Listed species, and because they're protected under the *Wildlife Act*, you can't harm them. So there's high level stuff that you can't do. But there's nothing for ecosystems.

Trevor Goward felt that provincial legislation on SAR would be a good idea, but that the most important change would be for governments to act on their promises to protect the environment, and enforce the legislation they do have:

> Well, bringing a species at risk act would be a good idea, provincially. Having said that, there is a *Species at Risk Act* federally, *SARA*, and I've been involved in trying to … get some action through that *Act* on behalf of the deep-snow mountain caribou. And the government is not even following its own laws. It's a difficult question. … [G]overnments are sometimes doing the lip work. But there's really nothing happening that's going to give these animals a future. … Where I'd I like to see it, but I don't believe that the government will. … And with a few exceptions, I don't think that any of the animals that have been recognized as endangered in Canada, threatened or endangered, have had any real action applied to them. Recovery action, there are recovery reports, but they amount to very little. They're recommendations. … Almost never does that happen. And without that these the animals will disappear. They're already disappearing.

As a final note on the interviews, I will include two quotes that give opposing views on the future of SAR in BC, one expressing a belief that we can take actions to lead to a positive outcome, and one fearing that we have already lost the chance at that future:

> **Tom Dickinson:** I remember when I was young, seeing Globe and Mail headline that said, "The Great Lakes are dead". Right. And it was because of the pollutants that were entering it, from the American side in particular. … So, I've actually seen a resilience at a big level in ecosystems … [W]hen you really do look at it. [R]ight now with [2021] summer and those fires and everything, I tell you, nature was fighting back pretty good. And I think there's a resilience of nature, that if we just give it a chance, and we don't continue to hamper its ability to recover, it'd go a great long way.

> **Trevor Goward:** My experiences, it's been very dispiriting. And there's nothing to be done except revolution. But a revolution is not going to happen. Because for various reasons … they're simply distracted with their own stories, not the larger stories. … Canada has about one quarter of the wooded, forested wilderness of the world. It's a sparsely populated country by global standards, if there were to be a country where an animal like the caribou could have survive, it ought to have been Canada, which is also wealthy country, an educated country. And it simply hasn't happened. And so now we come to the point that if we can't find enough caring, as a society, for an iconic species like the deep-snow mountain caribou, then we don't have enough caring for our children. … And that's why, had we, as a country, found the resolve to look after the species, we would have had the resolve to look after our young people, but we did not, and so your future's been spent.

Discussion

Interview participants generally felt that there was not enough action to conserve SAR in BC. They expressed that they would like to see this taken more seriously in the province. The necessity of including Indigenous perspectives and Traditional Ecological Knowledge into developing or updating SAR legislation and management practices was another a through-line between interviews. This reflects and reinforces the most recent Hansard discussions seen in the previous chapter where consultation with Indigenous groups has been vaunted by politicians as a key component to SAR legislation.

The role of industry and the economy also contributed to how interview participants viewed SAR protection and conservation in BC. Without means of enforcement, even the best industry guidelines will have no effect. Participant suggestions ranged that self-regulation and

internal discipline for industry guideline compliance was a contributing factor to negative impacts on SAR. Another repeated suggestion was to use money generated from industry or set aside for conservation to promote education and to assist with transitioning local economies away from a reliance on resource extraction. There was also a call to communicate with those communities most likely to be affected by new SAR legislation more transparently about the long-term lifespans of the industries they prop up conservation interests.

Indeed, the importance of knowing what is going on with species was another major takeaway from the interviews. Participants called for a focus on education around SAR, and fostering a sense of responsibility towards the environment and the other species we share the province with. Another recurring theme was increasing research on ecosystems and SAR, including gathering information about population sizes, life history, and the habitat features they need to thrive. Following that theme, participants also raised concerns that "protection" of species was not the same as "management" of those species, and that more involved and proactive measures would be preferable over simply identifying land to designate as a protected area and expecting that to be sufficient for species recovery.

Conclusion

The interviews supported what I found in the other chapters of this research. From the perspective of BC's conservation community there is an absence of meaningful action taken on SAR conservation and protection in BC. While dedicated legislation may not be the proverbial silver bullet that resolves the many systemic issues that are failing our species, absence of clear and thorough legislated requirements only enables insufficient management practices. Increased education expanded research on species life-history, and a commitment to upholding and enforcing promises and protections are all themes that came up in the interviews. Proponents of dedicated SAR legislation also believe these are important inclusions for new or updated legislation (Westwood et al., 2019).

Perhaps the most persistent theme across multiple interviews is the critical role that Indigenous viewpoints and collaboration must play a role in any changes to BC's conservation approach. This echoes not only the calls to action for developing new legislation, (Westwood et al., 2019), but also the shift in political debates explored in the Hansard in Chapter 4.

However, interview participants also expressed a sense of urgency in relation to SAR. There are more than 200 Indigenous nations and communities in BC, and each is made up of individuals, not a monolith of shared opinions and ideas. It will not be a quick task to meaningfully incorporate Indigenous perspectives and Traditional Knowledge into legislation. There is a clock ticking on SAR and taking the time to work with Indigenous groups should not be used as a reason to forestall taking any action in the interim. Species do not have time for the best possible solution to be developed, they need imminent and ongoing action if we are to prevent extinctions.

