Paddling Together:

Co-Governance Models for Regional Cumulative Effects Management

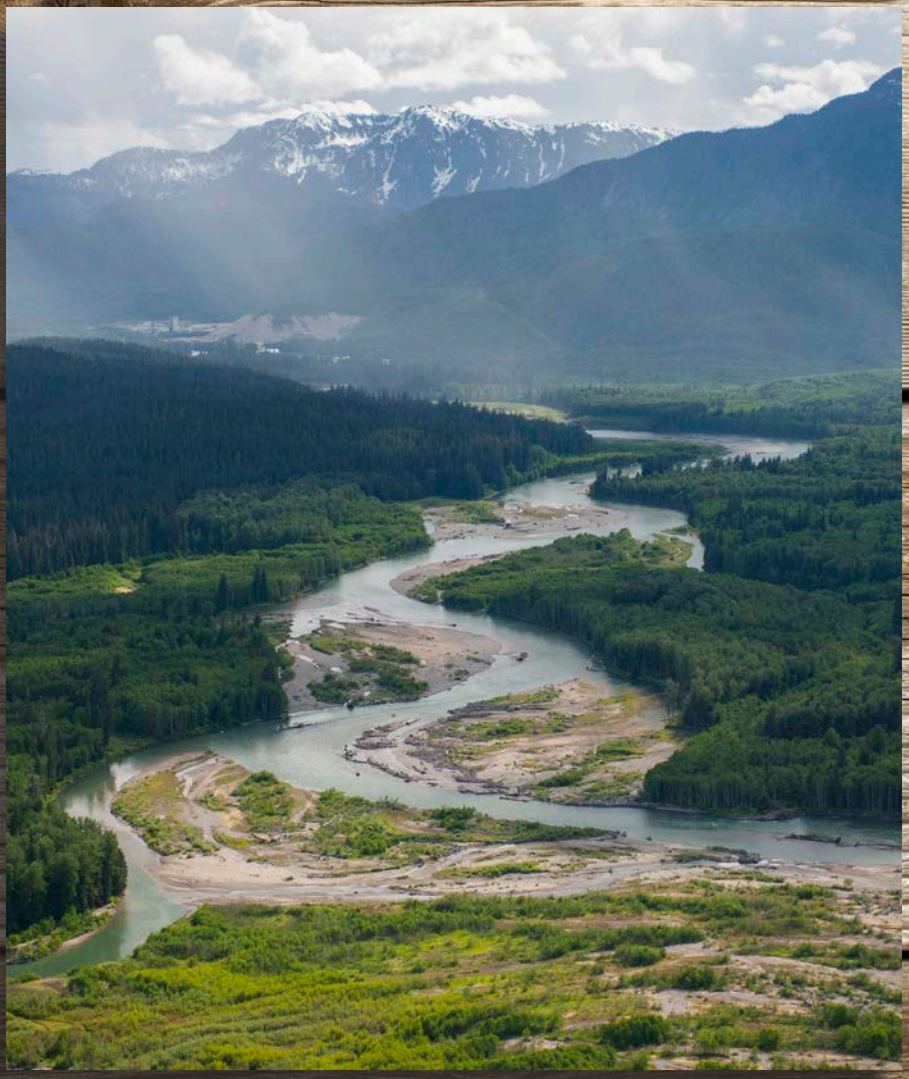

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Photo: Anton Bielousov

Executive Summary

Over the past twenty years, in communities from Moricetown to Mission we have heard Indigenous Elders express in their own words their lived reality that: "If the salmon goes, we go too."

As Nak'azdli Hereditary Chief Tsodih (Peter Erickson)[1] has said:

Fish is the backbone of all our systems from food to governance to relationships with our neighbours. I feel that salmon are a part of our DNA and that fishing is the very basis of our well-being. The importance of fish is still one of the things that not only sustains us but also gives us a sense of community and gives us the sense of being a nation.

In this sentiment, these men and women embody both their awareness of the dramatic decreases in salmon productivity and abundance over the past 100 years,[2] and their deep cultural connection to the species. They are not alone: commercial fishers and non-Indigenous communities have also felt substantial economic and social impacts from declining salmon stocks and related policy choices.[3] Yet salmon are only one element of our environment that is suffering from the cumulative effects of unsustainable resource development, climate change and other human-caused impacts on land, air and water over time.

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No one decision or project brought us to this point. Rather, the combined effect of hundreds of thousands of different approvals, licences and unpermitted activities have combined over time to degrade our natural life support systems – the web of life that we are part of, and depend upon, to sustain our cultures and economies. In the midst of all this activity, no one has had the clear responsibility and capacity to look after the "big picture," and we are beginning to pay the price.

This paper draws on British Columbia's experience to better understand the legal framework for cumulative effects management in Canada today, the challenges and opportunities it presents, as well as potential solutions. Building from the ground up – looking at best practices and models from around the world – we examine the key elements of cumulative effects management and examples of approaches that could help get Canada back on track if implemented in federal, provincial and Indigenous law. We focus on solutions that move beyond reactive, proponent-driven project-based assessment and operational permitting, to focus on the big picture at a strategic and regional level.

Our approach is integrative, examining Indigenous, Canadian, provincial, local government and common law, as well as the full cycle of cumulative effects management – from strategic and regional assessment and planning; to tenuring, project assessment and permitting; to monitoring, enforcement and adaptive management.

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In particular, we examine options for:

- structuring collaboration between levels of government, including Indigenous governments, and between responsible agencies in the context of regional cumulative effects management;
- ensuring that Indigenous legal orders equally inform co-governance structures, including identification of decision-makers, decision-making processes, and relevant criteria for decision-making;
- integrating scientific and Indigenous knowledge into collaborative management of cumulative effects;
- engaging stakeholders and the public in the process of collaborative management of cumulative effects;
- giving effect to information, recommendations and decisions of collaborative management bodies; and
- funding collaboration in regional cumulative effects management.

Finally, we present a proposal for how different co-management processes and bodies could give effect to these learnings in Canada today. Ongoing work to develop a next generation environmental assessment law for Canada, and implementation of BC's Cumulative Effects Framework, provide opportunities to consider and implement our recommendations.

"There is now a collective understanding that environmental assessment must go beyond the evaluation of site-specific, direct and indirect project impacts to also encompass regional perspectives and considerations of the sources of cumulative environmental change, and to do so at the earliest stages of regional policy, plan, and program development and decision making." — Canadian Council of Ministers of the Environment[4]

"The solution lies in a fundamental shift from blind incrementalism and fragmented decision-making to an integrated system for managing land and resource use." — Canadian Institute of Resources Law[5]

1.0 What is Regional Cumulative Effects Management?

"Every year, the province of BC issues thousands of permits to use Crown land—permits to log, draw water from streams, build roads and pipelines, drill for oil, mine coal, or carry out a myriad of other activities. Currently, there are more than 250 000 active permits (including licences, leases, authorizations, etc.) in the province…. This occurred through a series of separate decisions rather than a coordinated effort in which the risks and benefits were understood." — BC Forest Practices Board[6]

Cumulative effects are "changes to the environment [or human well-being] that are caused by an action in combination with other past, present and future human actions."[7] Most resource management practitioners are familiar with the concept of cumulative effects in the context of environmental assessment, particularly under the *Canadian Environmental Assessment Act, 2012* (*CEAA 2012*), which requires consideration of "any cumulative environmental effects that are likely to result from the project [under assessment] in combination with other projects or activities that have been or will be carried out."[8]

However, cumulative effects management is about much more than environmental assessment. In fact a key purpose of cumulative effects management is to "zoom out" from project-level assessments in order to first approach planning and decision-making at a regional scale. In doing so, cumulative effects management can address the diverse array of activities, decisions and other factors that may affect a region over time, the full impacts of which could never be meaningfully assessed and managed on a project-by-project (or even industry-by-industry) basis. Interconnected values like water, wide-ranging species such as salmon, and large-scale impacts such as climate change link together in complex ways that can be better addressed by first focusing management activities on the "big picture" of the long-term well-being of ecosystems and communities in a region.[9]

Moreover, the "big picture" approach of cumulative effects management can

Photo: Jason Woodhead

provide a foundation for structuring co-management regimes that involve multiple jurisdictions with decision-making authority (including Indigenous governments) to work on issues of shared concern at the ecosystem or regional level. This is particularly important with regard to structuring co-management regimes that meaningfully recognize the decision-making authority of Indigenous peoples, a topic which will be returned to frequently in this paper.

Broadly speaking, the critical elements of cumulative effects management include the following:

1. Establishing strategic-level direction;
2. Assessing, making decisions about and regulating activities in a manner that ensures objectives are met (using a precautionary approach);
3. Ongoing monitoring and adaptive management (i.e., adjusting plans and actions based on outcomes of monitoring) to ensure objectives are met and provide ongoing learning.

Furthermore, these elements must be linked together by a supportive law and policy framework that ensures that they operate as an integrated system for managing land and resource use. These elements of cumulative effects management are discussed further below.

1.1 Establishing strategic level direction

Key aspects of establishing strategic level direction include:

- Identifying valued components of the environment and human well-being;
- Identifying management targets and thresholds for valued components based on best available science and Indigenous law and knowledge;
- Scenario analysis;
- Strategic land use, watershed or marine spatial planning;
- Establishing measurable, legally binding management objectives for valued components.

1.1.1 Values and valued components

Historically, laws about land and resource management in BC were designed to facilitate the extraction, use and export of natural resources. For example, many of BC's rules about land and water use are embedded in laws focused on specific resource extraction industries (e.g., *Forest and Range Practices Act*, *Oil and Gas Activities Act*, *Mineral Tenure Act*, *Mines Act* etc.). This approach has contributed to fragmented decision-making that fails to address cumulative effects.

Bringing a cumulative effects lens to resource management in Canada will, in effect, mean turning this approach on its head: placing the focus of assessment and management first and foremost on the needs of the land, water and people, and asking how past, present and future resource use affects them. Cumulative effects management thus involves first identifying the rights and values that need to be

Photo: Tyler Batty

protected, and in turn the attributes of those rights or values (often called "valued components") that can be measured, managed and maintained over time to ensure the integrity of the value or right. For example, when considering human health, valued components might include particular traditional foods of Indigenous peoples.

Some values will be important to all Canadians, while others may be specific to a region or an Indigenous people.

1.1.2 Identifying management targets and thresholds for valued components, based on best available science and Indigenous law and knowledge

We cannot overstate the importance of incorporating best available science and Indigenous law and knowledge in the process of establishing management objectives. The difference is dramatic and telling between land use plan outcomes in BC that were created with Indigenous nations and informed by independent science and Indigenous knowledge, versus those that occurred with minimal Indigenous involvement under earlier policy caps on the level of protected areas and biodiversity protection. For example, as a result of legalization of Strategic Land Use Plan Agreements with Coastal First Nations in the Great Bear Rainforest, approximately 38 percent of the region is now covered by various protected area designations (and fully 85 percent of the forested area in the region is off-limits to commercial logging), versus the 12 percent protected area cap imposed upon regional land use plans from the 1990s.[10] While social choice decisions will always be required as

information about scientific thresholds is translated into policy and legal direction, it is essential that the relative risk of the choices we make is clear, and where possible that we manage to low risk targets for valued ecosystem components.[11] Upholding Indigenous decision-making authority and legal requirements also needs to be a central part in this process.

1.1.3 Scenario analysis and strategic land use, watershed or marine spatial planning

One of the most profound shifts in moving to a regional cumulative effects management approach is that it involves establishing not just conditions on particular projects but also cumulative limits on impacts to a given value within a region. This will require not just identifying measurable low risk management targets for valued components based on best available science and Indigenous legal requirements but finding a coherent way to apply these through time and space and to legally establish these management objectives so that they provide direction for future decision-making and permitting.

In the literature on cumulative effects management, two tools are frequently identified as highly valuable for doing so: strategic level planning and scenario analysis.

Multi-scale strategic land use planning is familiar to British Columbians. The

Photo: Andrew Wright

variety of reasons why it has failed to more effectively manage cumulative effects in BC are discussed elsewhere in this paper. The acknowledged need for improved mechanisms for managing cumulative effects has the potential to be a driver for updating and strengthening strategic land use direction in BC, while building on the existing foundation of twenty years of planning. One of the most powerful catalysts for doing so is that the legal duty on the Crown to deal honourably with constitutionally protected Aboriginal title and rights, in the context of land use planning remains outstanding in most areas of the province.

If strategic level planning allows us to identify what needs to be left behind on the land (or protected on the water in marine ecosystems) to sustain valued components (e.g., desired levels of old growth retention and where old forest reserves should be located), scenario analysis is a tool that allows us to begin to grapple with the desired pace and scale of development over time, as well as the desired mix of development opportunities.

In scenario analysis, various future development scenarios are identified so that potential cumulative effects of different scenarios on valued components can be assessed and compared, desired futures for those valued components identified, and choices ultimately made about how to achieve those desired futures. The goal is not to predict the future but instead to identify scenarios that represent various sets of events that might reasonably take place[12] and pathways for achieving desired outcomes. Scenario analysis has the potential to allow decision-makers and communities to identify future scenarios that could lead to the greatest, mutually reinforcing benefits with respect to ecological and social values, and to explicitly address trade-offs that exist between values and over different time scales.[13]

1.1.4 Establishing measurable, legally binding management objectives

Ultimately, effective cumulative effects management will depend on our willingness as a society to establish and enforce limits on specified human activities that contribute to cumulative environmental effects, before it's too late.[14]

BC is no stranger to the establishment of legal resource management objectives. A mechanism has long existed to legalize strategic land use plans through land use objectives that must be reflected in operational forest planning, and a limited scheme now exists requiring consideration of "government's environmental objectives" in permitting decisions for the oil and gas industry. However, as discussed further in section 3.3 below, BC presently does not establish targets and objectives that apply across multiple resource industries and uses, limiting the effectiveness of these objectives for cumulative effects management. The absence of a mandatory legal mechanism to link land use plans (and resulting legal objectives) with the environmental assessment process is particularly noteworthy. Furthermore, arbitrary policy caps on levels of protected areas and protection of biodiversity and endangered species habitat have limited the ecological impact of many historically established objectives (as did the failure to consider climate change when most existing objectives were established). Finally, the absence of meaningful

government-to-government engagement with Indigenous peoples in many areas meant that most existing legal objectives were established with little regard for Indigenous governance rights, laws, and knowledge.

1.2 Assessing, making decisions about and regulating activities in a manner that ensures objectives are met

Much of the heavy lifting with respect to cumulative effects management lies at the strategic level. However, to be effective as a tool for cumulative effects management, such strategic level direction must be integrated into a legal and policy framework that links plans and objectives to actual on-the-ground decisions about land and water use, e.g., project-specific environmental assessment, tenuring and resource approvals, as well as the establishment of harvest levels. To be effective, management objectives need to be equally applicable across resource sectors, applied at the appropriate scale, and consistently enforced and monitored. Furthermore, where there may be imperfect information on the potential impacts of decisions or activities, a large precautionary "buffer" needs to be applied around assessment and decision-making (i.e. making decisions that err on the side of caution) to ensure management objectives are met.

Coherent application of management objectives will require both removing existing legal barriers to cumulative effects management (e.g., the statutory free ride that mining activities currently get from land use objectives established to legally implement land use plans in BC),[15] and introducing new legal tools to ensure that the decision-making and activities of all agencies and actors must be consistent with meeting management objectives.

Photo: Joffre Lake, Lindsay Borrows

1.3 Monitoring and adaptive management (i.e., adjusting plans and actions based on outcomes of monitoring)

A foundational step in cumulative effects management is understanding baseline conditions, since the impacts of past actions on these may have already been profound. Work to understand the historic range of variability in ecosystem conditions for use as a base case has occurred in many areas of the country and should be a research priority elsewhere.

Once plans have been established or projects approved, ongoing monitoring will be essential to determine the effectiveness of our actions at maintaining valued components over time. Part of this process should involve identifying "indicators of gradual change and early warning signals of loss of ecosystem resilience and possible threshold effects."[16]

Perhaps most importantly, the results of monitoring should be used to make adjustments to plans, policies and management objectives in a process of ongoing adaptive management. This process can also provide a basis for continuous reflection and learning among those involved in cumulative effects management, which is important in building the collaborative working relationships necessary for co-management arrangements.[17]

It should be noted, however, that monitoring and adaptive management cannot "fix" impacts from decisions or projects of such a scale or nature that they inherently jeopardize the achievement of management objectives. This emphasizes the need to ensure that management objectives are consistently applied in a region, using a precautionary approach, when decisions are initially made. Monitoring and adaptive management "is a means of addressing uncertainty, not a mitigation measure, and is not appropriate where there is risk of irreversible or irreparable harms. Adaptive management is not feasible in the absence of adaptable design, and is not a replacement for application of the precautionary principle."[18]

2.0 Introduction to Governance in the Context of Regional Cumulative Effects Management

If the elements of cumulative effects management identified above are what needs to be done to secure our collective future, the next question is: Who should be responsible for ensuring that they are implemented? This question is fundamentally one of governance. At the broadest level, two overarching themes emerge in this paper on the question of who must be involved in cumulative effects governance. First, based on the recognition that multiple jurisdictions, including Indigenous nations, have authority related to cumulative effects management in a given region, governance structures must enable co-governance through collaborative decision-making among the various authorities. Second, those with special knowledge and/or those who stand to be impacted (broadly understood) by management decisions should play a key role in informing cumulative effects governance.

Governance in this context "is broadly understood as the exercise of authority over the environment through the processes and institutions by which decisions are made."[19] While historically the assumption of many was that Crown governments would look after these matters, a focus on "governance" more broadly, and not merely Crown government decision-making, "reflects the fact that governments no longer are, and in many cases cannot be, the sole source of environmental decision-making authority."[20]

In what has been characterized as a "global shift that is taking place around the world" many jurisdictions are beginning to explore what a shift from "government to governance" might look like.[21] The pressures and demands of grappling with cumulative environmental change present fertile ground for doing so. In a world where change and uncertainty is the norm, where resource values must be addressed at multiple spatial scales and in the face of variability in ecological and social systems, we need to ensure that our institutions and processes for environmental decision-making are up to the task.

