

**The (In)Ability to Develop Indigenous Protected and Conserved Areas in Canada:
A Literature Review**

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ABSTRACT

The Canadian federal government's latest conservation plan is hoping to achieve protected area targets of 25% of the land and water by 2025 and then increasing to 30% by the year 2030. The federal government also intended to move forward with reconciliation efforts and put into practice the Truth and Reconciliation Commission's Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples. Conservation targets will only be possible with Indigenous support and involvement and therefore in 2018, the term Indigenous Protected and Conserved Area (IPCA) was created to move towards a conservation model, which included Indigenous Peoples' values and traditions. Unfortunately, some groups believe this process might potentially be a double-edged sword, because this places a colonial framework of conservation on Indigenous land, which could be perceived as colonial entanglement instead of an act of reconciliation.

Indigenous efforts to conserve or protect ecosystems in Canada are lengthy processes and the purpose of this research was to synthesize written resources to gain a better understanding of what it means to develop and designate IPCAs as well as some common challenges. The research involved a systematic literature review of Canadian supportive documents and was complimented by one-on-one semi-structured interviews with four practitioners. These methods were performed to gain insight on the written resources and education tools used when creating an IPCA in Canada. Five key themes were generated from assessing 148 documents, namely *governance, habitat, cultural and spiritual values, sustainable economies, and boundaries* that were all highly interconnected with one another. Key results of the research concluded that the ability or inability of the development of a successful IPCA and its designation was the result of collaboration efforts between Indigenous communities, industry, and government(s). The literature suggests it is possible to achieve effective collaboration between parties through the framework of "Ethical Space" or using a "Two-Eye Seeing" approach.

Key words

Indigenous Protected Conserved Areas, IPCA, Conservation, Tribal Parks, Reconciliation, Protected Areas, Collaboration

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I engage with this topic as a settler living and learning on three unique Treaty lands during the time of my Master's program. In the spirit of respect, reciprocity, and truth, I honour and acknowledge that I resided on the traditional lands of Treaty 7 territory which is shared by the Nations of the Blackfoot Confederacy, the Îyâxe Nakoda, the Tsuut'ina Nations, and the Métis Nation of Alberta. I also lived on the traditional lands of Treaty 2 territory which is home to the Anishinaabe Peoples and the Métis Nation of Manitoba, as well as Treaty 6 territory which is home of Cree Peoples and the Métis Nation of Saskatchewan. I pay my respects to the past, present, and future generations of these Nations who help us steward this land, as well as honour and celebrate these magnificent areas in Canada.

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DEDICATION

To my nieces and nephews. Over the past two years, all of you have bestowed upon me moments of joy, laughter, and love. Your future is one of many reasons I continued this research project and I hope my work serves as a small piece of inspiration as you walk through your journey in life. Know that you are capable of achieving greatness and always believe in your highest potential.

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*"In the end we will conserve only what we love;
we will love only what we understand;
and we will understand only what we are taught."*

Baba Dioum, 1968

TABLE OF CONTENTS

PERMISSION TO USE.....	i
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
DEDICATION.....	iv
TABLE OF CONTENTS	v
LIST OF TABLES.....	vii
LIST OF FIGURES.....	vii
LIST OF DEFINITIONS.....	viii
SITUATING MYSELF.....	x
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background.....	1
1.1.1 Geographical Distribution of Protected Areas	1
1.1.2 Current Protected Area Strategy	2
1.2 Indigenous Protected and Conserved Areas Defined.....	4
1.3 Types of International Designations	4
1.3.1 International Union for Conservation of Nature.....	5
1.3.2 Other Effective area-based Conservation Measures (OECM).....	6
1.3.3 UNESCO.....	7
1.4 IPCAs in Canada	8
1.4.1 Types of Existing Indigenous Parks in Canada.....	8
1.4.2 Tribal Parks.....	9
1.4.3 Conservancies.....	10
1.5 The IPCA Problem.....	11
1.6 Purpose of the Research.....	14
1.7 The Objectives of the Research.....	14
CHAPTER TWO: METHODS.....	15
2.1 Methodology.....	15
2.1.1 Literature Review Design.....	15
2.1.2 Interview Design.....	18
2.2 Limitations with the Methods.....	19
2.2.1 Literature Review Limitations	19
2.2.2 Interviews Limitations.....	20
CHAPTER THREE: RESULTS.....	21
3.1 Results of the Systematic Literature Review.....	21
3.2 Overview of Themes Associated with IPCAs.....	21
3.2.1 Governance	21
3.2.2 Habitat	23
3.2.3 Cultural and Spiritual Values	24
3.2.4 Sustainable Economies	26
3.2.5 Boundaries	28
3.3 Examples of Themes Associated with IPCAs.....	30
3.3.1 Examples of Governance	30
3.3.2 Examples of Habitat.....	32

3.3.3 Examples of Cultural and Spiritual Values.....	34
3.3.4 Examples of Sustainable Economies.....	35
3.3.5 Examples of Boundaries.....	37
3.4 Challenges facing IPCA design and designation	39
3.4.1 Challenges with Governance	39
3.4.2 Challenges with Habitat	41
3.4.3 Challenges with Cultural and Spiritual Values.....	43
3.4.4 Challenges with Sustainable Economies.....	44
3.4.5 Challenges with Boundaries	46
CHAPTER FOUR: DISCUSSION.....	48
4.1 Introduction	48
4.2 Unpacking the Five Key Themes.....	48
4.3 Other Considerations.....	51
CHAPTER FIVE: CONCLUSION.....	55
CHAPTER SIX: REFERENCES.....	58
APPENDIX A: IUCN PROTECTED AREA MANAGEMENT CATEGORIES.....	70
APPENDIX B: IUCN PROTECTED AREA GOVERNANCE STRUCTURES.....	71
APPENDIX C: LITERATURE REVIEW DATA SET	72
APPENDIX D: ETHICS FORMS	86

LIST OF TABLES

Table 1.1: Federal Government Funding Opportunities.....3
Table 1.2: Tribal Parks in Canada.....10
Table 1.3 A List of Organizations Supporting Indigenous-Led Conservation Efforts.....13
Table 2.1: Key Terms and Secondary Filters of Literature Review.....16
Table 2.2: Breakdown of the Number and Percentage of Literature Review.....18

LIST OF FIGURES

Figure 2.1: Flow Chart of PRISMA Guidelines for Literature Review.....17
Figure 3.2: Locations of Indigenous Guardians within Canada.....27

LIST OF DEFINITIONS

Description of terms:

The following terms are used throughout this thesis and are described here to ensure that the use of the term is not misrepresented or misinterpreted.

Ecosystems: term used to describe the land and or water (both fresh and saltwater systems) and all the systems and species encompassed within.

Government(s): term used that refers non-Indigenous forms of government such as municipal, provincial, territorial, or federal government, individually or collectively.

Indigenous Peoples: term used that refers to First Nations, Inuit, and Métis Peoples. This term encompasses all members of the community, individually or collectively as well as including their Indigenous governments.

Abbreviations:

AB	Alberta
BC	British Columbia
CBD	Convention on Biological Diversity
CHN	Council of the Haida Nation
ECCC	Environment and Climate Change Canada
ESF	Ecosystem Service Fee
FPIC	Free Prior Informed Consent
GIS	Geographic Information System
GBR	Great Bear Rainforest
IBA	Impact Benefit Agreements
ICCA	Indigenous Peoples' and Community Conservation Areas
ICE	Indigenous Circle of Experts
IPCA	Indigenous Protected Conservation Area
IUCN	International United for Conservation of Nature
MPA	Marine Protected Area
NGO	Non-Governmental Organization
NT	Northwest Territories
OECD	Other Effective area-based Conservation Measures

PA	Protected Area
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
TRC	Truth and Truth and Reconciliation Commission
TTP	Tla-o-qui-aht Tribal Park
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNESCO	United Nations Educational, Scientific and Cultural Organization

SITUATING MYSELF

I grew up on Treaty 2 traditional territory in Fork River, Manitoba and I am a descended from an Irish-Ukrainian settler and Ojibwe Assiniboine-Irish immigrant, and was raised in a predominately Ukrainian cultured home.

I have numerous knowledge gaps surrounding Indigenous affairs and culture which stems from my lack of exposure and educational background. Initially, my educational exposure to Indigenous culture began when visiting local museums throughout my youth. Approximately seven years ago I started to gain a more in-depth knowledge of Indigenous affairs and culture through courses at the University of Saskatchewan. As a result, this research project has been an eye-opening experience and humbling journey while learning about Indigenous knowledges, history, and culture. I know my desire to learn more about Indigenous heritage will continue to evolve over the course of my lifetime.

It is noted to the reader that this thesis was written during the early onset of the Covid-19 global pandemic. During a time when institutions, businesses and families were forced to quickly adjust to the policies and behavioral mandates instated by the government(s). The entirety of my graduate studies was performed remotely online and at times in isolation from family, friends, and colleagues. This resulted in multiple pivots with the design of this thesis project to adjust to the ever-changing government(s) restrictions and protocols. My personal and academic struggles were not unique when compared to others of this time. However, those adversities did influence my research, perception, and writing.

CHAPTER ONE: INTRODUCTION

Starting in 1885, with the establishment of Banff National Park, government agencies within Canada started to create numerous protected and conserved areas (Dearden & Dempsey, 2004). Across Canada, designations and classifications for these areas include national, provincial, territorial parks, national wildlife areas, migratory bird sanctuaries, marine protected areas, and Indigenous protected areas (ECCC, 2021a). Since 1885 there has been a steady increase in the number and extent of areas being protected, but with recent increased threats from climate change, biodiversity crisis, habitat fragmentation, and resource exploitation, there has never been a greater need to conserve and protect ecosystems in Canada.

One of the ways that the current federal Canadian government is trying to protect and conserve more areas is through reconciliation efforts with Indigenous Peoples across the country. This method involved the launching of the Canada Nature Fund Target 1 Challenge in 2017 as a funding initiative to create Indigenous Protected and Conserved Areas (IPCAs). IPCAs are loosely designed as a type of protected area that have a significant component of Indigenous leadership involved in the planning, creation, and control of a Protected Area (PA). As will be illustrated later in this thesis, the theoretical designation of an IPCA and the legally defined status of an IPCA are currently quite different, which naturally leads to a lot of confusion on the subject. This confusion often presents groups working towards a PA with a series of double-edged sword situations, where they wonder if making a PA is the right thing to do for the community. My research hopes to understand what it means to develop and designate an IPCA and what challenges are presented when creating IPCAs.

1.1 Background

1.1.1 Geographical Distribution of Protected Areas

Historically, the colonization of Canada started on the east coast and moved first westwards and then into the northern portions of the country. Accompanying this westward expansion, various types of formalized promises and treaty land agreements between the existing Indigenous Peoples and the Crown were made. As Canada became a more formalized country, so did their agreements. Shortly after the time that Canada officially established as a country within the British Empire in 1867, the idea of protecting areas for the future was also becoming more commonplace around the world. This led to Canada's first National Park in Banff eighteen years later, but it also helps illustrate the start of much of the current mistrust seen with the topic of

PAs with Indigenous Peoples (Brockington et al., 2008; Stevens, 2014). Creating PAs was seen as more easily done by taking over vast areas of land in what was thought of by eastern Canadians as unpopulated regions of the country, and if Indigenous peoples were in the way or even considered, they could be easily removed from the region (e.g., the formation of Jasper National Park in 1907).

A generalized pattern of western then northern movement of PA development followed. Dating back to 1885, there was little to no Indigenous input into PA strategies (Stevens, 2014), but within the last three decades there has been more inclusive input from Indigenous groups as the PAs got further west and into the north, especially where land claims were not yet formalized. This recent input into how PAs were made has allowed for Indigenous perspectives and values to be included in some of the more recent comprehensive and specific land claims, as well as self-government agreements. Because of the way Canada was settled and the different styles of government across the nation, one can see that the collection of PAs across the country with Indigenous involvement varies greatly. The majority of the PAs with strongly involved Indigenous groups are either located within British Columbia (BC) or in northern Canada and are very recent.

1.1.2 Current Protected Area Strategy

The federal government's latest plan is hoping to achieve PA targets of 25% of the land and water protected by 2025, increasing to 30% by the year 2030. The Environment and Climate Change Canada (ECCC) 2030 Plan that was unveiled in February of 2021 stated that the federal government was committed to creating new federal protected land areas as well as IPCAs. The plan includes six different programs with funding available to help individuals and communities wishing to protect or conserve ecosystems (Table 1.1). The 2030 Plan also states that it will commit to improving and protecting sensitive habitats for 230 species at risk and recognizing protected and conserved areas that are already contributing to the PAs network (ECCC, 2021b). These programs provided funding initiatives, which are available through an application process and eligibility criteria. Unfortunately, at the time that this plan was announced, two of the six programs were already closed to new applicants, and a third was ended in May of 2021. This mixed message sent by the government likely had detrimental effects.

Table 1.1: Federal government and Environment and Climate Change Canada (ECCC) funding programs to assist in achieving the conservation targets for the year 2030 (ECCC, 2021c; Department of Fisheries and Oceans, 2021; Wildlife Habitat Canada, 2018).

Program	Who can apply	Closing Date
Ecological Gifts Program	Any government, municipal governments, public bodies performing a function of government.	Ongoing
Community-Nominated Priority Places for Species at Risk	Non-governmental organizations (NGOs), Indigenous Peoples, education institutions, municipal governments, and local organizations in the three territories.	May 2021
Canada Nature Fund for Aquatic Species at Risk	Anyone who puts forth a proposal which presents the best potential to benefit aquatic species at risk.	March 31, 2026
Canada Nature Fund Target 1 Challenge	NGOs, Indigenous Peoples, education institutions, local organizations, municipal and provincial governments.	March 15, 2019
Indigenous Guardians Program	Indigenous Peoples.	November 30, 2020
Natural Heritage Conservation Program	NGOs and private landowners.	March 31, 2023

In the federal government’s 2021 Budget, they also committed approximately \$3.2 billion towards achieving the goals of protecting 30% of land and water by 2030. Almost \$1 billion went to ocean protection and over \$2 billion to land and freshwater protection. The money was set aside for creating and expanding parks, IPCAs, and other PAs (Department of Finance Canada, 2021). With the announcement of these new conservation targets and funding, many believe the only way forward in achieving these targets is to include Indigenous Peoples in these efforts. IPCA have the potential to significantly increase the number of areas that are conserved or protected in Canada. However, when bringing all of the existing and newly proposed applications for IPCAs together in one call, the government unfortunately was unable to accept all applications. There were 148 applications requesting funding for the Target 1 Challenge, but only 68 applications received funding. This resulted in the loss of potential projects that had an opportunity to create IPCAs and could contribute towards Canada’s goal of protecting 30% of the land and water by the year 2030 (e.g., Canada Nature Fund Target 1 Challenge).

1.2 Indigenous Protected and Conserved Areas Defined

In the 2018 report created by the Indigenous Circle of Experts¹ (ICE), they described an IPCA as needing to have three key aspects (ICE, 2018). First, that the initiative is Indigenous led. Second, that it represents a long-term commitment to conservation. Third, that it elevates Indigenous rights and responsibilities (ICE, 2018). These three aspects of an IPCA echo the conditions of a PA as described by the International Union for Conservation of Nature (IUCN). The ICE report used the internationally accepted definition of an IPCA, because up until that time, there was no concept of a legally designated IPCA in Canada.

At the time, the David Suzuki Foundation pointed out that there was a wide spectrum of PA recognitions, and a lot of ambiguity surrounded the IPCA concept in Canada (Plotkin & David Suzuki Foundation, 2018). The new term IPCA that was chosen in the ICE report (2018) was selected to describe numerous types of PAs in Canada, some theoretical, and some that already existed. They defined examples of IPCAs which could include Tribal Parks, Indigenous Cultural Landscapes, Territorial Protected Areas, Indigenous Protected Areas, and Indigenous Conserved Areas (ICE, 2018). The ICE Report also discussed that IPCAs could also be areas with Indigenous governance, Indigenous management, or Other Effective area-based Conservation Measures (OECMs) (Zurba et al., 2019, ICE, 2018).

1.3 Types of International Designations

Although this research project focusses on Canada and its IPCAs, because of the slow uptake of designating PAs under an Indigenous context in our country, it is necessary to first understand the international context of PAs before one can see how Canada's current designations work. Lacking any IPCA designations of its own, Canada recognizes two main international agencies frameworks to help provide various types of PA structures that have been commonly used in Canada. The two agencies are and the International Union for Conservation of

¹ The Indigenous Circle of Experts (ICE) is a group organized to provide recommendations and advice to achieve Canada's Target 1 goals. The group is comprised of Indigenous and non-Indigenous peoples from Canada. ICE held four gatherings across Canada which provided an opportunity to collect information and insights about IPCAs from a wide range of communities and governments. The results of those gatherings were displayed and presented within the 2018 report *We Rise Together* (ICE, 2018).

Nature (IUCN) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

1.3.1 International Union for Conservation of Nature

The IUCN is an international organization which promotes conservation of nature and sustainable natural resource uses. IUCN defines a protected area as one that is “a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Dudley, 2008). Along with this definition the IUCN has created many new policies which strongly endorse UNDRIP concepts within PAs. The perception of using the spirit of UNDRIP policies is particularly interesting to Canadian Indigenous groups, as there has never been a formal recognition of many of these concepts in Canada until recently. Concepts such as in the list below have proven to be helpful for Indigenous Peoples trying to create a PA within the IUCN system (Stevens et al., 2016; Stevens, 2014), and is one reason that the IUCN international designation is seen as enticing to Indigenous groups in Canada.

- Indigenous Peoples have the right to retain ownership of an area within a PA, including national parks. They have the right to restitution of the land incorporated in PAs without their free, prior, and informed consent (FPIC).
- New PAs should only be established with Indigenous Peoples FPIC.
- Indigenous Peoples should not be evicted from the PA.
- Full and effective participation in PA governance and management is required in all existing and new PAs with full respect for their rights.
- Indigenous Peoples have rights to livelihood and cultural use and management of natural resources from the PA.
- Indigenous Peoples have the rights to custodianship of sacred natural sites within the PA.
- Human rights and Indigenous Peoples rights apply in all PAs.

The IUCN is the main international organization known for regulating the classification and governance types of PAs (Borrini-Feyerabend et al., 2013). Appendix A lists the categories of management classification which an organization or government can seek from the IUCN, as well as Appendix B, which lists the types of governance structures accepted by the IUCN within a designated PA.

Because the federal government recognizes these IUCN definitions of PAs and all protected or conserved areas designated under Canadian legislation, all Canadian PAs are assigned to one or more of these IUCN management categories (ECCC, 2021a). Any Indigenous communities could therefore declare one of these international management types or use a Canadian government(s) definition to decide which of the seven IUCN management categories would apply to their PA, and their PA could have a legal standing. To receive recognition for one of the seven types of PAs, formal applications are processed through the ECCC branch of the federal government (Dudley, 2008).

1.3.2 Other Effective area-based Conservation Measures (OECM)

In the Convention on Biological Diversity (CBD) Agreement an area considered to be an Other Effective area-based Conservation Measures (OECM) is defined as an area which is (1) geographically defined, (2) governed or managed to achieve long term *in situ* conservation of biodiversity, and where applicable, (3) cultural, spiritual, socio-economic, and local values (IUCN WCPA, 2019). This definition laid out in the CBD is parallel to the IUCN definition of a PA. Examples of such areas can include Indigenous territories, watersheds, resource management areas, and areas with restricted access such as military training areas (ECCC, 2021a).

Because these areas are recognized under the IUCN and CBD, they could be used as a steppingstone for Indigenous communities to gain a formal international designation as an interim process while trying to establish a PA within a federally regulated ecosystem in Canada (Sparling, 2020). Once formally recognized, a community could then take further steps to decide on the best governance structure for their community, which might eventually lead to a designation of an IPCA.

Another reason that many groups turn to the CBD is the availability of guidance documents for assessing a terrestrial area as an OECM or a PA which are available through the “*Pathway to Canada Target 1 Decision Support Tool*” report (Conservation 2020, 2021) and for marine areas, it is available through the “*Operational Guidance for Identifying OECMs in Canada*” report (Department of Fisheries and Oceans, 2017). As of 2020, according to the Canadian Protected and Conserved Areas Database, 135 out of the 10,510 protected and conserved areas are OECMs on federal lands or waters. Of these, 59 had Indigenous Government structures totaling 39,182 square kilometres of conserved area (ECCC, 2020b). These figures

indicate the relatively large numbers of Indigenous Peoples that decide to use this type of designation to create a conserved area.

1.3.3 UNESCO

There are three types of designations created through UNSECO, that help set up the current context in Canada. There are World Heritage Sites, Biosphere Reserves, and Geoparks. To receive recognition for one of these three classifications, groups in Canada must make a formal application which is processed through UNESCO by the federal government (UNESCO World Heritage Centre, 2021; Akins & Bissonnette, 2020).