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Chapter 6 – The Case for Species at Risk Legislation in BC

The astounding deterioration of biodiversity worldwide, mainly attributable to human activities, is a problem that only increases in severity. While human actions have contributed to creating perilous situations for vulnerable species, it is human inaction to rectify and remediate the damage that was the focus of this research. Without meaningful changes to how species are managed, many will go extinct. The ramifications from the loss of those species to ecosystems will be devastating and will further destabilize ecosystem and biodiversity health.

How Does BC's Legislation Measure Up?

In Canada, species at risk (SAR) are not treated uniformly across all provinces. By almost all the metrics I used in this research, BC, and the other provinces without designated legislation, fall behind provinces with SAR legislation. There are many gaps within BC's legislation when compared to provinces with designated legislation. One of the most significant is the absence of any legislative requirements for conservation plans for listed species. While listing a species is crucial to ensure that any additional protections for listed species are in place, that is a reactive measure of protection, only deterring or punishing individual offences against that species. On the other hand, conservation plans represent a government's commitment to taking proactive steps towards safeguarding, and hopefully ameliorating, the status of listed species. BC has one of the lowest ratios of published conservation plans to listed species.

However, where the legislation exists, courts are willing to uphold it, with provinces without designated legislation also having courts that tend to decide in favour of SAR more than the courts in provinces with designated legislation. While this could be the result of fewer cases needing to be considered by courts in provinces with SAR legislation, courts are willing to protect listed species. This means that listing status remains an important metric of how SAR protected.

The situation in BC is unlikely to change in the immediate future. Despite initial promises and commitments to amending and improving BC's SAR legislation, the current government has yet to take any steps since coming into power in 2017. BC's current legislation

is also not effective from the perspectives of the interview participants. It is not a situation where effective on-the-ground conservation surmounts weaknesses of the on-paper legislation. Participant interviews did not paint current conservation efforts in a favourable light, even those occurring within protected areas. Outside of the boundaries of protected areas, SAR conservation is in even more dire straits.

The Necessity of Designated Provincial Legislation

In the Hansard discussion for BC, some of the pushback against taking actions to enact new SAR legislation is that existing legislation, including federal legislation, already covers the same protections, rendering any new legislation redundant. However, there are several reasons why leaving it all to federal legislation does not give vulnerable species the best chance at protection and survival. Putting aside the initial barrier of federal legislation only applying in specific areas, the "backup" provisions in *SARA* that allow federal legislation to apply anywhere have only been employed sparingly since 2002. Only two species have emergency orders under s. 34 of *SARA,* the provision that extends protection from killing, harming, and damaging the residence of a listed species. These species are the greater sage-grouse (*Emergency Order for the Protection of the Greater Sage-Grouse,* SOR/2013-202) and the western chorus frog (*Emergency Order for the Protection of the Western Chorus Frog (Great Lakes / St. Lawrence — Canadian Shield Population)*, SOR/2016-211.; *Emergency Order for the Protection of the Western Chorus Frog Great Lakes / St. Lawrence — Canadian Shield Population (Longueuil)*, SOR/2021-231).

Despite the concerns expressed in the Hansard (see Chapter 4), the federal government's intervention for boreal caribou was not an order made under s.34 of *SARA,* but rather s.58, which prohibits the destruction of habitat identified as "critical habitat" to a listed species if "the critical habitat is on federal land"[15] (*Critical Habitat of the Woodland Caribou (Rangifer tarandus caribou) Boreal Population Order*, SOR/2019-188). While the order establishes critical habitat within BC, it does not implement the *SARA* backup provisions

[15] For species that are not aquatic or migratory birds.

because it does not apply to land that is provincially managed (Order Summary: Critical Habitat of the Woodland Caribou (Rangifer Tarandus Caribou), Boreal Population Order, 2021).

The other well-known BC species that has been considered for an emergency order under *SARA* is the orca. While orcas are aquatic species, and therefore under federal jurisdiction, the government did make two orders establishing critical habitat (*Critical Habitat of the Killer Whale (Orcinus orca) Northeast Pacific Southern Resident Population Order*, SOR/2018-278; *Critical Habitat of the Killer Whale (Orcinus orca) Northeast Pacific Northern Resident Population Order,* SOR/2018-279). However, the government declined to make an emergency order for the protection of the southern resident population of orcas (*Order Declining to Make an Emergency Order for the Protection of the Killer Whale Northeast Pacific Southern Resident Population,* SI/2018-102). Both caribou and orcas have extensive habitats in areas that overlap industrial ambitions for resource extraction or shipping. Indeed, while economic interests are not explicitly mentioned as the reason the government declined to make an order for the protection of the orca populations, they were "considered" in making the decisions. In contrast, the western chorus frog emergency protection orders did not cover nearly the same expanse of land and were less likely to conflict with industrial development ambitions. Much of the pushback for the western chorus frog, as found in the court cases assessed for Chapter 3, was from private housing developers in relation to purchased land could no longer be developed.