There are not only ecological drivers but also legal and social ones for doing so. There is growing recognition that Crown decision-making structures must be reshaped so that the legal orders and governance systems of Indigenous peoples play a key role.[22] The courts have also made it abundantly clear that the Crown can no longer make unilateral decisions about resources that potentially impact Aboriginal title and rights.[23] More generally, it is increasingly accepted that "[t]he knowledge needed to deal with complex social-ecological systems takes different forms (e.g., scientific and local) and is held by actors outside of governments."[24]

Through a governance lens it is also apparent that the process of making environmental decisions is closely connected to substantive outcomes. Indeed

Photo: Sarah and Michael Reid

"[t]he normative dimension of environmental governance is typically referred to as sustainability."[25]

So what is "good" environmental governance? Based on a systematic review of the adaptive co-management literature, researchers from Brock University, Stockholm Resilience Centre and the University of Waterloo suggest that it is "characterized by polycentric institutions, legitimacy and transparency, empowerment and social justice, diversity of participating actors, and where multilevel institutions are matched with social-ecological dynamics."[26]

The notion of "multi-level governance" is particularly important when we seek to "facilitate learning and adaptation in complex social-ecological circumstances."[27]

> *Such arrangements should connect community based management with regional/national government-level management, link scientific management and traditional management systems, encourage the sharing of knowledge and information, and promote collaboration and dialogue around goals and outcomes. Governance innovations of this type can thus build capacity to adapt to change and manage for resilience.*[28]

On the issue of cumulative effects management, BC has a considerable task ahead of us. As the Forest Practices Board has noted, not only is there no legal framework for managing cumulative effects in BC, but "to the extent that there is an issue, there is no one to tell—there is no decision maker when it comes to cumulative effects of multiple developments."[29] This failing is emphasized in a 2015

Photo: Bubba55

BC Auditor General report, which finds that BC's "current legislation and directives do not effectively support the management of cumulative effects."[30] While BC has more recently introduced a cumulative effects policy framework, as addressed later in this paper the policy has no legal mechanism requiring that its outcomes be integrated into decision-making. In the words of the BC government: "The cumulative effects framework does not create new legislative requirements; rather it informs and guides cumulative effects considerations through existing natural resource sector legislation, policies, programs and initiatives."[31]

Furthermore, if experience suggests that successfully managing complex systems will require multi-level governance institutions that are matched with the socio-ecological context, BC's resource management system contains a particularly glaring hole at the regional scale. Cumulative impacts on many values of critical importance, from water to iconic far-ranging species like caribou and salmon, must be managed at a scale beyond that of an individual project, in a governance structure that is legally integrated into decision-making across resource sectors and coordinated with federal and Indigenous jurisdictions. Currently, BC does not have or has not fully implemented the processes or institutions to do so.

In this paper we have drawn on legal research about best practices from around the world in collaborative decision-making to generate options for new institutional arrangements that, in the context of regional cumulative effects management, address issues such as how to best:

- structure collaboration between provincial, federal and Indigenous governments/technical staff, and between governmental and non-governmental actors;
- integrate best available information, including independent science and Indigenous knowledge, into decision-making; and,
- take into account the diverse legal and policy regimes that are relevant to assessing and monitoring cumulative effects (i.e., which by definition cross-cut multiple resource specific legal frameworks).

3.0 Legal Context for Regional Cumulative Effects Management

We begin by offering an overview of the legal context for regional cumulative effects management, which cross-cuts Indigenous, constitutional, federal, provincial and municipal law as well as rules about planning, environmental assessment, tenuring, zoning, permitting, and monitoring.

3.1 Constitutional law context

Constitutional jurisprudence in Canada provides an important foundation for understanding why the federal government, provinces and Indigenous nations all have an important role to play in regional cumulative effects management. Furthermore, it is arguable that the Constitution's recognition and protection of Aboriginal and treaty rights can in fact require the establishment of governance structures to meaningfully manage the cumulative effects of human activities.

3.1.1 Division of powers between the federal and provincial governments

While the *Constitution Act, 1867* enumerates various heads of power to be exercised by Canada and the provinces, respectively, the Supreme Court of Canada has underlined that: "It must be recognized that the environment is not an independent matter of legislation under the *Constitution Act, 1867* and that it is a constitutionally abstruse matter which does not comfortably fit within the existing division of powers without considerable overlap and uncertainty."[32] In foundational cases such as *Friends of the Oldman River Society v Canada (Minister of Transport)* and *R v Hydro Québec*, the Supreme Court of Canada clarifies that "…the Constitution should be so interpreted as to afford both levels of government ample means to protect the environment while maintaining the general structure of the Constitution."[33] As such, if a provision relating to the environment falls within the parameters of one or more of the powers assigned under the Constitution to the enacting body (whether Canada or a province), then it will generally be considered constitutionally valid.

Both the federal and provincial governments thus have an important role to play in cumulative effects management, the very purpose of which is to coherently address a variety of issues at the regional level, in a manner that necessarily engages both federal and provincial jurisdiction.

3.1.2 Aboriginal title and governance rights

Section 35 of Canada's Constitution recognizes and affirms Indigenous peoples' pre-existing "Aboriginal and treaty rights", which the courts have interpreted to include Indigenous peoples' governance and management authority in their territories. In this regard, constitutional recognition of Indigenous governance and decision-making authority may flow from Aboriginal title, or governance rights may be independently recognized.

Photo: Jamie McCaffrey

In *Tsilhqot'in Nation v British Columbia*, the Supreme Court of Canada recognized the Tsilhqot'in Nation's Aboriginal title using a territorial approach, and affirmed that:

> *Aboriginal title confers on the group that holds it the exclusive right to decide how the land is used and the right to benefit from those uses, subject to one carve-out — that the uses must be consistent with the group nature of the interest and the enjoyment of the land by future generations.*[34]

This includes "the right to pro-actively use and manage the land."[35]

Independently of Aboriginal title, Indigenous governance may also be constitutionally recognized as a right to regulate with regard to a particular issue, where pre-contact regulation by Indigenous peoples is an integral and defining feature of the culture, considered "in light of the specific circumstances of each case and, in particular, in light of the specific history and culture of the aboriginal group claiming the right."[36]

It is important to note that the Indigenous decision-making authority inherent in Aboriginal title or governance rights does not depend on a court declaration or Crown acceptance in order to be recognized and protected under the Constitution. Rather: "All that a court declaration or Crown acceptance does is to identify the exact nature and extent of the title or other rights."[37]

Failure on the part of the Crown to recognize and respect Indigenous governance and management authority in its decision-making processes exposes the resulting Crown decisions to legal risk and uncertainty, including quashing of approvals following judicial review or title and rights litigation.[38]

Thus the need for Crown governments to better recognize Indigenous governance, both as a matter of complying with the Constitution and ensuring predictability and validity of Crown decisions, provides a compelling rationale for establishing regional co-management approaches that address the cumulative impacts of human activities through a process of collaborative decision-making.

Moreover, the "big picture" approach of regional cumulative effects management, which focuses on ensuring the long-term well-being of ecosystems and human communities in a region, is consistent with the Supreme Court of Canada's emphasis that use of Aboriginal title land must ensure the enjoyment of the land by future generations.

3.1.3 Treaty rights

A further rationale for implementing regional cumulative effects management approaches is that failure to do so may constitute a violation of the constitutionally-protected treaty rights of Indigenous peoples. This argument is currently being pursued in at least two cases.

The Beaver Lake Cree Nation, which is an adherent to Treaty 6, is arguing before the Alberta courts that the Crown has breached Treaty 6 (and the Crown's fiduciary duty) by granting approximately 19,000 authorizations in their territories for oil

and gas, forestry, mining and other activities, the cumulative effects of which have prevented the Beaver Lake Cree from exercising their rights (such as hunting, trapping and fishing) in a manner guaranteed by the Treaty. In the words of the Alberta Court of Queen's Bench:

> *The Plaintiffs assert that an obligation arises from Treaty 6 to manage the Cumulative Effects of developments (Cumulative Effects). More specifically, the Plaintiffs allege that their Treaty Rights include or impose an obligation on the Crown to discharge certain duties consistently with, and respectfully of, the Crown's promise that it would not interfere with or deprive BLCN of the meaningful exercise of those Rights in perpetuity, including managing wildlife populations, habitats and water resources to ensure the continuing meaningful exercise of the Rights (Management Duties). Once it became reasonably evident that the Plaintiffs' meaningful exercise of their Treaty Rights had been or will be compromised, the Crown had a duty to avoid further compromising, and to take active steps to restore, the Plaintiffs' meaningful exercise of their Treaty Rights.*[39]

Attempts by Canada and Alberta to strike some or all of Beaver Lake Cree's Statement of Claim were largely unsuccessful.[40]

Blueberry River First Nation, which is an adherent to Treaty 8, has brought a similar case in the BC Supreme Court, which the court has summarized as follows:

> *BRFN members have treaty rights to use their traditional territory for hunting, fishing and other traditional activities, but BRFN says the cumulative effect of industrial development has made or will soon make it impossible to meaningfully exercise those rights. It has commenced an action seeking declarations that the Crown has breached treaty obligations as well as interim and permanent injunctions to prohibit the Province from doing or permitting any activities that amount to a further breach.*[41]

The Court did not grant Blueberry River First Nation's "test case" application for an injunction against particular timber harvesting activities pending trial of the cumulative effects matter, on the basis that "[t]he public interest will not be served by dealing with the matter on a piecemeal, project-by-project basis."[42] However, the underlying claim continues and the Court noted that:

> *BRFN may be able to persuade the court that a more general and wide-ranging hold on industrial activity is needed to protect its treaty rights until trial. However, if the court is to consider such a far-reaching order, it should be on an application that frankly seeks that result and allows the court to fully appreciate the implications and effects of what it is being asked to do.*[43]

Such cases provide a clear impetus for establishing strong cumulative effects regimes to manage human development activities in a manner that is comprehensive enough to prevent violations of Aboriginal and treaty rights, and provide a higher degree of confidence and certainty in Crown decision-making.

3.1.4 The duty to consult

In two landmark 2004 cases, *Haida Nation* v *BC (Ministry of Forests)*,[44] and *Taku River Tlingit First Nation* v *BC (Project Assessment Director)*[45] the Supreme Court of Canada confirmed that the Crown may not make unilateral decisions about the use and management of natural resources, even if Aboriginal title and/or Aboriginal rights have not been formally recognized by the Canadian courts or addressed in a treaty. Instead, "depending on the circumstances…the honour of the Crown may require it to consult with and reasonably accommodate Aboriginal interests pending resolution of the claim."[46] Similar duties arise when treaty land is "taken up" for non-Indigenous use (i.e., for "settlement, mining, lumbering, trading or other purposes") as an exception to the constitutionally protected right to "pursue their usual vocations of hunting, trapping and fishing throughout the tract surrendered" as enshrined in Treaty 8 and other numbered treaties.[47]

If the Crown fails to uphold these duties in making environmental assessment, tenuring or resource approval decisions, a variety of remedies are possible, from injunctions, to damages, to setting aside a permit or approval that has been granted. However, by far the most common is a declaration that the Crown failed to honourably consult and/or accommodate the Indigenous nation and must do so.

The courts have now had some opportunity to consider what these duties mean in the context of cumulative effects. In particular, they have grappled with how the duty to consult and accommodate applies in the context of a legacy of historical impacts on an Indigenous nation's territory, and with respect to future development.

First, the Supreme Court of Canada has held that past wrongs do not themselves trigger the duty to consult unless the Crown is considering conduct or a decision today that has a potential for adverse impacts on Aboriginal title and/or rights.[48]

The BC Court of Appeal has held that if the Crown *is* contemplating conduct that could have negative impacts on title and/or rights, then the "historical context is essential to a proper understanding of the seriousness of the potential impacts" on the Indigenous nation's rights.[49] However, with respect to consultation on specific operational approvals, the courts have stopped short of requiring a holistic or comprehensive approach to accommodation, emphasizing that the focus of consultation is the impact "of the *current* decision under consideration"[50] and that the Crown is not obliged "to accommodate the effects of prior impacts."[51] Thus in the context of the drastically reduced Burnt Pine caribou herd in West Moberly territory, the obligation on the Crown was said to be to consult regarding protection of remaining caribou but not necessarily recovery planning or restoration.[52]

The courts have been careful to find, however, that this does not mean that past impacts are without remedy – only that this remedy is not an order that consultation is required. An example of another potential remedy would be damages (e.g., a financial compensation).[53]

On the other hand, the BC Court of Appeal has confirmed that the potential future impacts of a present land and resource decision may be considered in consultation on the current decision (e.g., considering future impacts of mining activities beyond the immediate consequences of a mining exploration permit application).[54]

While judicial review in the context of specific operational approvals or Crown decisions has not yielded a direct trigger for regional cumulative effects management, there are nevertheless a number of legal drivers in this direction that bear noting:

- The uncertainty and risk created by potential litigation surrounding multiple tenure and approval decisions (as Indigenous nations attempt to deal with cumulative effects of different forms of development on their title and rights) has created an incentive for all parties to consider a more comprehensive (and potentially more efficient) approach to cumulative effects management. It is certainly a key factor behind current policy development in this area.
- In particular, when a nation seeks an interim injunction to prevent resource use from occurring while they are in the court challenging the permit approving it, cumulative effects are relevant to determining whether the nation will suffer irreparable harm if the activity proceeds.[55]
- The Supreme Court of Canada has confirmed that consultation must occur at higher, more strategic levels of planning for the use of resources,[56] acknowledging that without this, consultation at the operational level may be ineffective.[57] Regional cumulative effects assessment and management squarely falls within this category as it has been elaborated by the courts.
- The Crown is expected to use its legislative authority to uphold its honour to Indigenous peoples, and may not hide behind provincial statutes to circumvent its duties. As noted by the Supreme Court of Canada: "The government's legislative authority over provincial natural resources gives it a powerful tool with which to respond to its legal obligations."[58]

In this manner the courts have clearly laid out a pathway in which the Crown can and should be removing legal barriers and legislatively enabling collaborative engagement with Indigenous peoples to address strategic-level planning for land and resource use, including legal tools required for regional cumulative effects assessment and management.

3.2 Indigenous law context

Indigenous nations have their own complex legal orders and governance systems that pre-date the arrival of European settlers and the importation of the common law system onto the land we now know as Canada. In the words of United States Chief Justice Marshall, later cited by Justice Hall of the Supreme Court of Canada in the seminal case of *Calder v British Columbia (Attorney General)*:

> *America, separated from Europe by a wide ocean, was inhabited by a distinct people, divided into separate nations, independent of each other and of the rest of the world,* ***having institutions of their own, and governing themselves by their own laws*** *[Justice Hall's emphasis].*[59]

These Indigenous legal traditions continue to have power and relevance for environmental governance today. The source of their authority comes not from recognition from the Crown, but rather from the inherent authority of the nation's own laws. Establishment of meaningful co-governance structures for regional cumulative effects management therefore requires that institutions be shaped as much by the laws of the Indigenous nations involved as by federal and provincial legal regimes.

3.2.1 What is Indigenous law?

Due to the diversity of Indigenous nations, the territory now known as Canada contains not one but rather multiple distinctive Indigenous legal orders.

The Cree legal scholar Val Napoleon posits that the term "legal system" may be used to describe a state-centred legal system where law is managed by legal professionals in legal institutions, that are separate from other social and political

Photo: Wallace Studios

During an All Clans Gathering regarding the Enbridge Northern Gateway proposal, Yinka Dene "hire" the federal delegates at the gathering as messengers, according to their legal protocol, to convey to the Prime Minister that the Yinka Dene have prohibited the project in their territories.

organizations. Canada relies on a legal system involving judges, lawyers, courts and tribunals. Napoleon contrasts the term "legal system" with the term "legal order" which she uses to describe law that is embedded throughout social, political, economic and spiritual institutions. Coast Salish peoples, for example, have traditionally relied upon a legal order in which law is inseparable from spiritual, social, political and economic domains of life.[60]

Similar to Napoleon's definition, Anishinabe legal scholar John Borrows explains that "[the] underpinnings of Indigenous law are … based on many sources including sacred teachings, naturalistic observations, positivistic proclamations, deliberative practices and local and national customs." Indigenous law can be accessed from a range of sources, including Elders and community knowledge keepers, published stories, oral histories and narratives, songs, ceremonies, language, dreams, the land, art, pots, petroglyphs, scrolls, and published anthropological and historical research.[61]

Chickasaw Nation member and legal scholar James Youngblood Henderson suggests that Indigenous laws are best accessed in the context of language, stories, methods of communication, and styles of performance and discourse because these are mediums that frame understanding and encode values.[62] These are the mediums used to communicate Indigenous law to the family and to the community, by conceptualizing values and good relationships. In the process of transmitting and negotiating Indigenous law, Elders (particularly those that are fluent in an Indigenous language) and other particularly knowledgeable community members will be the primary authorities for interpreting Indigenous jurisprudences.[63]

As both Napoleon and Borrows emphasize, Indigenous laws manifest themselves through social experiences that involve people communicating with one another about how to best conduct relationships and resolve disputes.[64] The maintenance and production of Indigenous law involves an ongoing process of negotiation, discussion and compromise. Underlying principles and shared understandings provide the framework in which these negotiations occur.

3.2.2 Indigenous law and decision-making

Indigenous legal orders involve not only substantive legal principles and a potential range of remedies applicable to pertinent issues, but also identify authoritative decision-makers and legal processes for arriving at decisions. These may (and in fact are likely to) vary widely between legal orders. Governance structures based on nations' own legal orders existed prior to the band council governance structure imposed by the *Indian Act*. Within some nations and communities, deep and ongoing tensions exist between the authority of the band council and the authority of decision-makers under a nation's own legal order. In other communities, tensions may be less under circumstances where, for example, hereditary leaders remain the primary decision-makers on land and resource matters and the Crown engages with them as such,[65] or if there has been what Napoleon calls a "legitimate process of change" whereby communities have been able to

adopt changes to their governance structures over time in accordance with their own laws.[66] In any case, co-management arrangements will need to address the question of legitimate decision-makers if they are to be consistent with Indigenous as well as federal and provincial law.

Indigenous laws and governance systems were adversely impacted by colonialism. Territorial displacement, language loss, residential schools, and the banning of important institutions of Indigenous law and governance all caused serious damage to Indigenous legal orders. As Napoleon cautions, we "cannot assume that there are fully functioning Indigenous laws around us that will spring to life by mere recognition. Instead, what is required is rebuilding..."[67] Many nations and communities are currently in the process of revitalizing their Indigenous laws in relation to aspects of environmental governance.[68] Co-governance initiatives that operate on a nation-to-nation basis may need to incorporate flexibility to accommodate the rebuilding work that a nation may be engaged in.

3.3 Statutory context – federal

At the time of writing, the federal government is undertaking a wholesale review of many of its key environmental laws,[69] providing an excellent opportunity for implementing significant federal reforms to support regional cumulative effects management and related co-governance structures.