There are three types of current World Heritage Sites located in Canada: Natural, Cultural, and Mixed Indigenous. There are ten Natural World Heritage Sites area within Canada, and to achieve this designation, agencies need to prove that their Natural Heritage area have either: (1) outstanding life or geological processes present, (2) have ecological or biological evolutionary process present, (3) contain natural phenomena that are rare, unique or beautiful, or, (4) contain habitats that are rare, have endangered animals, plants or exceptional biodiversity which are of outstanding universal value from the point of conservation or science (UNESCO World Heritage Centre, 2019). Currently there are nine Cultural World Heritage Sites within Canada. These types of sites may contain historical buildings, monuments, archeological sites, sculptures, and or paintings which are of outstanding universal value from the point of view of history, science, or art (UNESCO World Heritage Centre, 2019). Currently there is one Mixed Indigenous World Heritage Site within Canada. These types of sites must meet part, or all, of the definitions presented for both a Natural Heritage site and a Cultural Heritage site above (UNESCO World Heritage Centre, 2019).

Canada has 18 biosphere reserves which are designated places for learning about sustainable development across unique ecosystems. These can include terrestrial, marine, or coastal ecosystems and the sites promote conservation of biodiversity with sustainable use within the boundaries of these designations. GeoParks are a single unified geographical area where areas of significance are managed with a holistic concept, to provide protection, promote education and understanding on the heritage and history within the area, encourage sustainable tourism, and promote research and sustainable development.

1.4 IPCAs in Canada

Currently IPCAs in Canada are established under a dual-recognition system, ultimately legally established through one of the IUCN management categories (see Appendix A). The reason for this is simple, there is no legally designated title for an IPCA in Canada (Tran et al., 2020). Although there are federal programs to help create IPCAs, in essence this is an apparition, as there is also no legally defined designation behind an IPCA in Canada, which is protected in any federal, provincial, or territorial law. As has just been discussed, there are numerous types of international designations and frameworks which might be used to create a protected or conserved areas, and which have the potential to respect Indigenous culture and rights. However, these types of designations do not have to be considered an IPCA by Canadian governments, because technically, there is still no such thing as an IPCA in Canada.

There are numerous national and international designations which Indigenous Peoples find promising when trying to formally protect or conserve their culture, ecosystems, and values in Canada. The following provides a brief overview of possible designations which can reflect Indigenous Peoples rights and values. Under the right conditions, these designations might ultimately contribute to increasing PAs in Canada and assist with Canada's commitments to the CBD's Strategic Plan for Biodiversity and its national commitment to conserve and protect 30% by the year 2030. As we will see in the following sections, one part the federal government already has a track record of using existing Indigenous Parks and co-opting them as IPCAs, while another part of the government refuses to admit that IPCAs even exist on certain lands.

1.4.1 Types of Existing Indigenous Parks in Canada

The ICE report (2018) pointed out that there is no federal or provincial legislation for recognizing voluntary conservation actions by Indigenous Peoples or for creating PAs that are culturally, spiritually, and ecologically important. In 2021, ECCC also stated that legal status, and policy issues surrounding the term IPCA are still under development and will take more time to resolve. During these three intervening years between releasing the statement that the problem exists (ICE 2018), and saying they are working on the issue, no federal, provincial, or territorial government have established any formal process for the creation of a designation of an IPCA (ECCC, 2021a; Plotkin & David Suzuki Foundation, 2018). The lack of a formal recognition of these types of PAs, is in direct conflict with the federal government's commitment to recognize

Indigenous rights and responsibilities, the right to self-determination, and self-government (Herrmann et al., 2012; ICE, 2018; Zurba et al., 2019; Whyte, 2018; Duncanson et al., 2021).

Many Indigenous groups are not waiting though. They consider Section 35(1) of the Canadian Constitution Act 1982, which states, “The existing Aboriginal and treaty rights of the Aboriginal peoples of Canada are hereby recognized and affirmed” (Jackson et al., 2020, pp.123) as all they need to create an IPCA. In addition, this is often interpreted as their inherent right of self-government (Zurba et al., 2019). Traditional governance has a role in constitutional law and creating IPCAs is considered an assertion of this responsibility. Based on this perspective, the ICE report (2018) stated that if an Indigenous community manages the land and water better than the current government, and provides local sustainable livelihoods, then that IPCA does not need any government recognition or designation to exist (Ecotrust Canada, 2009; Lockwood et al., 2006). This is one style of a common double-edged sword. If an Indigenous group follows a government(s) rules to create a PA are they also giving up their inherit rights to the land? Some literature recognizes this as a type of colonial entanglement (Tran et al., 2019). It is therefore in this vein of self-governance, that many Indigenous groups are moving ahead with their own ideas of PAs, whether they are formally designated and recognized, or not.

Depending on how you wish to define an Indigenous Protected and Conserved Area, many IPCAs may already exist in Canada. Parts of the Canadian federal government see incorporating these previously made PAs as a way to rapidly increase the overall percentage of the Canadian land designated by an international PA status, and thereby quickly coming closer to meeting their overall conservation targets. It is therefore important to take a brief look at what is already considered an existing Indigenous PA, before more formally looking into the issue of how to create new PAs.

1.4.2 Tribal Parks

“A Tribal Park can be a protected area model of self-determination, environmental stewardship, and sustainable livelihoods” (ICE, 2018, pp. 89). This type of PA is not recognized by the federal government but more recently the definition of Tribal Parks is changing and might soon become recognized by ECCC (Personal communication, 2021; Zurba et al., 2019). Currently there are six Tribal Parks in Canada (Table 1.2) which have defined borders, management is practiced through Indigenous belief and values, and there is a long-term view of safeguarding the ecosystems and considering climate change adaptation. Ways to safeguard the

ecosystems could include educational eco-tourism, renewable energy projects, and value-added natural resource use, as well as other non-timber forest product use (Zurba et al., 2019; Enns, 2015). It would be ideal if Tribal Parks were managed by an Indigenous community and on land secured under Aboriginal title, however, there are some which exist on land where title is contentious, and the communities manage the park through a shared agreement with provincial or federal government partners (ICE, 2018; Plotkin & David Suzuki Foundation, 2018). There are no guidelines available which formally determine what classifies a PA as a Tribal Park. Depending on the desires of the community, declaring this type of PA would likely be processed through the ECCC.

Table: 1.2: Tribal Parks and locations within Canada as of August 2021.

Name	Nation	Location
K'ih ts aa?dze Tribal Park	Doig River First Nation	North-eastern B.C and North-western A.B.
Dasiqox Tribal Park (Nexwagweʔzan)	Yunesit'in and Xenigwet'in First Nations	Central B.C.
Tla-o-qui-aht Tribal Parks (encompasses the four Tribal Parks below) <ul style="list-style-type: none"> • Esowista Tribal Park • Ha'uukmin Tribal Park • Tranquil Tribal Park • Wah'nah'juss Hilth'hoo'iss (Meares Island) Tribal Park 	Tla-o-qui-aht First Nations and the Nuu-chah-nulth, a confederation of 15 different groups	Clayoquot Sound UNESCO Biosphere Reserve, Vancouver Island

1.4.3 Conservancies

Conservancy is a type of PA designation that is unique to the province of BC, but one worth mentioning because of the inclusion of Indigenous values within the formal definition. The provincial government in BC made changes to their Parks Act in 2006 to include a new designation of a PA called a *Conservancy* (Turner & Bitonti, 2011). This type of designation was the first in Canada which was created to incorporate Indigenous Peoples' values into the legal framework. Currently there are 220 conservancy designations in BC (ECCC, 2020b). There are four distinct purposes for a Conservancy which include:

“(1) protection and maintenance of biological diversity and natural environments, (2) preservation and maintenance of social, ceremonial, and cultural uses of Indigenous Peoples, (3) protection and maintenance of recreational values, and (4) ensure the uses of natural resources occurs in a sustainable manner in respect to the first three purposes” (Turner & Bitonti, 2011, pp. 1-2).

This type of designation meets the criteria defined by the IUCN as a PA because the area is designed to protect biodiversity, Indigenous values, and is legally safeguarded (British Columbia Parks, n.d.; Zurba et al., 2019). The designation of Conservancies occurs only in BC, however other provincial and territorial governments are watching, and could adopt this same type of legal framework into their legislation. Conservancies would not fall under the same designation as an IPCA, because the governance structures of the conservancies are maintained by the provincial government and therefore is not Indigenous led (Zurba et al., 2019). However, since this designation comes close to many concepts that are seen to be in an IPCA, the designation status is receiving a lot of attention.

1.5 The IPCA Problem

With an overview of international types of designations of PAs, and how these ranges of designations are both seen or not seen from the viewpoints of Canadian governments, the main aim of the research I present in this thesis was to try to better understand how the uptake of IPCAs can be increased in our country. Currently, there are minimal federal guidelines and or frameworks and resources available to Indigenous communities wishing to create an IPCA (Macura et al., 2015; Bhattacharyya & Whittaker, 2016). In Canada, some timeframes to get a PA from establishment to designation can take decades to achieve (ECCC, 2019). These lengthy timeframes before formal designation allow for opportunities of resource exploitation, biodiversity depletion, and prolonging of reconciliation efforts with Indigenous Peoples to be greatly delayed.

Far beyond what most people can imagine, Indigenous communities have an abundant source of knowledge and data within their oral histories, traditional use, and ways of knowing to establish IPCAs (Fa et al., 2020; Artelle et al., 2019; DeRoy et al., 2021; Whyte, 2018). This knowledge is more than sufficient to create effective IPCAs, and it would be incorrect for anyone to suggest that Indigenous communities are lacking the resources for creating a just and equitable

protected area on their traditional territory (Finegan, 2018). However, issues arise when they want to declare their PAs to government(s) and international bodies, as it is well documented, that a consolidation of written resources and educational tools are needed when communicating these practices with outside agencies (e.g., Buscher, 2019; Tran et al., 2019; Bhattacharyya & Whittaker, 2016; Ecotrust Canada, 2009).

Some helpful organizations which support Indigenous practitioners with negotiations and collaboration protocols, and that have existing consolidated resources are presented in Table 1.3. The organizations within this Table are taking steps forward to ensure that there is support and recognition of the efforts put forth by Indigenous leaders and communities who are attempting to create IPCAs. This Table is not exhaustive by any means, but these organizations were the most helpful and the most easily collected resources found when researching this topic. These organizations are leading the way and are providing examples for other institutions and organizations to further support Indigenous efforts in conservation in many regions of the country.

Table 1.3: A list of Canadian and international organizations who support and promote Indigenous-led conservation efforts (Fajardo et al., 2021; IISAAK OLAM, 2021; CRP; 2021; David Suzuki Foundation, 2021; Vancouver Island University, 2021; ICCA Consortium, 2021; United Nations Climate Change, 2021).

Organization	Type of Organization	Description	Contact Information
Canadian Examples			
IISAAK OLAM Foundation	Indigenous NGO	Provides innovating solutions and programs to help support Indigenous communities with IPCAs.	https://www.iisaaokolam.ca/aboutus
Conservation through Reconciliation Partnership	Program created by Indigenous Leaders Initiative, University of Guelph and IISAAK OLAM Foundation.	Program designed to support Indigenous-led conservation efforts by creating networks and increasing capacity. Provides several supportive documents for Indigenous Peoples and is designing a website to support Indigenous efforts in conservation.	https://conservation-reconciliation.ca/
David Suzuki Foundation	Non-profit environmental organization	Regularly collaborating with communities, government(s), NGOs, and industry to promote community action to addressing environmental issues. Provides several supportive documents for Indigenous Peoples creating PAs.	https://david Suzuki.org/science-learning-centre/
Vancouver Island University	Educational institution	Creating the first in Canada, an IPCA Planning Certification which is a two-semester undergraduate certificate program designed to help future practitioners of IPCAs. Slated to begin in Spring of 2022.	https://socialsciences.viu.ca/mcp
International Examples			
ICCA Consortium	Civil Society Organization	Assists communities with documentation, identification, and legislation of ICCAs. Provides several supportive documents for Indigenous Peoples creating PAs and capacity for research initiatives and technical reports.	https://www.iccaconsortium.org/
Local Communities and Indigenous People Platform	Intergovernmental Organization (platform of the United Nations)	Facilitates in promoting and supporting Indigenous efforts, best practices, and lessons in climate change action. Provides knowledge, engagement capacity and policies for climate change.	https://unfccc.int/LCIPP

1.6 Purpose of the Research

During my evaluations of what is available to practitioners wanting to create an IPCA, I talked to agencies to better understand what bodies of resources are available to them. One area that was collectively pointed out that would be useful, would be to look towards the academic literature to find common themes that all types of IPCAs usually use in their creation. I felt that I could then augment this type of formalized literature review with a small number of select interviews to gain a first-hand understanding of challenges and resources other practitioners of IPCAs were presented with.

Canadian federal conservation targets are consistently not being met by the end of their stated timeframes, and this seem to be the direction of the current federal government promise to conserve and protect 25% of the land and 25% of the water by the year 2025 (ECCC, 2021b). The purpose of my research is therefore to better understand what resources are available when developing and designating an IPCA and to understand the challenges which can arise for those who are creating IPCAs in Canada. By synthesizing a wide list of the literature and producing summaries from a formal literature review, my work will support individuals and organizations wishing to better understand the process of IPCA establishment in Canada.

1.7 The Objectives of the Research

The three main objectives of my thesis research, are:

- #1– To review and synthesize current written knowledge on the development and designation of IPCAs in Canada.
- #2 – To explore the challenges facing the creation of IPCAs in Canada.
- #3 – To identify lessons from current and past experiences to inform future IPCA processes.

CHAPTER TWO: METHODS

2.1 Methodology

To understand my research objectives, I performed a qualitative systematic literature review to analyze journal articles, books, and reports which provided relevant information on the development and designation of an IPCA. I followed similar methodologies that were performed by Hitomi and Loring (2018) and Tran et al. (2019). The result of this portion of my study was to provide and interpret a consolidated collection of the foundational guidelines and written resources available. To further understand my second and third objectives, I used a qualitative methodology to perform semi-structured one-on-one interviews with a select number of practitioners to understand the literature resources which were accessed during the preliminary phases of creating an IPCA in Canada, and to better understand some of the challenges that arose when developing an IPCA.

2.1.1 Literature Review Design

To perform a systematic literature review, I needed to define the subject of my searches. Because IPCA is a relatively new term when used in the Canadian context (ICE, 2018), there are limited scholarly articles written about the few IPCAs in Canada (Tran et al., 2019). To overcome this limitation, I included other key terms in the database searches as listed in Table 2.1. To further refine my search terms, I focused my inquiry on academic and grey literature and then applied secondary filters. Secondary filters were applied to create manageable boundaries with the amount of the literature selected to be reviewed. These ancillary filters highlighted articles that to be eligible for inclusion in the data set, needed to be: (1) written in English, (2) looking at the Canadian context, and (3) published between January 1, 1990, and August 2, 2021. Rational for the secondary filters included the following: English literature was selected due to the researcher's ability to understand only English language. Canadian context and the selected timeframes of the published material allowed for a time-manageable selection of literature that would be reviewed and effectively analyzed in the portion of time allotted for the research project. The specific timeframe of 1990 to 2021 was chosen because the majority of the literature about IPCAs arose from the year 2015 and onward.

Table 2.1: The five key terms and three secondary filters used in the database searches for this study. The three added parameters were again independently applied by the researcher to further refine the computer derived data set.

Key Terms Searched
Indigenous Protected Area
Indigenous Conserved Area
Indigenous Protected and Conserved Area
Tribal Park
Indigenous and Community Conserved Area
Secondary Filters
English in written
Canadian context
Published between January 1, 1990 - August 2, 2021

The review involved searching 12 main academic databases that included: Web of Science, iPortal, Scopus, Academic Search Complete, Political Science Complete, Bibliography of Native North Americans, ProQuest One Literature, Public Affairs Information Service Index, Education Database, EBook Central, Canadian Research Index, and Google Scholar, each using the five defined key terms and then the secondary filters (Table 2.1). The review followed the “Preferred Reporting Items for Systematic Reviews and Meta-Analyses” (PRISMA) guidelines by Moher et al. (2009) to analyze the data collected.

All the selected literature was processed through the Mendeley referencing management software program where duplicates were removed (Mendeley, 2008). The remainder of the listed articles were then exported to a web tool program called Rayyan (Rayyan-Intelligent Systematic Review, 2016) for screening and selection of the relevant articles. After the initial title and abstract review of the literature, numerous articles were excluded because the articles did not pass the secondary filters as stated above (Table 2.1). The data set was then screened a second time to gain a more in-depth level of subject matter discussed and to determine potential themes to label each independent piece of literature related to creating IPCAs in Canada.

A total of 2282 articles (Figure 2.1) were selected from the 12 databases which matched the five key terms and secondary filters as stated in Table 2.1. All collected literature was processed through the Mendeley referencing management software program and a total of 1659 duplicates were removed (Mendeley, 2008). A total of 623 articles were then exported to Rayyan (Rayyan-Intelligent Systematic Review, 2016) for screening and further refining the data set of

relevant articles. After the initial title and abstract review of the literature was conducted, another 377 articles were excluded because the articles did not meet the finer points of the secondary filters as stated above. A total of 246 articles were reviewed in full text to determine their relevance and cohesiveness to information on the establishment of an IPCA in Canada. A further 98 articles were removed because of a lack of cohesiveness and relevance to the set guidelines. The remainder of the 148 articles were included into the finalized data set.

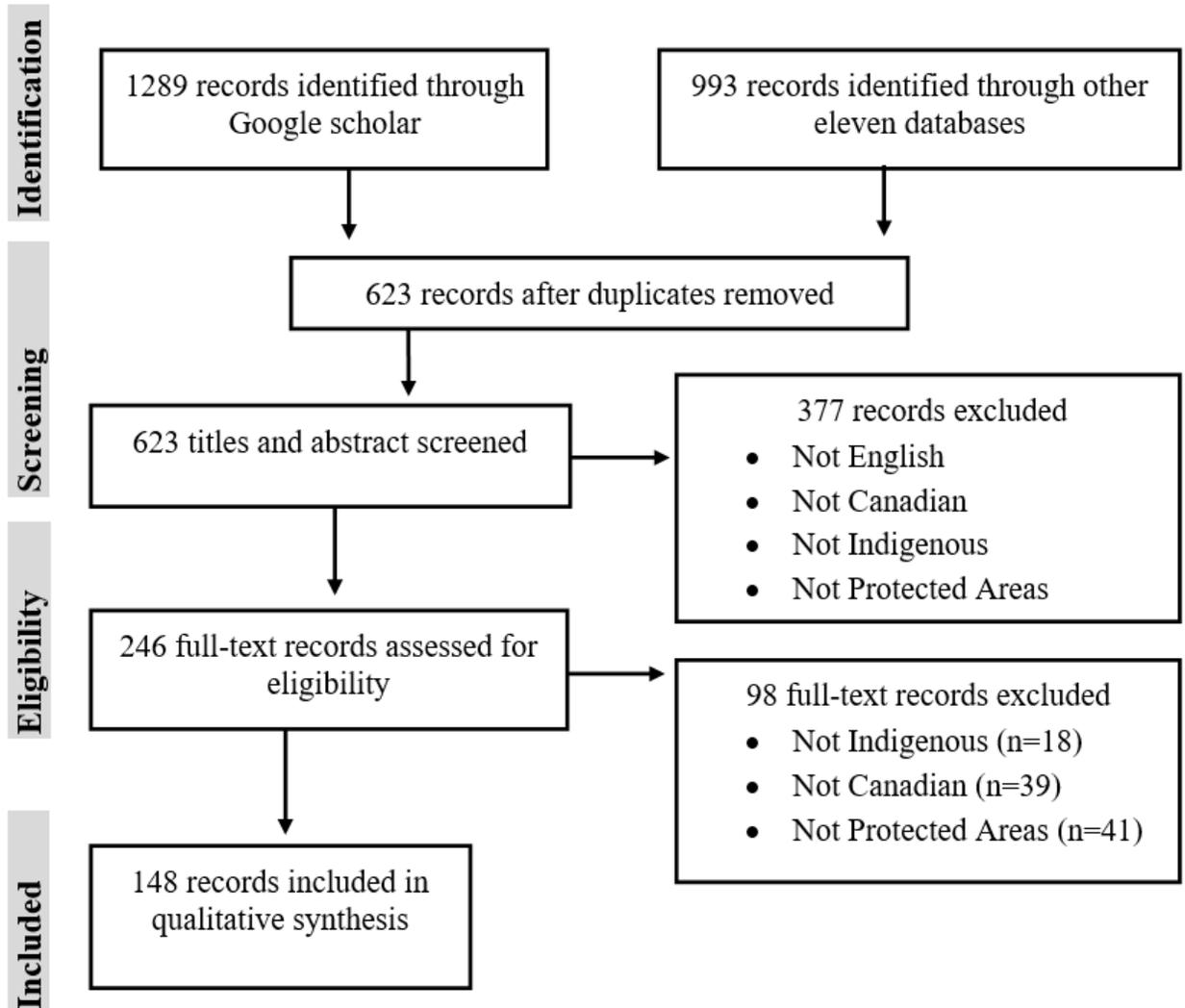


Figure 2.1: Overview of the systematic literature structure used in this thesis. The structure is derived from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009) to analyze the data collected.