Beyond the historical unwillingness of the federal government to intervene for SAR, it is too unpredictable to rely on federal legislation alone. An example is the recent SCC decision *Re Impact Assessment Act* (2023 SCC 23). While not directly relating to SAR, the decision dealt with environmental law jurisdiction. The Province of Alberta challenged the Federal *Impact Assessment Act,* claiming that the provisions, particularly those that triggered an automatic federal review for certain "designated projects" was *ultra vires* the federal government's jurisdiction. The SCC did find that the "designated projects" provisions unconstitutional, as the projects in question could be entirely within provincial heads of power (2023 SCC 23).

Given the uncertainty around which head of power the environment falls under, the SCC's finding in *Re Impact Assessment Act* should warn against over-reliance on federal environmental legislation to backstop any deficiencies within provincial legislative schemes. The *Species at Risk Act* only applies on federal land, which makes up only a fraction of the Canadian geographic area, particularly in western provinces like BC. Additionally, the federal government has historically been unwilling to implement the failsafe provisions in the *Species at Risk Act* designed to overcome the limited area of application in the absence of provincial action. Vulnerable species cannot rely on federal legislation as the sole means of protection. Provinces must be meaningfully involved in protecting their SAR.

Conclusion and Further Research

This research shows that provinces play a critical role in conserving SAR. While designated SAR legislation is not strictly essential in fulfilling that role, the provinces without designated legislation are unquestionably less effective at protecting SAR. In BC, it is not only a matter of hypothetical weaknesses or oversights that might arise from a decentralized approach. There are existing gaps in BC's protections, and those gaps already impact vulnerable species and ecosystems.

Individuals with ties to SAR and protected areas noticed and lamented the government's inaction in participant interviews. Additionally, the current political stance on SAR in BC gives little hope for the situation to change in the near future. Until designated legislation is implemented requiring better and more thorough protections, BC's SAR must rely on policy-based or discretionary action from the government to conserve their future. Designated SAR legislation that is clear, thorough, and enforceable is a crucial component in the campaign to prevent the loss of BC's many and varied species. While designated SAR legislation may not be the only possible means of remedying these impacts, this research shows that some further action is needed.

This research only began to touch on the complexity that is effective SAR management in BC, and in Canada. One crucial area of further research would be a trans-systemic approach incorporating Indigenous laws and values on conservation in addition to the colonial legal system examined in this research. This is an entire additional layer of complexity that could

not fit into this project but is, as noted by both MLAs in Chapter 4, and by the interview participants in Chapter 5, an essential component in progressing SAR protections in the future. On a similar note, Quebec was excluded from this research despite historically being seen as a leader in Canadian conservation. Research comparing Quebec to the other Canadian provinces would be of importance, perhaps with a focus on how civil law principles alter relationships to the environment compared to the common law approach.

Another area that could be expanded on from this work is to go beyond the presence of conservation plans examined in Chapter 2 by looking into the content of those plans. Important factors are the thoroughness of species life history and habitat identification, the scientific evidence behind target setting for population maintenance and recovery, and whether the actions and funding in the plans can meet those goals. A final area of additional research would be looking at how SAR listing decisions and conservation plans are incorporated into other government decision-making processes, with a potential focus on Environmental Impact Assessments required at both provincial and federal levels.

References

Critical Habitat of the Killer Whale (Orcinus orca) Northeast Pacific Northern Resident Population Order, SOR/2018-279.

Critical Habitat of the Killer Whale (Orcinus orca) Northeast Pacific Southern Resident Population Order, SOR/2018-278.

Critical Habitat of the Woodland Caribou (Rangifer tarandus caribou) Boreal Population Order, SOR/2019-188.

Emergency Order for the Protection of the Greater Sage-Grouse, SOR/2013-202.

Emergency Order for the Protection of the Western Chorus Frog (Great Lakes / St. Lawrence — Canadian Shield Population), SOR/2016-211.

Emergency Order for the Protection of the Western Chorus Frog Great Lakes / St. Lawrence — Canadian Shield Population (Longueuil), SOR/2021-231.

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Order Summary: Critical Habitat of the Woodland Caribou (Rangifer tarandus caribou), Boreal Population Order. (2021). https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/Cho-BorealCaribouSommaireSummary-v00-2021Jun-Eng.pdf.

Re Impact Assessment Act., 2023 SCC 23.

Species at Risk Act, SC 2002, c 29.