The federal review stems in large part from public dissatisfaction with the repeal of the *Canadian Environmental Assessment Act* of 1995 and its replacement by *CEAA 2012*, which dramatically reduced the number of federal assessments (some 3000 were cancelled just when the *CEAA 2012* came into force), and generally narrowed the scope of those assessments that proceeded. The changes brought about in *CEAA 2012* were combined with changes to other statutes like the *Fisheries Act* and *Navigable Waters Protection Act* that mean fewer assessments are triggered.

Currently, if a project undergoes an environmental assessment under *CEAA 2012*, section 19(1)(a) requires consideration of:

> *the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project* ***and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out*** *[emphasis added].*[70]

This aspect of CEAA was one of the few that was not affected by the rollback of federal environmental laws. However, the existing CEAA 2012 requirement is limited because it confines consideration of cumulative effects to project-specific assessments, in which the focus, scope, resourcing and decision-making structure of the assessment are insufficient to meaningfully manage cumulative effects occurring

at a regional scale. Beyond project-specific environmental assessment, there is currently no requirement in Canadian law to conduct broad-scale assessment of the cumulative effects of multiple forms of development in a given region.

CEAA 2012 did introduce a discretionary provision for conducting "a study of the effects of existing or future physical activities carried out in a region."[71] The following was also added to the purposes of *CEAA 2012*: "The purposes of this Act are …(i) to encourage the study of the cumulative effects of physical activities in a region and the consideration of those study results in environmental assessments."[72] If they occur, such regional studies may be conducted in collaboration with other jurisdictions (e.g., a province). However, no legal mechanism is provided for implementing the results of such a study, and no such study has yet been conducted.[73]

At the policy level, the *Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals*[74] does provide for a limited form of "strategic environmental assessment" of policy, plans, or programs submitted to a federal Minister or Cabinet for approval, but is widely seen as an "ad-hoc exercise" whose results are rarely adopted by federal departments and agencies.[75] Indeed, reports of the Commissioner of Environment and Sustainable Development have demonstrated that the vast majority of assessments triggered under the Cabinet Directive are not being done, and where they are, in general they are not being done well.[76]

More promising is the policy development that has occurred around the concept of "regional strategic environmental assessment" or R-SEA. In 2009 the Canadian Council of Ministers of the Environment (CCME) released the publication *Regional Strategic Environmental Assessment in Canada: Principles and Guidance.* Intended to provide a common strategic framework for R-SEA, the R-SEA *Principles and Guidance* document defined R-SEA as: "a process designed to systematically assess the potential environmental effects, including cumulative effects, of alternative strategic initiatives, policies, plans, or programs for a particular region."[77]

In this guidance document, the CCME acknowledges that:

> *After more than thirty-five years of environmental assessment practice in Canada, there is now a shared understanding that an explicitly regional and strategic approach to environmental assessment is required – an approach that addresses the cumulative environmental effects of human development actions and provides direction for planning and development decision making beyond that which is possible in project-based impact assessment.*[78]

The overall objective of R-SEA is to inform the preparation of a preferred development strategy and environmental management framework for a region. A strategic assessment is one that ensures the full consideration of alternative options at an early stage when there is greater flexibility. In terms of decision-making, it asks "what is the preferred option?" and "what are the possible futures?" for a given region, instead of just attempting to predict what is most likely to happen.

In part 5 of this paper, we present options for multi-level institutions for cumulative effects management, which in part reflect the principles of R-SEA as well as the extensive work currently being undertaken through the federal environmental assessment review process to advocate for a "next generation" environmental assessment regime that includes integrated, tiered assessments starting at the regional and strategic level, based on co-governance relationships.[79]

3.4 Statutory context – BC

Because the division of powers in the Canadian Constitution places natural resources under provincial jurisdiction, BC's laws touch on a wide variety of matters relevant to cumulative effects management. BC's laws about natural resources grew up first and foremost around the policy objective of encouraging exploitation of our minerals, forests and other natural resources and securing associated economic and social benefits, and many of these laws date back to the early days of our province.

Only much more recently did BC's policy-makers begin to grapple with managing the environmental impacts of those activities. Throughout most of BC's history, holders of a variety of forms of resource tenures (e.g., tree farm licences, mineral claims, mining leases) functionally operated as the primary decision-makers when it came to resource planning. With increased environmental regulation came an

Photo: David Stanley

enhanced role for government, but one of the historical legacies of BC's many resource-specific statutes is the continued fragmentation of resource decision-making between ministries and agencies, as well as overlapping administrative boundaries that rarely correspond to meaningful ecological units.

Tools like strategic land use planning and environmental assessment, introduced in the past quarter century, have created opportunities to more proactively assess and plan, as well as for public involvement. As discussed below, some mechanisms do exist to legalize land use plans through the establishment of legal management objectives for the plan area or zones within it.[80] Yet even with these tools in place, as the Forest Practices Board put it, "the cumulative effect of natural resource development remains largely unknown and unmanaged." Why is that?

The answer lies in the finer points of BC's laws regarding legalization of land use plans and environmental assessment. Legal mechanisms to link strategic land use objectives to on-the-ground decision-making in BC are either non-existent, discretionary or full of loopholes, thus presenting a major barrier to cumulative effects management.

Table: Legal barriers to linking strategic land use direction with on-the-ground decision-making in BC

Entire industries exempted from objectives	When objectives do apply, loopholes undermine effectiveness
Small projects with potential cumulative impacts exempted from objectives	Discretion (i.e., it's legally possible to do the right thing but not required)

3.4.1 Strategic land use plans in BC

Existing legal objectives for resource management in BC are the legacy of over twenty years of strategic land use planning. In BC, strategic land use planning is understood to include regional, sub-regional and landscape level plans, as well as tactical plans at a watershed level (as distinct from operational plans and approvals for specific resource activities). Most of the provincial land base is covered by large regional or sub-regional plans, which determined areas to be added to the protected areas system, and set objectives for resource management zones outside of protected areas.[81] The Province's Biodiversity Strategy also provided for landscape-level planning for priority biodiversity values, such as old growth forest. Some statutes also provide for default objectives in the absence of "higher level" strategic planning. More detail on the process and content of previous strategic land use planning in BC is covered in section 4.4 of this paper.[82]

While BC is one of the few jurisdictions in the world to have undertaken this form of land use planning, there remain significant gaps and barriers that present challenges from the perspective of cumulative effects management. For example:

- For close to a decade it was provincial policy to design land use planning processes as "multi-stakeholder" negotiations; thus most strategic land use plans in BC were completed without government-to-government engagement with Indigenous peoples.
- Provincial policy limits on how much of the land base could be set aside from development were political, subjective, and, in many cases, limited the extent to which plan outcomes reflected best available science and Indigenous knowledge.
- Provincial laws did not require strategic land use plans to consider climate change in identifying management objectives, either in terms of its impact on ecological and human values, or with respect to forest carbon management.[83]

As a result, even if existing legal objectives were fully enforced (see below), the overall level of development in a given region may still cause "valued components" to be significantly damaged or diminished, or see Indigenous peoples' inherent title and rights compromised.

There are notable exceptions regarding legal objectives in some geographic areas. In particular, government-to-government negotiations have led to strategic land use agreements between the Crown and Indigenous peoples in several nations' territories that have resulted, or may result, in more robust legal objectives.[84]

In addition to issues associated with the substantive content of legal objectives established to implement land use plans, there are also legal barriers to their effective use in the context of cumulative effects management. In particular, land designations and management objectives flowing from strategic land use plans do not apply to all resource industries. Furthermore, even when objectives do apply, there is no legally enabled mechanism for coordinating decision-making between resource agencies and between provincial and Indigenous nations governments at a scale appropriate for the value in question. These barriers are discussed further below.

Legal mechanisms to implement strategic plan outcomes were initially designed to apply only to forest and range use,[85] and this basic approach remains constant today. The principal mechanisms for establishing management objectives flowing from land use plans apply to forest and range use under *Land Act* s 93.4, or the *Government Actions Regulation* to the *Forest and Range Practices Act*.[86] Even for these industries a number of loopholes and exemptions have been hardwired into BC's laws. For example, operational forestry plans only have to be consistent with the established legal objectives "to the extent practicable," a test which brings into play economic issues as well as other discretionary factors.[87] Additionally, a number of regulatory provisions insulate some areas of the province from compliance with land use plan designations and legal objectives, either completely or for a period of time following plan implementation.[88] In many cases, this can mean up to four years of further unconstrained logging inconsistent with strategic land use plans even once they are legally implemented.

Although 2003 amendments to the *Land Act* created a mechanism through

which designations and legal objectives could be made to apply to resource development other than forestry and range use, this section (s. 93.1) has never been brought into force. Furthermore, section 14(5) of the *Mineral Tenure Act* explicitly provides that land use designations or objectives do not apply to mining.[89]

More recently, regulations under the *Oil and Gas Activities Act* have established "government's environmental objectives" for values like water and old growth,[90] although many of these simply track relatively low bar default *Forest and Range Practices Act* requirements. Before issuing a permit to allow oil and gas activities, the Oil and Gas Commission must "consider" these environmental objectives.[91] However the Oil and Gas Commission may also exempt a permit holder or a person from "government's environmental objectives" (e.g., from restrictions on oil and gas activities in old growth management areas and wildlife habitat areas) on any condition the Commission considers necessary.[92]

Perhaps most promising to date is the province's introduction of the *Water Sustainability Act*, which contains a number of potentially useful legal mechanisms for cumulative effects management in relation to water specifically. In particular, the Act enables the establishment by regulation of "water objectives for a watershed, stream, aquifer or other specified area" to sustain "water quantity, water quality and aquatic ecosystems," including the ability to require that the water objectives be considered and/or applied by decision-makers under other enactments.[93] It

Photo: Neil Ever Osborne

also provides potentially extensive powers for developing and implementing water sustainability plans, including the ability to require by regulation that a water sustainability plan be considered and/or followed by decision-makers under other enactments, even by limiting and/or imposing requirements on how such decision-makers exercise their powers, or by prohibiting certain uses of land or natural resources in the plan area.[94] However, these potentially useful legal tools have yet to be fleshed out or implemented on the ground by regulation, therefore it remains to be seen whether they will be used in a manner that meaningfully advances cumulative effects management.

3.4.2 Environmental assessment in BC

In the context of environmental assessment, both legal objectives and resource management targets identified in other ways (e.g., through provincial plans, policies and strategies) may be considered[95] and it is possible, though not mandatory, for conditions in an environmental assessment certificate (under the BC *Environmental Assessment Act*), or a decision statement (under the federal *CEAA 2012*), to require mitigation measures to address these. However, there is no legal requirement that they do so. In other words there is no direct legal linkage between strategic land use plans and environmental assessment in BC, which can result in conflicts between project certification and legal objectives including those flowing from land use planning.

At the present time, BC's *Environmental Assessment Act*, allows[96] but does not require assessment of cumulative effects in the context of project-specific environmental assessment. Where cumulative effects assessment does occur, and large projects are approved on the basis of environmental impact mitigation packages that include measures at a regional or sub-regional scale (e.g., for species with large area needs like grizzly bear), these measures may never be implemented because the proponent alone does not have authority to do so. Furthermore, provincial environmental assessment, and as of 2012 federal environmental assessment, now use a "project list" approach,[97] which means that many smaller projects that don't 'make the list' (the cumulative impact of which may be significant) are not subject to environmental assessment at all.

On very rare occasions the Minister has used the discretionary power in section 49 of the BC *Environmental Assessment Act* to direct that an inquiry or strategic assessment occur.[98] This process results in a report to the minister regarding the "policy, enactment, plan, practice or procedure of the government" under assessment, but has no legal impact.

3.4.3 Cumulative effects policy in BC

Ultimately, in BC there is currently no legal requirement for comprehensive, integrated and proactive assessment of cumulative effects at a scale beyond that of a particular project, and an absence of legally enabled mechanisms for coordinating decision-making about different resource uses at a regional scale. More promising

are specific collaborative management or shared decision-making arrangements that have been concluded between the Crown and First Nations.[99] These initiatives will, however, continue to face legal barriers to cumulative effects management in BC and Canada's laws, which must be overcome.

At the policy level, the province is in the process of developing a strategy to better assess and manage the cumulative ecological and social effects of past, present and future developments. To this end, it has recently introduced an interim Cumulative Effects Framework policy (CEF).[100] The CEF was developed with some input from First Nations, but not in the context of nation-to-nation relationships. Under the CEF policy, the provincial government intends to undertake periodic values-based regional cumulative effects assessments and to use the results in operational, tactical and strategic decision-making across natural resource sectors (forestry, mining, oil and gas, land tenures, etc). The CEF will include spatial tools and reports that describe the current condition of a given value (e.g. moose) within an established regional boundary in relation to benchmarks, and may also include recommended management responses designed to address those conditions. As the tools become available, the intention is that they are to be integrated in the Environmental Assessment Office's project-level assessments although there is no legal requirement to do so.

Currently, values are selected based on having been identified as a BC government priority through legislation or policy. The initial values approved as CEF values for the province are: forest biodiversity, old forest, aquatic ecosystems, grizzly bear and moose.

While the policy commitment of the CEF is promising, the draft policy currently lacks legal mechanisms requiring implementation of the outcomes from cumulative effects assessments in decision-making. For example, it is also unclear the extent to which the policy will actually result in management interventions if impacts to values exceed low risk management objectives based on best available science and Indigenous law and knowledge. Without a legal requirement to apply the CEF in environmental decision-making, there is a substantial risk that its application will be inconsistent across departments, regions and industries, and perhaps not applied at all. Weak public oversight, and the inability to appeal the application of the policy framework, also pose barriers to consistency and accountability in cumulative effects management under the CEF.

Furthermore, the current draft of the CEF does not establish binding requirements for monitoring and adaptive management. As we have seen in the land use planning context, this is likely to hinder its effectiveness. While many BC land-use plans recommended, or even mandated, monitoring and adaptive management to ensure plan objectives continued to be met, these were not carried over in legal objectives set by government. Rather, plan goals and strategies have been allowed to wither by the withdrawal of funding and lack of political will to implement them.[101] BC's resource management laws themselves are virtually silent on monitoring and adaptive management.

The interim CEF policy is a step in the right direction, and there is room for further improvement as the policy develops. However, the policy's impact is significantly limited by the absence of legal requirements to implement its outcomes in decision-making. While there may be trends towards greater integration in land and resource decision-making in BC, integration alone is not enough absent a serious intent by all parties to deal with cumulative effects at necessary scales.

For further analysis of the draft CEF policy see West Coast Environmental Law's submissions to the provincial government on this topic. [102]

3.5 Statutory context – local government (BC)

Local governments (such as municipalities, regional districts and resort municipalities) are themselves creatures of statute and have only the specific jurisdiction delegated to them by the Province of BC. This can mean that towns and cities face direct and indirect impacts from resource extraction activities that they have little power to address. For example, local governments in BC have no jurisdiction over mines or minerals.[103] Because of this, the City of Kamloops cannot use its zoning or regulatory powers to stop the development of an open-pit mine right within its city boundaries. British Columbia's provincial mineral tenure laws have made it possible for a company, KGHM Ajax Mining Inc., to acquire 58 mineral claims[104] [105] in Kamloops for its proposed gold-copper mine, half of which would be located within six kilometers of several schools and seniors' residences, a hospital and a university, and hundreds of family homes. (It is worth noting that the Stk'emlúpsemc te Secwépemc Nation conducted its own assessment and rejected the Ajax mine project,[106] while federal and provincial reviews are ongoing).[107]

Local governments also find themselves vulnerable to other types of resource development activities on lands within or near to municipal boundaries, or on Crown lands in rural areas of regional districts. Some examples include:

- local governments are specifically prohibited from adopting any bylaw or issuing a permit that would restrict forest management activity on private managed forest land;[108]
- local governments do not have decision-making powers with respect to independent power producer (IPP) projects on Crown land within the geographical boundary of regional districts or municipalities in most cases, following an amendment to the provincial *Utilities Commission Act*[109] in May 2006;[110]
- local governments do not have the ability to restrict or prohibit forestry activities or oil and gas exploration on provincial Crown lands within their geographic boundaries;[111] and,
- local governments do not have any jurisdiction over the issuance of water licenses or approvals related to watercourses under the *Water Sustainability Act*, although where the Province requires the development of a water sustainability plan for a given area, it may take into consideration local

government planning related to land and water within or adjacent to the area.[112]

In addition, while section 8(3)(j) of the *Community Charter*[113] appears to give municipalities in BC broad powers with respect to "protection of the natural environment," in fact those powers are specifically limited by the *Spheres of Concurrent Jurisdiction — Environment and Wildlife Regulation*.[114] If relying on this section of the *Community Charter*, local governments may only regulate in relation to the pollution or impeding the flow of a watercourse, the application of pesticides for landscaping (but not for agriculture), invasive species, and the sale of wildflowers.

Despite the exceptions noted above, local governments do have the power to zone lands for use and density, and to designate permit areas where new developments and redevelopment activities must meet certain guidelines aimed at protecting natural features, avoiding natural hazards, or to achieve energy or water conservation goals.[115] Local governments may also designate areas where project developers must provide information setting out the environmental impacts of proposed developments.[116]

Local governments in BC are also able to develop forward looking policy plans that consider land use and key local government policy objectives in an integrated fashion, i.e. Official Community Plans and Regional Growth Strategies. Once these plans are adopted as bylaws, all subsequent local government bylaws and policies must be consistent with the plans. However, these plans do not have any direct impact on activities that are not subject to local government jurisdiction as described above.[117]

4.0 Options for Regional Cumulative Effects Governance Mechanisms

In this research project, West Coast Environmental Law analyzed approximately 40 models that exemplified potential options for different aspects of regional management of cumulative effects. In particular, we focus on options for:

- structuring collaboration between levels of government, including Indigenous governments, and between responsible agencies in the context of regional cumulative effects management;
- ensuring that Indigenous legal orders equally inform co-governance structures, including identification of decision-makers, decision-making processes, and relevant criteria for decision-making;
- integrating scientific and Indigenous knowledge into collaborative management of cumulative effects;
- engaging stakeholders and the public in the process of collaborative management of cumulative effects;
- giving effect to information/recommendations/decisions of collaborative management bodies; and
- funding collaboration in regional cumulative effects management.

In each of these areas we draw on the literature as well as our analysis of replicable innovations and best practices to: a) identify potential effectiveness criteria ("success factors"); and b) discuss options identified from among the models analyzed.

We conclude by offering a model for co-governed regional cumulative effects management in the context of the ongoing federal reform of environmental assessment law.