Table 2.2 lists the number of articles found and then breaks down the body of literature into the five most common category themes. Each of the subject themes was created by reading

the literature and systematically identifying the most common themes of each paper. Initial scans of the abstract and titles of the literature allowed for a mapping of common themes. After reading approximately half of the literature, a commitment was made to organize the literature under five themes (Table 2.2). The remaining half of the papers were then read in full for content and assigned to one or more of the five themes. The first half of the literature was again reassessed for the five themes and categorized according to the content in each piece. At the end of the analyzes, each of the 148 pieces of literature were analyzed for content and assigned to one or more of the five themes (Table 2.2).

Table 2.2: Breakdown of the number and percentage of pieces of literature in each theme area from the 148 unique publications found from the systematic literature review of articles containing information relating to the creation of an IPCA. Articles could fall under one or more of the themes, and so therefore totals add up to more than 148 articles. Refer to Appendix C for a full list of the unique publications.

Theme	Number	Percentage
Governance	118	42%
Habitat	52	18%
Cultural and Spiritual Values	39	14%
Sustainable Economies	39	14%
Boundaries	35	12%
Total	283	100%

The 148 publications covered different themes on protected or conserved areas in Canada. The most common category of literature discussed *Governance* structures (n=118), one of the most difficult subjects to understand, and achieve. Next *Habitat* (n=52) was commonly found in the literature data set. This was followed by *Cultural and Spiritual Values* (n=39) and *Sustainable Economies* (n=39). The last category was labelled *Boundaries* (n=35). Each of these themes will be discussed in the following chapter, as well as some of the challenges associated with the specific theme. Lastly, some examples of best practices or key approaches are provided for each theme.

2.1.2 Interview Design

I contacted 14 organizations via email to ask to speak to someone from their group about the resources and challenges which occurred during the organization’s application for an IPCA. I was particularly interested in how each of their applications began and the types of written

resources they used which proved to be helpful with their process. The potential interviewees contacted were from IPCAs, OECMs, Tribal Parks, National Park Reserves, NGOs, and UNESCO sites who collaborated with Indigenous Peoples on PAs in Canada. For those organizations that had a person that agreed to speak with me, I sent a series of 11 questions ahead of time (Appendix D). The sample interview questions were designed in a manner to gain a better understanding of the supportive documents accessed when creating a PA and challenges which can occur. For everyone who did agree to participate in the study, I arranged specific dates and times to conduct the semi-structured one-on-one interview via a videoconferencing software platform of their choice. I conducted the interviews under an Ethics Certification provided by the Ethics Board of the University of Saskatchewan (see Appendix D). The preferred software program by all interviewees was Zoom Pro (*Video Conferencing, Web Conferencing, Webinars, Screen Sharing*, 2013).

The number of interviewees who agreed to participate in the study totaled four individuals. Three of the participants were representatives from designated protected areas in Canada and one participant was from an NGO in Canada. At the start of each interview, I asked for verbal consent (Appendix D) from the interviewee and answered any questions or concerns regarding the processes prior to starting the recording. I chose to record the interviews for the opportunity for each of us to review the interview material for accuracy. The length of the interview process lasted approximately 45 minutes and once the interview concluded, each interviewee received a digital recording of their own interview and were granted the opportunity to adjust or edit their comments. Only one participant provided clarification to their responses, and this was submitted via email. It was also agreed upon in the consent form (Appendix D) that the interviewees would also receive a digital copy of the thesis after it was defended.

2.2 Limitations with the Methods

2.2.1 Literature Review Limitations

There were limitations within the design of the systematic review. The first limitation was that the literature review focused solely on Canadian examples. This was done because the consolidated resources are intended for Canadian practitioners. It was decided that examples from other countries may not provide the best resources because legislation and relationships

between the foreign communities and their governments are frequently different compared to Canadian examples (Bhattacharyya & Whittaker, 2016).

The second limitation in the design of the study was the form of the material assessed in the review. I chose to include written academic and grey literature but excluded information from websites, videos, and voice recordings. Many websites, video and voice recordings also provide foundational information for creating a PA but due to the time constraints of this thesis and the difficulty determining the validity of the messaging, I chose not to include these types of resources. Further analysis may prove to be beneficial especially when attempting to include a more balanced collection of grey literature to scholarly literature, but this exceeds the scope of my work presented here.

2.2.2 Interview Limitations

One limitation with the interview process was the small number of interviewees, which meant that the full range of perspectives may not have been heard. Overall, the study was performed to gain insight on the resources used and the challenges presented when developing an IPCA in Canada. Clearly this part of the study would have benefited from more participants, however, valuable information was still provided by the interviewees and inductive conclusions could still be made from the collected information.

The second limitation was the difficulty in finding individuals who were involved during the preliminary phases of creating IPCAs. The study was performed during the early stages of the Covid-19 global pandemic. Due to the policies and behavioral mandates set out by the government(s) at the time, many of the organizations and individuals I was trying to contact for potential interviews were unavailable. For those interviewees who did agree to participate, most were not aware of the people, nor the resources used during their earliest phases, and therefore could not comment on many of the questions originally laid out during the interview process. Four of the designed sample questions (2, 3, 8, and 9, see Appendix D), remained unanswered by any respondent and so ended up being not applicable in this study.

CHAPTER THREE: RESULTS

3.1 Results of the Systematic Literature Review

Five specific themes that were commonly discussed in written resources found in the literature review included governance, habitat, culture and spiritual values, sustainable economies, and boundaries. These themes are presented in Table 2.2. Results below include *overviews* of the five independent themes, but what needs to be noted is that these themes are tightly interconnected with one another. Because of this, they can be difficult to unpack individually. Likewise, *examples* of the themes in a PA are showcased because they appeared more frequently in the literature. As well, the write-ups on individual theme *challenges* provides only a small portion of the potential barriers that occurred for these communities when creating or establishing PAs. Note that the information regarding the five themes is not an exhaustive accumulation of all *summaries*, *examples*, or *challenges*, but are intended to highlight what commonly arose for PAs in Canada from the literature review.

3.2 Overview of Themes Associated with IPCAs

The following section provides an overview of common themes of IPCAs found within the literature review. Common themes and considerations found in the literature are presented in each subsection.

3.2.1 Governance

The literature review found 42% of the articles to contain information about governance types and governance models (see list in Appendix C). It is the governance structure which determines how the Indigenous community will create and enforce all decision-making processes. The term governance can refer to the traditions, procedures, and processes by which an organization is controlled (Lemelin & Bennett, 2010). In the context of protected and conserved areas, governance is defined as the procedures by which decisions are created and enforced in relation to the desires of each stakeholder involved (Lück, 2008).

The governance structure ends up being the main decision-making authority for any PA and must be able to provide solutions to the challenges that develop throughout the planning and maintenance of an IPCA. Choosing the governance type within an IPCA can be one of the most important decisions required to move forward with planning. The exact type and which groups of people will be part of the governance team needs to be clearly defined by the Indigenous

community. One of the key concepts about an IPCA is that the Indigenous community is the head governing authority of the PA (Schuster et al., 2018; Nowlan et al., 2019; ICE, 2018). Ultimately it is the responsibility of the community to decide which type of governance will best fit their needs and whom they wish to partner with. Many responsibilities of these individuals include being held accountable, determining objectives, and creating management rules, and so it is therefore of the utmost importance that the individuals who are selected to be part of the governance will be respected and represent the values of the whole community moving forward (Lockwood et al., 2006; Campese et al., 2016).

As ICE (2018) points out, when contacting and collaborating with the stakeholders it is vital to do so in a manner that encompasses the concept of ethical space. Ethical space as understood by members of ICE as “a place for knowledge systems to interact with mutual respect, kindness, generosity and other basic values and principles. All knowledge systems are equal; no single system has more weight or legitimacy than another” (ICE, 2018, pp. 7). This type of ethical space is not easy to achieve but vital in the processes of creating an IPCA because of the complex web of relationships, reconciliation implementation, restitution efforts, and responsibilities of the stakeholders, government(s), and Indigenous Peoples involved (Finegan, 2018; Parks Canada, 2018; National Advisory Panel, 2018; ICE, 2018).

The IUCN has recently developed a spectrum of four governance types (Lockwood et al., 2006) which include (1) government protected areas, (2) co-managed protected areas, (3) privately protected areas, and (4) community protected areas. The IUCN classification of a governance type for a community protected area would fall under the IPCA classification of governance. In the ICE report (2018) they further defined the IUCN governance type of a “community protected area” to fall under four different structures depending on the type of institutions involved in the governance. The four possible examples as described by ICE (2018) include: (1) Sole Indigenous, (2) Crown and Indigenous, (3) Non-Crown and Indigenous, and (4) Hybrid Structure (ICE, 2018) and are discussed below.

Sole Indigenous is defined as a structure of Indigenous Peoples who have full governing authority over the entire IPCA and its processes (ICE, 2018). Crown and Indigenous is defined as a structure which includes Indigenous Peoples of the community who will effectively work together with the federal, provincial, or territorial government(s) when governing the IPCA (ICE,

2018). Non-Crown and Indigenous is defined as a structure which includes Indigenous Peoples of the community working together with a company or NGOs to govern the IPCA (ICE, 2018). Hybrid Structure is defined as a structure that has multiple organizations and governments working alongside with Indigenous Peoples in the community when governing the IPCA (ICE, 2018).

3.2.2 Habitat

In many of the documents that were reviewed, Indigenous Peoples were wanting to protect critical habitat in the area for numerous reasons. The desire to protect and conserve a particular habitat in an IPCA can be closely tied to traditional practices, culture, and beliefs of the Indigenous community. The literature review found 18% of the articles contained information regarding habitat protection (see Appendix C). This section focusses on providing an overview of the habitat information which was considered for other PAs.

IPCAs represent a long-term commitment to conservation (ICE, 2018). Because each community has a unique landscape or seascape within their traditional areas, careful consideration should be given to the topic of habitat protection (Lockwood et al., 2006). This component often weighs the highest when a group is trying to persuade government(s) attempting to achieve overall conservation targets (Cristine et al., 2018).

Indigenous Peoples have long understood the importance of their relationship (Stevenson, 2006) with the lands and waters within their traditional territory because it underpins most of their cultural needs and reinforces their traditional obligations to the ecosystems (Fa et al., 2020; Nakoochee, 2018). PA agreements which are Indigenous led are just as effective, or perhaps even more effective, at managing the PA than traditional western ways of managing the area (Stephenson et al., 2014, Fa et al., 2020; Wells et al., 2020). Some believe this is due to Indigenous Peoples having a multi-generational view when stewarding the lands, compared with many governments which can have priority shifts that might change due to four-year election cycles. When considering what habitat most needs conservation or protection, one must consider the moving parts of the ecosystem within the jurisdictional boundaries of that PA and the long-term direction of the habitat in relation to changes from industry or natural disturbances (Mulrennan et al., 2019; Bhattacharyya & Whittaker, 2016; Ecotrust Canada, 2009). This applies to any aspect of the habitat.

Discussed in the *boundary selection section* (see 3.2.5) theme below, there can be different levels of protection within a PA, and this concept can also apply to habitat selection. Some communities have species at risk in their area, or perhaps a cultural keystone species connected to them, and therefore protecting the habitat for that species becomes crucial to their PA efforts (e.g., Palm et al., 2020; Campbell, 2017). There can also be resource extraction occurring within a habitat that causes impacts to a landscape, species, or waterway for the Peoples, and therefore the impacts to flora and fauna in the area can be affected (e.g., DeRoy et al., 2021; Van Schie & Haider, 2015; Lee & Hanneman 2013; Mulrennan et al., 2012). Habitat considerations is also commonly given to aesthetically pleasing areas, carbon storage locations, or areas which might have research significance (e.g., Lemelin et al., 2016; Reed, 2016; Van Schie & Haider, 2015; Worboys et al., 2015; Fajardo et al., 2021). Habitats that hold culture and or medicinal values are also considered (Nakoochee, 2018; Lockwood et al., 2006; Papadopoulos, 2021; ICE, 2018). Because of all of these links, protecting different types of habitats have the potential to link into other theme areas, such as through economic stability if the community wishes to utilize an economic venture within their future IPCA. The key aspect in habitat protection from the literature is therefore having a community figure out what is the most important aspect of the ecosystem that needs protection. This often more easily guides them to establish what habitats will best encompass their protection efforts and will then lead to the most overall value for the community in the long run.

3.2.3 Cultural and Spiritual Values

The literature review found 14% of the articles to contain information about cultural and spiritual importance in IPCAs (Appendix C). Culture is the heart and soul of an IPCA (ICE, 2018; Tran et al., 2019). An IPCA allows for the preservation of culture and spiritual values to be revitalized², embraced, and practiced for generations to come (Robinson et al., 2012). This is done through song, language, dance, ceremony, and witnessing. There is evidence which illustrates that culture, spiritual values, knowledge, and the practices of Indigenous Peoples are

² Stated because of the lost cultural values due to the residential school systems. Residential schools were first established in the 1880s, and the last one closed in 1996. The government and church intentions for operating these schools was to “remove the Indian from the child”. Children were removed from their family homes and placed in the schools. They were forbidden to use their own Indigenous languages or any expressions of Indigenous cultures (Jackson et al., 2020).

fundamental for the conservation and sustainable management of natural resources in Canada (Nakoochee, 2018; Herrmann et al., 2012). If you “find intact ecological biodiversity, then you should also find a thriving and culturally holistic diversity” which is rich in oral history and tradition (ICE, 2018, pp. 73).

To achieve a shift towards a holistic approach of conservation, it is necessary to move away from the thinking of western conservation methods which tend to view nature, culture, and heritage as separate entities of the environment, towards a more comprehensive interconnected relationship one needs to have with nature (Zurba et al., 2019; Verschuuren, 2021; Fajardo et al., 2021). This holistic approach encompasses the People and better respects their way of life, where protecting nature also means protecting their culture and heritage (Borrini et al., 2004; Zurba et al., 2019). When eventually established, IPCAs by their nature will also contribute to the strengthening of language, knowledge systems, culture, and social institutions which have been systematically weakened by past colonization events (Martínez-Cobo, 1983).

UNDRIP highlights the importance of respecting the inherent rights of Indigenous Peoples which includes their cultures, spiritual traditions, histories, and philosophies. They believe that this type of respect will also contribute to the sustainable and equitable development of the environment. UNDRIP continues to state that maintaining culture is essential for promoting self-determination and reconciliation (United Nations, 2007). Some Indigenous communities may also want to establish an IPCA because they are looking for protection of the ecological and cultural resources which are being threatened by industry exploitation or being impacted by climate change (Bhattacharyya & Whittaker, 2016). Every Indigenous community will have different cultural values they wish to incorporate into their IPCA, but common themes in the literature reviewed include the combination of some of the following sets of values:

- Aesthetic, perceptual, or scenic (Worboys et al., 2015).
- Recreational, health, and therapeutic (Lockwood et al., 2006).
- Artistic, traditional, or contemporary (Ban & Frid, 2017; Tłicho Government, 2013).
- Information, knowledge, or education (De Vries, 2021).
- Historical, and ethnological (Mulrennan et al., 2012).
- Linguistic traditions, oral, and written (McIvor et al., 2008).
- Religious, and spiritual (Tłicho Government, 2013; Weber, 2020).

3.2.4 Sustainable Economies

The literature review found 14% of the articles to contain information regarding sustainable economies (Appendix C). In this section, I focused on providing an overview of the different types of sustainable economies that the literature suggests aligns with Indigenous values. Sustainable economies were broken down into three fundamentally different areas. Literature on economic initiatives that benefited Indigenous communities were seen in the creation of entities such as, A) Indigenous guardian programs, B) tourism products or services, and C) partnering with other industries who are interested in working or developing the protected area.

The concept of sustainable economies is one that tries to create self-reliant revenue opportunities which encourage First Nation members to stay within their own community (Herrmann et al., 2012). These opportunities are also largely seen as needing to be compatible with Indigenous values, and that they are also fundamental to the long-term protection of the unique community's values, traditions, culture, and ecosystems (Wozniczka, 2009). As mentioned in *habitat* (see 3.2.2), key aspects of a habitat directly influence a community's ability to proceed with a sustainable economy, providing this is what the community wishes to do. Below is a brief description of the three types of common economies found in the literature review, each closely linked to an individual group's ability to define and select a key habitat to protect.

Indigenous guardians are a group of individuals who become the eyes and ears to an IPCA. These guardians are employed to monitor the activities occurring within the PA, as well as enforce the protocols and standards set up by the community through a code of ethics. The revenue that can be generated as a result of implementing guardians is vast, and some parks have seen revenues exceeding 11.1 million dollars to go towards environmental, economic, social, and cultural benefit (e.g., Moore, 2020; Wells et al., 2020). Many of these guardians become highly trained to conduct trail building, protect the land, waters, firefighting, oil clean up and even protect the people (Akins & Bissonnette, 2020; Tran et al., 2020; Reed et al., 2020). Pacific Rim National Park Reserve, Thaidene Nëné National Park Reserve and Territorial Park, and the Tla-o-qui-aht Tribal Parks are just a few of the numerous PAs which have created Indigenous guardian programs (Figure 3.2) (*Indigenous Guardians Map*, 2021; Artelle et al., 2019).



Figure 3.2: Locations across Canada of communities with Indigenous guardians as reported by the *Indigenous Guardians Map* (2021).

A code of ethics can be created and implemented by PA managers to mitigate challenges presented from tourism or industry (Holmes et al., 2016; Murray & Burrows, 2017; Murray & King, 2012). Examples of the different approaches to enforce the codes have been showcased in many western conservation efforts. Soft approaches are usually voluntary, proactive, and/or educational, whereas taking a hard approach would be more regulatory such as imposing fines, fees, or limiting access (e.g., De Andrade, 2002; Holmes et al., 2016; Reed et al., 2020; Artelle et al., 2019).

Sustainable tourism, or ecotourism³, refers to the processes that contribute revenue in a sustainable manner that protects the values and culture of the community (Tran et al., 2020; De Andrade, 2002). This form of revenue generation was often discussed in the literature review as a viable option for communities because of the potential demand of the public to visit these places (Lemelin et al., 2016; Corrigan & Hay-Edie, 2013). This is evident because the public views the majority of PAs as being destination paradises as they are abundant in Indigenous cultures and traditions, are pristine, unique, and can often be romanticized in culture (Holmes et al., 2016; Brockington et al., 2008). A study performed by De Andrade (2002), indicated many positive impacts from ecotourism such as increases in environmental conservation, job availability, community awareness, and community pride. Ventures in tourism include

³ Honey (1999) describes ecotourism as the opportunity to travel and participate in a fragile and pristine area in a manner that is low impact, has potential to educate the traveler, provide funds for conservation efforts, fosters respect of cultures, and benefits the community.

communities developing different services, products, or experiences, and then charging service fees to the public for their usage. (e.g., tours of an area, viewing particular endangered species and habitats, educational experiences, and selling permits) (e.g., Murray & King, 2012, Tłı̨cho Government, 2013; De Vries, 2021; Tran et al., 2020; Kitasoo Xai'xais First Nation, 2021; Antomarchi et al., 2021).

Partnering with industries can be another way in which communities sought to increase revenue for their PA. These partnerships varied from re-negotiation of contracts for resource extraction, charging fees based on revenues generated from outside businesses, or developing partnerships with research facilities conducting work within the area (Mulrennan et al., 2019; Reed, 2016). One type of common partnership agreement between industry and Indigenous Peoples being exercised in Canada are Impact Benefit Agreements (IBA) (e.g., Mulrennan et al., 2019; Lemieux et al., 2020; Bullock et al., 2019). These agreements can be used to exert a community's values, control, and to obtain economic benefits from the resource extraction occurring within or near the PA (Mulrennan et al., 2012; Figueiredo & McDonald, 2019). Since 2001, there has been a fourfold increase in the amount of IBAs signed between Indigenous communities and industry (Kielland, 2015). Charging fees based on revenue generation from businesses surrounding or within the PA is also another approach (Murray & King, 2012). Extraction, degradation, or research in areas within the PA could result in compensation through payments for ecosystem services within that area. For example, many of the boreal or tundra regions in Canada are carbon-rich ecosystems (MacKinnon et al., 2020; Palm et al., 2020; Van Schie & Haider, 2015). These types of ecosystems could lead to collaborating with educational institutions or industries looking to perform research or receive tax breaks on these areas. This is especially true as Canada moves forward in a world trying to combat climate change effects and wrestle with new carbon economies.