Appendix I – Table of Legislation

Juris-diction	Title	Year	Enacting Gov.	Search-ability of Title	Listed on Gov. Website	# of Pieces	Average Search-ability
BC						13 (10 listed)	1.92
	Ecological Reserve Regulation, BC Reg 335/75	1975	BC New Democratic Party	3	Yes		
	Designation and Exemption Regulation, BC Reg 168/90	1990	BC Social Credit Party	1	No		
	Wildlife Act, RSBC 1996, c 488	1996	BC New Democratic Party	3	Yes		
	Forest Practices Code of BC Act, RSBC 1996, c 159	1996	BC New Democratic Party	1	No		
	Ecological Reserve Act, RSBC 1996, c 103	1996	BC New Democratic Party	3	Yes		
	Park Act, RSBS 1996, c 344	1996	BC New Democratic Party	3	Yes		
	Land Act, RSBC 1996, c 245	1996	BC New Democratic Party	1	Yes		
	Permit Regulation, BC Reg 253/2000	2000	BC New Democratic Party	1	No		

	Forest and Range Practices Act, SBC 2002, c 69	2002	BC Liberal Party*	1	Yes		
	Government Actions Regulations, BC Reg 582/2004	2004	BC Liberal Party	1	Yes		
	Oil and Gas Activities Act, SBC 2008, c 36	2008	BC Liberal Party	1	Yes		
	Environmental Protection and Management Regulation, BC Reg 200/2010	2010	BC Liberal Party	3	Yes		
	Park, Conservancy and Recreation Area Regulation, BC Reg 210/2018	2018	BC New Democratic Party	3	Yes		
AB						2 (2 listed)	3
	Wildlife Regulation, Alta Reg 143/1997	1997	Progressive Conservative	3	Yes		
	Wildlife Act, RSA 2000, c W-10	2000	Progressive Conservative	3	Yes		
SK						2 (2 listed)	4.5

	Wildlife Act, SS 1998, c W-13.12	1998	Saskatch-ewan New Democratic Party	4	Yes		
	The Wild Species at Risk Regulations, RRS c W13.11 Reg 1	1999	Saskatch-ewan New Democratic Party	5	Yes		
MB						1 (1 listed)	5
	Endangered Species and Ecosystems Act, CCSM c E111	1990	New Democratic Party of Manitoba	5	Yes		
ON						1 (1 listed)	5
	Endangered Species Act, SO 2007, c 6	2007	Ontario Liberal Party	5	Yes		
NB						3 (1 listed)	3
	Provincial Offences Procedure Act, SNB 1987, c P-22.1	1987	Progressive Conservative Party of New Brunswick	1	No		
	Wildlife Trust Fund and Wildlife Council Regulation, NB Reg 2002-6	2002	Progressive Conservative Party of New Brunswick	3	No		
	Species at Risk Act, RSNB 2012, c 6	2012	New Brunswick Liberal Association	5	Yes		

NS						1 (1 listed)	5
	Endangered Species Act, SNS 1998, c 11	1998	Nova Scotia Liberal Party	5	Yes		
PEI						1 (1 listed)	3
	Wildlife Conservation Act, RSPEI 1998, c W-4.1	1998	PEI Liberal Party	3	Yes		
NL						2 (1 listed)	4
	Endangered Species Act, SNL 2001, c E-10.1	2001	Liberal Party of Newfound-land and Labrador	5	Yes		
	Species Status Advisory Committee Regulations, 94/01, OC 2001-754	2001	Liberal Party of Newfound-land and Labrador	3	Yes		
Fed						1 (1 listed)	5
	Species at Risk Act, SC 2002, c 29	2002	Liberal Party of Canada	5	Yes		

* As of April 2023, the BC Liberal Party was renamed the BC United Party

Appendix II – Scoring Rubric for Legislation

SCORE FOR INCLUDED ELEMENTS:

0 – not included, 1 – incomplete/nominal and discretionary, 2 – incomplete and non-discretionary partially discretionary, 3 – vague/uncertain if complete and non-discretionary or partially discretionary, 4 – complete but discretionary, 5 – complete and mandatory

Score Multiplier: x1 – tangential (nice to have), x2 – supporting provision, x3 – core practical/essential provisions.

OVERALL QUESTIONS:

How searchable is legislation? (1- Bad – no directly relevant terms, 2 – Long title includes terms, but not short title, 3 – OK, title includes related terms like species, wildlife, endangered, 4 – Long title is descriptive, short title includes term, 5 – Good – name is specific and descriptive (species at risk, endangered species, threatened species)

How many total pieces of legislation required to find provisions (including statutes and regulations):

Jurisdiction:

Short Title and Reference:

Long Title:

Date Assented to:

Government Party:

Searchable:

Number of sources:

Topic	Score	Multiplier	Section #	Additional Section	Notes
PURPOSE/PREAMBLE					
Clearly aimed at protecting species at risk?		X2			
Co-governance or incorporation of Indigenous traditional knowledge or laws?		X2			
Protection of critical habitat one of purposes of act		X2			
DEFINITIONS					