4.1 Structuring collaboration between levels of government, including Indigenous governments, and among responsible agencies in the context of regional cumulative effects management

"The complexity and persistence of environmental problems have confirmed the limitations of traditional modes of governing over environmental issues, leading to new approaches."[118]

As discussed above, questions about who is responsible for which aspects of cumulative effects management are fundamentally ones of governance. Governance in this context can be thought of as "the structures and processes by which people in societies make decisions and share power."[119] Given the distinct constitutional

Photo: Seton Lake, Jessica Clogg

and statutory roles and responsibilities of different levels of government in BC related to cumulative effects management, one fundamental objective in designing new institutional mechanisms for regional governance is to effectively and efficiently structure collaboration between different levels of government to make decisions at a regional scale. The constitutional recognition of existing Aboriginal title and rights, including governance rights, creates a legal imperative to fully involve Indigenous governments in this collaboration.[120]

The term co-management[121] encompasses both "the problem-solving process involved in sharing management power across organizational levels,"[122] and approaches that embody a move away from top-down, centralized decision-making by the federal and provincial governments, to more decentralized and collaborative decision-making involving Indigenous peoples and/or community level bodies. Models for sharing power and responsibility between government and local resource users/civil society groups are discussed in section 4.4 below.

The Royal Commission on Aboriginal Peoples notes that in Canada:

> *[C]o-management has come to mean institutional arrangements whereby governments and Aboriginal entities (and sometimes other parties) enter into formal agreements specifying their respective rights, powers and obligations with reference to the management and allocation of resources in a particular area of….lands and waters.*[123]

While much of the literature on co-management focuses on community-level resource management, over time, as understanding of the importance of managing for resilience in complex systems has deepened, there has been increased attention to the need for "multi-level institutions" (i.e., not just community level but regional as well, with linkages to provincial and national levels) in order to achieve a good match with social-ecological systems, and to implement what is often referred to as "adaptive co-management."[124] "The ability to use institutions effectively, at organizational levels appropriate to the ecological scale, has been referred to as scale-matching or institutional fit."[125] Simply put, regional environmental

governance is a complex systems problem, where the "social and ecological system properties [are] not amendable to conventional, top-down decision-making."[126]

The concept of adaptive co-management reflects the evolution of co-management practice and theory over the past twenty-five years from collaborative management of natural resources to "the management of people within complex social-ecological systems."[127]

> *Adaptive comanagement relies on the collaboration of a diverse set of stakeholders, operating at different levels, often through networks from local users to municipalities, to regional and national organizations, and also to international bodies. The sharing of management power and responsibility may involve multiple institutional linkages among user groups or communities, government agencies, and nongovernmental organizations (NGOs). In addition, adaptive comanagement extends adaptive management into the social domain and is a way to operationalize adaptive governance.*[128]

Adaptive co-management is "frequently described as an approach or strategy for the governance of social-ecological systems in the face of complexity and uncertainty."[129]

Below we explore models that present different approaches to structuring collaboration between levels of government, including Indigenous governments, to make decisions at a regional scale. In subsequent sections we explore models that highlight approaches to sharing power and responsibility with non-governmental actors. In practice a desirable approach for Canada and BC would combine best practices in both areas.

Summary: Criteria for success[130]

- Involve all responsible parties and levels of government
- Recognize and give effect to Indigenous governance rights
- Align the authority and responsibilities of new institutions with the relevant ecological and cultural context (i.e. multi-scale assessment, planning, decision-making & monitoring)
- Several related institutions (e.g. co-management bodies) may function together to achieve goals

Related success factors discussed elsewhere in the paper:

- Process and decision rules "balance" power among participants (e.g. are consensus-based)
- Management requirements and decision rules are enshrined in formal agreements within a supportive law and policy framework
- Science-based western resource management systems are united with Indigenous and local knowledge, with equal weight given to each
- Co-management is structured to uphold both Indigenous and Canadian law

Model 4.1.1: Co-management Board acting as an institution of public government (Case Study: Various boards under *Mackenzie Valley Natural Resource Management Act*)[131]

In the Mackenzie Valley a number of interconnected institutions cover off key elements of cumulative effects management. Collaboration between levels of government is formally institutionalized through co-management boards with balanced representation of Indigenous nations and other levels of government. Typically, one half of the members of the board (other than the chairperson) must be appointed on the nomination of First Nations, with the other seats split between nominees of the territorial and federal governments. A chairperson is appointed after being nominated by the other board members. Where the board is regional in nature (i.e., for the whole Mackenzie Valley), each Indigenous nation[132] has representation on the board.

Co-management boards of this nature in the Mackenzie Valley, covering off different elements of cumulative effects management, include:[133]

Land Use Planning Boards: These co-management boards undertake collaborative planning for each Indigenous territory (settlement area). Among other things, resulting plans describe and map permitted and prohibited uses of land, waters and resources. Plans must be approved by three levels of government: the First Nation, the territory and the federal government. Once approved, all licences, permits or other authorizations relating to the use of land or waters or the deposit of waste in the region must be in accordance with the applicable land use plan.

Mackenzie Valley Environmental Impact Review Board: The Review Board is responsible for environmental assessment in the Mackenzie Valley, either directly or through an Environmental Impact Review Panel appointed by it. This includes a statutory responsibility to consider the cumulative effects that are likely to result from the development under assessment in combination with other developments as part of all environmental assessment and environmental impact reviews.

Land and Water Boards: Distinct land and water co-management boards for each Indigenous territory are responsible for the administration, review and approval of all land and water use applications, and preliminary screenings to determine whether full environmental assessment is required of larger projects prior to permitting. The licensing and permitting role of these boards ranges from small projects to major oil and gas pipelines. Applications that relate to unsettled regions, or for land/water uses that will span more than one settlement area, come under the jurisdiction of the regional Mackenzie Valley Land and Water Board.[134]

Collaboration in terms of cumulative effects monitoring is also provided for in the *Mackenzie Valley Resource Management Act*, but is not implemented through a formal co-management structure.

Across the north, these and many similar co-management bodies serve as "institutions of public government" that exist "at the intersection of three orders of government (Indigenous, territorial, and federal)."[135] Once appointed, board members are supposed to act independently to carry out the mandate entrusted to

them and not to take political direction from the government or organization who nominated them. That said, it is understood that the views of board members are likely to be similar/compatible with those of the governments that nominated them.

Model 4.1.2: Co-management board with representation of Indigenous rights & interests (Case Study: Various bodies under the Inuvialuit Final Agreement)

In contrast to the bodies discussed above, which are intended to serve as institutions of public government with impartial membership, the Inuvialuit Final Agreement[136] (legislated federally through the *Western Arctic (Inuvialuit) Claims Settlement Act*)[137] establishes co-management boards through which the Inuvialuit appoint members to represent their own rights and interests in decision-making.

All of the bodies described below are comprised of an equal number of representatives of the Inuvialuit and the Crown (federal and territorial governments together), plus a chairperson appointed by the Crown on the consent of all parties. Decisions are made by majority vote, with the chair only voting in the event of a tie. Representatives are remunerated by the party appointing them. Under this structure the Inuvialuit appointees are not bound to act impartially, rather they actively represent Inuvialuit interests in the various co-management bodies' decision-making processes (with other interests being represented by the federal and territorial appointees).

The primary co-management bodies under the Inuvialuit Final Agreement are as follows:

Wildlife Management Advisory Councils: The Inuvialuit Final Agreement establishes two Wildlife Management Advisory Councils, one each for the portions of the settlement region in the Northwest Territories and the Yukon, respectively. The Councils determine and recommend game harvest quotas to the Minister, as well as advise the Minister generally regarding wildlife management issues in the region. While the Minister exercises final decision-making on the quotas under the Agreement, if the Minister chooses not to follow a Council's recommendation he or she must first provide reasons to the Council and allow the Council an opportunity to reconsider the matter. The Councils also create and recommend regional management plans (as well as community-specific conservation plans in some cases), and one of the Councils is additionally responsible for co-management of Ivvavik National Park.

Fisheries Joint Management Committee: This committee is responsible for: gathering and sharing data regarding fisheries activities; running a public registration system for fishing in waters on certain lands, including the authority to regulate and restrict access; and determining and recommending Inuvialuit subsistence and commercial harvest quotas for fish, and harvest quotas for marine mammals. The process for quota decision-making is similar to the Wildlife Management Advisory Councils as described above.

Photo: Derrick Midwinter

Environmental Impact Screening Committee and Review Board: The Screening Committee screens any types of development proposals set out in the Inuvialuit Final Agreement or that are requested to be screened by the Inuvialuit. Proponents must submit a project description to the Committee, which screens the proposal and indicates to the Crown permitting authority either that: (a) the proposal will not likely have significant negative impacts (potentially with conditions); (b) the proposal is deficient and should be resubmitted; or (c) the proposal will likely have negative impacts and must be assessed by the Environmental Impact Review Board (or another assessment body, with the Committee's permission). If initiated, the Review Board launches a more detailed assessment on the public record and then issues a report and recommendations to the Crown permitting authority. If the Crown permitting authority does not follow the recommendations, it must provide reasons. No federal permits may be issued until the process of the Screening Committee, and if applicable the Review Board, has been completed.

Model 4.1.3: Elected regional body with joint management agreement (Case Study: Regional Councils under the *New Zealand Resource Management Act*)[138]

In New Zealand, regional cumulative effects management is the responsibility of a distinct order of elected government, the "Regional Council", whose role is set out in the New Zealand *Resource Management Act* (RMA). New Zealand is divided into 16 regions consistent with major watershed boundaries, most of which are governed by Regional Councils. Regional size ranges from only 445 km^2 to over 45,000 km^2. Some Regional Councils have jurisdiction over the ocean – the Horizon's Regional Council's jurisdiction, for example, extends 12 nautical miles off the coast.[139]

Regional Councils are required to prepare various land use and resource management plans to assist in the implementation of the RMA. These include a regional policy statement and regional coastal plans. Regional Councils are also responsible for making "resource consent" decisions under the RMA, which are required for most forms of resource use or development in New Zealand. The RMA establishes a framework for integrated resource management, and requires that cumulative effects be considered both in evaluating the potential impacts of regional plans and policies, and when specific approvals ("resource consents") are granted.

Although some resource consent decisions rest with territorial councils (more akin to Canadian municipalities) Regional Councils have jurisdiction over the majority of environmental values/effects under the RMA. By vesting the primary decision-making power with these councils, the RMA espouses the principle of subsidiarity – that decisions are best made at the level closest to the resources affected. However, the central government does have the authority to intervene in local decision-making where the proposed development has national significance. If the decision made by the district or Regional Council is disagreed with, the proponent can appeal to the Environment Court.

Decisions at the Regional Council level are made by a group of councilors, for which elections (by postal ballot) are held every 3 years. The number of councilors ranges from 6 to 13. In 2005 the RMA was amended, to give local authorities (i.e. Regional Councils) the authority to make joint management agreements with iwi (tribe) authorities and groups representing hapū(sub-tribes) of Maori peoples.[140] Via these agreements, the joint management entity is able to jointly exercise any of the local authority's functions, powers or duties under the RMA. The primary purpose of these provisions is to encourage collaboration and co-management between Regional Councils and Maori.[141]

> *These joint management provisions have enormous potential for Maori. They are progressive provisions that recognise the dual heritage of New Zealand and the special status that Maori have as tangata whenua (the indigenous people of the land). They have the potential to restore to Maori a degree of mana (prestige) and also tinorangatiratanga (self-determination). They can also result in an improved relationship between iwi and local authorities.*[142]

Though these provisions represent significant potential for robust co-management arrangements, to date only a handful of such arrangements has been established.[143][144]

Model 4.1.4: Intergovernmental cooperation through delegated authority (Case Study: Murray Darling Basin Authority, Australia)

Australian Commonwealth (federal) legislation has established a basin-wide planning framework to set an integrated annual sustainable diversion limit on groundwater and surface water extraction from the Murray Darling basin, in an attempt to provide a holistic solution to uncoordinated management decisions

among different government authorities in the Basin and perennial over-allocation of water resources, exacerbated by drought from 1997-2009. State-level governments (similar to Canadian provincial governments) "referred" or delegated some of their authority to the Commonwealth government in order to assemble the legal jurisdiction necessary to establish the Murray Darling Basin (MDB) Authority, which developed the Basin Plan (approved in 2012) and is overseeing its implementation, including monitoring and updating as required.[145]

The MDB Authority is intended to be an expert body, relatively independent from government. A Ministerial Council, made up of state and commonwealth ministers, provided input to the development of the Basin Plan and to its ongoing implementation.

The Basin Plan can only impose legal obligations on state governments in state territories where specific Commonwealth jurisdiction exists. However, the role of the Ministerial Council is to develop, by consensus, policies to implement the Plan, following which implementation of policy decisions are undertaken by individual states, in the form of Water Resource Plans. Water Resource Plan Areas for surface water and ground water are defined by the Basin Plan.[146]

The final decision-maker for the Basin Plan is the responsible Commonwealth minister under the *Water Act 2007*. Amid some criticism that the MDB Authority lacked experts from outside government, the Authority decided to appoint an Advisory Committee on Social, Economic and Environmental Sciences to provide strategic advice with respect to the development of a science and knowledge strategy, science priorities to support implementation of the Basin Plan, and outreach to Basin stakeholders and community members on science-related matters. The MDB Authority is also committed to peer review of its science.

The Basin Plan acknowledges that Indigenous peoples have interests within the Basin, referring to these as "cultural flows", without (yet) fully acknowledging any Indigenous rights but requiring a certain level of consultation with Indigenous peoples:

> *The Authority recognises and acknowledges that the Traditional Owners and their Nations in the Murray-Darling Basin have a deep cultural, social, environmental, spiritual and economic connection to their lands and waters. The Authority understands the need for recognition of Traditional Owner knowledge and cultural values in natural resource management associated with the Basin. Further research is required to assist in understanding and providing for cultural flows.*[147]

The Basin Plan requires states to identify Aboriginal objectives and outcomes based on Aboriginal values and uses.

In 2014 the MDB Authority participated in an Aboriginal Waterways Assessment Program, partnering with Wemba Wemba and Barapa Barapa Nations (Deniliquin); Gamilaraay Nation (Walgett); and Dhudhuroa and Waywurru Nations (Victorian Alps).

The purpose of the Aboriginal Waterways Assessment program was to develop a tool for Aboriginal communities to consistently measure and prioritise river and wetland health so that they are better placed to negotiate for their Country's water needs.

Rigorous mechanisms (beyond the usual economic and environmental indicators) that help explain the importance of water to particular places are critical for effective involvement of Aboriginal peoples in water planning processes.[148]

As described in a survey of Aboriginal water interests supported by the MDBA:

The approach of Traditional Owners to caring for the natural landscape, including water, can be expressed in the words of Darren Perry (Chair of the Murray Lower Darling Rivers Indigenous Nations) — 'the environment that Aboriginal people know as Country has not been allowed to have a voice in contemporary Australia. Aboriginal First Nations have been listening to Country for many thousands of years and can speak for Country so that others can know what Country needs. Through the Murray Lower Darling Rivers Indigenous Nations and the Northern Basin Aboriginal Nations the voice of Country can be heard by all'.[149]

The MDB Authority also consults with a Basin Community Committee, made up of stakeholders from throughout the region.

Model 4.1.5: Intergovernmental cooperation through strategic agreement (Case Study: Southeast Florida Climate Change Compact)

Faced with significant and long term impacts due to climate change, including sea level rise and extreme weather events, four counties in Florida with divergent politics that had traditionally competed against each other for state and federal funding decided to focus on regional cooperation to achieve common goals. In 2009 Miami-Dade, Broward, Munroe and Palm Beach counties signed the Southeast Florida Climate Change Compact, and committed to work together to promote sustainability and resilience to climate change at a regional scale.

Collaborative work is guided by a staff-level steering committee that includes two seats for each county, and one municipal representative from each county. The four counties adopted a five-year plan for regional climate action in October 2012. The development of the plan included consultation that involved more than 100 stakeholders and experts. The plan is being updated in 2017.

The counties also work together to develop joint positions to lobby for funding for vulnerable areas from Congress and state agencies. The counties were also successful in having Florida State create a legal designation for "Adaptation Action Areas" which are prioritized for funding, study and action, and are proceeding to define "Restoration Areas" that should be set aside for protection, as well as "Growth Areas" where new development could be undertaken safely and

Photo: Sarah and Michael Reid

efficiently. The counties have also proposed Regional Water Management Plans to address drought issues and protection of the Everglades, and have developed unified sea level rise projections for planning purposes.[150]

4.2 Structuring co-management to uphold both Canadian and Indigenous law

"To warrant the term, 'co-management' should respond as much to Indigenous tenure, knowledge and management practices as to state-organized bureaucracy."
— Monica Mulrennan and Colin Scott[151]

Even when power is shared close to equally on paper, existing co-management arrangements between the state and Indigenous governments still occur in a context of radically unequal power dynamics. The consequence of this is that, intentionally or not, the structures, language and values informing the process tend to favour western norms. Some academics have been critical of the result, for example, anthropologist Paul Nadasdy argues:

> *At best, co-management marries strong community-based indigenous resource management and conservation with government resources in alliances that safeguard and support indigenous rights, community-based conservation, and self-determination. More often, co-management arrangements may be unstable marriages of convenience – a level of government recognition of indigenous peoples that precludes simple expropriation of their lands to manage as protected areas but stops short of granting full recognition of their sovereignty, self-determination, land rights, and authority over natural resource management. Co-management arrangements as a result are*

often compromises, and very often ones that are weighted on the side of governments.[152]

For example, Nadasdy argues that Indigenous peoples have had to organize and express themselves in ways that are compatible with government bureaucracies in order to be able to participate in co-management arrangements, and accept implicitly Euro-Canadian values and assumptions about the nature of the relationship between humans and land, animals and plants.[153]

One of the most exciting ways in which this imbalance is beginning to be righted is through the conscious structuring of co-management arrangements to embody procedural and substantive aspects of Indigenous law.

Summary: Criteria for success

- Indigenous laws and governance systems are upheld in co-management arrangements
- A nation-to-nation relationship of equal power sharing between Indigenous and state governments is established
- Indigenous law – including legal principles regarding the relationships of humans to the non-human world, procedural requirements and substantive legal rights and responsibilities – are given equal respect and weight to Western law (see also section 4.3 criteria for success).
- Equal power sharing is not undermined by inadequate resourcing of Indigenous governments.

Model 4.2.1: Incorporating Indigenous legal concepts into co-management legislation (Case Studies: Waikato River and Whanganui River settlement legislation, NZ)

A land settlement agreement between the Waikato Tainui and the Crown was signed in 1995 under the Treaty of Waitangi Tribunal. However, the management of the Waikato River was not fully resolved in the agreement and the issue was set aside for future negotiations.

In 2010, after many years of negotiations between the Crown and the Waikato Tainui, the New Zealand Parliament passed the *Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act*.[154] The Act, which came into effect that year, is a unique piece of legislation that does not address ownership of the river, but rather addresses the health and well-being of the Waikato River through the principle of co-management and equal power-sharing between the Crown and Waikato Tainui. Notably, the Act and the related co-management arrangements are first framed by the Waikato-Tainui understanding of the identity of the river and their connection with it.