3.2.5 Boundaries

The review found that 12% of articles contained information regarding boundary selection (Appendix C). For millennia, Indigenous Peoples have been establishing their own PAs without requiring a formal designation from a higher institution. Many of these declarations were done through oral traditions, non-written documentation, and formal applications. However, most of the literature today only looks at modern day declarations of protected and conserved areas, and the types of boundary considerations currently taken when trying to establish an

IPCA. When planning for IPCAs, one should be aware of the cultural values, language, Indigenous protocols, economic opportunities, and ecological values that have been acquired through the ages (Plotkin & David Suzuki Foundation, 2018).

Boundary selection is woven into the community's choices surrounding governance, management, and habitat protection. The reason for this lies in the overlapping jurisdictional boundaries and borders that exist within the land and water that they wish to protect. Much of the literature presented examples of these types of overlaps between national PAs, provincial or territorial PAs, and IPCAs (Stevens et al., 2016; Coristine, et al., 2018; Borrini-Feyerabend 2016; Coast Funds, 2021; Tran et al., 2020). This is because many of the currently designated and legislated PAs do not align with Indigenous values (Tauli-Corpuz et al., 2020). Over time, local communities therefore sought a change within the area to have a PA which recognized and supported their traditional ways of life, usually through a designation of an IPCA. Boundaries of an IPCA could lay within, around, or outside of a currently designated protected or conserved area. There have been some instances where boundaries selected also overlapped government jurisdictions (Lee & Hanneman 2013). Some are based on watersheds, natural formations in the land, or based on the community's current traditional territory boundaries (Tran et al., 2020; Bennett & Lemelin, 2014; Mays, 2021). In the context of traditional territory, some of the examples in the literature illustrated that communities would start by designating a small portion of the landscape or seascape, and then as years went on, the communities would continue to add or join more portions of their traditional land and water to the PA (Murray & Burrows, 2017).

When considering the boundaries of a PA, the uses within those boundaries was also another factor. Many communities developed a land-use plan which can cover in detail many processes and standards which can occur within the boundaries (e.g., Buscher et al., 2021; Tłicho, Government, 2013; Ecotrust Canada, 2009; Murray & King, 2012). These plans tend to articulate the Indigenous laws, protocols, and traditions which are the heart and soul of an IPCA, and this is one aspect which differentiates Indigenous land-use plans from western colonial conservation strategies. Plans can be categorized by specifics such as natural processes, social processes, or visual processes (Turner, 1998), as well as considerations for the degree of usage within the boundaries. More commonly in Indigenous land-use plans, the protected zones will not have the same level of protection or conservation in the entirety of the area (e.g., they include

core zones, buffer zones, or tiered systems). There may be some areas that restrict public access altogether through exclusion zones (e.g., Val, 2008; Tłı̄cho, Government, 2013; Lockwood et al., 2006), areas that designate only limited use such as camping or hiking (e.g., Wheeler, 2019; Tłı̄cho, Government, 2013), or areas where resource extraction can be performed (e.g., Mulrennan et al., 2019; Carroll, 2014; Murray & King, 2012). These are just a few of the options that were considered when land-use planning was performed, and each specific plan varies depending on the zoning and stakeholders, but most importantly the different community vision and values.

3.3 Examples of Themes Associated with IPCAs

Results from the literature review regarding objective three showed that many protected or conserved areas in Canada have Indigenous involvement but few are formally designated as IPCAs by the federal government. The following section provides a brief description of a few of the many areas in Canada which are types of IPCAs or have the potential to be designated as IPCAs. Target examples showcased below are based on the five literature review themes.

3.3.1 Examples of Governance

The literature review highlighted examples of governance types used in Canada to create IPCAs. Sole Indigenous government, Crown government and Indigenous government, non-Crown government and Indigenous government, and Hybrid governance are four structures which have the potential to support Indigenous communities who establish IPCAs.

-Sole Indigenous governance

An example of Sole Indigenous governance would be the structure in the Tłı̄cho, Protected Area (pronounced tlee-chon). This IPCA is located in the Northwest Territories (NT) and it is comprised of two areas of the Tłı̄cho First Nation's lands. This area designation and structure were made possible due to the land claim and self-government agreements between the Tłı̄cho Government, NT Government, and the federal government (Government of Northwest Territorial, 2021). The Tłı̄cho First Nation is responsible for all of the decision-making processes.

-Crown government and Indigenous government

One example of a Crown government and Indigenous government governance structure is with the Edézhzié (pronounced eh-day-shae) IPCA. It is jointly managed through the federal government and Dehcho First Nations. It is designated as a National Wildlife Area and is managed under the legislation of the Wildlife Area Regulations and the Canada Wildlife Act (ECCC, 2019).

Gwaii Haanas (Haida Heritage Site) is another example of co-governance between the Haida Nation, the Department of Fisheries and Ocean as well as Parks Canada. Gwaii Haanas was first designated by the Haida Nation as the Haida Heritage Site in 1985, in later years it was designated as a National Park Reserve and then a National Marine Conservation Area Reserve. The governance authority from the Gwaii Haanas Agreement was made between Parks Canada and the Haida Nation (Wulder et al., 2018).

Pimachiowin Aki (pronounced Pim-MATCH-cho-win Ahh-KEY) is a mixed Indigenous Heritage UNESCO site which has a governing structure of two provincial governments along with five Indigenous Ojibwe communities working together as a corporation to govern the area (Moola & Roth, 2019; Wells et al., 2020). The First Nations in the area started the designation process in 2002 when they signed the Protected Areas and First Nation Stewardship Accord and by the year 2018 it finally became designated as a UNESCO site (Moola & Roth, 2019; Lemelin & Bennett, 2010).

-Non-Crown government and Indigenous government

The results of the literature review did not succeed in presenting information on IPCAs with a non-Crown government and Indigenous government type of governance structure. Typically, this governance would be presented on lands which were privately owned (ICE, 2018). Some non-governmental organizations such as the David Suzuki Foundation, the Indigenous Peoples' and Community Conservation Areas (ICCA) Consortium, Canadian Council on Ecological Areas, and the Nature Conservancy of Canada have collaborated with Indigenous communities while they are planning and establishing PAs (e.g., Tla-o-qui-aht Tribal Parks, Dasiqox Tribal Park (Nexwagwežan), and Qat'muk Central Purcell Mountain Range IPCA). However, it remains unclear if these organizations are directly contributing to the decision-making processes of the governance structure with these types of IPCAs developments.

-Hybrid governance

The collaboration between many of First Nations communities, the federal and BC government, three NGOs and seven industry stakeholders (Tran et al., 2020) for the Great Bear Rainforest (GBR) agreements could be considered an example of hybrid governance (ICE, 2018). The GBR is home to over 20 First Nations communities and represents a quarter of the remaining temperate rainforest in the world spanning over 6.4 million hectares on the coast of BC (ICE, 2018). In the 1990s, areas of cultural and ecological importance were threatened by logging practices which led to over two decades of negotiations for the GBR agreements. Conflicts with land usage resulted in many of the First Nations communities collaborating together to ensure their ideas surrounding ecological and sustainable resource management were included in future land-use planning in the area. With help from the David Suzuki Foundation, the First Nations in the area created the Coastal First Nations GBR Initiative and the Nanwakolas Council both which had a fundamental role in negotiations and capacity building within the communities (Low & Shaw, 2011). Government-to-government negotiations surrounding land-use processes occurred between 2001 and 2006 between the Coastal first nations, the Nanwakolas Council, the government(s), forestry industry and NGOs which led to the creation of the GBR agreements. The agreements included the creation of Conservancies through BC's Park Act, The GBR Act, and GBR Order (Tran et al., 2020). These agreements led to a fundamental shift in the roles that Indigenous Peoples in British Columbia have with the mode of governance and decision-making processes when involved with government, industry, and NGOs (Tran et al., 2020, Low & Shaw, 2011).

3.3.2 Examples of Habitat

Below are a few examples of different types of habitat protection which Indigenous Nations included in the establishment of their protected or conserved areas. Examples from the Broadback River Conservation Area, Pimachiowin Aki Indigenous Heritage UNESCO site, and Edézhzhíe IPCA are presented below.

Broadback River Conservation Area is located in Quebec and encompasses Eeyou Istchee, the homeland of the Cree. In 2020, a portion of the 400,000 square kilometres of the Eeyou Istchee became protected as a result of efforts put forth from the Cree Nation government and nine other Cree communities (Mulrennan et al., 2019; Bussièrès, 2005). After several years

of negotiations between numerous communities in the area, they decided to combine all the PA proposals into one and called it the Broadback River Conservation Area (Eeyou Conservation, 2021). The Cree Nations wanted protection for their lands and water against logging and hydro-power development. Their habitat is one of the last remaining old-growth forests in northern Quebec and is vital habitat for the woodland caribou (ICE, 2018). There was also significant concern for the impacts the hydro-power development would have had on their cultural values such as a trading post, painted rocks, and locations with trap lines that provided food and economic stability for the region.

Pimachiowin Aki is a mixed Indigenous Heritage UNESCO site established in 2018 (Moola & Roth, 2019). Located on the border of Manitoba and Ontario, it is the largest protected area of the North American boreal shield, covering 29,040 square kilometres (Wells et al., 2020; Pimachiowin Aki, 2021). The habitat protected in this PA contains an extraordinary range of ecosystems their services and fully supports wildfire, nutrient flow, species movements, and predator-prey relationships. The area provides habitat for many boreal species such as the woodland caribou, moose, wolf, wolverine, lynx, snowshoe hare, lake sturgeon, leopard frog, loon, and Canada warbler. Traditional use by Anishinaabeg Peoples is allowed and is deemed sustainable due to the high number of individual animals and varied diversity of animal species in this area (Parks Canada, 2021a, Lemelin, & Bennett, 2010).

Edézhzié was formally designated an IPCA in Canada in 2019. Located in the NT, this PA covers approximately 14,218 square kilometres. This area has Indigenous-led governance and is co-managed between the Dehcho First Nations and the NT Government (Zurba et al., 2019). The habitat protection sought in the PA considered the values of the species which were vulnerable, threatened, or endangered. They identified ten species at risk including the woodland caribou and wood bison as being essential to their core area. One-third of this habitat is wetlands which is vital for numerous waterfowl nesting and migratory areas. Aesthetically pleasing areas were also considered in relation to the Horn Plateau, a 600-metre escarpment which rises above the Mackenzie Valley (ECCC, 2019). There were also numerous areas with habitat loss and fragmentation from resource extraction that were highlighted to be restored.

3.3.3 Examples of Cultural and Spiritual Values

Below are a few of the many possible examples of techniques Indigenous communities are choosing as a way of protecting their cultural and spiritual values within a protected or conserved area. Results from the literature review found cultural and spiritual values present in the following types of IPCAs: Tłı̨chǫ Protected Area, Dasiqox Tribal Park, and the Qat'muk Central Purcell Mountain Range IPCA.

The Tłı̨chǫ Protected Area (pronounced tlee-chon) was the result of the land claims and self-government agreement signed between the Tłı̨chǫ government, the federal government, the NT government, and the Tłı̨chǫ First Nations. This resulted in the Tłı̨chǫ First Nations gaining rights to owning and governing their traditional lands in 2005 (Government of Northwest Territorial, 2021). Since the agreement was signed the Tłı̨chǫ government created and implemented a land-use plan which came into effect in 2013. The land-use plan protects cultural and heritage values of the Tłı̨chǫ Peoples through five different zones of protection covering over 39,000 square kilometres (e.g., Wehexlaxodiale, Nawoo Ké Dét'ahot'ı̨, Gowhadō Yek'e t'ı̨ k'e, Asii Haxowii Gha Enehatō, and Dèk'èasiiaedaà wehoodia). Within the Tłı̨chǫ Government was the establishment the Department of Culture and Lands Protection. This department's sole responsibility is for managing the land, cultural aspects of the land, and their resources. The Department of Culture and Lands Protection works closely with environmental agencies, government agencies, resource development companies and the Tłı̨chǫ Assembly to help serve and protect the traditional territory. They are protecting spiritual gathering places, special sites, caribou trails, gravesites, cabins, gathering sites, trails, and sustenance areas (Tłı̨chǫ Government, 2013).

Dasiqox (pronounced ta-see-ko) Tribal Park (Nexwagweʔan) was established by the Tsilhqot'in communities in 2014 and covers approximately 3,000 square kilometres of land in central BC (Plotkin & David Suzuki Foundation, 2018). The Tribal Park used three themes to organize their PA: ecosystems, culture, and sustainable livelihoods. The community has asserted their rights and responsibilities as caretakers of the land and are working towards cultural revitalization. This includes responsible hunting, fishing, gathering, and restoring practices of traditional healing, as well as creating a culture of learning and teaching from each other (Dasiqox Nexwagweʔan, 2018; Wheeler, 2019).

The Qat'muk Central Purcell Mountain Range IPCA is on the traditional territory of the Ktunaxa Nation. Announced in 2020, the area has yet to be designated by the federal government but covers over 700 square kilometres. The Qat'muk area is where the Grizzly Bear Spirit was born, will go to heal, and will return to as the way to access the spirit world. The Grizzly Bear Spirit is a source of guidance, strength, protection, and spirituality for the Ktunaxa First Nations. The Nation fought for over 30 years to protect their lands and the spiritual significance of the area (e.g., Candler, 2021; Supreme Court of Canada, 2021; Zimmerman, 2021; Weber, 2020; ECCC, 2020a).

3.3.4 Examples of Sustainable Economies

Below are just a few of many examples of types of sustainable economies which were developed by Indigenous communities. Tla-o-qui-aht Tribal Parks, Dasiqox Tribal Park, and Torngat Mountains National Park (Tongait Kakkasuangita Silakkijapvinga) are a few types of PAs found in Canada and are presented below.

The Tla-o-qui-aht Tribal Parks (TTP) (pronounced klaw-oh-kwee-awt) are four Tribal Parks⁴ adjacent to one another on Vancouver Island near Tofino and attracts millions of tourists to the area every year. The TTP originally declared in 1984 and the first IPCA in Canada which now spans over 2,100 square kilometres. As a way to promote a sustainable economy and provide funding for the development of their Indigenous guardians, the TTP implemented an ecosystem service fee (ESF) (Murray & King, 2012). The ESF was originally targeted towards boat outfitters who were bringing tourists to Wah'nah'juss Hilth'hoo'iss Tribal Park. Fees were collected by the outfitters and then remitted to the First Nation. Funds collected would be re-invested into the area as a way to maintain trails, have guardianship, and establish control in the TTP. In later years the ESF was shifted into the TTP Allies Program, and the First Nations took the concept of the ESF to a broader scale at the Tofino Tourism Summit in 2018. The First Nations asked businesses of Tofino to become allies and contribute to their ESFs (Nature United, 2021). Becoming an ally is completely voluntary and businesses who support the TTP can remit 1% of their revenues to the First Nations. Currently there are 56 allies in the program who

⁴ Of the four Tribal Parks there are the Wah'nah'juss Hilth'hoo'iss (Meares Island) Tribal Park (first of the four to be established in 1984), the Ha'uukmin (second of the four to be establish in 2008), lastly, the Tranquil and the Esowista Tribal Park. Together these four parks are collectively known as the Tla-o-qui-aht Tribal Parks (ICE, 2018).

contributed over \$105,000 (Tla-o-qui-aht Tribal Parks, 2021; Nature United, 2021). These funds collected were intended to contribute towards the guardian program, community service, education and training, justice, community capital projects, regional capital projects, and contingency plans (Tla-o-qui-aht Tribal Parks, 2020).

Dasiqox Tribal Park (Nexwagwezʔan) was established by the Tsilhqotʼin communities in 2014 and covers approximately 3,000 square kilometres of land in central BC (Plotkin & David Suzuki Foundation, 2018). The Tribal Park was initially declared to prevent hydro-electric development, mining, and logging practices on their traditional territory (ICE, 2018). A few years after the declaration, the community wanted to have paid employment positions for members of the community. They are hoping to establish a business venture of tree-planting and native plant species grown for restoration projects in the area. They are also establishing an Indigenous guardian team to build trails, conduct guided tours, and make other ecotourism ventures as a way to maintain and support the community (Dasiqox Nexwagwezʔan, 2018). A feasibility project by De Vries (2021), examined the potential for landscape management and restoration practices to generate funds, ecotourism, and support traditional culture within the park. The project introduced the idea of having a greenhouse and seed house which uses commercial or local wild seed to grow the species which could fully restore forestry cut blocks. Revenue could also be generated from the sale of plants to other companies doing restoration work within similar ecosystems. The idea of ecotourism was also promoted through the opportunity for visitors to be educated on the plants, trees, restoration efforts, and cultural values within the park. This concept is an example where an Indigenous group might move away from partnering with an extractive industry to a sustainable industry to better defend their land.

Torngat Mountains National Park (Tongait Kakkasuangita Silakkijapvinga) was designated in 2007 when the Nunavik Inuit signed the Nunavik Inuit Land Claims Agreement. Protecting over 9,700 square kilometres of land and water in northern Labrador. The area is co-managed by the Inuit in Labrador and Nunavik (Québec), (Herrmann et al., 2012) and utilized the concept of tourism within the area to generate revenue. One of the first Inuit tourism associations in Canada was created through the Nunavik Tourism Association (Lemelin et al., 2016). They provide tourism experiences through annual musk ox hunt, hiking, carving, mountain climbing, and whitewater rafting. The Park established a base camp and an arts and

craft store at the nearest town which provides employment opportunities and economic revenue for the Inuit. They also utilized a watchman program and have employed watchmen who oversee numerous aspects of the park (Nowlan et al., 2019). These tourism opportunities are also available to the local Inuit as a way to enrich a better understanding of the values in the park and for a chance to reconnect with the land.

3.3.5 Examples of Boundaries

Below are just a few of many examples of types of boundary selection approaches taken when Indigenous communities and government(s) were considering the size of the protected or conserved area. Thaidene Nënë National Park Reserve and Territorial Protected Area, K'ih tsaa?dze Tribal Park, and Haida Gwaii Protected Areas are types of IPCAs found in Canada and are presented below.

Thaidene Nënë (pronounced thy-Den-ay nen-ay) National Park Reserve and Territorial Protected Area in the NT was federally designated in 2019. It is important to remember that the entirety of Thaidene Nënë is designated by Łutsël K'é Dene First Nation as an Indigenous Protected Area (Holmes et al., 2016). Within this IPCA are many other designations and at times these designations tend to tower over the declaration of the IPCA. The NT government has designated 9,105 square kilometres of the area as a Territorial Protected Area (an example of an IPCA) under the territorial Protected Areas Act. Parks Canada has designated 14,070 square kilometres of the area as a National Park Reserve under the Canada National Parks Act. Also in the works with the NT government is the potential designation of the 3,120 square kilometres as a Wildlife Conservation Area under the Wildlife Act. All three of these areas are in partnership with Indigenous governments and organizations (Parks Canada, 2021b; Northwest Territories Government, n.d.). The collaboration amongst these partners allows for many unique aspects of this IPCA within the National Park Reserve such as the allowance of activities not typical for National Parks (e.g., hunting, berry picking, gathering of other non-timber forest products, cutting of firewood, artisanal uses of biotic and abiotic resources, and use of firearms) (Wheeler, 2019; Northwest Territories Government, n.d.).

K'ih tsaa?dze Tribal Park (pronounced ki-tsaw-tsay) is located at the northern border of BC and Alberta (AB) at the heart of one of the largest natural gas discoveries (the Montney shale formation), which has reserves of 449 trillion cubic feet of natural gas and one billion barrels of

oil (Lee & Hanneman, 2013). Established in 2011, there is approximately 960 square kilometres of land declared as a Tribal Park by the Doig River First Nation. The declaration for a park was done to protect the area from impacts of oil and gas development as well as forestry activities (Lee & Hanneman 2013; Gardner, 2018). The area is of high spiritual importance to the Indigenous community, and they defined the spatial region of the Tribal Park according to their protocols and traditions. The Park is located in the Treaty 8 Nation with traditional territory extending from their reserve land in BC across the border into northwestern AB. The AB portion is managed as public crown land, but the community is seeking to designate that side as a Wildlife Provincial Park. On the BC portion of the park the Indigenous community performed ecosystem-based management planning to find valued flora and fauna, including medicinal plants and old-growth forest species. Doig River First Nation is looking to develop a co-governance model with both the provinces (Plotkin & David Suzuki Foundation, 2018; Moola & Roth, 2019) and they are open to other designations as well, so long as any land-use plan is compatible with their traditions and protocols.