Definition of critical habitat		X2			
Definition of dwelling or residence					
Definition of Endangered		X2			
Definition of Extirpated					
Definition of habitat					
Definition of Special Concern					
Definition of Species at Risk		X2			
Definition of Threatened		X2			
GENERAL PROVISIONS					
All types of species are protected by the act		X3			
Sub-species units are protected		X3			
Protections apply everywhere		X3			
LISTING PROCESS					
Listing process is clearly established		X3			
Listing recommendations are based on scientific reasoning		X3			
Listing recommendations are made by independent body		X2			
Independent body includes representatives from science,		X2			

environment, biology backgrounds					
Threats are included in listing decision					
Public/scientists can recommend species to listing body		X2			
Listing is automatic		X3			
Reasons are provided for listing decisions		X2			
Listing decisions are subject to a deadline		X2			
Emergency expedited listing process for imminent threats		X3			
Status of listed species is reviewed periodically		X2			
PROTECTIONS					
Protections apply automatically to all listed species		X3			
Automatically include federally listed species **(Provincially listed for SARA)**		X2			
Protection from killing		X3			
Protecting from harming/harassing		X3			
Protection from trafficking		X3			
Protection of offspring/parts		X3			

Exemptions to protection (hunting licenses, etc.) are limited and clearly established		X3			
Exemptions require reasons		X2			
CRITICAL HABITAT					
Requirement to identify critical habitat		X3			
Deadline to identify habitat		X2			
Habitat is automatically protected		X3			
Industry projects must comply with regulations		X3			
Establishment of new protected areas for critical habitat		X2			
PROTECTION PLANS/RECOVERY PLANS					
Protection plans/recovery plans are required		X3			
Protection plans/recovery plans require identification of threats to individuals, habitat		X2			
Deadline for protection plans		X2			
Recovery goals are science based		X3			

Ecosystem or multi-species recovery plans where science-based evidence applies		X2			
Action plans or concrete steps for recovery process must be set out		X3			
Action plans must address threats to species including threats to critical habitat		X3			
Deadlines for action plans		X2			
Regular monitoring of recovery process is required		X3			
Recovery plan monitoring done by independent body		X2			
Protection committees are established		X2			
Committees are independent		X2			
TRANSPARENCY, ACCOUNTABILITY, AND ADMINISTRATION					
Regular reports/reviews of legislative effectiveness required					
Independent oversight committee is established					
Funding for recovery plans is guaranteed		X2			

Emergency Order Availability		X2			
Regulations must be made to expand protections where needed		X3			
Conservation Agreements with other jurisdictions must be considered for species that cross jurisdictional boundaries					
ENFORCEMENT					
Enforcement authority is provided for in the act		X3			
Breaches of act can be reported by public/scientists		X2			
Deadlines to investigate reported breaches		X2			
Offences and punishment provisions		X3			
Corporate Offences included		X3			
Corporate liability scales with corporate net worth					
Fines are earmarked for restoration		X2			
INDIGENOUS CONSULTATION AND INDIGENOUS KNOWLEDGE					
Consultation and Indigenous Knowledge integrated throughout the act		X3			

Indigenous knowledge integrated into listing decisions		X3			
Indigenous knowledge integrated into recovery plans		X3			
Indigenous title and treaty rights concerning species at risk are recognized and protected by the act		X3			

NOTES:

Appendix III – Species Listing Decision and Conservation Plan Sources

Federal	Species search	https://species-registry.canada.ca/index-en.html#/species?sortBy=commonNameSort&sortDirection=asc&pageSize=10
BC	BC Species and Ecosystems	https://a100.gov.bc.ca/pub/eswp/
	Recovery documents	https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/species-ecosystems-at-risk/recovery-planning/recovery-planning-documents
AB	Wild Species Status Search	alberta.ca/lookup/wild-species-status-search.aspx
	Plant species at risk	alberta.ca/plant-species-at-risk
	Species at risk - Resources *NOTE: Alberta's recovery plan status was updated in April 2023, after the collection date for this project.	alberta.ca/species-at-risk-resources *New: https://www.alberta.ca/system/files/custom_downloaded_images/epa-status-of-provincial-recovery-plans.pdf
SK	The Wild Species at Risk Regulations, (1999) Chapter W-13.11 Reg 1	Accessible from: https://www.saskatchewan.ca/business/environmental-protection-and-sustainability/wildlife-and-conservation/wildlife-species-at-risk
	Woodland Caribou	Accessible from: https://www.saskatchewan.ca/business/environmental-protection-and-sustainability/wildlife-and-conservation/wildlife-species-at-risk/woodland-caribou
MB	Species and Ecosystems at Risk	https://www.gov.mb.ca/nrnd/fish-wildlife/wildlife/ecosystems/index.html
	Conserving a Boreal Icon – Manitoba's Boreal Woodland Caribou Recovery Strategy	Accessible from: https://gov.mb.ca/nrnd/fish-wildlife/resource/articles-and-publications.html
ON	Species at risk in Ontario	https://www.ontario.ca/page/species-risk-ontario
NB	Species at Risk Public Registry	https://www1.gnb.ca/0078/SpeciesAtRisk/search-e.asp?_gl=1*qo53p5*_ga*MzY5ODY5MzQ5LjE3MDAwNzI2ODM.*_ga_F531P4D0XX*MTcwMDA3MjY4

		My4xLjAuMTcwMDA3MjY5My4wLjAuMA..&_ga=2.229386076.1985099530.1700072683-369869349.1700072683
NS	Species at Risk – Recovery Update	https://novascotia.ca/natr/wildlife/species-at-risk/
PEI	Species at Risk – PEI	https://www.princeedwardisland.ca/en/information/environment-energy-and-climate-action/species-at-risk-pei
NL	Species at Risk	https://www.gov.nl.ca/ffa/wildlife/endangeredspecies/

Appendix IV – List of Case Law Search Terms

All searches were filtered to only include cases as results.