The Act begins with a statement, in Maori, about the relationship of the Waikato-Tainui with the Waikato River. In the preamble to the Act, the identity of the river as a single, indivisible spirit, and as an ancestor of the Waikato Tainui, is recognized. These principles are further set out in a Schedule to the Act, which reads in part:

1 Te mana o te awa (the spiritual authority, protective power, and prestige of the river)

(1) To Waikato-Tainui, the Waikato River is a tupuna (ancestor) which has mana (prestige) and in turn represents the mana and mauri (life force) of the tribe. The River has its own mauri, its own spiritual energy and its own powerful identity. It is a single indivisible being.

(2) Respect for te mana o te awa (the spiritual authority, protective power, and prestige of the Waikato River) is at the heart of the relationship between the tribe and their ancestral River. Waikato-Tainui regard their River with reverence and love. It gave them their name and is the source of their tribal identity. Over generations, Waikato-Tainui have developed tikanga (values, ethics, governing conduct) which embody their profound respect for the Waikato River and all life within it. The Waikato River sustains the people physically and spiritually. It brings them peace in times of stress, relief from illness and pain, and cleanses and purifies their bodies and souls from the many problems that surround them. Spiritually, to Waikato-Tainui, the Waikato River is constant, enduring and perpetual.

In the preamble the Crown acknowledges the illegitimacy of its past confiscation of the Waikato River, as well as its failure to protect the special relationship that Waikato Tainui have with the river. The Crown also acknowledges that severe degradation to the river occurred while the river was under the authority of the Crown, and that this degradation caused Waikato Tainui significant suffering due to their close relationship with, and reliance on, the river. The stated overarching purpose of the Act is to "restore and protect the health of the Waikato River for future generations."

Under the Act, future guardianship decisions pertaining to the river are to be made by a newly formed 10-person Waikato River Authority Board, whose membership is composed of an equal numbers of Crown- and iwi (tribe)- appointed guardians, including representatives of other iwi with interests along the river. The Board is co-chaired by two individuals, one appointed by the Crown and one appointed by the Waikato Tainui. The Waikato River Authority makes decisions according to a direction-setting document designated "Te Ture Whaimana" which takes precedence over national policy statements and other planning documents under New Zealand's 1991 *Resource Management Act*.

Resource development applications involving the river will be considered by the Waikato River Authority and decisions to accept applications must be made by consensus. This effectively gives Waikato Tainui a veto over development applications.

Under the Act, the Crown has allocated $210 million towards clean-up of the river over the next 30 years, at $7 million annually, to be administered by the Waikato River Authority. Community members wishing to apply for grants for clean-up projects must apply to the Waikato River Authority. Also under the Act, certain cultural uses of the river by the Waikato Tainui are recognized and Waikato Tainui no longer have to seek permission from the Crown to engage in these cultural practices.

In a further striking example of legislation grounded in the legal principles of the participating Indigenous peoples, in 2017 New Zealand's Parliament passed the *Te Awa Tupua (Whanganui River Settlement) Bill* (awaiting royal assent at the time of writing), which acknowledges "Te Awa Tupua is an indivisible and living whole, comprising the Whanganui River from the mountains to the sea, incorporating all its physical and metaphysical elements."[155] Notably, the Bill recognizes that "Te Awa Tupua is a legal person and has all the rights, powers, duties, and liabilities of a legal person",[156] as represented by a body established under the Bill.

In the words of the Whanganui chief negotiator: "We have fought to find an approximation in law so that all others can understand that from our perspective treating the river as a living entity is the correct way to approach it, as an indivisible whole, instead of the traditional model for the last 100 years of treating it from a perspective of ownership and management."[157] The responsible New Zealand Minister, in response to some surprised reactions about the novel statutory approach of recognizing the legal personhood of a river, noted that "…it's no stranger than family trusts, or companies or incorporated societies."[158] It is true that state law regularly creates legal identities for (effectively fictitious) non-human entities such as corporations; the Bill demonstrates that Indigenous legal perspectives can advance and transform state law to recognize the legal identity of natural non-human entities such as a river.

Model 4.2.2: Parallel Indigenous assessment (Case Study: Tsleil-Waututh Nation Assessment of the Trans Mountain Project Proposal)[159]

The Tsleil-Waututh Nation, or "People of the Inlet," are a Coast Salish Nation whose territory includes Burrard Inlet in what is now known as the Metro Vancouver region. Faced with the Kinder Morgan Trans Mountain oil pipeline and tanker project proposal, which would see the capacity of an existing oil pipeline tripled and require a corresponding tripling of oil storage capacity and sevenfold increase in oil tanker traffic in the Burrard Inlet, the Tsleil-Waututh Nation resolved to conduct its own independent assessment based in Tsleil-Waututh laws. The Tsleil-Waututh assessment of the Kinder Morgan proposal "combined TWN [Tsleil-Waututh] legal principles, traditional knowledge and community engagement with state of the art expert evidence including expert reports related to oil spill risk, spills and cleanup, human and biophysical health impacts, anthropology and archaeology.[160]

As noted earlier in this paper, the current federal environmental assessment process (which was applied to the Trans Mountain proposal) focuses on mitigating the environmental impacts of the specific project under review, and addresses

cumulative effects in the limited sense of how the project-specific impacts interact with other developments. In stark contrast, Tsleil-Waututh law focused the assessment on the question of how the health of Tsleil-Waututh territories has been impacted by cumulative effects over the long term, and in this context whether the Trans Mountain proposal was the best use of lands and resources for the present and future:

> *Using the health of our Tsleil-Waututh subsistence economy as a key indicator of environmental and cultural integrity, it is clear that by the time the federal government closed Burrard Inlet to bivalve harvest in 1972, Tsleil-Waututh cumulative effects thresholds had been exceeded, in violation of Tsleil-Waututh stewardship laws. Devastation of our subsistence economy signalled that Burrard Inlet's carrying capacity had been exceeded and that the inlet could not and should not absorb any more effects from urban, commercial, or industrial development.*
>
> *The loss of herring in 1885 and the closure of bivalve harvest in 1972 bookend the collapse of Burrard Inlet's environmental integrity. After thousands of years of supporting our Tsleil-Waututh way of life, in less than 200 years key marine resources in Burrard Inlet were exterminated, contaminated, or made inaccessible. Our subsistence economy was shattered.*
>
> *Since 1972, cumulative effects have continued to accrue, pushing Burrard Inlet further beyond its environmental carrying capacity in violation of Tsleil-Waututh law. It is essential to know both the historical context and the compromised environmental integrity that exists today in order to understand the seriousness of the potential effects of the proposed TMEX on Tsleil-Waututh title, rights, and interests.*
>
> *Given these circumstances, the nation takes a precautionary approach to assessing any new project and only consents to those new development proposals that are consistent with restoring the territory to the conditions prescribed in Tsleil-Waututh law and the objectives of the Marine Stewardship Program. To do otherwise would ignore the existing state of affairs, further contribute to negative cumulative effects, and continue to deny Tsleil-Waututh a subsistence economy.*[161]

The Tsleil-Waututh Assessment consequently concluded that the Trans Mountain proposal:

> *…if implemented, will contribute to these cumulative effects, further harming Burrard Inlet, our community, our culture, and our economy. Given these circumstances, we conclude that 1) implementation of the TMEX proposal would slow or deny achievement of the objectives of the Marine Stewardship Program and 2) approving the TMEX proposal would violate Tsleil-Waututh law, because it undermines our stewardship obligations.*[162]

The Tsleil-Waututh Nation filed its independent assessment report with the National Energy Board conducting the federal review, and sought to use its parallel assessment as a basis for the Crown and Tsleil-Waututh to enter into government-to-government discussions to seek to reconcile the outcomes from their parallel reviews.[163] Unfortunately this did not occur. The National Energy Board recommended approval of Trans Mountain, only briefly responding to the Tsleil-Waututh assessment as a "traditional land and resource use study", without addressing or acknowledging the Tsleil-Waututh Nation's application of its own laws and jurisdiction to review and reject Trans Mountain.[164] The federal government subsequently approved the project based on the National Energy Board report, without addressing the application of Tsleil-Waututh law,[165] a decision which the Tsleil-Waututh and many other parties have challenged in court.

Despite the federal government's failure to meaningfully engage with the Tsleil-Waututh assessment (and related ongoing litigation),[166] this example nonetheless provides a glimpse of what could be possible in terms of parallel Indigenous- and Crown-led assessment processes with integrated government-to-government negotiations.

Photo: Don Bain, UBCIC

4.3 Integrating scientific and Indigenous knowledge[167] into collaborative management

It has been said that one of the "expected benefits of multi-level governance… is the linking of formal science and local or indigenous knowledge systems."[168] This is important because "[n]o individual actor – state or non-state – will have the full range of knowledge required to support effective environmental governance."[169]

"Science-based decision-making" is an important goal of many collaborative management bodies, with the explicit understanding that equal weight and value is to be placed on Indigenous and Western scientific knowledge. Indigenous knowledge is based on millennia of direct experience and observation of the ecosystems subject to collaborative management and linked to Indigenous culture and spirituality. "There is a growing literature on the potential in combining local knowledge systems with scientific knowledge to cope with change in resource and ecosystem management."[170]

Yet even where statutory provisions and formal decision rules require that co-management bodies apply or incorporate Indigenous knowledge, there is considerable critical commentary questioning whether this is occurring. Our analysis suggests a number of success factors, discussed further below, that have the potential to improve this situation.

For example, ensuring that Indigenous knowledge-holders themselves are involved at all stages of environmental decision-making is critical, because knowledge "is not a stand-alone element, and … the holders of knowledge must be engaged in the resource management process in ways that are truly meaningful to them."[171]

Furthermore, it is crucial that better integration of Indigenous knowledge into decision-making goes hand-in-hand with recognition of the authority of Indigenous law and governance within those decision-making structures, as discussed elsewhere in this paper. This point is put succinctly by Gwitchin lawyer Kris Statnyk:

> *[O]ur knowledge cannot be hived off from the law and governance which makes it effective. The apparent benefits of traditional knowledge to resource management will only be realized if current resource management institutions are transformed so that the full force and weight of Indigenous legal traditions are felt on their own terms."*[172]

"'[K]nowledge co-production' has also been emphasized as a primary concern in governance processes."[173] To this end, establishment of an independent or jointly managed expert body to provide relevant information to policy and decision-makers has been identified as a factor for success for integrating scientific and Indigenous knowledge into collaborative management and decision-making (see Model 4.3.1 below). This approach has the potential to allow decision-makers to engage more clearly with the implications and tradeoffs if plans, policies or decisions involve political compromises that diverge from what experts (both Indigenous and non-Indigenous) have recommended.

Because available scientific or Indigenous knowledge may evolve over time, it is important that policy frameworks for co-management bodies provide for flexibility and updating at regular intervals. Recommending a process for doing so (for example, an adaptive management approach) may be part of the advice and input provided by the experts engaged.

Summary: Criteria for success

- Commitment to use of best available scientific and Indigenous knowledge
- Two-eyed seeing gives equal weight to Indigenous ways of knowing and Western ways of knowing
- Incorporation of Indigenous knowledge into decision-making is paired with structuring co-management to uphold both Indigenous and Canadian law (see also section 4.2 criteria for success)
- Separating science and knowledge generation from political decision-making
- Ability to incorporate updated scientific and Indigenous knowledge
- Shared control over research and data analysis

Model 4.3.1: Independent science body (Case Study: Coast Information Team)

The Coast Information Team (CIT) operated between 2002 and 2004 with the mandate of providing independent information and analysis, based on best available scientific, traditional, and local knowledge, to inform development and implementation of ecosystem-based land use planning and management on the North and Central Coast and Haida Gwaii.

The CIT was formed through a joint Memorandum of Understanding between the BC provincial government, First Nations governments, the forest industry, environmental groups, communities and later the federal government as part of the implementation of the 2001 CCLCRMP (Central Coast Land and Coastal Resource Management Planning) Phase I Framework Agreement. The intention of the Parties was to provide a common set of scientific and Indigenous knowledge resources to various land use planning and decision-making processes in the region.

The CIT was overseen by a five-person management committee made up of representatives of the provincial government, First Nations, environmental NGOs, forest products companies, and the community at large, and supported by a secretariat (including an executive director, a project manager and other part-time staff). Provincial (58%), federal (6%), ENGO (18%) and forest products companies (18%) contributed financially to the $3.3 million budget of the CIT.

The work of the CIT sought to embody the principles of credibility, independence and transparency. Transparency and credibility were supported by peer review of most products and ensuring their public availability, while the management

committee structure helped ensure that scientific, local, and traditional knowledge experts retained to do work for the CIT were seen as credible by all parties involved. Examples of CIT products include: the Ecosystem-based Management Framework, the Ecosystem-based Management Planning Handbook, the Hydroriparian Planning Guide, the wellbeing assessment, and institutional analysis.[174]

Another excellent example in this vein was the **Clayoquot Scientific Panel.**[175] The Clayoquot Scientific Panel was an expert panel of Elders, Indigenous knowledge holders and scientific experts that made extensive findings and recommendations for "sustainable ecosystem management in Clayoquot Sound" that were adopted in 1996 as the basis of decisions about tenure, planning and practices in the region through an Interim Measures Agreement between the Provincial Government and the Ha'wiih (Hereditary Chiefs) of the Nuu-chah-nulth central region.

Model 4.3.2: Science panel elected by statutorily-established planning agency (Case Study: Science Panel of the Puget Sound Partnership)

The Puget Sound Partnership (PSP) is an agency of the Washington State government, created by statute.[176] It has no regulatory authority, but develops action agendas for all levels of government aimed at the ecological recovery of Puget Sound by 2020. Its Leadership Council consists of seven representatives appointed by the Governor, and it is advised by a 27-member board with representation from tribal and local governments, business and environmental communities, and state and federal agencies.

The Science Panel is made up of nine members chosen from among the top scientists in the State of Washington, nominated by the Washington Academy of Sciences and elected by the Leadership Council of the PSP. The mandate of the Panel is to provide independent, nonrepresentational scientific advice to the Council, including the identification of environmental indicators and benchmarks for incorporation into the action agenda of the PSP. Duties of the Panel are specified in the enabling legislation for the PSP. The Science Panel does not provide advice on Indigenous knowledge.

Of particular note is the Strategic Science Plan developed by the Panel,[177] which outlines a process for developing and incorporating scientific information into PSP activities, including two-way engagement between the Panel and PSP policymakers, the development of an adaptive management framework and performance management system, and periodic peer review of Panel activities, as well as an education and outreach plan to build public awareness of the value and role of science in the recovery of Puget Sound.

Model 4.3.3: Establishing "Two-Eyed Seeing" as guiding principle informing collaborative planning (Case Study: Bras D'or Lakes Collaborative Environmental Planning Initiative)[178]

The Bras d'Or Lakes Collaborative Environmental Planning Initiative (CEPI) was

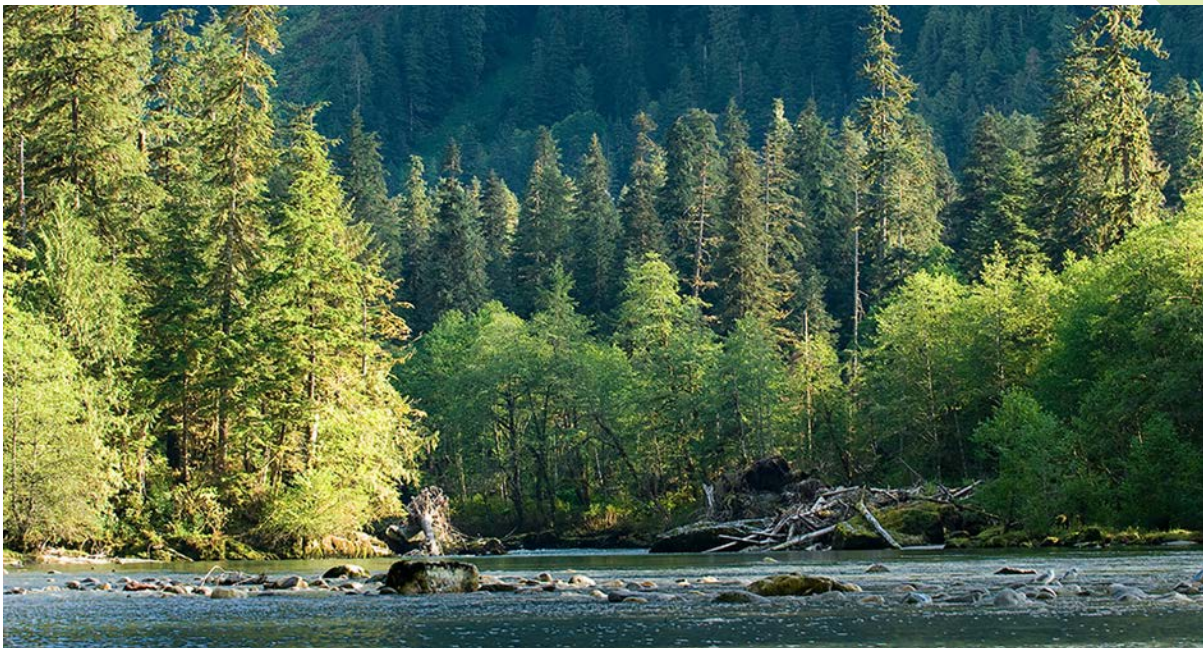

Photo: Andrew Wright

created in response to a request by Cape Breton First Nations Chiefs in 2003 to develop an overall environmental management plan for the Bras D'or Lakes and watershed lands.

The Bras d'Or Lakes CEPI organizational model includes a steering committee (with federal, provincial, municipal and Mi'kmaq governments, industry, academia and NGO representation), a management committee, task teams, a Mi'kmaq Elder Advisor, and Elders Council, and a Senior Council. The committee meets once per month, twelve months of the year. Funding for CEPI comes from a range of partnerships including government, academia, industry and First Nations.