Haida Gwaii Protected Areas are a group of islands off the west coast of BC. To prevent logging activities on the islands the Haida First Nation were looking to protect their lands and waters. For nearly forty years the community fought to regain governance over their traditional territory (Mays, 2021). Finally in 1993, the Gwaii Haanas Agreement was signed between the federal government and the Council of the Haida Nation (CHN). The Haida Heritage Site spans over 3300 square kilometres of terrestrial area and 1600 square kilometres of marine foreshore (Plotkin & David Suzuki Foundation, 2018). The BC government and the CHN agreed upon the term “protected area” to describe 18 different areas within the Haida Heritage Site. These 18 sites are divided into two parks, five ecological reserves, and eleven conservancies (ICE, 2018). These 18 PAs are collaboratively managed according to the Haida Stewardship Law and the provincial Haida Gwaii Reconciliation Act. Many agreements have been signed over the years including the Gwaii Haanas Marine Agreement in 2010, which led to the implementation of a Marine Protected Area (MPA). However, lack of recognition of the boundaries and discrepancy with stakeholders and government has challenged the community’s traditional sustenance supply. The Department of Fisheries and Oceans are allowing industry fishers to hunt sablefish within the boundaries of the MPA and allowing commercial ships to come into the area which is disrupting salmon and whales (Lemieux et al., 2019). Despite these agreements, no effort has

been taken by the government to divert these ships and fishers outside of the MPA boundaries (Mays, 2021).

3.4 Challenges facing IPCA design and designation

The following section provides descriptions of common challenges facing IPCA creation within the literature review with the five common themes of IPCAs. Common types and considerations found in the literature are presented in each subsection, but note, these are not all the challenges which have or might arise for practitioners involved IPCAs.

3.4.1 Challenges with Governance

There are numerous challenges surrounding the topic of governance throughout the literature and this section describes a few issues present for communities wishing to create an IPCA. Topics about financial issues, Two-Eye Seeing⁵ approaches, stakeholder collaboration, identity, and access to information were the most common themes presented in the literature.

Some communities are not equipped with the required capacity to undertake planning of an IPCA with other agencies around governance, especially when trying to include the entire community's involvement, establish background land-use research, specialized data collection, mapping, and monitoring (e.g., Papadopoulos, 2021; Bhattacharyya & Whittaker, 2016; Herrmann et al., 2012; Lemieux et al., 2018; ICE, 2018). Funding for development, evaluation, and revenue generation is often required, as well as the need for reliable commitments from governments (Nowlan, et al., 2019; Nakoochee, 2018; Robinson, 2020; Wheeler, 2019). These all need to be in place early within the discussions on governance to ensure the success of the IPCA. One of the interviewed participants had the following to say:

“There is always a need in Indigenous communities... [they] are usually under-resourced, not just in capacity building but capacity in terms of infrastructure, administration, and access to other education resources... They don't give assistance in how to do it, but in terms of governance models, the examples from Australia and New Zealand are really helpful.”

⁵ Two-Eye Seeing is defined as “is the gift of multiple perspective treasured by many aboriginal peoples and explains that it refers to learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing, and from the other eye with the strengths of Western knowledges and ways of knowing, and to using both these eyes together, for the benefit of all” (Bartlett et al., 2012, p. 335).

The Two-Eye Seeing approach is a challenge for the communities when trying to bring together their Indigenous knowledges to be aligned with western scientific knowledge. There will commonly be differences about governance styles, management practices, bio-cultural conservation methods, natural resource usage, and creating adaptation plans for climate change scenarios (Stevenson, 2006; Herrmann et al., 2012; Figueiredo & McDonald, 2019). Scientists, stakeholders, and community members must remember to respect each other's knowledge but also to trust each other (e.g., M'sit No'kmaq et al., 2021; Borrows, 2016; ICE, 2018; Lemieux et al., 2018; Whyte, 2018).

Some participants who were interviewed discussed the topic of cooperation from institutions involved in the governance structure as vital for the success of any IPCA.

One participant was quoted saying,

“Shared interest, to me that is critical to any collaboration...and good leadership in all areas and willingness to work together...it's about hearing, listening, and understanding each other, so that collectively we are moving towards something that we are all generally comfortable with...it is a huge part of it.”

Another participant also mentioned, *“What made this successful was the collaboration and partnerships between Indigenous communities and surrounding industries that overlap within the area was the key part of the success behind the initiative.”*

Most literature stated that collaboration with all the stakeholders regarding the processes and policies on natural resource management could raise issues and delay negotiations (Schuster et al., 2018). Understanding and establishing interim protections from natural resource exploitation (Bhattacharyya & Whittaker, 2016; Gardner, 2018; Figueiredo & McDonald, 2019) during negotiations of governance structures can be vital during the early planning stages because most negotiations for a PA are lengthy and resources can be completely extracted or destroyed during these timeframes (Goetze, 2005).

Collaboration is key when building relationships and when trying to obtain tenures from industry. Collaborating and effective negotiations with the stakeholders is what tends to be the most time-consuming aspect of creating a PA. This finding also correlated with some of the participants who discussed that:

“An IPCA won’t work if a Nation works in isolation. IPCAs will only work if there are partners involved, who support listen and respect the vision that is put forward by the Nation.”

And also,

“Collaboration was critical to this” ... “having people with shared interest and shared desires to achieve the kind of outcomes that we were looking to do. This [protected area] was a very collaborative effort between industries, governments, other partners, stakeholders, and Indigenous communities.”

“Creating a conservation area takes time, from idea to concept. There are required steps that need to occur...in general it is a time-consuming process that does require input and collaboration, externally and internally for government to do.”

Access and dissemination of information surrounding Indigenous environmental protection was another challenge commonly found amongst practitioners establishing governance models. Lack of accessibility to information, especially regarding Aboriginal rights, Aboriginal law, national law, international law, land claim agreements, and how to enforce their rights and power within traditional territory were common themes (Herrmann et al., 2012). In a research study by Bhattacharyya & Whittaker in 2016, they found Indigenous communities were searching for tools or guidelines on the following issues: decision making processes surrounding interim protection, leverage points, models of Indigenous knowledge programs, environmental monitoring, policy guidelines, protocol agreement templates, methods for documenting laws for the management and governance teams, programs for funding, and carbon sequestration assessment tools. They also expressed the need to have access to a contact list of the current protected and conserved efforts by Indigenous communities in Canada. These types of tools and guidelines are essential for supporting and creating good governance for an IPCA.

3.4.2 Challenges with Habitat

There were common challenges found during the review of the literature materials which may occur while determining the types of habitats which need to be protected or conserved. Issues with resource extraction, tradeoffs, and outside research actions were commonly discussed in the literature and are presented below.

Considerable examples from the literature found that most PAs were established due to external threats surrounding resource extraction (e.g., Plotkin & David Suzuki Foundation, 2018; Candler, 2021; Lee & Hanneman 2013; Gardner, 2018; Mays, 2021; Wheeler, 2019). Challenges commonly arise with industries such as forestry, mining, fisheries, or oil extraction, which at times can become severe enough to cause individuals or communities to leave the area due to the industry (Herrmann et al., 2016; Corrigan & Hay-Edie, 2013).

Resource development and extraction tend to result in a need for a cessation of activity and interim protection while communities are pulling together research or background information on the areas of habitat they want to include in their PA (Bhattacharyya, & Whittaker, 2016). Negotiating a cessation of activity within a given habitat or an interim protection can be a lengthy process between the Indigenous community, industry, and government (Gardner, 2018; Northwest Territories Government, n.d.). One participant in the interview process reflected on the earliest success they had with a PA they helped establish:

“In order to create a conservation area there is a need to clear those [industry] leases off the land base, it is a type of requisite to create a conservation area...they [industries] voluntarily relinquished those leases to support the initiative [of the PA].”

The term *tradeoff* refers to decisions or compromises one group must make between two habitat choices. Considering tradeoffs when working towards a PA was also commonly presented as a challenge in the literature when working with other government(s) or organizations. Tradeoffs such as making a choice between protecting the habitat between a connecting and existing PA, versus protecting important, but more isolated areas in a region can occur (Wheeler, 2019; Robinson et al., 2012). Alternatively, considering a tradeoff of the critical needs for a habitat occurring today, versus habitat needs in the future, based on climate change scenarios or changing resource extraction needs (Wulder et al., 2018; Tyson & Heinemeyer, 2020). Fires, floods, droughts, insect infestations, erosion, greenhouse gases release, hurricanes and other natural disasters might all become more prominent in a given area and ultimately have grave implications in the future if not addressed in the present. Analysis of the tradeoffs often leads to some communities questioning their core values or feeling fatigued and overwhelmed during habitat planning and negotiations (Stevenson, 2006; Ecotrust Canada, 2009).

Challenges arose when needing to provide background research on ecosystems within the traditional territory (Candler, 2021; Timko & Satterfield, 2008). Inclusion of outside organizations coming into a community to assist with, for example, Geographic Information System (GIS) mapping of an area that includes species at risk, culturally sensitive locations, or ecozones can present challenges. There should be a clear understanding of the research protocols and complement Indigenous knowledges to make certain that the written and oral traditions are in no way undermined (Fajardo et al., 2021). Developing trust early for the multiple uses of the research collected, and consistency surrounding how managing the collected information are also considerations brought forth in the literature (e.g., Papadopoulos, 2021; Wheeler, 2019; Bhattacharyya & Whittaker, 2016; Whyte, 2018). Limited capacity and limited funding within communities was also listed as a challenge that could cause delays in habitat selection (Brunet et al., 2020; Stevenson, 2006; Papadopoulos, 2021).

3.4.3 Challenges with Cultural and Spiritual Values

There were common challenges found during the review which may occur when determining the types of cultural and spiritual values to include in an IPCA project. Challenges tend to arise during community engagement processes due to lost knowledge, contrasting viewpoints, intergenerational trauma, and eroded identities (Bhattacharyya & Whittaker, 2016). Some articles pointed out the possibility that these challenges may continue to resurface throughout the creation, development, establishment, or lifespan of an IPCA.

During the engagement processes, it is vital to make certain the community feels heard and is informed of the processes occurring within their community. Engaging the youth and allowing for the Elders to teach the youth as a way to understand the oral traditions, histories and wisdoms is critical to the development of any IPCA (Nakoochee, 2018; ICE, 2018; Bhattacharyya & Whittaker, 2016). Some of the younger generations have lost the knowledge of the land, and this ultimately makes it difficult for revitalization and preservation of their culture (Bhattacharyya & Whittaker, 2016).

There can be trauma cycles and setbacks from discussing certain aspects of lost culture and spirituality values (Nakoochee, 2018). Workshop fatigue, feeling overwhelmed or burnout may occur as a result from engaging sessions (Ecotrust Canada, 2009). Poverty, health, and infrastructure problems can also become a challenge. Many First Nations have been placed on

reserves and live in circumstances that prevent them from expressing, knowing, or dreaming about the possibilities that can evolve from forming an IPCA.

Self-identity, place, and cultural identity of the Indigenous Peoples has been eroded for over four centuries and this can present significant challenges for the governance and management teams. Indigenous knowledges and culture preservation within the community can at times be a process of cultural revitalization and redefining responsibilities that Indigenous Peoples have with each other and their traditional territory (Herrmann et al., 2012). Alongside this revitalization, day-to-day issues of poverty, or communities in crisis can still be occurring (ICE, 2018).

3.4.4 Challenges with Sustainable Economies

There were common challenges found during the literature review which may occur while establishing or pursuing sustainable economies as a source of revenue for a given IPCA. However money ends up generated in a PA, it appears that when the concept of money is involved many complications can occur, especially with individual worldviews. On one hand, one must remember that funding is necessary within these IPCAs because without a source of self-reliant revenue the region cannot be effectively protected, but on the other hand monetizing nature often goes against many cultural values in many communities (Stevenson, 2006).

A lack of clarity over the boundaries in an IPCA can have implications for communities wishing to generate forms of revenue from within their IPCA. Consequences with respect and protocol carried out by the Indigenous guardians, stakeholder responsibility, industry, fluctuations with species, and governments upholding their commitments can arise. Guardians may end up protecting and monitoring in the “wrong” area or protecting the “wrong” thing (Tran et al., 2020). Stakeholder negotiations over borders and jurisdictions can occur, but in the end, who receives the revenue generated not only within the community but also with others with overlapping jurisdictions produce problems. Unknown borders or jurisdictional rights do not consider the movement of species and the flow of waters that move in and out of the IPCA (Whyte, 2018; Keyser, 2018). Governments may not enforce their agreements because of a lack of clarity on exact boundaries or border locations (Artelle et al., 2019; Mays, 2021; Macura et al., 2015). Because so many of these PAs are part of over-lapping boundaries, different industrial

jurisdictions, and associated regulations, much of the potential for sustainable economic development can be lost in the confusion.

The lack of respect for the culture and rights of a community have left many disappointed with the agreements made between industry and government (Borrows, 2016; Stevens, 2014; Harland, 2018; Mays, 2021). One common challenge presented with Impact Benefit Agreements (IBA) is their need for consensus and collaboration between the partners (Bullock et al., 2019; Figueiredo & McDonald, 2019). There is a confidentiality clause within most IBAs which prevents transparency of the information collected, and this does not allow for advice or counsel from outside parties which often prevents understanding of the full potential or effectiveness of the IBA (Kielland, 2015). Some believe this clause diminishes negotiating power and prevents Indigenous communities from learning about past experiences of others, or industry knowledge from other jurisdictions (Figueiredo & McDonald, 2019).

In many of the articles reviewed there were implications of tourism or ecotourism development within a PA. Tourism is a consumer industry. Some believe that the costs outweigh the benefits because tourism can lead to environmental pollution and degradation (Brockington et al., 2008). Also, because of the lack of understanding or education surrounding the culture of Indigenous Peoples, a surplus of visitors to an area can often cause implications for the community managers trying to estimate the consequences of these social interactions (e.g., increased crime, degradation to habitat, inappropriate behavior, too many tourists, harassment or feeding of wildlife, degradation of sites, loss of community privacy) (Tran et al., 2020; Brockington et al., 2008; De Andrade 2002). Aside from the influx of humans into the area, some tourism ventures and educational experiences rely on non-human species (e.g., whales or bear viewing). Fluctuation and movement of these species in and out of the IPCA can cause revenue variability and leave certain ventures impractical during certain seasons (Whitford & Ruhanen, 2016) and in some cases, even over years at a time, may get better or worse depending on the unknowns of climate change and natural disturbances. Planning for these varied fluctuations in nature can often be exceedingly difficult for the tourism industry (Whyte, 2018; Bone, 2018).

The literature presented issues such as limitations and a lack of awareness around the demands and competitiveness of services, products, and experiences that were developed

through business ventures in Indigenous communities. Capacity for marketing products or services as well as the overall will to undertake business ventures, limited understanding of the benefits and costs relating to development and sales (e.g., charging too little for a venture) were also commonly experienced in some communities (Lemelin & Bennett, 2010; McIvor et al., 2008). There can also be politics occurring among community members, or other nearby Nations involved in a PA, especially regarding how much of the culture is shared and with whom. Capacity issues are also common, due to the lack of trained staff to deliver products, services, or experiences (Lemelin & Bennett, 2010; Reed et al., 2020; Papadopoulos, 2021).

3.4.5 Challenges with Boundaries

There were common challenges found during the literature review which may occur while determining the boundaries to select for an IPCA. Most noted were funding, capacity, contradictions in land-use plans, trust, and collaboration between the partners of the IPCA.

As discussed in the *habitat* and *sustainable economies* sections, many of the challenges are the same when trying to establish what boundaries to declare for the IPCA. Funding and capacity being the most prevalent issue, especially for research to perform Geographic Information System (GIS) mapping and having access to the spatial data, and decision-making tools used by governments and industry necessary for the task of boundary selection (Wulder et al., 2018; Corrigan & Hay-Edie, 2013; Franco & Tracey, 2019). Funding for monitoring the boundaries and enforcing the protocols declared for each area also presented large challenges for some communities (Gardner, 2018; Ecotrust Canada, 2009).

At times “land-use plans” contradict current management strategies laid out by other governments and organizations. These contradictions are necessary to analyze and consider when assessing what boundaries to establish on the land and water. Some governments or industries can be firm in the legal commitments to enforce Indigenous jurisdictions as fixed and inflexible (e.g., reserves or treaty boundaries) however, one must consider any seasonal subsistence which moves through those jurisdictions and the implications that these variations may have on a community (Whyte, 2018). In some cases, negotiations surrounding a land-use plan can cause time-consuming disputes that delay protection and discredit the values of the community (e.g., Stevenson, 2006; Mulrennan et al., 2019; Goetze, 2005). These two factors can therefore result

in further rapid resource exploitation and damage the efforts of reconciliation and restitution that the PA was trying to achieve.

Trust and collaboration were another challenge common in the literature (e.g., Zurba et al., 2019; ICE, 2018; Whyte, 2018; Borrows, 2016). Building and maintaining trust with the governments, organizations, stakeholders, and research teams involved in the planning process is at times difficult due to the many different agendas (e.g., Troniak, 2011; Borrows, 2016; Wozniczka, 2009; Fajardo et al., 2021). The delay and lack of clarity with the relationships between these individuals and associates can be frustrating and further delay reconciliation efforts (Gardner, 2018; Troniak, 2011). Some of the areas that are to be included with the boundaries, may have previously experienced intense resource extraction, and therefore require reclamation or restoration measures. Collaboration and consensus over these areas is vital to furthering an IPCA, but at times industry or governments are not prepared to take responsibility for healing of the land and water that is needed, and that occurred during their watch (ICE, 2018).

CHAPTER FOUR: DISCUSSION

4.1 Introduction

The literature review assembled the most relevant sources of information about IPCAs in Canada, and then they were analyzed for content. The resulting 148 pieces of supportive documents portrayed five themes which nearly always appear in literature about IPCAs in Canada. The structured literature review broke down into five natural themes: governance, habitat, culture and spiritual values, sustainable economies, and boundaries.

IPCAs can offer a potential means by which Indigenous communities can promote their culture and utilize an opportunity for relationship building between industries, governments, and the public through establishment of an IPCA (Wells et al., 2020). Throughout the analysis, I have learned that there is no “one size fits all” approach to constructing an IPCA (ICE, 2018), because every culture, landscape, or seascape of Canadian Indigenous Peoples is so profoundly unique. It is almost overwhelming for one to create a framework or give recommendations of best practices for IPCAs because of the numerous considerations of their culture and ecosystems. I also would caution against any attempt to drape a western conservation framework overtop of any IPCA model. However, even though there is not a one prescribed framework for IPCAs, there were still common themes involved in every PA that could be a key concept of an IPCA.

4.2 Unpacking the Five Key Themes

Governance structure selection can be one of most important and most complex aspects for a community to discuss and work on. Possible structures for IPCA governance are described by ICE and are recognized by the IUCN. The four possible structures for governance are more complex than what meets the eye, this is a result of the overlapping and interconnected relationships that can occur over funding, land tenures, management, and rights to resources (Macura et al., 2015).

A majority of the IPCAs have a Crown government and Indigenous governance structure. These types of structures have shown that a lengthy collaboration usually occurs between the parties involved. Sometimes these lengthy collaborations are necessary to repair and or build a good relationship but also at times might not be necessary because they cause further delays in protection, and a loss of values for the community and stakeholders involved. When these scenarios present themselves, the choice of governance type a community moves ahead with,

will set up many of the further implications that they will need to deal with from the choice they make.

Approximately half of the literature discussing governance illustrates the importance placed on this aspect, one that each community should take their time deciding. All other decisions on how to create a PA flow from this general theme. It usually sets up as a continuum from whether a community will be fully in control, but it will take them a long time to create a PA, to accepting a lot of assistance by multiple partners, but sacrificing some of the overall direction and control, to make an IPCA faster.

One of the three core components to an IPCA is having a long-term commitment to conservation of the ecosystems. Presented often in the literature were concerns over habitat destruction, degradation, and fragmentation due to resource extractions and climate change implications. Indigenous communities have an interconnected relationship with the land and water, and all that it encompasses. The desire to protect certain aspects of an ecosystem is tied into the fact that the ecosystems are at the core of Indigenous knowledge, language, wisdom, and cultural diversity (Fajardo et al., 2021). Often when industry or government are involved, they are seeking to extract high amounts of resources or alter the ecosystem for the benefit of increased revenue. At times this can result in areas of high value resources to be at the forefront of negotiations and considerations when creating an IPCA. The literature suggests that the worldviews in Indigenous cultures are to only take from the land what is necessary, and this type of perspective conflicts with western culture economics. This often results in lengthy negotiations with outside stakeholders such as industry and government over habitat use because the parties involved are not joined together in a framework of Ethical Space or from a viewpoint of “Two-Eye Seeing”.

IPCA's are an opportunity to elevate Indigenous rights and responsibilities. Culture and spiritual values are at the heart and soul of an IPCA (ICE, 2018). Each Indigenous group will have unique cultural and spiritual values, and at times, this theme can be connected to the reason a community is seeking protection of their territory. Having a particular species or sacred place preserved is vital to the community and can make an IPCA stand apart from a Western style of PA. Stakeholders involved in the IPCA should understand and respect the inherent rights of Indigenous Peoples, especially their culture and spiritual values as a way to contribute to the sustainable and equitable development of the ecosystem.