Database	Jurisdiction filters	Search term
Westlaw	none	"species at risk act"
Westlaw	none	"endangered species"
Westlaw	Ontario	"Endangered Species Act" (ON)
Westlaw	none	"Species at Risk Act" (federal)
Westlaw	Nova Scotia	"Endangered Species Act" (NS)
Westlaw	Saskatchewan	"The Wildlife Act" (SK)
Westlaw	Saskatchewan	"Wild Species at Risk Regulations"
Westlaw	BC	"Wildlife Act" (BC)
Westlaw	Alberta	"Wildlife Regulation"
Westlaw	PEI	"Wildlife Conservation Act"
Westlaw	BC	"Forest and Range Practices Act"
Westlaw	BC	"Environmental Protection and Management Regulation"
Westlaw	BC	"Permit Regulation"
Westlaw	BC	"Ecological Reserves Act"
Westlaw	BC	"Land Act"
Westlaw	BC	"Oil and Gas Activities Act"
Westlaw	BC	"Park Act"
Westlaw	Manitoba	"Endangered Species and Ecosystems Act"
Westlaw	Saskatchewan	"Captive Wildlife Regulations"
Westlaw	New Brunswick	"Species at Risk Act" (NB)
Westlaw	Alberta	"Wildlife Act" (AB)
Westlaw	PEI	"Wildlife Conservation Act"
Westlaw	Newfoundland and Labrador	"Endangered Species Act" (NL)
CanLII	none	"species at risk"
CanLII	none	"endangered species"
CanLII	none	"threatened species"

CanLII	none	“Species at Risk Act” (federal)
CanLII	BC	“Wildlife Act” (BC)
CanLII	BC	“Park Act”
CanLII	BC	“Land Act”
CanLII	BC	“Forest and Range Practices Act”
CanLII	BC	“Oil and Gas Activities Act”
CanLII	Alberta	“Wildlife Act” (AB)
CanLII	Saskatchewan	“Wildlife Act” (SK)
CanLII	Manitoba	“Endangered Species and Ecosystems Act”
CanLII	Ontario	“Endangered Species Act” (ON)
CanLII	New Brunswick	“Species at Risk Act” (NB)
CanLII	Nova Scotia	“Endangered Species Act” (NS)
CanLII	PEI	“Wildlife Conservation Act”
CanLII	Newfoundland and Labrador	“Endangered Species Act” (NL)

Appendix V – List of Cases in Data Set

0707814 BC Ltd. v British Columbia (Assistant Regional Water Manager), [2008] BCWLD 1993

9255-2504 Québec Inc. v Canada, 2022 FCA 43

Adam v Canada (Minister of the Environment), 2011 FC 962

Ahousaht Indian Band v Canada (Minister of Fisheries & Oceans), 2008 FCA 212

Alberta Wilderness Assn. v Canada (Attorney General), 2013 FCA 190

Alberta Wilderness Assn. v Canada (Minister of Environment), 2009 FC 710

Alliance to Protect Prince Edward County v Director, Ministry of the Environment, [2013] OERTD No. 40

ANC Timber Ltd. V Alberta (Minister of Agriculture and Forestry), 2019 ABQB 710

Association for the Protection of Amherst Island v Ontario (Environment and Climate Change), [2016] OERTD No. 36

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Bancroft v Nova Scotia (Lands and Forestry), 2019 NSSC 205

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Monture v Ontario (Director, Ministry of the Environment), [2012] OERTD No. 69

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Nation Rise Wind Farm Limited Partnership v Minister of the Environment, 2020 ONSC 2984

Nature Conservancy of Canada v Waterton Land Trust Ltd., 2014 ABQB 303

Nelson Aggregate Co., Re, [2012] 71 CELR (3d) 233

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Ontario (Natural Resources and Forestry) v South Bruce Peninsula (Town), 2021 ONCA 749

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R v Morris, 2010 BCPC 270

R v Nam Bak Enterprises Ltd., 2012 BCPC 506

R v Newman, 2018 ABPC 143

R v Rio Tinto Alcan Ltd., 2017 BCSC 1144

R v Russ, 2007 BCPC 453

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R v Sandover-Sly, 2002 BCCA 56

R v Shirey, 2014 BCSC 2204

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Wiggins v Ontario (Environment and Climate Change), [2017] 13 CELR (4th) 235

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Wildlands League v Ontario (Lieutenant Governor in Council), 2016 ONCA 741

Wrightman v Director, Ministry of the Environment, [2014] OERTD No. 11

Xats'ull FIrst Nation v British Columbia (Director, Environmental Management Act), [2008] BCWLD 4464