Some of the key watershed issues that CEPI addresses include:

- Forestry (clear cutting and logging roads)
- Sewage (on-site, central, boats)
- Land Use (mining, agriculture, shoreline development, landfills, roads)
- Invasive Marine Species (MSX, Green Crab, Tunicates)
- Declining Fish Stocks (Oysters, Lobster, Herring)

The vision of CEPI is: "To lead a unique collaboration of partners that incorporate both traditional and western perspectives in order to foster a healthy and productive Bras d'Or Lakes watershed ecosystem." In realizing this vision, a guiding principle for CEPI is the principle of "Two-Eyed Seeing." Elder Albert Marshal, of the Eskasoni Mi'kmaq explains that the principle involves "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 (or Eurocentric, conventional or mainstream) knowledges and ways of knowing . . . and to using both these eyes together, for the benefit of all."[179]

The CEPI website further elaborates on its use of Two-Eyed Seeing, explaining that it contains the following principles:

- Two-Eyed Seeing is often a weaving back and forth between the perspectives represented (Indigenous and Western) and not domination or assimilation.
- Two-Eyed Seeing recognizes the great utility in cultivating our understandings using organic language and paradigms beyond only mechanistic language and paradigms. For example, the term knowledge gardening is often more useful than the commonly employed terms knowledge transfer or knowledge translation and within many efforts we find it more helpful to think of community capacity growing rather than community capacity building.
- Two-Eyed Seeing acknowledges the necessity of formal structure permeable to and receptive of new understandings and opportunities, i.e. understandings associated with Spirit of the East which brings the gift of newness, of transformation. Thus, for example, we might often need to be able to shift our views of a printed agenda such that it is living, i.e. capable of responding to the energies in the present moment (with its encompassed past and future) rather than being seen as a rigidly enforced document incapable of being and becoming. In other words, our efforts must be able to respond to emergent relational consciousness and collectiveness within an understanding of, for example, health and wisdom as expanding senses of wholeness.[180]

In 2011 CEPI released a water management plan called *The Spirit of the Lakes Speaks.* According to CEPI chair Dan Christmas, it is a "living document that will

Photo: Neil Ever Osborne

change according to the needs of the Bras d'Or Lakes and its environment."[181] The planning document is inspired by the Medicine Wheel (knowledge, action, spirituality and feelings) and acknowledges both Indigenous and scientific knowledge. *The Spirit of the Lakes Speaks* introduces the Bras d'Or as a living entity that generates feelings in people, and supports them in many ways.

Model 4.3.4: Using trusts to get impartial resource-use information (Case Study: Babine Watershed Monitoring Trust)

Land use planning involves social choice decisions that are often based on uncertain information. Richard Overstall proposes that the trust is "a useful legal device to enable competing interests to agree on a common process to assess the uncertainty and risk" surrounding land use plan outcomes.[182] The Babine Watershed Monitoring Trust was established in 2005 to implement a monitoring program in the Babine River drainage (a sub-drainage of the Skeena). One of the catalysts for the trust was negotiations leading to the West Babine Sustainable Resource Management Plan, in which the parties agreed to accept a "less than ideal plan if there was an agreed upon process to modify the plan if it failed to meet its stated objectives."[183]

As a result, an ad hoc Governance Design Group was formed with representatives from the angling/tourism industry; the timber industry; Bulkley Valley Community Resources Board; the then Ministry of Forests; the then Ministry of Agriculture and Lands (Integrated Land Management Bureau); and Ministry of Environment (Fish and Wildlife Branch). Indigenous peoples with territories in the Babine watershed declined to participate. Overstall reports that:

> *What emerged from the design group's initial discussions was the need for a governance structure that would satisfy three conditions:*
>
> *1. allow diverse and conflicting interests to participate in monitoring, assured that no one of them could control the decision-making or results;*
>
> *2. insure that the selection of monitoring projects and their results would be impartial, reliable, transparent and freely available;*
>
> *3. apply scarce monitoring resources to those plan objectives that were most at risk.*[184]

After a year of monthly meetings facilitated by the Bulkley Valley Resource Centre, a trust was selected as the legal form that could best meet these conditions. In a trust arrangement the owner of property (in this case funding for monitoring activities and the resulting information) draws up rules and then hands over the property to a trustee, who has a legal obligation to follow the rules. In turn the trustee's duties may be enforced in court.

In the case of the Babine Watershed Monitoring Trust the trust is for the benefit of a charitable purpose, namely "to conduct impartial monitoring research on the effectiveness of land use plans in the watershed," rather than a specific named

individual.[185] The applicable rules are embodied in the Babine Watershed Monitoring Trust Agreement,[186] which was signed in 2005 by the parties who had participated in the Design Group. Among other things the Agreement incorporates an agreed Monitoring Framework designed by scientific consultants, as well as decision-making rules and procedures. The Monitoring Framework provides a key mechanism for trustees to prioritize projects impartially.

The annual budget of the Monitoring Trust is about $40,000. Initially funding for the Trust consisted of a combination of public and private funds. Private funds came principally from the tourism industry and its clients, and were matched by government funds at a 1:2 ratio. The province subsequently decided not to continue funding the trust, leaving just the tourism industry as its main financial source.

Overstall highlights as a key strength of this trust mechanism its ability to "separate the science of effectiveness monitoring from the politics of determining plan objectives," thus allowing it to produce objective information about how strategies in the land use plans are meeting land use objectives and goals.[187] Ultimately, the impact of the trust's activities will depend on whether the results of monitoring, where necessary, trigger changes to plans and activities to better protect the ecosystem and human well-being.

Model 4.3.5: Direct involvement of Indigenous knowledge-holders in co-management decision-making (Case Study: Northern Co-management Boards)

In the north there are a wide variety of co-management boards involved in various aspects of resource management. In these models, the principal mechanism used to integrate Indigenous knowledge into decision-making (as is constitutionally and statutorily required) is the direct participation of Indigenous knowledge holders as decision-making members of the various boards. Examples include:

- Mackenzie Valley Land and Water Board[188]
- Gwich'in Land and Water Board[189]
- Sahtu Land and Water Board[190]
- Wek'eezhii Land and Water Board[191]
- Gwich'in Land Use Planning Board[192]
- Sahtu Land Use Planning Board[193]
- Dehcho Resource Management Authority and the Deh Cho Land Use Planning Committee[194]
- Gwich'in Renewable Resource Board[195]
- Sahtu Renewable Resources Board[196]
- Wekʊ̀eezhìi Renewable Resources Board[197]
- Mackenzie Valley Environmental Impact Review Board[198]
- Inuvialuit Fisheries Joint Management Committee[199]
- Inuvialuit Environmental Impact Screening Committee[200]

- Inuvialuit Wildlife Management Advisory Councils[201]
- Nunavut Water Board[202]
- Nunavut Wildlife Management Board[203]
- Nunavut Impact Review Board[204]

Northern land claims agreements and enabling legislation explicitly provide for use of Indigenous knowledge. For example, *Mackenzie Valley Resource Management Act* section 115.1 reads: "In exercising its powers, the Review Board shall consider any traditional knowledge and scientific information that is made available to it." Furthermore, the Review Board's Guidelines for incorporation traditional knowledge in environmental impact assessment provide that: "In order to ensure that aboriginal cultures, values and knowledge play an appropriate role in its determinations, the Review Board is committed to fully consider any traditional knowledge brought forward in its proceedings."[205]

The impact of this is shown by examples where the Review Board recommended that proposals be rejected based on Indigenous knowledge evidence (e.g., a diamond exploration project at Drybones Bay on Great Slave Lake in 2004, and a small, uranium drilling operation proposed for the Upper Thelon basin in 2007).[206]

Nevertheless, the role played by Indigenous knowledge in land claims boards

Photo: Pat Moss

has been the subject of a number of critiques.[207] By all accounts, northern land-claims boards do a reasonable job of incorporating factual "local environmental knowledge", e.g., of species migration patterns. However, these boards have often failed to come to terms with more deeply spiritual or philosophical underpinnings of Indigenous norms regarding interactions between people and between people and their environment. As noted above, for example, anthropologist Paul Nadasdy goes so far as to argue that "by ensnaring participants in a tangle of bureaucracy and endless meetings" land-claims boards impede "meaningful change" for Aboriginal Peoples, because "to participate…they have to accept the rules and assumptions of the state management game."[208]

Based on extensive interviews of northerners involved in land-claims boards as well as Indigenous governments, Christensen and Grant found that, however:

> *[I]nterview respondents were more concerned that co-management arrangements give local Aboriginal people greater representation and participation in the process, so that their knowledge would be contributed to decision making on resource management. For respondents, the issue was not so much how to integrate two different 'ways of knowing': it was to ensure that decisions would no longer be made for the people, but rather by the people.*[209]

Overall, many commentators point to the substantially greater influence over environmental decision-making "than was possible, or even imaginable under the state system" concluding that "if 'the alternative' is the state management system that largely excluded aboriginal people and their TK [Traditional Knowledge], land-claim boards may be judged a success in securing aboriginal influence over land and wildlife decisions," despite the fact that the board's "essentially bureaucratic nature" has meant that sincere efforts to incorporate TK "have been only partially successful."[210]

Finally, a word should be said about the various secretariats and dedicated staff that support the northern co-management boards. From the perspective of "co-production of knowledge" it is significant that these technicians, scientists, Indigenous knowledge experts, and administrators are responsible to the boards they serve, including implementing their commitments to incorporate Indigenous knowledge into decision-making.

A BC example of this approach is found in the former Clayoquot Sound Central Region Board, which had its own technical and administrative staff. The approach may be contrasted to Land and Resource Management Planning Tables in BC, discussed further below, where line ministry staff provided technical support, or even to bodies where technical duties are filled by employees or members of the parties. The latter situations can present circumstances where technicians have other priorities and responsibilities to their employer that influence how they perform their roles beyond the mandate of the co-management body.

Model 4.3.6: Joint technical body (Case Studies: Various bodies established through Government-to-Government Reconciliation Protocols or Strategic Engagement Agreements in BC)

A common feature of many emerging "shared decision-making" agreements between the Crown and Indigenous nations in BC are joint technical bodies who are responsible for collaboratively reviewing and making recommendations to decision-makers on land and resource applications in the nations' territories according to an agreed-to "engagement" or "shared decision-making" process framework.[211] In a number of cases, the work of joint technical bodies (and related political government-to-government forums) is closely linked to strategic land use agreements that also provide substantive direction to the joint work of the parties with respect to subsequent resource approvals.[212]

These bodies, such as the Haida Gwaii Solutions Table, the Gitanyow Joint Resources Council, Coastal First Nations "Technical Teams", or the Tsilhqot'in Joint Resources Council involve technical or scientific staff of the parties to Reconciliation Agreement or Strategic Engagement Agreements. In a less formal manner than the northern examples, this approach counts on the balanced involvement of Indigenous representatives to ensure that Indigenous perspectives and knowledge are brought into a consensus-seeking process. One distinction from some northern models, however, is that technical and scientific staff involved in shared decision-making in BC remain representatives of their government employer/nation, and independence from that affiliation is not expected. Indeed the process of negotiation between parties is hoped to produce outcomes that accommodate the responsibilities and needs of both. A further difference is that legal mechanisms that result in deference to recommendations from co-management bodies in the north are largely absent in the BC context (with the exception of Haida Gwaii, see section 4.5 below), although consensus recommendations are assumed to have a greater likelihood of implementation by the parties' respective decision-makers.

Ultimately, "[b]uilding social-ecological resilience requires understanding of ecosystems that incorporates the knowledge of local users,[213] and questions of governance and knowledge generation are closely linked. As the Clayoquot Scientific Panel acknowledged in one of its key recommendations for ecosystem-based management, the answer may lie in "co-management based on equal partnership and mutual respect as a means of including indigenous people and their knowledge in planning and managing their traditional territories."[214]

4.4 Engaging stakeholders and the public in the process of collaborative management of cumulative effects

"Meaningful public participation is both fair and essential. The principles of administrative fairness require that those affected by decisions have the opportunity to take part in making them; and sustainability requires that all interests be heard."[215]

Public participation ranges along a spectrum from mere notification to shared or delegated decision-making. Meaningful stakeholder and community engagement has been recognized as requisite to ensuring that decisions about resource and land use are adequately informed by economic and social realities. For example, in an analysis of governance issues related to the Murray Basin in Australia, it was observed that:

> *The problems facing the river have social and cultural causes and demand social and cultural solutions…the current state of the Murray can be seen as part of a continuing social problem dating back to settlement rather than a recent environmental problem.*[216]

In other words, engagement of stakeholders and communities supports policy outcomes that are more responsive to the root causes of at least some of the problems that those policies likely seek to address. Community engagement may also help provide a lens on policy development and decision-making that offers a more integrated and realistic view of the impacts on the ground of policies and decisions, a sort of antidote to overly linear and technical decision-making.[217]

This may be one of the reasons, for example, behind an innovative provision of the *Mackenzie Valley Natural Resource Act*, which makes public concern an explicit trigger for more in-depth environmental assessment.[218] This statutory provision gives citizens an important say in ensuring that the environmental impacts, including cumulative impacts associated with a development, are assessed.

In a procedural sense, studies have indicated that citizen engagement in the policy process can lead to greater community ownership of both the issue and the solution, i.e. it supports community buy-in, [219] which will presumably have benefits with respect to more effective implementation.[220] Engagement at earlier, higher levels of decision-making may also be a success factor. For example, some commentators highlight the usefulness of involving stakeholders and communities in the deliberation of policy, as a way to arrive at and implement solutions to complex problems.[221] In terms of timing, engagement at the stage of policy development may also reduce the risk of antagonistic responses that can occur when engagement begins at the latter stages of planning and implementation.[222]

In practice, there is significant variation in approaches to stakeholder and community engagement. In the most robust models we examined, stakeholders and community representatives with a substantive interest in the geographic area or the values in question were directly integrated into co-management structures, in others, they were simply engaged through a consultative model. At the end of

the day, for engagement to have a meaningful impact on outcomes, it needs to be linked somehow to the decision-making process.[223] Participants who do not see their voices having any impact on decision-making quickly become disillusioned and cynical about the benefits of engaging leading to conflict and uncertainty.[224]

Summary: Criteria for success

- Ensure opportunities for meaningful community and stakeholder participation linked to decision-making and policy development
- Enhance resilience and legitimacy of decisions through strong communication between co-management bodies and communities and by demonstrating tangible benefits to community members

Model 4.4.1: Design charrette (Case Study: Calgary Greenfield Case Study Charrette)[225]

In 2006 the City of Calgary set out to develop an integrated Land Use and Mobility Plan that would sustainably accommodate 2.5 million people and 1.3 million jobs within the city by 2075. Part of the process involved a series of design charrettes, including the Greenfield Case Study Charrette. A design charrette is a type of workshop that typically brings together local government planners, engineers, architects, interested community members and other stakeholders to work together to develop a practical, integrated solution or set of solutions to achieve a sustainable neighbourhood.[226] In this case the neighbourhood was a new greenfield community. Diverse perspectives and viewpoints were welcomed.

Over four days the Calgary charrette participants agreed, by consensus, on design indicators, and developed four different design strategies. Participants also considered how the design strategies could be implemented. They emphasized that a common understanding (between policymakers and community members) of the long-term vision for the community was critical, along with ongoing engagement of the community throughout the development phase. This would ensure effectiveness and adaptability. Participants also identified key policy and funding barriers, and potential solutions.

Taking broad community goals as a point of departure, and bringing together participants with a range of perspectives and expertise, but a shared interest in a particular site or neighbourhood, design charrettes can produce practical and highly contextual input that will helpfully inform policy and decision-making for the community. While design charrettes are generally designed to take issues down to the neighbourhood scale, the integrative, practical and participatory approach of a design charrette would seem to offer insight into the development of public participation processes at a regional scale.

Model 4.4.2: Multi-stakeholder strategic land use planning tables (Case Study: British Columbia Land and Resource Management Planning processes)

In this example, well known to resource managers in British Columbia, interest-based negotiations among stakeholders from diverse backgrounds resulted in sub-regional land use plans for most of British Columbia. These plans identified new protected areas and defined resource management zones and objectives for vast areas outside of protected areas. While a number of factors constrained the effectiveness of outcomes from these processes (not least the absence of any distinct government-to-government role for Indigenous nations), they remain an important example of in-depth public and stakeholder participation that remains cogent in the context of regional cumulative effects management.

Land and Resource Management Planning (LRMP) processes were guided by a 1993 policy document *Land and Resource Management Planning: A Statement of Principles and Process,*[227] which characterized them as "an integrated, sub-regional, consensus building process." Representatives of various "interests" involved in or impacted by resource development (e.g., environment, labour, forestry, mining, local communities) formed planning "tables" for each sub-regional area (which were mostly coextensive with provincial timber supply areas). There was an explicit expectation that if consensus was reached among interest representatives that the plans would be approved by Cabinet. Key characteristics of the LRMP process included the following:

- All parties with a key interest or stake in the plan were invited to participate in planning tables. This included "all levels of government and all members of the public with an interest in land use and resource management; and, the public directly affected by the outcome."
- Each participating sector selected a person or persons to represent them in negotiations and consensus building. Provincial policy provided that: "Representatives must be selected to reflect the full range of land use and resource interests for an area. Periodic consultation with the general public is also required."
- The primary objective of land and resource management planning was to develop consensus at each stage of the planning process.
- The planning table then submitted a consensus plan or option report for approval by provincial Cabinet, and legal implementation.[228]

The consensus-building, interest-based approach used in the LRMP process (and in their precursor regional plans facilitated by the Commission on Resources and Environment) was referred to by the Province at the time as "shared decision-making" which was defined as:

> *A framework approach to participation in public decision-making in which, on a certain set of issues for a defined period of time, those with authority to make a decision, and those affected by that decision are empowered jointly to*

seek an outcome that accommodates rather than compromises the interests of all concerned.[229]

Regrettably, a change in provincial policy with respect to strategic land use planning occurred in 2001 to shift away from a participatory model of planning to a 'consultation' model for strategic land use planning. Furthermore, the province has not allocated sufficient resources to update, implement, enforce and monitor the existing plans, with the result that many are now outdated.[230]

Model 4.4.3: Appointment of community members/stakeholders to hold provincial seats on co-management body (Case Study: Clayoquot Sound Central Region Board)

Enabled by the Clayoquot Sound Interim Measures Agreement (IMA), and subsequent Extension Agreements, from 1994-2009, the Clayoquot Sound Central Board was charged with ensuring that the recommendations of the Clayoquot Sound Scientific Panel for ecosystem-based management were reflected in all

Photo: Andrew Wright

Photo: Dale Simonsen

resource management plans and approvals in Clayoquot Sound.[231] The Board did so by exercising its authority under the IMA to review all strategic and operational resource management plans as well as decisions regarding alienation of land and water resources, land tenures, wildlife management and mining in Clayoquot Sound, and recommending rejection, approval, or modification to the originating ministry/proponent.

The CRB was very similar in many respects to the northern co-management boards discussed in the previous section, in that it was made up of equal representatives from the First Nations and provincial governments. In the CRB's case First Nations representation came from each of the five Central Region Nuu-chah-nulth Nations, and the board had First Nations and a provincial co-chairs. However, the model is noted here to highlight that in practice, provincial representatives on the CRB were typically appointed from among local community members, for example representatives of local government, and conservation and resource interests. In this manner, the Province in effect chose to 'share' *its* decision-making power with diverse stakeholders but within a balanced government-to-government co-management arrangement.