During the process of trying to bring back cultural and spiritual values to and from the landscape, other challenges with trauma cycles and loss of identity through past systematic colonization of Indigenous Peoples can arise. Throughout Canada's history and the institution of residential schools, there are entire generations of Indigenous Peoples who have lost their sense of culture and spiritual values. As a result of this, having community-wide discussions of incorporating culture, honouring survivors, or trying to revitalize these lost identities, can present challenges and trauma for some communities and or individual members within the community who may not have the capacity to address these trials.

The literature indicates that the theme of sustainable economies dances on the line between Western and Indigenous ways of knowing, and with the reliance on money as one of the main drivers for this theme, it will continue to be a major area of contention between rights holders and other stakeholders. Many communities are hoping to preserve their culture and traditional ways for future generations. By creating economic ventures within their IPCAs, communities see an avenue to fund their energies, such as guardian programs to protect the land, educate the community and public on Indigenous culture, and then develop healthy sustainable livelihoods.

With the introduction of tourism or increases in tourism, some PAs may also experience the negative aspects of economic development. An overflow of visitors to some communities, can at times lead to a degradation or disrespecting of the ecosystems and culture that is seen as sacred to the community in question. The lack of capacity or understanding of the entire demands placed on a community or their land which occur when having tourism ventures within a PA can lead to many challenges and potentially divisions. Enforcing protocols and laws within an IPCA can present many challenges for self-governed IPCAs which might lack formalized legal recognitions. For this reason, there may also be some communities who move in the complete opposite direction of opening up for tourism and establish their IPCA with limited or no public visitors to an area to ensure that the pristine nature of their ecosystem is left intact (e.g., Edézhíe IPCA).

The beauty or maybe the challenge in the boundary theme is that it is a complex interconnected web with the other four themes. Many values, rights and culture are so tightly wound together, that it can be rather difficult to attempt to understand or make decisions about exactly where a boundary should occur and understand all the influences it can have on the other

four themes of the IPCA. These interconnected webs are the essence of an IPCA because they mirror the relationship that Indigenous Peoples have with the land, air, water, each other, and the spirit world. This relationship can often result in multiple boundaries across an IPCA with different levels of land use and protection.

When looking at the K'ih tsaa?dze Tribal Park (section 3.3.5), it has boundary lines that cover two provinces which are both included in the management of the area. Located within prime oil and gas territory, the Doig River First Nation were able to declare their Park to protect against further development from industry because they wanted to protect the spiritual and cultural values of the area. This Tribal Park is an example of how habitat, culture, governance, and sustainable economies all impact the decisions a community had to make regarding locations for boundary lines in the park. This type of interconnectedness within the concept of boundary selection is often highlighted in many other examples of PAs (e.g., Tłı̄cho, Protected Area, Broadback River Conservation Area, and Dasiqox Tribal Park).

4.3 Other Considerations

Besides the five key themes, other considerations when creating an IPCA also became apparent when digesting all the associated literature. Bigger questions that all point toward the real reasons of why each group is trying to pursue a PA in the first place became apparent. Common considerations of things that helped each group define how to create a PA under a system that was created without their belief system in mind. The following thoughts should also be reflected upon.

Since the Canadian system of PAs seems to be based on the IUCN designations, most groups are recognizing that with the lack of rules surrounding the creation of an IPCA in Canada, it is probably better to use the existing IUCN rules, as eventually the Canadian governments will align with the international designations if they want their 25% or 30% of PAs to be recognized internationally. Therefore, each new group should be keeping these international designations in mind as they move ahead with their IPCAs in Canada. These frameworks, although not created from an Indigenous perspective and have the tendency to be government run, may prove to be a valuable learning resource for communities trying to create an IPCA. History has shown that traditional western style conservation methods do not respect or encompass Indigenous values and culture.

By moving towards more international designations, groups trying to make a PA in their community may also be able to use the power of these international bodies as an advantage mechanism in their individual efforts to create a PA that they want. In cases where negotiations are dragging on and a community sees industry slowly degrading their hard-fought local resources, establishing a quick, albeit international designation, might help slow or stop the resource extraction if granted an international designation.

There are many guidelines and legislative mechanisms available to groups, depending on where the land (or water) that they are intending to protect is located. This is because there are legislative mechanisms available for federal ecosystem protection and different legislations for provincial or territorial ecosystem protection. Guidelines can be found throughout many of the government(s) websites depending on the type of PA a community is hoping to achieve (e.g., Oceans Act, Wildlands, National Park Act, BC Park Acts or Protected Areas Act). Some of the participants in the study who worked on projects stated the ease in using the available legislative frameworks:

“There is [a] fairly well-established general process for bringing in a national park or a national conservation area... legislation that was written, it is not that complicated, it’s a process that describes the park.”

“There are processes within the government to establish a park and do these things; there are those standards paths or processes.”

However, these types of legislations do not recognize or provide guidelines for the elements that make an IPCA different, because currently there are no legislative frameworks or designations for an IPCA (Tran et al., 2020; Plotkin & David Suzuki Foundation, 2018; ICE, 2018). With no legislations currently available to recognize IPCAs, as we move forward with IPCAs it may be easier for practitioners to rework their vision of an IPCA into a different but more palatable conservation model. One participant in the study had the following to say:

“Governments are not always open or receptive to make an IPCA...If an IPCA is being presented and it’s not accepted, is there a different way to present the same interests of what you are trying to achieve in a different way, and it’s not called an IPCA, but it still looks and sounds like one?”

Some authors have argued that the reason so many of the community-level PA efforts are unsuccessful, is because of the lack of legislation and an overriding resistance to the devolution of power held within a legal designation for those currently controlling the land (Macura et al., 2015). They state that it is only through gaining a fully binding designation that a community can have a full opportunity to govern their natural resources within the area in a way and manner that is acceptable to the group.

Because of the convoluted history that led to this point, and the difficulty that is seen to move forward in the existing legal system, some Indigenous groups are going forward with their own laws and creating IPCAs without formal designation from the government(s) (e.g., Tribal Parks). They state, why do Indigenous Peoples even need to make a PA from the land and water that was originally taken from them in the first place? The usual answer is that many see having a formal designation may result in more respected negotiations and collaboration with certain industries and governments, but the literature suggests that this process is certainly a double-edged sword. As stated in Section 35 of the Constitution Act 1982, Indigenous Peoples have the right and responsibility to practice their own traditional governance (Jackson et al., 2020). This concept is also clearly stated in Article 3 of the UNDRIP, that Indigenous Peoples have the right to freely determine their political status and freely pursue their economic, social, and cultural development (United Nations, 2007). These territorial rights are a composition of the right to jurisdiction, the right to the resources, and the right to control boundaries (Miller, 2011), therefore it is not necessary for any Indigenous group to ask an institution of government in Canada for permission to declare or recognize their IPCA. What was also noted in the literature was that some communities might not want to formally declare their IPCA because this could then be perceived as colonial entanglement, and any external IPCA recognition may result in them formally surrendering pieces of their true self-determination or sovereignty to another government (Tran et al., 2019).

Almost all the literature reviewed advocated or provided suggestions to government(s) and industry to uphold their commitments to UNDRIP, FPIC, Truth and Reconciliation Commission (TRC) Calls to Action, and or Section 35 of the Constitution Act 1982 (Fajardo et al., 2021, ICE, 2018). I find it worrisome that recent authors are still providing recommendations for government(s) to uphold the “minimum standards for the survival, dignity and well-being of the Indigenous Peoples” (United Nations, 2007, pp. 28) (e.g., Reed et al., 2020; Figueiredo &

McDonald, 2019; Wells et al., 2020; Watson et al., 2021; Gardner, 2018; Herrmann et al., 2012). Even after centuries of colonial measures, biocultural loss, and assimilation tactics bestowed upon Indigenous Peoples in Canada, it is evident that they must continue to fight for control of their culture, heritage, and ways of life.

Canadian government(s) have been very slow in responding and working towards such calls to action when creating or recognizing laws and regulations adapted to co-governance and or that provide legal recognition of an IPCA (Arjumend et al., 2018). It appears that some government(s) are lacking recognition not only for Indigenous efforts in conservation and protection of ecological systems, but also lack any recognition for Indigenous Peoples rights, and way of life. However, if Canada embraced the true spirit of these IPCAs it will go a long way towards promoting opportunities for true reconciliation.

CHAPTER FIVE: CONCLUSION

In this thesis, my research involved a systematic literature review of Canadian supportive documents and was complimented by one-on-one semi-structured interviews with a small set of practitioners. The literature review resulted in 148 documents which contained information surrounding the concepts of IPCAs. After summarizing the 148 documents, I found there to be numerous instances of interconnecting themes with one another making it difficult to clearly understand one approach how to develop and designate an IPCA. However, I was able to summarize five key themes of IPCAs and show some examples and challenges of each of the five themes that were commonly presented in the literature. Some of these challenges were also identified and discussed with practitioners during the interviews, and their comments helped to solidify some of the thinking around developing IPCAs.

As I have come to better understand, there is no right or wrong way to go about developing an IPCA. Initially I was predicting there would be legislations or frameworks available through government agencies that would lay out a model for creating an IPCA. However, the literature review and interviews I conducted made it clear that this was not the case, with *no one size fits all* model for IPCA creation in Canada. This is because of the unique values and culture of every Indigenous community and extensive range of beliefs and traditional practices of each Indigenous group. This is also why I believe there are so few resources that clearly explain how to create one of these types of PAs. But even though there are few resources which provide a concise and clear roadmap to develop an IPCA, Indigenous communities are still trying and pushing forward with these IPCAs with or without the help from government(s). I have found that there is little appetite for yet another western conservation framework, or another new model from outside applied to their unique ways of life.

Throughout my research two underlying challenges arose, collaboration and time constraints, which were at the forefront of every theme I came across. Rarely could I find a scenario where stakeholders came together and quickly found sound footing to establish a PA without some deeply established collaboration. I think if western practitioners and stakeholders came with respect for the viewpoints of Indigenous Peoples there would be many more paths forward in creating successful IPCAs. A good place to turn to when trying to respect unique perspectives and values would be to apply the philosophy of Two-Eye Seeing (Bartlett et al., 2012). It is a process described as learning to use both eyes together; the eye of the Indigenous

knowledges and the eye of the Western knowledges for the benefit of all. It is only with this radically changed way of thinking that taking steps towards respecting, and supporting Indigenous authority, laws, values, protocols, and stewardship practices can be achieved. Needing to achieve this level of respect will ultimately be vital for increasing IPCAs for Indigenous groups, achieving conservation targets for Canada, and creating true reconciliation which the international community can see.

Timeframes surrounding these types of PAs are lengthy and are usually caused by the need for collaboration over a dramatically changed land-use plan (e.g., with industry), or a complete restructuring of the way the landscape is governed. Practitioners involved with the creation of IPCAs should be prepared for an extended timeframe especially if stakeholders from outside of the community are involved. When trying to mix a western knowledge system in with an Indigenous knowledge system there will always be hurdles unless respect for one another is kept at the core of negotiations. Contentious issues will always arise when stakeholders are no longer seeing eye-to-eye, and this can lead to decades of delays for some communities trying to protect what is most valuable to them. I now believe that effective collaboration is the key to time reduction in establishing these types of PAs.

At the heart of effective collaboration is often the economics associated with existing resource extraction processes on a landscape. There is a need for more governments to make financial aid available to allow Indigenous Peoples to have equal footing around a negotiation table. Effective collaboration, negotiations, and understanding, can only come from allowing a community to come to a negotiation table with the ability to speak on terms that government(s) and industry have been working at for years. For example, government(s) and industry work using tools such as GIS and remotely sensed data, that are commonplace in their world, but for some communities they are lacking the capacity to have such tools. Time ticks by as the groups wait to find a common ground to discuss the ways to relook at a resource such as fishing grounds, forestry cut blocks, or mining claims with stakeholders at a negotiation table. If the federal government genuinely wants to hit their percentage levels of PAs in Canada, they should do more to either provide the resources to these groups wanting to make a PA, or at least provide more dedicated funding and expertise to allow collaboration at the negotiating table to proceed faster using tools that the Indigenous groups may not have. I think that an increase in knowledge

surrounding capacity building and an improved resource availability for these types of processes and skills could improve the effectiveness and lead to an increase in IPCAs.

However, sometimes a rush or full stop should be placed on the land-use processes occurring in an area, especially when some traditional lands are placed in the presence of resource exploitation in an area that is vital to an Indigenous community's wellbeing. In these cases, I believe it suddenly becomes crucial to quickly create and establish an IPCA without delay, in the hopes that it will avoid a prolonged negotiations process around an industry that will continuously extract and disrespect the land that the community values so greatly. If not by creating a form of an expedited IPCA, then at least through the development of a mechanism to halt all extraction or disrespecting processes. This would dissipate much of the one-sided hostilities and influence all parties to come to the table to talk.

It appears that the current database of PAs by the federal government is lacking recognition of IPCAs and the efforts from Indigenous communities causing their true values to be largely underappreciated. This makes even the most basic information on their conservation efforts difficult to find, or worse, completely unknown to the public or other Indigenous groups. A new type of movement is in the works and currently the Conservation through Reconciliation Partnership is creating centres and databases which are providing resources about other IPCAs, showcasing PAs, and providing support for those looking to create IPCAs. I believe this is an extremely exciting and beneficial movement which will help reduce timeframes for practitioners creating IPCAs.

Along with this movement, in mid-2021, the federal government finally took some concrete steps towards creating legislation surrounding UNDRIP. The government of British Columbia soon followed afterwards. It is these types of legislations, I believe, which history will look back on as being one of the many steppingstones towards ultimately recognizing IPCAs as a separate designation in our country. With the need to increase conserved and PAs within our country, moving forward we all need to be hopeful that through respect and understanding, there will ultimately be a viable mechanism to increase the establishment of IPCAs in Canada.

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APPENDIX A: IUCN PROTECTED AREA MANAGEMENT CATEGORIES

IUCN Protected Area Management categories adapted from definitions provided by Borrini-Feyerabend et al., 2013 and Dudley, 2008.

Ia Strict Nature Reserve: Strictly protected areas set aside to protect biodiversity. Possible geological and/or geomorphical features, where human visitation, use and impacts are strictly controlled. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.

Ib Wilderness Area: Large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed to preserve their natural condition.

II National Park: Large natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational, and visitor opportunities.

III Natural Monument or Feature: Areas set aside to protect a specific natural monument. This can be a landform, sea mount, submarine cavern, or geological feature. Usually small areas and high visitor value.

IV Habitat/Species Management Area: Areas which aim to protect particular species or habitats and management within the area reflects this priority. They need regular, active interventions to address the requirements of particular species or to maintain habitats.

V Protected Landscape/ Seascape: A protected area where the interaction of people and nature over time has produced an area of distinct character with significant, ecological, biological, cultural, and scenic value. Safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its values.

VI Protected area with sustainable use of natural resources: Conserved ecosystems and habitats together with associated cultural values and traditional natural resource management systems. Usually large areas, natural condition and have a portion under sustainable natural resource management. Can have low-level non-industrial use of the natural resources.

APPENDIX B: IUCN PROTECTED AREA GOVERNANCE STRUCTURES

IUCN Governance Types adapted from definitions provided by Borrini-Feyerabend et al., 2013 and Dudley, 2008.

- 1) Governance by Government: This is government delegated management. Usually federal, provincial, or territorial government.
- 2) Shared governance: This could be collaborative, joint, or transboundary management
- 3) Private Governance: This can be held by the individual owner, non-profit organization, or for-profit organization.

Governance by Indigenous Peoples and local communities. Community conserved areas that are declared and run by the community or Indigenous Peoples

APPENDIX C: LITERATURE REVIEW DATA SET

Number	Reference	Governance	Habitat	Culture	Economics	Boundaries
1	Akins, P., & Bissonnette, M. (2020). Co-governance of Marine Protected Areas in British Columbia: A reference report for First Nations. <i>Coastal First Nations</i> . https://coastalfirstnations.ca/wp-content/uploads/2020/10/Akins-and-Bissonnette-2020-Co-governance-of-Marine-Protected-Areas-in-BC.pdf	✓			✓	✓
2	Antomarchi, V., Joliet, F., & Chanteloup, L. (2021). Nunavik’s national parks: A tourism offer at the service of Indigenous societies?. <i>Espace-Populations-Societes</i> , 1–19. https://doi.org/10.4000/EPS.10760				✓	
3	Arjjumend, H., & Beaulieu-Boon, H. H. (2018). Customary Institutions and Rules underlying Conservation Functions of Sacred Sites or Indigenous and Community Conserved Areas. <i>Grassroots Journal of Natural Resources</i> , 1(2), 1-12.	✓	✓			
4	Arjjumend, H., Konstantia, K., Fagan, H., & Shibata, S. (2018). International Overview of Sacred Natural Sites and Indigenous and Community Conserved Areas (ICCAs) and the Need for Their Recognition. <i>Journal of Global Environmental Studies</i> , 13, 33–56.	✓				
5	Artelle, K. A., Stephenson, J., Bragg, C., Housty, J. A., Housty, W. G., Kawharu, M., & Turner, N. J. (2018). Values-led management: The guidance of place-based values in environmental relationships of the past, present, and future. <i>Ecology and Society</i> , 23(3).	✓		✓		
6	Artelle, K. A., Zurba, M., Bhattacharyya, J., Chan, D. E., Brown, K., Housty, J., & Moola, F. (2019). Supporting resurgent Indigenous-led governance: A nascent mechanism for just and effective conservation. <i>Biological Conservation</i> , 240, 108284. https://doi.org/10.1016/j.biocon.2019.108284	✓			✓	
7	Ban, N. C., & Frid, A. (2018). Indigenous peoples’ rights and marine protected areas. <i>Marine Policy</i> , 87, 180–185. https://doi.org/10.1016/j.marpol.2017.10.020	✓				
8	Ban, N. C., McDougall, C., Beck, M., Salomon, A. K., & Cripps, K. (2014). Applying empirical estimates of marine protected area effectiveness to assess conservation plans in British Columbia, Canada. <i>Biological Conservation</i> , 180, 134–148. https://doi.org/10.1016/j.biocon.2014.09.037	✓	✓		✓	✓
9	Ban, N. C., Wilson, E., & Neasloss, D. (2019). Historical and contemporary indigenous marine conservation strategies in the North Pacific. <i>Conservation Biology</i> , 34(1), 5-14.	✓		✓		

21	Brockington, D., Duffy, R., & Igoe, J. (2008). <i>Nature Unbound: Conservation, Capitalism and the Future of Protected Areas</i> . Routledge.	✓	✓	✓	✓	✓	
22	Brunet, N. D., Jardine, T. D., Jones, P. D., Macdermid, F., Reed, G., Bogdan, A. M., Tchir, D. R., & Natcher, D. C. (2020). Towards Indigenous community-led monitoring of fish in the oil sands region of Canada: Lessons at the intersection of cultural consensus and fish science. <i>The Extractive Industries and Society</i> , 7(4), 1319–1329. https://doi.org/10.1016/j.exis.2020.06.014	✓	✓				
23	Bullock, R., Boerchers, M., & Kirchhoff, D. (2019). Analyzing control, capacities, and benefits in Indigenous natural resource partnerships in Canada. <i>Environmental Practice</i> , 21(2), 85-99.	✓				✓	
24	Buscher, E. (2019). <i>Supporting Indigenous marine conservation planning: a case study of the Songhees Nation</i> [Master’s thesis, University of Victoria]. ProQuest Dissertations and Theses Global.	✓					
25	Buscher, E., Mathews, D. L., Bryce, C., Bryce, K., Joseph, D., & Ban, N. C. (2021). Differences and similarities between Indigenous and conventional marine conservation planning: The case of the Songhees Nation, Canada. <i>Marine Policy</i> , 129, 104520. https://doi.org/10.1016/j.marpol.2021.104520	✓	✓				✓
26	Bussi�eres, V. (2005). <i>Towards a culturally-appropriate locally-managed protected area for the James Bay Cree Community of Wemindji, Northern Qu�ebec</i> [Master’s thesis, Concordia University]. ProQuest Dissertations and Theses Global.	✓	✓	✓	✓		
27	Campbell, L. (2017). <i>Indigenous knowledge in Wagiiwing and applications in harvesting and management</i> [Master’s thesis, Royal Roads University]. ProQuest Dissertations and Theses Global.	✓				✓	
28	Campese, J., Nakangu, B., Silverman, A., & Springer, J. (2016). <i>The NRGF Assessment Guide: Learning for Improved Natural Resource Governance</i> . NRGF Paper. Gland, Switzerland: IUCN and CEESP.	✓					
29	Candler, C. (2021). Standing Our Ground Putting Indigenous Standards to Work in Environmental Assessment. In Holmes, C., McDonald, F., Graham, J., & Darnell, R. (Eds.), <i>The Social Life of Standards: Ethnographic Methods for Local Engagement</i> (pp. 219-276). UBC Press.	✓	✓			✓	✓
30	Carroll, C. (2014). Native enclosures: Tribal national parks and the progressive politics of environmental stewardship in Indian Country. <i>GEOFORUM</i> , 53, 31–40. https://doi.org/10.1016/j.geoforum.2014.02.003	✓				✓	
31	Casson, S. A. (2015). Socially-Just and Scientifically-Sound: Re-Examining Co-Management of Protected Areas. <i>IK: Other Ways of Knowing</i> 1(2), 32-64.	✓					