Yahey v British Columbia, 2021 BCSC 1287

Young v Ontario (Environment and Climate Change), [2016] 4 CELR (4th) 221

Zoocheck Canada Inc. v Parks Canada Agency, 2008 FC 540

Appendix VI – List of MLAs Contacted

- George Heyman, Minister of Environment and Climate Change – no response (not even automated)
- Rob Fleming, sponsor of Bill M 207 (2010), and Bill M 211 (2011) – automated response
- Katrine Conroy, Minister of Forests
- Andrew Weaver, former leader of the BC Green Party, sponsor of Bill M 224 (2017) Bill M 208 (2017)
- Sonia Furstenau, Leader of the BC Green Party

Appendix VII – MLA Contact Email Template

The following is a version of the email template I used to send to current and former MLAs of BC. Versions were edited for each recipient. This was the version sent to the Minister of Environment and Climate Change, George Heyman:

Hello,

My name is Jordyn Bogetti. I am doing a Master's in Environmental Science at Thompson Rivers University. The focus of my thesis is on species at risk legislation in BC.

Developing and [sic.] enacted a designated endangered species act for BC was included in the 2017 mandate letter to you as the Minister of Environment and Climate Change strategy. The process was underway but has not been completed, and no bills have been proposed with draft legislation in response to that mandate. The language in the 2020 mandate letter to the Minister of Environment and Climate Change was also downgraded from enacting new legislation to "continu[ing] to work with partners to protect species at risk and biodiversity".

As you know, draft legislation has been put forward in the past in BC. Member's bills were proposed in 2010, 2011, and twice in the first half of 2017 before the change in government. You were the sponsor of Bill M 226 in 2017. Unfortunately, none of these bills made it to a second reading in the legislature so there is no public record of any debate or reasons why those bills did not move forward.

As the sponsor of one of those previous bills, I am writing to inquire whether you would be willing to comment on why those bills, particularly the one you sponsored, were not passed in the legislature. I am also writing to you in your capacity as Minister of Environment and Climate Change to inquire where the process of enacting species at risk legislation currently stands in BC.

Thank you for your time,

Jordyn Bogetti

Appendix VIII – Consent Form for Interview Participants

"The Development of Species at Risk Legislation in British Columbia"

Project researcher: Jordyn Bogetti | 1-778-512-1753 | bogettij10@mytru.ca

This consent form is for a research project being conducted by Jordyn Bogetti, a Masters of Environmental Science student at Thompson Rivers University (TRU). The purpose of this project is to research how British Columbia's current species at risk legislation is operating, and to determine whether species at risk conservation would be improved by developing designated legislation. The research will be conducted from the fall of 2021 to the spring of 2022 and will involve a one hour, one-on-one semi-structured interview with Jordyn Bogetti.

Participation is completely voluntary, and you may withdraw from the interview at any time. You may choose to remain anonymous by circling the correct area below. By choosing this option your name and organization will be coded and never disclosed. If you choose to not remain anonymous, your name and other details including your occupation or organization may be disclosed alongside your views and opinions in the final report. This could put you at risk of violating corporate or employment policies. You may also choose to let the researcher know during the interview if you wish to keep only some identifying details anonymous. You will also be sent a transcription of your interview to review for accuracy, and will be given the opportunity to change your decision on anonymity after you review the transcript.

Interview questions will consider existing species at risk protections under the *Wildlife Act, Forest and Range Practices Act, Oil and Gas Activities Act, Ecological Reserves Act, Park Act, Land Act,* conservation policies or actions taken in provincial protected areas, and personal interactions or experiences with species at risk.

Interviews will be recorded. The recordings will be accessible only by the researcher, Jordyn Bogetti, and by her research supervisor, Dr. Courtney Mason. The storage and disposal of records/data will be as follows:

1. Initial interview recordings will be stored in a password-protected file on a password-secured computer.

2. Recordings will be backed up to a password-protected folder, on a password-protected desktop computer at TRU.
3. Recordings will be transcribed to written files, which will be stored the same way as in steps 1 and 2.
4. Recordings will be deleted once the transcribed files are stored and backed-up.
5. You will be sent the transcription of your interview to whichever contact information you provide to review for accuracy. You are responsible for storing or deleting your copy of the transcription.
6. Researcher copies of the transcriptions and any research data will be deleted 5 years after the completion of the project, or immediately if you choose to withdraw.

There is a low likelihood of discomfort and/or inconvenience associated with your participation in the project. It is possible that the research will be published. There is a possibility if you choose not to remain anonymous that opinions you express as part of your participation in this research could violate your employment policies, or otherwise lead to social discomfort.

If you would like to receive a copy of the executive summary of the completed project, please circle the appropriate area below.

Any comments, questions, or concerns should be directed towards Jordyn Bogetti, who can be contacted by e-mail at bogettij10@mytru.ca or by phone at 1-778-512-1753. Her research supervisor Dr. Courtney Mason can be reached by e-mail at cmason@tru.ca. For further information, please contact the Chair of the TRU Research Ethics Board at TRU-REB@tru.ca or 1-250-828-5000. If you have read and fully understood the consent form, and agree to participate, please initial in the space provided below:

Please initial or circle:

- I am 19 years of age or older. _____
- I have received, read, and understand this consent form. _____
- I agree to allow my name, position and organization to be published in the final document or used in presentations regarding the final document: YES / NO
- I wish to remain anonymous: YES / NO
- I permit the interviewer to audiotape/record the interview: YES / NO

- I would like to receive a copy of the executive summary of the completed project: YES / NO

By signing this consent form, I _____ agree to participate in this project.