Decision-making within the CRB was by consensus, and if consensus couldn't be reached, a double-majority vote occurred where the majority of board members *and* the majority of the First Nations members had to approve a decision. This approach thus allowed for both consensus building among diverse provincial stakeholders/local government representatives as well as providing for a distinct and more powerful First Nations role in decision-making. In practice consensus outcomes were almost always achieved; the CRB had to resort to a vote only a handful of times in its history.

While in theory the CRB's decisions were recommendations only, in practice implementation by government agencies was the norm. A strong incentive for implementation was provided by the appeal mechanisms provided for in the IMA. If the CRB's decisions were not implemented to its liking in 30 days by the proponent or originating ministry, it was able to appeal disputes directly to Cabinet (a process that was required exceedingly rarely).

It should be noted that because the provincial approach to appointing its members was not formalized in any way, concerns were sometimes expressed about the balance or representativeness of those appointed. This could have been remedied by formalizing the expectations regarding the local community interests with whom the Province agreed to "share" its decision-making role in board deliberations.

4.5 Giving effect to information, recommendations and decisions of regional co-management body

"If co-management is to proceed, government[s] must take action to enact supportive policies, legislation and authority structures, which define jurisdiction and control, give legitimacy to decision-making arrangements, clarify the rights and responsibilities of partners and communities, and uphold local enforcement and accountability mechanisms."

— Sherry and Fondahl, Criteria Affecting Success of Co-management[232]

The composition, mandate and authority of regional co-management bodies may be enabled in a variety of ways. Often bodies are established through government-to-government agreements between the Crown and one or more Indigenous nations (including formal treaties but also other types of agreements and MOUs). Some are established through legislation and others through trust agreements. Regardless of how they are established, the critical question for the purposes of our analysis is how the outcomes of their work can and should be integrated into decisions about resource use and allocation in order to manage cumulative effects.

As the Forest Practices Board noted in its report on assessing and managing cumulative effects: "the real issues are not about methods of assessment; they are about the development and implementation of a decision-making framework that can be informed by those assessments."[233]

The current state of cumulative effects management in BC is ineffective and untenable because the application of cumulative effects management is:

a) discretionary (e.g., consideration of cumulative effects in environmental assessment is not necessary and there is no requirement to follow land use plans in project-specific environmental assessment);

b) incomplete (e.g., legal objectives flowing from land use plans don't apply to most resource industries); and

c) inconsistent (e.g., it occurs only on an ad hoc basis if market or social license concerns arise).

Lawyers at the Canadian Institute of Resources Law have found limitations in cumulative effects management across the country.[234] We concur with their conclusion that: the "establishment and enforcement of regulatory *limits* on specified human activities that contribute to cumulative environmental effects" is a key success factor in effective cumulative effects management.[235]

Summary: Criteria for success

- Strategic-level direction flowing from regional cumulative effects assessment and land use planning is legally established and applied in a binding, consistent way to project-level assessment and operational decision-making
- Co-management bodies have clear, meaningful decision-making authority (for establishing strategic-level direction or making operational decisions, or both)
- Regular monitoring informs adjustment of plans and actions where necessary and provides for ongoing learning
- With the exception of sensitive cultural information, all relevant information and analysis is publically available (e.g., in a searchable database) in order to facilitate public/stakeholder and Indigenous engagement throughout all stages (including monitoring, adaptive management, and informed engagement in subsequent reviews and assessments).

In this case we have grouped models with reference to the criteria for success.

Strategic-level direction is legally applied to project-level assessment and operational decision-making

Our research identified a number of legal mechanisms that may accomplish the goal of ensuring that strategic-level direction from regional cumulative effects assessments and land use planning is applied in a binding, consistent way to project-level assessment and operational decisions.

Model 4.5.1: Legislation provides that plans are binding (Case studies: *Mackenzie Valley Natural Resource Management Act*, Ontario *Far North Act*)

In some cases, legislation directly establishes that the strategic level direction set out in a land use plan is binding. The *Mackenzie Valley Resource Management Act*, for example, provides that:

> *46. (1) The Gwich'in and Sahtu First Nations, departments and agencies of the federal and territorial governments, and every body having authority under any federal or territorial law to issue licences, permits or other authorizations relating to the use of land or waters or the deposit of waste, shall carry out their powers in accordance with the land use plan applicable in a settlement area [emphasis added].*

Similarly, Ontario's *Far North Act* provides that:

> **14.** *(1) If there is a community based land use plan for a planning area, no person shall make any decision under an Act respecting the allocation, disposition or use of public land and natural resources in the area or carry on any activity in the area that is related to that allocation, disposition or use unless the decision or the activity, as the case may be, is consistent with the land use designations and permitted land uses specified in the plan and the permitted activities prescribed for the purpose of the plan.*[236]

In addition, no new industrial activities (mining, oil and gas development, commercial logging etc.) are permitted in areas without community based land use plans, until such plans are developed and approved under the *Far North Act*.[237]

Model 4.5.2: Stand-alone legislation provides management direction for a specific region (Case studies: *Muskwa-Kechika Management Area Act*, *Flathead Watershed Area Conservation Act*, *Great Bear Rainforest (Forest Management) Act*)

In contrast to the enabling, generally-applicable approach in Model 1 above, a stand-alone statute may also be enacted to govern planning for a particular geographic area. For example, the *Muskwa-Kechika Management Area Act*[238] resulted from the BC Land and Resource Management Planning process, discussed above, through which a consensus was reached that the unique region deserved special protection and management.[239] The Act, passed in 1998, requires that the use and management of Crown land in the region be governed in accordance with a management plan established under the Act, and also enables the creation of local strategic plans (which must be consistent with the management plan).[240]

As another example, the *Flathead Watershed Area Conservation Act*[241] was catalyzed by extensive public concern regarding proposed coal and coal bed methane development in the transboundary Flathead watershed. Following the signing of a memorandum of understanding between the Governments of British Columbia and Montana in 2010, the Act was passed in order to prohibit mining, oil and gas development activities in the region.[242]

A further recent example can be seen in the *Great Bear Rainforest (Forest Management) Act*,[243] which resulted from years of negotiations among the Crown and First Nations, conservation groups and the forest industry in the region. The Act, in tandem with related government-to-government agreements with First Nations, new protection area designations, and the *Great Bear Rainforest Order*,[244] sets the framework for forest management that takes approximately 85 percent of the forested area in the region off the table for commercial logging.[245]

Model 4.5.3: Legal order or regulation establishes land use designations or zones and related management objectives

As noted above, presently in BC, the province's preferred mechanisms for legalizing strategic direction for land use outside of protected areas (*Land Act* s. 93.4 orders and *Government Actions Regulation* orders) do not apply to most resource uses, limiting their effectiveness from the perspective of cumulative effects management. However, *Land Act*, s. 93.1 (if brought into force) would create a legal mechanism to make objectives for various land designations applicable to a range of industries (or more properly to statutory approvals and tenure decisions made under statutes regulating these industries). *Environment and Land Use Act* section 7 orders may also be made applicable despite the provisions of any other act.[246] For example in the Great Bear Rainforest, an *Environment and Land Use Act* order prohibits commercial logging and hydroelectric development in 310,000 ha of the region.[247]

In some cases provincial Cabinet is also empowered to legalize resource management objectives through a regulation rather than an order. For example, while the *Wildlife Act* does not deal specifically with land use objectives, it enables the designation by regulation of wildlife management areas in which no person may use land or resources without written permission from a fisheries and wildlife regional manager, despite any other enactment (although there are some practical and legal limitations to the effect of such a designation).[248] As discussed above, the *Water Sustainability Act* also enables Cabinet to pass regulations establishing water objectives, and/or requiring the development and application of water sustainability plans.[249]

Co-management body has clear, meaningful decision-making authority

Once measurable management objectives for different values are established, cumulative effects management still requires decision-makers to decide whether any specific project or decision is within those limits, and manage the complexity of trade-offs between activities that compete for "space" within the limits established.

There are many models where at least certain aspects of environmental assessment, tenuring and permitting decisions rest with co-management bodies. The decisions of such co-management bodies will be most effective when they cannot be easily ignored or overridden. Many co-management arrangements in Canada, including a number explored earlier in this paper, provide that "ultimate" authority rests with the Crown. Nonetheless, co-management may be structured so that the co-management body has considerable authority in practical terms. One example of this, the **Clayoquot Sound Central Region Board** discussed earlier in this paper, demonstrates that a body may technically be "advisory" while in practice implementation of its recommendations is the norm. However, the "gold standard" is for a co-management body to have clear, legally-established decision-making authority: see Model 4.5.4 below.

Model 4.5.4: Decisions of a co-management body are binding , with lack of consensus resolved by a jointly appointed chair (Case study: Haida Gwaii Management Council)

The *Haida Gwaii Reconciliation Act* and a resolution of the Haida Nation jointly establish the Haida Gwaii Management Council, consisting of two members each appointed by the Haida Nation and provincial Cabinet, and a jointly appointed chair. The *Haida Gwaii Reconciliation Act* recognizes that "the Haida Nation and British Columbia hold differing views with regard to sovereignty, title, ownership and jurisdiction over Haida Gwaii" yet they intend to make decisions jointly under their respective authorities.[250] The Act places legal authority for certain strategic land and resource decisions with the Council: the establishment of forest and range practices objectives, determining the allowable annual cut, approving protected areas management plans, and establishing policies and standards for the identification and conservation of heritage sites. The Council is the ultimate decision-maker on such issues (subject to judicial review if applicable). The Council's decisions are to be made by consensus, but where consensus cannot be reached then votes are cast, with the chair holding the deciding vote in the event of a tie.

In addition, the Kunst'aa guu – Kunst'aayah Reconciliation Protocol[251] between the Haida Nation and the Province of British Columbia provides for establishment of a technical level Solutions Table that engages in consensus-seeking deliberation on other forms of land and resource decisions, with the intention of presenting consensus recommendations to the respective decision-makers of the parties. If the Solutions Table is unable to reach consensus, all relevant information, including about areas of disagreement are forwarded to the decision-makers. Dispute resolution mechanisms if the Parties reach different decisions are not clear from the Protocol itself.

Model 4.5.5: Crown is required to justify departing from co-management body's decisions according to entrenched criteria (Case Study: Nunavut Wildlife Management Board)

The Nunavut Wildlife Management Board, a co-management body established under the Nunavut Land Claims Agreement and *Nunavut Land Claims Agreement Act*,[252] is the main regulator of access to wildlife in the Nunavut Settlement Area. Although the Crown is said to retain "ultimate" responsibility for wildlife management in the area, the Board is the main instrument of management and the main regulator of access to wildlife. Its functions include:

- establishing, modifying or removing levels of total allowable harvest;
- allocating resources to residents and to existing operations in the territory;
- approving plans for management and protection of particular wildlife or habitats; and,
- establishing wildlife management zones and conservation areas.

Decisions of the Nunavut Wildlife Management Board must be accepted and implemented by the Minister, unless specifically disallowed according to legally entrenched "decision-making criteria" (e.g., to give effect to a valid conservation purpose/to provide for public health or safety) within a set time frame.[253]

Model 4.5.6: Local body exercises delegated legal authority subject to an approved management plan (Case Study: California Coastal Commission)[254]

The California Coastal Commission (CCC) is one of the agencies designated to administer the federal *Coastal Zone Management Act* in California, and as such manages development activities along the California coast except for San Francisco Bay. Local governments along the coast are mandated to prepare Local Coastal Programs, which they submit to the CCC for approval. Once approved the CCC delegates its permitting authority for the area in question to the local government that prepared the Plan, with certain limitations. The CCC also acts as the appeal body for certain local government permitting decisions.[255]

Regular monitoring informs adjustment of plans and actions where necessary and provides for ongoing learning

At its most effective, adaptive management requires not only that monitoring be conducted in order to determine whether objectives are being met and effects are as predicted, but also that monitoring outcomes be used to adjust plans and actions as needed. Few jurisdictions that we examined provided legislative triggers for

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adaptive management, although in some cases monitoring is specifically provided for.

Generally, in Canada boards and trusts who generate research and/or monitoring information have no legal authority to ensure that decision-makers act on the information. With that said, the funding capacity of some bodies in BC, like the Columbia Basin Trust or the Okanagan Basin Water Board, mean that in some cases they can support activities that directly give effect to learnings from knowledge generated. These case studies are discussed in section 4.6 below.

Model 4.5.7: Monitoring is statutorily (and/or constitutionally) required (Case Studies: *Nunavut Land Claims Agreement Act* and *Mackenzie Valley Resource Management Act*)

The Nunavut Land Claims Agreement (and corresponding *Nunavut Land Claims Agreement Act*) makes monitoring a constitutional requirement, but does not specifically provide for how monitoring information is to be integrated into decision-making:

> ***Article 12.7.6 - General Monitoring***
> *There is a requirement for general monitoring to collect and analyse information on the long term state and health of the ecosystemic and socio-economic environment in the Nunavut Settlement Area. Government, in co-operation with the Nunavut Planning Commission (NPC), shall be responsible for developing a general monitoring plan and for directing and co-ordinating general monitoring and data collection.*[256]

The monitoring of cumulative effects is also a constitutional obligation contained in the Sahtu, Gwich'in and Tlicho comprehensive land claim agreements and a statutory requirement of the *Mackenzie Valley Resource Management Act,* which provides:

> *146. The responsible authority shall, subject to the regulations, analyze data collected by it, scientific data, traditional knowledge and other pertinent information for the purpose of monitoring the cumulative impact on the environment of concurrent and sequential uses of land and water and deposits of waste in the Mackenzie Valley.*[257]

One of the innovations of the *Mackenzie Valley Resource Management Act* is that it also requires the federal Minister to have an independent environmental audit conducted at least once every five years.[258] The terms of reference for the audit including the key components of the environment to be examined must be fixed in consultation with the Gwich'in First Nation, the Sahtu First Nation, the Tlicho Government and the territorial government. The *Mackenzie Valley Resource Management Act* further provides that:

148 (3) An environmental audit shall include

(a) an evaluation of information, including information collected or analyzed under section 146, in order to determine trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends;

(b) a review of the effectiveness of methods used for carrying out the functions referred to in section 146;

(c) a review of the effectiveness of the regulation of uses of land and water and deposits of waste on the protection of the key components of the environment from significant adverse impact; and

(d) a review of the response to any recommendations of previous environmental audits.[259]

The independent audits provide an important level of transparency and accountability, and allow progress or challenges to be tracked over time. For example, in 2010 the audit noted that:

INAC has not fulfilled its mandate under the MVRMA to implement an effective Cumulative Impact Monitoring Program (CIMP). CIMP has been chronically underfunded and underresourced....The lack of progress in implementing CIMP has hindered land use planning and the ability of MVRMA Boards, regulators and the public to properly assess the cumulative impact context within which project–specific decisions need to be made.[260]

By 2015 the audit found that, despite a number of foundational challenges:

Since the last Audit in 2010, the environmental regulatory system in the NWT has continued to improve….Since the last Audit, the NWT Cumulative Impact Monitoring Program (NWT CIMP) has focused its attention on the priorities of caribou, water and fish. These priorities were identified by environmental decision makers and regulators. This has allowed NWT CIMP to better meet its mandate. Much work needs to be done, but there is a clearer path forward.[261]

Model 4.5.8: Indigenous-led monitoring program (Case Study: Coastal Guardian Watchmen)

Indigenous led-monitoring and enforcement initiatives, often referred to as Indigenous Guardian programs, are one approach to fulfilling ongoing monitoring and adaptive management requirements of regional cumulative effects management. Indigenous peoples are often the first to observe both acute and incremental changes to their territory. Empowering Indigenous Guardians to undertake consistent and purposeful monitoring of their territories can ensure

that relevant, up-to-date data are available to co-governance boards or other decision-makers. Apart from the practical value of Indigenous Guardian initiatives, the constitutional imperative to recognize Aboriginal title and rights increasingly demands a greater role for Indigenous peoples in the management, conservation and enforcement of Indigenous laws in their territories.

The Coastal Guardian Watchmen Network[262] is an example of an Indigenous-led monitoring and enforcement initiative that is already fulfilling many of the ongoing monitoring and adaptive management requirements of a regional cumulative effects approach. The Coastal Guardian Watchmen Network was created in 2005 in response to the lack of enforcement by the Crown in the region and an increase in illegal activities and poaching along BC's coast. The Network is a program of the Coastal First Nations – Great Bear Initiative. There are currently eight Guardian Programs working with the Network that now spans the land and waters of BC's central and north coast and Haida Gwaii. The Watchmen play many roles: They are trained to monitor the territory, report any illegal activities, collect data on key indicators, and educate the public about their work.

The Coastal Guardian Watchmen Network is part of a broader movement towards increased recognition for Indigenous Guardian programs across Canada. There are approximately 30 programs across Canada with an estimated 200 Indigenous nations looking to start programs in the near future. In 2016, a National Indigenous Guardians Network was established and the first-ever Guardians Gathering was held to share best practices and create strategies for broader recognition. With a few exceptions, the Canadian government does not currently recognize the authority of Indigenous Guardians to enforce Canadian or Indigenous laws within their territories. However in 2017, for the first time, the federal government recognized the value of Indigenous Guardian programs and allocated $25 million towards a National Indigenous Guardians Network.[263] Work is also ongoing to develop an Indigenous Guardians toolkit[264] – a how-to guide for starting and running a successful Indigenous Guardian program – which will be an invaluable, publically available resource for nations interested in this work.

4.6 Options for funding collaboration in regional cumulative effects management

This section examines approaches used currently in BC, as well as models from other jurisdictions, for funding regional co-management bodies or other institutional arrangements for cumulative effects management.

Summary: Criteria for success

- Ample, stable and apolitical funding
- Objective and mutually agreed-to criteria for prioritizing among uses of limited resources
- Funding arrangements that are flexible enough to address emerging priorities

Model 4.6.1: Endowment fund (Case Study: Coast Opportunities Funds)

Government-to-government strategic land use agreements on the Central and North Coast and Haida Gwaii have resulted in implementation of an ecosystem-based management framework for managing human activities, particularly forestry, in what is often referred to as the Great Bear Rainforest. One of the innovations of the approach implemented in this region was the creation of the Coast Opportunities Funds. The two funds, The Conservation Fund and The Economic Development Fund are sustained by funds that were provided by Province of British Columbia ($30 million), the Government of Canada ($30 million), and six philanthropic foundations ($60 million). Both funds may be accessed only by participating Indigenous nations (Indigenous nations with territories in the Great Bear Rainforest who signed land use planning agreements with the provincial government) by application to the fund and approval by the board of directors.