32	Coristine, L. E., Jacob, A. L., Schuster, R., Otto, S. P., Baron, N. E., Bennett, N. J., Bittick, S. J., Dey, C., Favaro, B., Ford, A., Nowlan, L., Orihel, D., Palen, W. J., Polfus, J. L., Shiffman, D. S., Venter, O., & Woodley, S. (2018). Informing Canada’s commitment to biodiversity conservation: A science-based framework to help guide protected areas designation through Target 1 and beyond. <i>FACETS</i> , 3(1), 531–562. https://doi.org/10.1139/facets-2017-0102	✓	✓			✓
33	Corrigan, C., & Hay-Edie, T. (2013). A Toolkit to Support Conservation by Indigenous Peoples and Local Communities: Building Capacity and Sharing Knowledge for Indigenous Peoples and Community Conserved Territories and Areas (ICCAS). <i>UNEP-WCMC, Cambridge, UK</i> .	✓	✓	✓	✓	✓
34	Counsell, S. (n.d.). <i>Community forest management: how it is supported in international agreements</i> . Friends of the Earth International. https://www.foei.org/wp-content/uploads/2021/03/Community-forest-management-How-it-is-supported-in-international-agreements.pdf		✓			
35	Day, J., Dudley, N., Hockings, M., Holmes, G., Laffoley, D., Stolton, S., & Wells, S. (2012). Guidelines for applying the IUCN protected area management categories to marine protected areas. <i>Best Practice Protected Area Guidelines Series</i> , (19).	✓	✓			✓
36	De Andrade, A. (2002). <i>Understanding (eco) tourism from the bottom-up: a case study of Tofino, Clayoquot Sound, in British Columbia</i> [Doctoral Dissertation, University of British Columbia]. ProQuest Dissertations and Theses Global.				✓	
37	De Vries, N. (2021). <i>Walking Waterways: Guardianship of Land and Water in Dasiqox</i> [Master’s thesis, University of British Columbia]. ProQuest Dissertations and Theses Global.		✓		✓	
38	DeRoy, B. C., Brown, V., Service, C. N., Leclerc, M., Bone, C., McKechnie, I., & Darimont, C. T. (2021). Combining high-resolution remotely sensed data with local and Indigenous Knowledge to model the landscape suitability of culturally modified trees: biocultural stewardship in Kitsoo/Xai’xais Territory. <i>FACETS</i> , 6(1), 465-489.			✓		
39	Deutsch, N. (2016). <i>Equitable management of protected areas</i> . CCEA 2016 Yellowknife Workshop. https://ccea-ccae.org/wp-content/uploads/2018/03/CCEA_2016YK-Day2-Equitable_Management_Discussion_Paper-Deutsch.pdf	✓				
40	Devin, S., & Doberstein, B. (2004). Traditional ecological knowledge in parks management: A Canadian perspective. <i>Environments</i> , 32(1), 47-70.	✓		✓		

41	Diggon, S., Bones, J., Short, C. J., Smith, J. L., Dickinson, M., Wozniak, K., Topelko, K., & Pawluk, K. A. (2020). The Marine Plan Partnership for the North Pacific Coast – MaPP: A collaborative and co-led marine planning process in British Columbia. <i>Marine Policy</i> . https://doi.org/10.1016/j.marpol.2020.104065	✓	✓		✓	
42	Dovers, S., Feary, S., Martin, A., McMillan, L., Morgan, D. and Tollefson, M. (2015). Engagement and participation in protected area management: who, why, how and when?. In Worboys, Lockwood, Kothari, Feary & Pulsford (Eds.), <i>Protected Area Governance and Management</i> (pp. 413–440). ANU Press, Canberra.	✓				
43	Durand, M. (2020). <i>Indigenous Protected and Conserved Area: A Tool for Marine Conservation and Steps Towards Reconciliation In The Canadian Arctic</i> [Master’s thesis, Université De Montpellier]. ProQuest Dissertations and Theses Global.	✓	✓			
44	Dussart, F., & Poirier, S. (Eds.). (2017). <i>Entangled Territorialities; Negotiating Indigenous Lands in Australia and Canada</i> . University of Toronto Press.			✓		
45	Herrmann, T., Heinämäki, L., & Morin, C. (2016). Protecting sacred sites, maintaining cultural heritage, and sharing power. In Elenius, Allard, & Sandström (Eds.) <i>Indigenous rights in modern landscapes: Nordic conservation regimes in global context</i> (pp. 62-81). Taylor & Francis.	✓				
46	Enns, E. (2015). A Tribal National Park Rises in Canada. <i>Earth Island Journal</i> , 30(3), 49.	✓				
47	Fa, J. E., Watson, J. E. M., Leiper, I., Potapov, P., Evans, T. D., Burgess, N. D., Molnár, Z., Fernández-Llamazares, Á., Duncan, T., & Wang, S. (2020). Importance of Indigenous Peoples’ lands for the conservation of Intact Forest Landscapes. <i>Frontiers in Ecology and the Environment</i> , 18(3), 135–140.		✓			
48	Fajardo, P., Beauchesne, D., Carbajal-López, A., Daigle, R. M., Fierro-Arcos, L. D., Goldsmit, J., Zajderman, S., Valdez-Hernández, J. I., Terán Maigua, M. Y., & Christofoletti, R. A. (2021). Aichi Target 18 beyond 2020: mainstreaming Traditional Biodiversity Knowledge in the conservation and sustainable use of marine and coastal ecosystems. <i>PeerJ</i> , 9, e9616. https://doi.org/10.7717/peerj.9616	✓	✓	✓		
49	Feit, H. A. (2005). Re-cognizing Co-management as Co-governance: Visions and Histories of Conservation at James Bay. <i>Anthropologica</i> , 47(2), 267-288.	✓				
50	Figueiredo, L., & McDonald, C. (2019). Making land management work for Indigenous economic development. <i>OECD Regional Development Working Papers</i> . Published. https://doi.org/10.1787/ac7a11be-en	✓			✓	

51	Finegan, C. (2018). Reflection, Acknowledgement, and Justice: A Framework for Indigenous-Protected Area Reconciliation. <i>International Indigenous Policy Journal</i> , 9(3). https://doi.org/10.18584/iipj.2018.9.3.3	✓					
52	Finegan, C. (2020). Undergraduate curricula in the USA, Canada, New Zealand and Australia: Are we missing the mark on Indigenous peoples and parks? <i>Parks</i> , 26(1), 25–36. https://doi.org/10.2305/IUCN.CH.2020.PARKS-26-1CF.en	✓					
53	Finlayson, C. M., Arthington, A. H., & Pittock, J. (Eds.). (2018). <i>Freshwater ecosystems in protected areas: Conservation and management</i> . Routledge.	✓	✓				✓
54	Foy, J. (2015). Safeguarding Nature and Culture in Tsilhqot’in Nation Territory. <i>Wilderness Committee</i> , 34(3).		✓	✓	✓		
55	Franco, I. B., & Tracey, J. (2019). Community capacity-building for sustainable development: Effectively striving towards achieving local community sustainability targets. <i>International Journal of Sustainability in Higher Education</i> , 20(4), 691–725. https://doi.org/10.1108/ijsh-02-2019-0052	✓					
56	Garcia, L. A. (2015). Tsilhqot’in Nation v British Columbia: Aboriginal Title, Indigenous Resurgence, and the Politics of Recognition [Master’s thesis, Carleton University]. ProQuest Dissertations and Theses Global.	✓					
57	Gauthier, S., Vaillancourt, M., Leduc, A., & Grandpré, D. L. (2009). Ecosystem Management in the Boreal Forest: Origins and Foundations. In Gauthier, S., Vaillancourt, M., Leduc, A., & Grandpré, D. L. (Eds.), <i>Ecosystem Management in the Boreal Forest</i> . (pp. 13-38). Presses de l’Université du Québec.		✓				
58	Goetze, T. C. (2005). Empowered Co-management: towards power-sharing and Indigenous rights in Clayoquot Sound, BC. <i>Anthropologica</i> , 47(2) 247–265.	✓					
59	Grego, C. E. (2015). Maybe National Park: Consultation, Conservation, and Conflict in the Okanagan-Similkameen. BC Studies: <i>The British Columbian Quarterly</i> , (186), 9-38.	✓					
60	Groves, C. R., Jensen, D. B., Valutis, L. L., Redford, K. H., Shaffer, M. L., Scott, J. M., Baumgartner, J. V., Higgins, J. V., Beck, M. W., & Anderson, M. G. (2002). Planning for Biodiversity Conservation: Putting Conservation Science into Practice. <i>BioScience</i> , 52(6), 499.		✓				
61	Harland, F. (2018). Taking the “Aboriginal Perspective” Seriously The (Mis)use of Indigenous Law in Tsilhqot’in Nation v British Columbia. <i>Indigenous Law Journal</i> , 16/17(1), 21–50.	✓					
62	Henderson, N. (2021). <i>Indigenous protected and conserved areas: review paper for Saskatchewan</i> [Master’s thesis, Royal Roads University]. ProQuest Dissertations and Theses Global.	✓					

63	Henn, R. D. (2010). <i>A community perspective: Conflicting environmental interests and barriers to effective collaborative management in Clayoquot Sound</i> [Master's thesis, Royal Roads University]. ProQuest Dissertations and Theses Global.	✓					
64	Herrmann, T. M., Ferguson, M. A. D., Raygorodetsky, G., & Mulrennan, M. (2012). Recognition and support of ICCAs in Canada. In Kothari, A., Corrigan, C., Jonas, H., Neumann, A., & Shrumm, H. (Eds.), <i>Recognising and Supporting Territories and Areas Conserved by Indigenous Peoples and Local Communities: Global overview and national case studies</i> . Secretariat of the Convention on Biological Diversity, ICCA Consortium, Kalpavriksh, and Natural Justice, Montreal, Canada. Technical Series no. 64.	✓	✓	✓	✓		
65	Hickling, J. (2020). <i>Ktunaxa Nation v British Columbia: Sacred Sites and Saving Graces</i> . <i>Oxford Journal of Law and Religion</i> , 9(1), 193–207. https://doi.org/10.1093/ojlr/rwaa006			✓			
66	Higgins-Zogib, L., Dudley, N., Mallarach, J. M., & Mansourian, S. (2010). Beyond belief: linking faiths and protected areas to support biodiversity conservation. In Dudley, N., & Stolton, S. (Eds.), <i>Arguments for Protected Areas: Multiple Benefits for Conservation and Use</i> (pp. 165-184). Routledge.			✓			
67	Holmes, A. P., Grimwood, B. S., King, L. J., & Lutsel K'e Dene First Nation. (2016). Creating an Indigenized visitor code of conduct: The development of Denesoline self-determination for sustainable tourism. <i>Journal of Sustainable Tourism</i> , 24(8-9), 1177-1193.				✓		
68	Hubert, A. M., & Gray, S. (2020). Area-Based Marine Protection in Canada. <i>Asia-Pacific Journal of Ocean Law and Policy</i> , 5(1), 142–168.	✓					
69	Indigenous Circle of Experts (ICE). (2018). <i>We Rise Together: Achieving Pathway to Canada Target 1 through the Creation of Indigenous Protected and Conserved Areas in the Spirit and Practice of Reconciliation: The Indigenous Circle of Experts' Report and Recommendations</i> . (Report). Retrieved from https://www.conservation2020canada.ca/home	✓	✓	✓	✓	✓	
70	Jacobson, C., Manseau, M., Mouland, G., Brown, A., Nakashuk, A., Etooangat, B., Nakashuk, M., Siivola, D., Kaki, L.-M., Kapik, J., Evic, M., Kennianak, A., & Koonelieusee, D. (2015). Co-operative Management of Auyuittuq National park: Moving Towards Greater Emphasis and Recognition of Indigenous Aspirations for the Management of Their Lands. In Herrmann & Martin (Eds.), <i>Indigenous Peoples' Governance of Land and Protected Territories in the Arctic</i> (pp. 3-21). Springer, Cham.	✓					
71	Jonas, H. D., Lee, E., Jonas, H. C., Matallana-Tobon, C., Wright, K. S., Nelson, F., & Enns, E. (2017). Will “other effective area-based conservation measures” increase recognition and support for ICCAs. <i>Parks</i> , 23(2), 63–78.	✓					

72	Keenleyside, K.A., N. Dudley, S. Cairns, C.M. Hall, and S. Stolton (2012). <i>Ecological Restoration for Protected Areas: Principles, Guidelines and Best Practices</i> . Gland, Switzerland: IUCN		✓	✓				
73	Keyser, E. (2018). <i>Collaborative Conservation: Reconnecting People, Land, and Bison through the Inniit Initiative</i> [Master's thesis, University of Guelph]. ProQuest Dissertations and Theses Global.	✓						
74	Laidlaw, D., & Passelac-Ross, M. M. (2021). <i>Sharing Land Stewardship in Alberta: The Role of Aboriginal Peoples</i> (CIRL Occasional Paper, 38). Canadian Institute of Resources Law.	✓						
75	Layton-Cartier, G. (2014). <i>Facilitating Mechanisms in Support of Emerging Collaborative Governance of MPAs in Québec</i> [Master's thesis, Concordia University]. ProQuest Dissertations and Theses Global.	✓						
76	Lemelin, H., Johnston, M., Lough, D., Rowell, J., Broomfield, W., Baikie, G., & Sheppard, K. (2016). Two parks, one vision—collaborative management approaches to transboundary protected areas in Northern Canada: Tongait KakKasuangita SilakKijapvinga/Torngat Mountains National Park, Nunatsiavut and le Parc national Kuururjuaq Nunavik. In Herrmann & Martin (Eds.), <i>Indigenous Peoples' Governance of Land and Protected Territories in the Arctic</i> (pp. 71-82). Springer, Cham.	✓			✓			
77	Lemelin, R. H., & Bennett, N. (2010). The proposed Pimachiowin Aki world heritage site project: Management and protection of Indigenous world heritage sites in a Canadian context. <i>Leisure/Loisir</i> , 34(2), 169–187. https://doi.org/10.1080/14927713.2010.481113	✓						
78	Lemieux, C. J., & Gray, P. A. (2020). How Canada “hamburger manufactured” its way to marine protected area success and a more effective and equitable way forward for the post-2020 conservation agenda. <i>Journal of Environmental Studies and Sciences</i> , 10(4), 483-491.	✓	✓					✓
79	Lemieux, C. J., Gray, P. A., Devillers, R., Wright, P. A., Dearden, P., Halpenny, E. A., Groulx, M., Beechey, T. J., & Beazley, K. (2019). How the race to achieve Aichi Target 11 could jeopardize the effective conservation of biodiversity in Canada and beyond. <i>Marine Policy</i> , 99, 312–323. https://doi.org/10.1016/j.marpol.2018.10.029	✓	✓					✓
80	Lemieux, C. J., Groulx, M. W., Bocking, S., & Beechey, T. J. (2018). Evidence-based decision-making in Canada's protected areas organizations: Implications for management effectiveness. <i>FACETS</i> , 3, 392–414. https://doi.org/10.1139/facets-2017-0107	✓						
81	Lemieux, C. J., Halpenny, E. A., Swerdfager, T., He, M., Gould, A. J., Den Hoed, D. C., Bueddefeld, J., Hvenegaard, G. T., Joubert, B., & Rollins, R. (2021). Free Fallin'? The decline in evidence-based decision-making by Canada's protected areas managers. <i>FACETS</i> , 6, 640–664. https://doi.org/10.1139/facets-2020-0085	✓						

82	Leroux, S. J., Brimacombe, C., Khair, S., Benidickson, J., & Findlay, C. S. (2015). Legislative correlates of the size and number of protected areas in Canadian jurisdictions. <i>Biological Conservation</i> , 191, 375–382. https://doi.org/10.1016/j.biocon.2015.07.016	✓					✓
83	Lloyd-Smith, G. (2017). An Ocean of Opportunity: Co-governance in Marine Protected Areas in Canada. West Coast Environmental Law. https://wcel.org/sites/default/files/publications/2017-06-oceanofopportunity-cogovernance-brief-eng_0.pdf	✓					✓
84	Lockwood, M., Worboys, G., & Kothari, A. (2006). <i>Managing protected areas: a global guide</i> . London, UK: Earthscan.	✓	✓	✓	✓	✓	
85	Low, M., & Shaw, K. (2011). First Nations Rights and Environmental Governance: Lessons from the Great Bear Rainforest. BC Studies: <i>The British Columbian Quarterly</i> , (172), 9-33.	✓				✓	
86	MacKinnon, K., Smith, R., Dudley, N., Figgis, P., Hockings, M., Keenleyside, K., Laffoley, D., Locke, H., Sandwith, T., Woodley, S., & Wong, M. (2020). Strengthening the global system of protected areas post-2020: A perspective from the IUCN World Commission on Protected Areas. <i>Parks Stewardship Forum</i> , 36(2). https://doi.org/10.5070/p536248273	✓	✓	✓			
87	Maclean, K., Robinson, C. J., & Natcher, D. C. (2015). Consensus building or constructive conflict? Aboriginal discursive strategies to enhance participation in natural resource management in Australia and Canada. <i>Society & Natural Resources</i> , 28(2), 197-211.	✓					
88	Macura, B., Secco, L., & Pullin, A. S. (2015). What evidence exists on the impact of governance type on the conservation effectiveness of forest protected areas? Knowledge base and evidence gaps. <i>Environmental Evidence</i> , 4(1), 1–29.	✓					
89	Mainguy, G. (2012). Presentation: IUCN Commission on Environmental, Economic and Social Policy (CEESP). SAPI EN. S. <i>Surveys and Perspectives Integrating Environment and Society</i> , (5.2).	✓					
90	Mays, J. (2021). <i>Haida Governance Strategies for Effective Ecosystem Based Management: A Critical Literature Review</i> [Master’s thesis, University of Victoria]. ProQuest Dissertations and Theses Global.	✓					✓
91	McIvor, A., Fincke, A., & Oviedo, G. (2008, October). Bio-cultural diversity and Indigenous peoples’ journey. In Report from the 4th IUCN World Conservation Congress Forum.		✓	✓			
92	Moola, F., & Roth, R. (2019). Moving beyond colonial conservation models: Indigenous Protected and Conserved Areas offer hope for biodiversity and advancing reconciliation in the Canadian boreal forest. <i>Environmental Reviews</i> , 27(2), 200–201. https://doi.org/10.1139/er-2018-0091	✓		✓			

93	Moore, M. (2020). <i>Decolonizing Park Management: A Framework for the Co-management of National Parks and Protected Areas</i> [Master's thesis, Simon Fraser University]. ProQuest Dissertations and Theses Global.	✓			✓		
94	M'sit No'kmaq, Marshall, A., Beazley, K. F., Hum, J., Joudry, S., Papadopoulos, A., Pictou, S., Rabesca, J., Young, L., & Zurba, M. (2021). "Awakening the sleeping giant": re-Indigenization principles for transforming biodiversity conservation in Canada and beyond. <i>FACETS</i> , 6, 839–869. https://doi.org/10.1139/facets-2020-0083	✓		✓			
95	Mulrennan, M. E., & Bussi�eres, V. (2020). Indigenous Environmental Stewardship: Do Mechanisms of Biodiversity Conservation Align with or Undermine It? Plants people, and places: the roles of ethnobotany and ethno ecology in Indigenous peoples' land rights in Canada and beyond. McGill-Queen's Press, Montreal, 282-312.	✓					
96	Mulrennan, M. E., Mark, R., & Scott, C. H. (2012). Revamping community-based conservation through participatory research. <i>The Canadian Geographer / Le G�ographe Canadien</i> , 56(2), 243–259. https://doi.org/10.1111/j.1541-0064.2012.00415.x	✓					
97	Mulrennan, M. E., Scott, C. H., & Scott, K. (2019). <i>Caring for Eeyou Istchee: Protected Area Creation on Wemindji Cree Territory</i> (Illustrated ed.). UBC Press.	✓	✓	✓	✓	✓	
98	Murray, G., & Burrows, D. (2017). Understanding power in Indigenous protected areas: The case of the Tla-O-qui-Aht Tribal Parks. <i>Human ecology</i> , 45(6), 763-772.						✓
99	Murray, G., & King, L. (2012). First Nations values in protected area governance: Tla-o-qui-aht tribal parks and Pacific Rim National Park Reserve. <i>Human Ecology</i> , 40(3), 385-395.	✓			✓		✓
100	Nakoochee, R. (2018). <i>Reconnection with Asi K�yi: Healing Broken Connections' Implications for Ecological Integrity in Canadian National Parks</i> [Master's thesis, University of Guelph]. ProQuest Dissertations and Theses Global.		✓				
101	Narine, S. (2014). Tsilhqot'in invites province to the table on land use. <i>Windspeaker</i> , 32(8), 8. http://cyber.usask.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=99025284&site=ehost-live	✓					
102	Notzke, C. (1995). A new perspective in Aboriginal natural resource management: Co-management. <i>Geoforum</i> , 26(2), 187–209. https://doi.org/10.1016/0016-7185(95)00019-H	✓					
103	Nowlan, L., Lloyd-Smith, G., Cheater, D., & Watson, M. (2019). Literature Review & Analysis of Shared Indigenous and Crown Governance in Marine Protected Areas. West Coast Environmental Law. (Report)	✓					