Signature: _____ Date: _____

Project Researcher's Name: _____

Signature: _____ Date: _____

Appendix IX – List of Interview Participants

Name	Protected Area Affiliation	Interview Date	Connection to Protected Area
Ian Barnett	Lac Du Bois	April 29, 2022	Worked with Ducks Unlimited and Nature Conservancy of Canada on projects in Lac Du Bois and adjoining private conservancy lands.
Dave Low	Lac Du Bois	May 5, 2022	Worked as a government biologist in Kamloops Regional Office. Director of Lac Du Bois for the Burrowing Owl Conservation Society of BC.
Jean Nelson	Wells Gray	May 9, 2022	Member of the Friends of Wells Gray society.
Anonymous		May 13, 2022	Registered Professional Biologist (RPBio). Worked previously with the Priority Grasslands Initiative.
Trevor Goward	Wells Gray	May 16, 2022	Lichenologist and expert on deep-snow mountain caribou, with a research focus on the Wells Gray herd.
Tom Dickinson	Lac Du Bois and Wells Gray	July 12, 2022	Professor Emeritus at Thompson Rivers University in the Biological Sciences Department. Previous research connections to both Lac Du Bois and Wells Gray. Member of the Friends of Wells Gray.
Tay Briggs	Wells Gray	September 26, 2022	Registered Forester and owner and operator of Wells Gray Adventures, an adventure tourism company operating in Wells Gray.
Nathan Matthew	Wells Gray	December 7, 2022	Chief of the Simpcw First Nation (Sécwepemc) for twenty years. Chancellor of Thompson Rivers University.

Appendix X – Interview Question Framework

POSITION/BACKGROUND

- What do you do for work?
- What is your connection to **Protected Area**?
    - Employment, volunteer, recreation, etc…
- How long have you been working/volunteering/visiting **Protected Area**?
- How often are you at **Protected Area**?

SPECIES AT RISK FAMILIARITY

I will be using the term "Species at Risk" to describe a species that is endangered or considered threatened.

- How familiar are you with species at risk?
- How alert are you to the possibility of encountering a species at risk when you are working/volunteering/visiting outdoor or wilderness areas?
- Would you take any different actions or measures if you thought you might encounter a species at risk?
- Are you more careful in areas where you know species at risk live?

EXISTING LEGISLATION AND CONCERNS

- How familiar are you with how species at risk are protected in this province?
    - Which laws, regulations, or policies relating to species at risk are you familiar with?
- Have you ever looked for or read any of these laws or regulations?
    - Did you encounter any issues with accessing or reading those regulations or laws?
- Would you look for more information on laws or restrictions if you were visiting species at risk habitat?

  - Where would you look for this information?
  - How many different places would you be willing to check?
- Do you think finding information about species at risk protections in BC is accessible?
  - Is there anything you would like to see changed?
- Are you satisfied with how species at risk are being protected in BC?
  - Is there anything you would like to see changed?
- Are you satisfied with how protections for species at risk are implemented in BC?
  - Is there anything you would like to see changed?

SITE SPECIFIC POLICIES

- Do you have any experience with policies or laws that govern the **Protected Area**?
  - Are there any species at risk specific policies?
- Have you seen any informational displays about the **Protected Area?**
  - Where?
  - What types? (signs, websites, pamphlets)
  - Do you stop to read the informational displays?
- Do you check for updates to information about **Protected Area** regularly?
  - Where?

PROTECTED AREAS POLICIES AND MEASURES

- Are you aware of any species at risk within the **Protected Area**?
- How did you find out about them?
- Have you seen or heard any information about species at risk in the **Protected Area**?
  - Where?
  - What types of information?
    - Where the species lives/habits
    - Conservation measures being taken by the **Protected Area**
    - Areas/activities to avoid while visiting **Protected Area**
    - What to do if you encounter a species at risk

- Do you feel you could be better informed about species at risk in **Protected Area?**
- Do you feel that species at risk conservation in **Protected Area** is working?
    - Why or why not?
    - What would you like to see changed?
- Have you seen or heard any information about species at risk conservation *outside* of the **Protected Area**?
    - Where?
    - What types of information?
- Do you feel that species at risk conservation outside of **Protected Area** is working out?
    - Why or why not?
    - What would you like to see changed?
- Have you visited other areas within or outside of BC where you did see or hear information about species at risk?
    - How was that information provided?
    - How did that experience compare to the species at risk experience at **Protected Area**?

Final:

- ARE THERE ANY QUESTIONS/AREAS OF PARTICULAR CONCERN RELATING TO SPECIES AT RISK THAT YOU HAVE?
    - Types of questions you have
    - Types of questions you would like asked
    - Groups you would like to see included in species at risk work