104	Palm, E. C., Fluker, S., Nesbitt, H. K., Jacob, A. L., & Hebblewhite, M. (2020). The long road to protecting critical habitat for species at risk: The case of southern mountain woodland caribou. <i>Conservation Science and Practice</i> , 2(7), e219.	✓	✓		✓		
105	Papadopoulos, A. (2021). <i>Exploring governance mechanisms and Mi'kmaw values and aspirations for Indigenous Protected and Conserved Areas (IPCAs) in Nova Scotia</i> [Master's thesis, Dalhousie University]. ProQuest Dissertations and Theses Global.	✓					
106	Plotkin, R., & David Suzuki Foundation. (2018). <i>Tribal Parks and Indigenous Protected and Conserved Areas: Lessons Learned from B.C. Examples</i> . 4–54. https://david Suzuki.org/wp-content/uploads/2018/08/tribal-parks-indigenous-protected-conserved-areas-lessons-b-c-examples.pdf	✓	✓	✓	✓	✓	
107	Reed, G., Brunet, N. D., Longboat, S., & Natcher, D. C. (2021). Indigenous guardians as an emerging approach to indigenous environmental governance. <i>Conservation Biology</i> , 35(1), 179–189. https://doi.org/10.1111/cobi.13532	✓			✓		
108	Reed, M. G. (2016). Conservation (in) action: renewing the relevance of UNESCO biosphere reserves. <i>Conservation Letters</i> , 9(6), 448-456.	✓					
109	Richardson-Deranger, L. (2019). <i>Enhancing the Marine Protected Area (MPA) Process in the British Columbia Northern Shelf Bioregion MPA Network to Improve Indigenous Participation</i> [Master's thesis, Dalhousie University]. ProQuest Dissertations and Theses Global.	✓					
110	Robinson, A. M. (2020). Governments must not wait on courts to implement UNDRIP rights concerning Indigenous sacred sites: lessons from Canada and Ktunaxa Nation v. British Columbia. <i>The International Journal of Human Rights</i> , 24(10), 1642–1665.	✓		✓			
111	Robinson, D. F., Abdel-Latif, A., & Roffe, P. (Eds.). (2017). Protecting traditional knowledge: The WIPO intergovernmental committee on intellectual property and genetic resources, traditional knowledge and folklore. Taylor & Francis Group.	✓		✓			
112	Robinson, L. W., Bennett, N., King, L. A., & Murray, G. (2012). “We want our children to grow up to see these animals:” values and protected areas governance in Canada, Ghana and Tanzania. <i>Human Ecology</i> , 40(4), 571-581.	✓					
113	Ryser, R. C. (2012). On our own: Adapting to climate change: Finding an internal and an intergovernmental framework for an adaptation strategy. In Parker & Grossman (Eds.). <i>Asserting Native Resilience: Pacific Rim Indigenous Nations Face the Climate Crisis</i> (pp. 125-133). Oregon State University Press.		✓				
114	Schreiber, D., & Newell, D. (2006). Negotiating TEK in BC Salmon Farming: Learning from each other or managing tradition and eliminating contention? <i>BC Studies</i> , (150), 79-102,147-148.		✓	✓			

115	Schuster, R., Germain, R. R., Bennett, J. R., Reo, N. J., Secord, D. L., & Arcese, P. (2018). Biodiversity on Indigenous lands equals that in protected areas. <i>BioRxiv</i> , 321935.	✓					
116	Shore, M., & Potter, K. (2018). <i>Assessing Biosphere Reserves for Qualification as Other Effective Area-Based Conservation Measures (OECMs): A Preliminary Analysis</i> .	✓					✓
117	Singleton, S. (2009). Native people and planning for marine protected areas: how “stakeholder” processes fail to address conflicts in complex, real-world environments. <i>Coastal Management</i> , 37(5), 421-440.	✓					
118	Sparling, A. (2020). <i>An opportunity for policy change? Creating new space for conservation through marine’ other effective area-based conservation measures’ in Canada</i> [Master’s thesis, University of Guelph]. ProQuest Dissertations and Theses Global.	✓					
119	Stephenson, J., Berkes, F., Turner, N. J., & Dick, J. (2014). Biocultural conservation of marine ecosystems: Examples from New Zealand and Canada. <i>Indian Journal of Traditional Knowledge</i> , 13(2), 257–265		✓				
120	Sneddon, L. (2018). Barriers to implementing a bottom-up management approach to coastal MPAs: a Canadian case study [Master’s thesis, Dalhousie University]. ProQuest Dissertations and Theses Global.	✓					
121	Stevens, S. (Ed.). (2014). <i>Indigenous Peoples, National Parks, and Protected Areas: A New Paradigm Linking Conservation, Culture, and Rights</i> (First ed.). University of Arizona Press.	✓	✓	✓	✓	✓	
122	Stevens, S., N. Pathak Broome and T. Jaeger with J. Aylwin, G. Azhdari, D. Bibaka, G. Borrini-Feyerabend, M. Colchester, N. Dudley, C. Eghenter, F. Eleazar, M. T. Farvar, F. Frascaroli, H. Govan, S. Hugu, H. Jonas, A. Kothari, G. Reyes, A. Singh, and L. Vaziri. (2016). <i>Recognising and Respecting ICCAs Overlapped by Protected Areas</i> . Report for the ICCA Consortium.	✓					✓
123	Stevenson, M. G. (2006). The Possibility of Difference: Rethinking Co-management. <i>Human Organization</i> , 65(2), 167–180. https://doi.org/10.17730/humo.65.2.b2dm8thgb7wa4m53	✓					
124	Tauli-Corpuz, V., Alcorn, J., Molnar, A., Healy, C., & Barrow, E. (2020). Cornered by PAs: Adopting rights-based approaches to enable cost-effective conservation and climate action. <i>World Development</i> , 130, 104923.	✓					✓
125	Thomlinson, E., & Crouch, G. (2012). Aboriginal peoples, Parks Canada, and protected spaces: A case study in co-management at Gwaii Haanas National Park Reserve. <i>Annals of Leisure Research</i> , 15(1), 69–86. https://doi.org/10.1080/11745398.2012.670965	✓					

126	Thornton, T. F., & Bhagwat, S. A. (2020). <i>The Routledge Handbook of Indigenous Environmental Knowledge (Routledge International Handbooks)</i> (1st ed.). Routledge.	✓	✓	✓			
127	Timko, J., & Satterfield, T. (2008). Criteria and Indicators for Evaluating Social Equity and Ecological Integrity in National Parks and Protected Areas. <i>Natural Areas Journal</i> , 28(3), 307–319.	✓	✓				
128	Tran, T. C., Ban, N. C., & Bhattacharyya, J. (2020). A review of successes, challenges, and lessons from Indigenous protected and conserved areas. <i>Biological Conservation</i> , 241, 108271.	✓	✓	✓	✓	✓	
129	Tran, T. C., Neasloss, D., Kitsoo/Xai'xais Stewardship Authority, Bhattacharyya, J., & Ban, N. C. (2020). “Borders don’t protect areas, people do”: insights from the development of an Indigenous Protected and Conserved Area in Kitsoo/Xai'xais Nation Territory. <i>FACETS</i> , 5(1), 922-941.	✓	✓	✓	✓		
130	Troniak, S. (2011). <i>Good relations: an alternative paradigm for natural resource governance in Eeyou Istchee</i> (Order No. MR75016) [Master’s thesis, McGill University]. ProQuest Dissertations and Theses Global.	✓					
131	Tsatsaros, J. H., Wellman, J. L., Bohnet, I. C., Brodie, J. E., & Valentine, P. (2018). Indigenous water governance in Australia: Comparisons with the United States and Canada. <i>Water</i> , 10(11), 1639.	✓					✓
132	Turner, K. L., & Bitonti, C. P. (2011). Conservancies in British Columbia, Canada: Bringing Together Protected Areas and First Nations’ Interests. <i>International Indigenous Policy Journal</i> , 2(2).	✓					
133	Turner, T. (1998). <i>Landscape planning and environmental impact design</i> . Taylor & Francis Group.		✓				
134	Tyson, W., & Heinemeyer, K. (2020). Arctic Climate Change Research and Monitoring. <i>Arctic</i> , 8, 3.		✓	✓			✓
135	Van Schie, R., & Haider, W. (2015). Indigenous-based Approaches to Territorial Conservation: A Case Study of the Algonquin Nation of Wolf Lake. <i>Conservation and Society</i> , 13(1), 72.		✓		✓		
136	Verschuuren B., Mallarach J-M., Bernbaum, E., Spoon J., Brown S., Borde R., Brown J., Calamia M., Mitchell N., Infield M and Lee E. (2021). <i>Cultural and spiritual significance of nature. Guidance for protected and conserved area governance and management</i> . Best Practice Protected Area Guidelines Series No. 32, Gland, Switzerland: IUCN.	✓		✓			
137	Von der Porten, S., Ota, Y., Cisneros-Montemayor, A., & Pictou, S. (2019). The Role of Indigenous Resurgence in Marine Conservation. <i>Coastal Management</i> , 47(6), 527–547. https://doi.org/10.1080/08920753.2019.1669099	✓					

138	Watson, M. S., Jackson, A. M., Lloyd-Smith, G., & Hepburn, C. D. (2021). Comparing the Marine Protected Area Network Planning Process in British Columbia, Canada and New Zealand – Planning for cooperative partnerships with Indigenous communities. <i>Marine Policy</i> , 125, 104386. https://doi.org/10.1016/j.marpol.2020.104386	✓					
139	Weber, B. (2020). Once Proposed as Ski Resort: B.C.'s Jumbo Glacier Turned over to First Nation. <i>Aboriginal Business - Canada</i> , 19.	✓	✓	✓			
140	Wells, J. V., Dawson, N., Culver, N., Reid, F. A., & Morgan Siegers, S. (2020). The state of conservation in North America's boreal forest: issues and opportunities. <i>Frontiers in Forests and Global Change</i> , 3, 90.	✓			✓		
141	Wheeler, I. S. (2019). <i>Investigation of the Tribal Park Concept and Opportunities for the Blackfeet Nation</i> [Master's thesis, University of Montana]. ProQuest Dissertations and Theses Global.		✓		✓		
142	Whitney, C., Frid, A., Edgar, B., Walkus, J., Siwallace, P., Siwallace, I., & Ban, N. (2020). "Like the plains people losing the buffalo": perceptions of climate change impacts, fisheries management, and adaptation actions by Indigenous peoples in coastal British Columbia, Canada. <i>Ecology and Society</i> , 25(4).	✓					
143	Whyte, K. (2018). What do Indigenous Knowledges Do for Indigenous Peoples?. In Nelson, M. & Shiling, D. (Eds.), <i>Traditional Ecological Knowledge: Learning from Indigenous Practices for Environmental Sustainability</i> (pp. 57-84). Cambridge University Press. DOI. 10.1017/9781108552998	✓	✓		✓		
144	Wild, R. & McLeod, C. (Eds.). (2008). <i>Sacred Natural Sites: Guidelines for Protected Area Managers</i> . Gland, Switzerland: IUCN.			✓	✓	✓	
145	Worboys, G. L., Lockwood, M., Kothari, A., Feary, S., & Pulsford, I. (Eds.). (2015). <i>Protected area governance and management</i> . ANU Press, Canberra.	✓		✓			
146	Wozniczka, I. A. (2009). <i>Exploring opportunities and constraints associated with protected areas in Northern Ontario, Canada</i> [Master's thesis, Lakehead University]. ProQuest Dissertations and Theses Global.		✓		✓		
147	Wulder, M. A., Cardille, J. A., White, J. C., & Rayfield, B. (2018). Context and Opportunities for Expanding Protected Areas in Canada. <i>LAND</i> , 7(4). https://doi.org/10.3390/land7040137		✓			✓	
148	Zurba, M., Beazley, K. F., English, E., & Buchmann-Duck, J. (2019). Indigenous Protected and Conserved Areas (IPCAs), Aichi Target 11 and Canada's Pathway to Target 1: Focusing Conservation on Reconciliation. <i>Land</i> , 8(1), 1–20.	✓	✓	✓	✓	✓	

APPENDIX D: ETHICS FORMS



UNIVERSITY OF
SASKATCHEWAN

Behavioural Research Ethics Board (Beh-REB) 09-Jun-2021

Certificate of Approval

Application ID: 2672

Principal Investigator: Colin Laroque

Department: Department of Soil Science

Locations Where Research
Activities are Conducted: Canada

Student(s): Julie Mullen

Funder(s):

Sponsor: University of Saskatchewan

Title: Creating Wise Practices Model for Indigenous Protected and Conserved Areas

Approved On: 08-Jun-2021

Expiry Date: 08-Jun-2022

Approval Of: Behavioural Ethics Application

Appendix A: Invite email

Appendix B: Follow up email

Appendix C: Consent Form

Appendix D: Sample Questions

Appendix E: Confirmation of interview email

Appendix F: Edited recording email

Appendix G: Confirmation of withdraw email

Appendix H: Thank you for participating email

Acknowledgment Of:

Review Type: Delegated Review

CERTIFICATION

The University of Saskatchewan Behavioural Research Ethics Board (Beh-REB) is constituted and operates in accordance with the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TPCS 2 2018). The University of Saskatchewan Behavioural Research Ethics Board has reviewed the above-named project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this project, and for ensuring that the authorized project is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS

In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month prior to the current expiry date each year the project remains open, and upon project completion. Please refer to the following website for further instructions: <https://vpresearch.usask.ca/researchers/forms.php>.

***Digitally Approved by Robert Henry, Vice-Chair, Behavioural Research Ethics Board
University of Saskatchewan***

Participant Consent Form

I. Project Title: Creating Wise Practices Model for Indigenous Protected and Conserved Areas

II. Study Team

Principal Investigator: Colin Laroque, PhD PAg

Professor, School of Environment and Sustainability (SENS)

University of Saskatchewan

School of Environment and Sustainability (SENS)

Phone: (306) 966-2493

Email: colin.laroque@usask.ca

Student Researcher: Julie Mullen, Master of Environment and Sustainability Candidate

School of Environment and Sustainability

University of Saskatchewan

B.Sc. Agriculture

Email: j.mullen@usask.ca

III. Invitation and Study Purpose

This research project will conduct interviews with individuals who have experience with the planning and creation of Indigenous Protected and Conserved Areas in Canada. Your expertise will be an asset to the study and as such, you are being invited to participate. The interviews will help us to understand the resources available and where improvements are needed when creating a protected or conserved area.

IV. Study Procedures

Should you decide to participate in this study, you will have the opportunity to book a one-hour audio or video conferencing call or phone call with the student via email.

During the interview, you will be asked to answer a set of questions from an interview guide.

This will help to extract critical information, but the conversation is meant to be dynamic and based on your professional experience and knowledge. These interviews will be audio and video recorded and saved to the student's University of Saskatchewan One Drive account.

You will be emailed a copy of this recording within one week of the interview for your review. You will be given one week after receipt of recording to make and submit any edits to j.mullen@usask.ca. If after one week, the student does not receive any edits from you, we will assume you consent to us using the recording as data in the study.

Please note that audio recording is mandatory, but if you do not wish to be video recorded, you may opt to have your camera off during the interview. We also recommend that you take this interview in a private area. The interviewer will also be conducting the interview in a private office. Finally, any reports or supplementary materials that you feel would be beneficial to

the study will remain confidential and will not be shared outside of the study team for any other purposes.

V. Study Results

There is a possibility that the results of this study will be published in academic journal articles. Should publishing be pursued, you will be informed, and you will have the opportunity to review the article to confirm that no identifying information is disclosed. A four-week period will be afforded for your review from the time you receive a digital copy of the article.

VI. Potential Risks of the Study

There are no foreseeable risks to your participation in this study. The questions are intended to extract information to develop an understanding of the current resources available and recommendations about Indigenous Protected and Conserved Areas (IPCAs) in Canada. We hope to compile relevant information to build practical recommendations for other communities and management teams attempting to create or plan an Indigenous Protected and Conserved Areas (IPCAs). Should you decide to participate in the study, you are not required to answer any or all interview questions, and your identity will be protected.

VII. Potential Benefits of the Study

This study will provide you with an opportunity for your professional knowledge and experiences to help inform and characterize the need for resources around the creation and planning of Indigenous Protected and Conserved Areas (IPCAs) in Canada. These resources can assist in the planning and creation of Indigenous Protected and Conserved Areas (IPCAs), have potential to reduce timeframes and reduce biodiversity loss.

VIII. Confidentiality

Please review Zoom's privacy policy

(<https://zoom.us/privacy#:~:text=Zoom%20uses%20customer%20content%20only,may%20choose%20to%20share%20information.>) for a full description of how your confidentiality will be protected using Zoom's audio/video conferencing system. By consenting to this study, you are consenting to use Zoom. If you have any questions do not hesitate to send your concerns to j.mullen@usask.ca. If another videoconferencing software program is used as a preference, the student will email the privacy policy of that software program to you to receive your consent.

The study team will protect your confidentiality by keeping a Master List of Participants using code. Any personal information you provide in the interview, such as your name, contact information, job title, professional registration status, degree and university will be written on a physical piece of paper next to your code. There will only ever be a single copy of this Master List and it will never be digitized. Only the study team (named in Section II) will ever have access to the Master List. The Master list will be kept secure for five years with the Supervisor, Dr. Colin Laroque.

When the recording becomes available, Julie Mullen will immediately remove any personal information and name the recording with the code from the Master List. Similarly, for the final report, and the (potential) published journal article, all personal information will be withheld, and the only identifier will be the code.

All recordings and documents related to this study will be stored in a password protected One Drive folder linked to the University of Saskatchewan's server. The folder will be accessible exclusively to the study team for the duration of the study. The final report will be available to the study team as well as Jim Robson, Ph.D. and David Natcher, Ph.D. who are members of Julie Mullen's graduate committee.

When this study finalizes in December 2021, the only raw data retained will be the final recordings, identified by code, and the paper Master List. Recordings and documents related to this study will be stored by the Principal Investigator for five years. The Master List will move from Julie Mullen's custody to the Principal Investigator's custody by Canada Post registered and expedited mail, stored in a locked safe at the Principal investigators office.

The study team will ask your permission before using the research data for any other project other than the one described in this document.

IX. Right to Withdraw

Your participation is voluntary, and you may answer only those questions which you are comfortable with. You may withdraw from the research project for any reason, within four weeks of the interview without explanation or penalty of any sort. For any pre-existing professional relationships: whether you choose to participate or not will not affect your position (e.g., employment, academic status, access to services) or how you will be treated by the study team.

Should you wish to withdraw at any point for up to four weeks from the date of the interview, you may email j.mullen@usask.ca with your decision. Julie Mullen will then permanently delete all data (if collected) and notify the study team of the participant's decision. You will receive a thank you and a letter confirming your withdrawal once the procedure is complete.

X. Point of Contact for Questions or Concerns:

If you have any questions, comments, or problems, please contact any member of the study team by email.

This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office: (email) ethics.office@usask.ca; (phone) 306-966-2975; and out of town participants may call toll free 1-888-966-2975.

XI. Pre-Existing Relationship Transparency (if applicable)

If a member of the study team is already known to you, please characterize that relationship, including for how long you have known that member of the study team:

Please specify to which study team member this relates to:

XII. Participant Consent and Signature

Your participation in this study is entirely voluntary. You have the right to refuse to participate in this study. If you decide to participate, you may choose to withdraw from the study up to four weeks from the date of the interview without giving a reason.

I read and explained this consent form to the participant before receiving the participant’s consent, and the participant had knowledge of its contents and appeared to understand it.

Name of Participant *Researcher’s Signature* *Date*

Sample Questions:

1. What motivated the community to create an IPCA?
2. Where did the community initially search for help when creating an IPCA?
3. What resources did the management team use to move their idea to concept?
4. What resources did you find to be the most helpful when creating an ICPA?
5. What information do you think is missing from the resources available?
6. Were the resources difficult to find or comprehend?
7. What Federal Government agencies helped with the process or providing resources?
8. What Provincial/territorial government agency or department helped with the process or providing resources?
9. What challenges occurred during the process including access to scholarly information or library resources available?
10. What was the most time-consuming aspect of putting together the concept for the IPCA?
11. What advice would you give another community when trying to create an IPCA?