The Economic Development Fund is "a shorter-term fund designed to create sustainable businesses and community-based employment opportunities over seven years."[265]

The Conservation Fund is a permanent endowment fund of $56 million. Each year income earned from the fund (anticipated to be in the range of $1.5 to 2.5 million) is used to pay for eligible conservation management projects and activities that support the goals of the fund. These goals are directed at the long-term conservation of the region, and include things like habitat restoration and educational programs.

Of particular interest from the perspective of governance and regional cumulative effects management is the Conservation Fund's focus on enhancing capacity for ongoing conservation planning, research and monitoring. Many grants made to date from the Conservation Fund have gone to sustain innovative monitoring and enforcement programs such as the Guardian Watchman Program, as well as to

build capacity among Indigenous nations resource management and stewardship departments.

Model 4.6.2: Property taxation power (Case Study: New Zealand Regional Councils)

Property tax on residential and business properties is the primary source of funding for New Zealand's Regional Councils (referred to as "rates" in that country); see section 4.1 above. While the types of rates charged and means of calculation vary in each region, rates are generally calculated as a function of property value. One of the primary purposes of the *Local Government (Rating) Act 2002* is to ensure that rates are set in a "transparent and consultative manner" and that information is readily available to taxpayers to ensure that they understand their liability for rates.[266] Certain rates are only charged to those constituents that benefit from a particular service. For example, the Horizons Regional Council charges a biodiversity rate to those constituents that benefit from pest animal control.[267] Funding also comes from government subsidies, fees and user charges and investment income.[268]

The New Zealand *Local Government Act 2002* imposes requirements on Regional Councils to have balanced budgets, and stipulates that the central government is not responsible for their debt.[269] Annual budgets must be published in an annual plan that is subject to public consultation, and at the end of each year, the Regional Council must publish an annual report revealing whether and to what extent the budget was adhered to.[270]

Photo: Island Conservation

Model 4.6.3: Property taxation power (Case Study: Okanagan Basin Water Board)

Established by Supplementary Letters Patent pursuant to the *Municipalities Enabling and Validating Act*[271], the Okanagan Basin Water Board (OBWB) is a unique BC entity that delivers programs related to water management in the Okanagan Basin. Representation on the OBWB consists of three directors from each of the three regional districts, one director appointed by the Okanagan Nation Alliance, one director from the Okanagan Water Stewardship Council, and one director from the Water Supply Association of BC.

The Supplementary Letters Patent[272] specify tax rates that the OBWB can collect through the regional districts for each of its approved programs based on assessed property values for residents and businesses within the Okanagan Basin. The OBWB itself has a program that provides grants for projects related to water conservation and water quality impacts.

In addition to the revenue generated through taxation, the OBWB has pursued a model of leveraging project-based funding from different levels of government, universities and foundations, with an emphasis on collaborative work that provides relevant input for local governments in the Basin.

Model 4.6.4: Property taxation power (Case Study: Columbia Valley Local Conservation Fund)

In 2006 the Regional District of East Kootenay (RDEK) learned through a survey that residents would be willing to pay up to $20 per property per year to support

Photo: Ralph Rodriquez

conservation initiatives in the Columbia Valley region. The survey was followed by community consultation and a referendum, which confirmed support for the measure. In 2009, by means of a service establishment bylaw, the RDEK created a conservation fund supported by a property tax levy from participating areas within the regional district. Funds are allocated by the RDEK Board, based on the advice of a volunteer Technical Review Committee that examines project proposals following terms of reference decided by the Board. The Fund is administered through an agreement with the Kootenay Conservation Program, made up of more than 50 partners including conservation and agricultural organizations, forestry and business, education, First Nations, and all levels of government.[273]

Funds awarded through the Conservation Fund have reportedly been used to leverage funds from other sources.[274] To support public commitment to the Fund, selected proponents report out to the community at annual town hall meetings.

Model 4.6.5: Regional trust (Case Study: Columbia Basin Trust)

The Columbia Basin Trust (CBT) is created by statute[275] and has a $321 million endowment whose investment returns provide funding for its programs. According to its enabling legislation the CBT is required to use its funds for the "ongoing economic, environmental and social benefit of the region." The twelve directors of the CBT (including five board members from each of the regional districts within the CBT defined region and one representative from the Ktunaxa-Kinbasket Tribal Council, plus six other directors appointed by Cabinet) are charged with developing a long term Columbia Basin Management Plan, and allocating funds to meet the objectives of the plan. Before making any changes to the plan, the directors "must solicit input on the proposed amendments from residents of the region in the manner and to the extent the directors consider appropriate."

The CBT was created in response to public outcry about the lack of public consultation carried out by government before the Columbia River Treaty was signed in 1964, when a number of communities and Indigenous peoples suffered significant negative impacts as a result of the creation of three reservoirs and the associated permanent flooding of land, that led to loss of agricultural and traditional Indigenous lands, loss of habitat and harm to ecosystem values. The CBT supports environmental research and environmental education, and also provides funding to collaborative initiatives such as the Columbia Basin Water Quality Project, the Canadian Columbia Basin Glacier and Snow Research Network and the Columbia Basin Watershed Network.[276]

Model 4.6.6: Proponent-funded independent monitoring agency (Case Study: Ekati Diamond Mine Independent Environmental Monitoring Agency)[277]

The Independent Environmental Monitoring Agency (IEMA)[278] was formed through a legally binding Environmental Agreement[279] signed in 1997 by BHP Billiton Diamonds Inc., the Government of Canada and the Government of the Northwest

Photo: Jessica Clogg

Territories. The IEMA was established as a public watchdog for a single project--BHP-Billiton's Ekati diamond mine. Seven directors are appointed by the parties (four appointed by Indigenous peoples and three joint federal-territorial-BHPB appointees, who may not be employees of any of the parties) to monitor environmental performance by the company and government regulators. The company is required to fund the agency for the entire life of the project, including reclamation and closure. The Environmental Agreement provides that the IEMA "shall operate at arms length from, and independent from" the company, Canada and the Government of the Northwest Territories. The IEMA itself is a non-profit society incorporated under the Northwest Territories *Societies Act*.

The agency participates in all regulatory reviews and licensing hearings, and ensures that Indigenous community concerns are effectively communicated to the company or government as required. The IEMA has no enforcement capability, but it does produce an annual report and can resort to informing the responsible minister if there are unresolvable issues emerging at the mine.

Because of the technical capacity of the appointed directors, IEMA has become a significant player in management of the Ekati mine. It produces solid scientific work, and has eased the burden on regulatory agencies and the Aboriginal communities who have grown to trust it as a reliable and objective source of environmental information about the mine. The success of IEMA suggests the potential for a regional, multi-project oversight agency.

For example, it seems conceivable that at a regional scale, funds from a range of all proponents could form part of a fund for ongoing monitoring of cumulative impacts on valued components in the region, potentially structured as a trust in order to create a legal firewall between proponents and the agency. This would allow for efficiencies and cost-sharing for monitoring programs that might otherwise have been required on a project-by-project basis.

Model 4.6.7: Payment for ecosystem services (Case Study: Carbon Benefit Sharing)

Status quo logging in BC is a massive source of greenhouse gas emissions.[280] Projects that avoid these greenhouse gas emissions through permanent, additional conservation measures create a carbon benefit that may have a market value in voluntary or regulated carbon markets. In a handful of government-to-government reconciliation agreements between Indigenous nations and the province of BC[281] the parties have reached innovative arrangements to share the carbon benefits of agreed-to conservation and improved forest management practices.[282]

These "forest projects" flow from strategic land use agreements between Indigenous nations and the Province that provided for new protected areas, and management objectives implementing more ecosystem-based forest management. The parties agree to quantify the tonnes of carbon in avoided emissions or enhanced carbon sequestration associated with these measures each year and to apply them as follows: as a first priority to cover the costs of the Indigenous nation in administering the Offset Sharing Agreement; as a second priority to cover the costs of the Indigenous nation in meeting its obligations under the reconciliation agreement (e.g., protected areas management); and as a third priority the remaining tonnes of each year's "qualifying offsets" are to be shared 50-50 between the parties, and then may be sold in carbon markets.

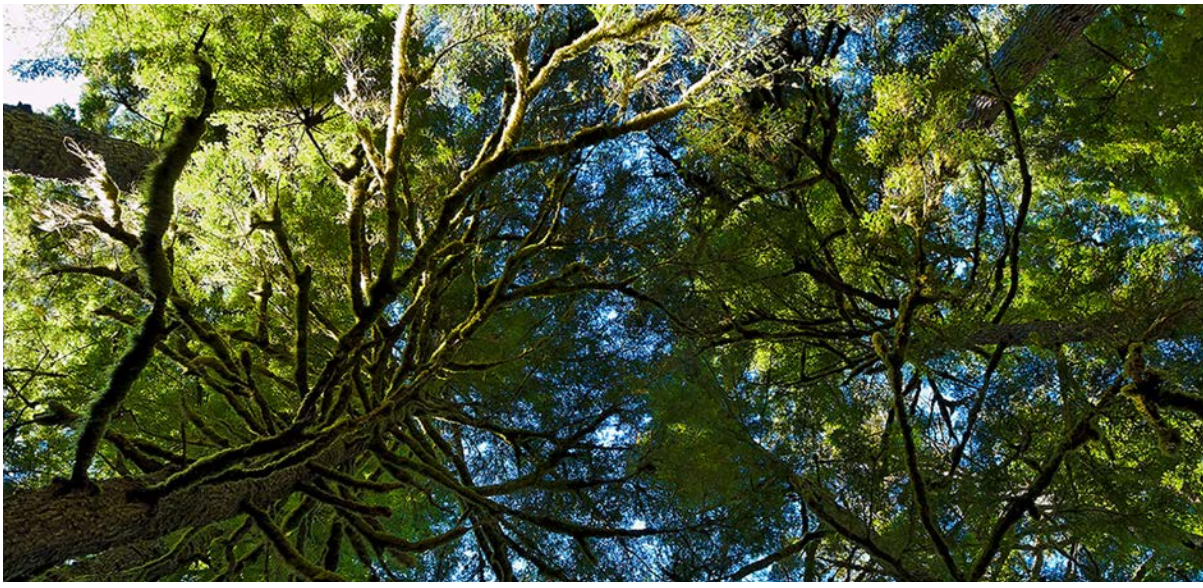

Photo: Andrew Wright

5.0 Analysis: Co-Governance Options for Regional Cumulative Effects Management

"Adaptive governance of ecosystems generally involves polycentric institutional arrangements, which are nested quasi-autonomous decision-making units operating at multiple scales."[283]

The models highlighted in this paper represent a number of different institutional forms, at different scales, for example:

- Elected regional governance bodies
- Trusts
- Legislatively enabled tribunals or co-management bodies
- Boards established by government-to-government agreement or other form of legal agreement or non-legal memorandum of understanding
- Time limited planning teams or committees

Our analysis suggests that different institutional models or approaches to governance may be most appropriate for different elements of regional cumulative effects management. This section illustrates our findings by exploring these elements in the context of a proposed co-governed Regional Impact Assessment structure, which could be enabled through the federal environmental assessment law reform process that is currently underway.

In its April 2017 report, the federal Expert Panel for Review of Environmental Assessment Processes (the "Expert Panel") makes a number of recommendations that are highly relevant to establishing co-governed regional structures for assessing and managing cumulative effects. The Expert Panel recommends "…a Canada-wide requirement for regional IAs [Regional Impact Assessments],"[284] noting that "…the greatest benefit from regional IAs will occur through the co-operation of all orders of government."[285] In this regard, the Expert Panel emphasizes the importance of federal, provincial and Indigenous governments entering into multi-jurisdictional arrangements to conduct regional assessments in a manner that incorporates the decision-making authority of all jurisdictions:

> *Where Indigenous governments have assessment responsibilities, tri-partite arrangements should be negotiated for the conduct of regional or project assessment within their traditional territory, treaty settlement lands and/or Aboriginal title lands. Should Indigenous groups without modern treaties wish to undertake their own IA process, they should be able to do so, and co-operation arrangements with the Groups should be negotiated. Federal IA governance structures and processes should support Indigenous jurisdiction.*[286]

Photo: Neil Ever Osborne

In the table below, we provide an illustration of what this could look like in practice, drawing from the models in this paper, as well as the Expert Panel report and submissions to the federal environmental assessment review process by West Coast Environmental Law and the Environmental Planning and Assessment Caucus.[287] Wherever possible, the bodies, processes and steps described in the Expert Panel report are incorporated, in order to highlight how the Expert Panel's recommendations can be built upon to support a co-governed cumulative effects management process taking place through a Regional Impact Assessment. Terms described in the Expert Panel report that are used in the table below include: Regional Impact Assessment; Project Impact Assessment; Planning Phase; Study Phase; Decision Phase; Impact Assessment Commission; Assessment Team; and Conduct of Assessment Agreement.[288]

For context, the model explored in the table includes the following bodies:

- **Impact Assessment Commission:** the new federal assessment authority envisioned in the Expert Panel report.[289]
- **Regional Assessment Commission:** a regional body to collaboratively oversee Regional Impact Assessments, consisting of members nominated by the federal Impact Assessment Commission, provincial and Indigenous governments. A Regional Assessment Commission may be created by agreement, or a pre-existing co-management body may take on the role (in the table we assume there is no such pre-existing body). The Regional Assessment Commission would generally fill the responsibilities of the Impact Assessment Commission and relevant provincial assessment bodies as they relate to the planning and study phases of a Regional Impact Assessment. As noted in the table, we also propose broader roles for the Regional Assessment Commission, such as conducting Project Impact Assessments in the region and overseeing monitoring.
- **Assessment Team:** a temporary expert team retained by the Regional Assessment Commission to conduct the studies and analysis that inform the Regional Impact Assessment.[290]
- **Territorial or regional co-management bodies:** various co-governed bodies responsible for implementing the outcomes of a Regional Impact Assessment through land use planning, project-level assessment, tenuring and regulatory decision-making, and so on.

The table below sets out a proposed structure for how the key components of cumulative effects management could be discharged in a collaborative way by federal, provincial and Indigenous jurisdictions though a Regional Impact Assessment and related implementation measures. This approach could be enabled by legislative reform at a federal level plus collaboration among the various jurisdictions. In addition to legislative change, the governance approaches identified in the table would require adequate funding and secretariat/staff support to

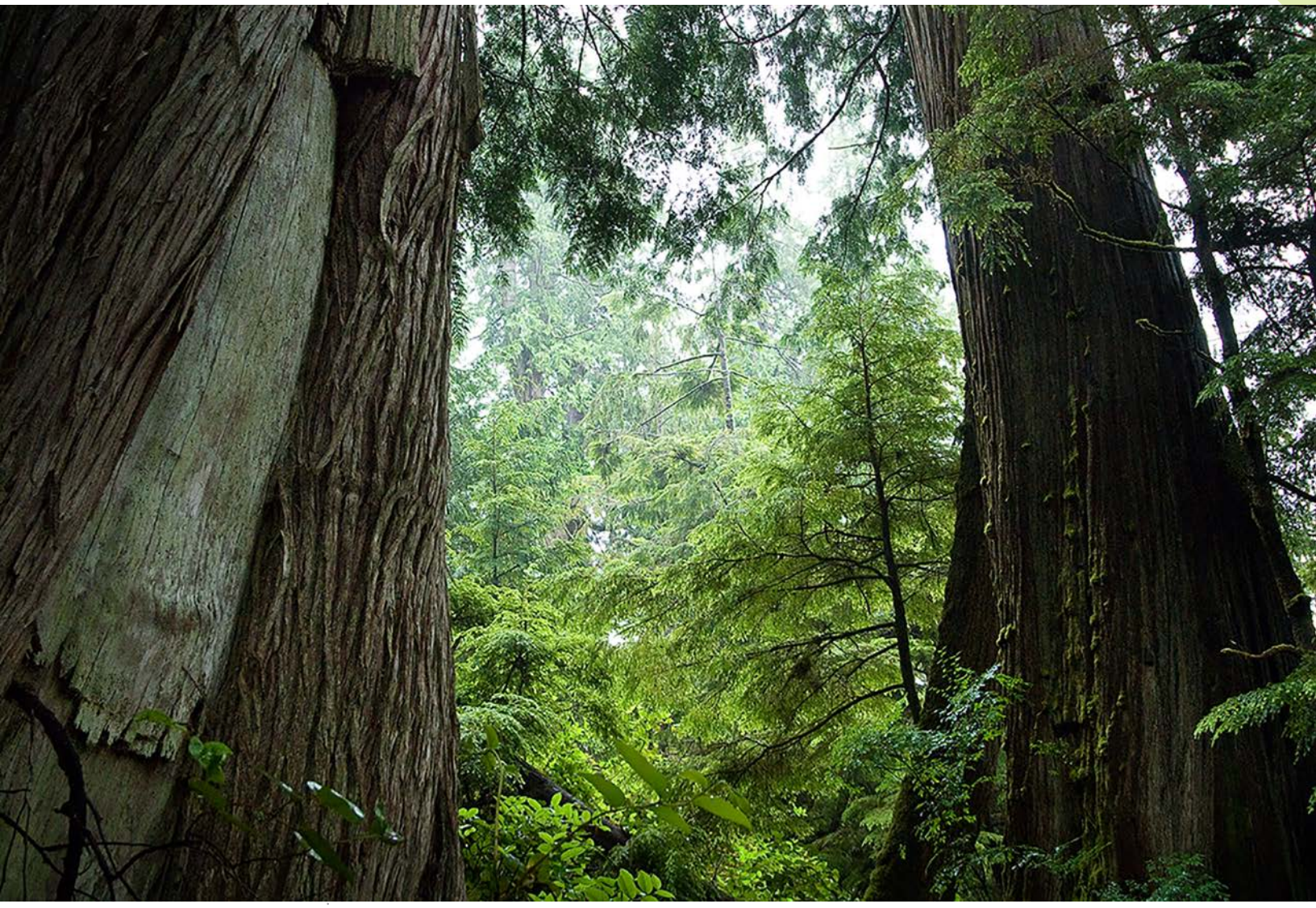

Photo: Andrew Wright

function effectively. Options for addressing these issues are discussed in sections 4.3 and 4.6 above.

As noted throughout this paper, reformed legal and policy approaches are also recommended at the provincial level in order for such a model to function most effectively. However, we centre the model explored in the table below in the context of federal environmental assessment law reform, both for the sake of providing a summary example and because the federal government has an opportunity to act now to enable and catalyze meaningful multi-jurisdictional cumulative effects management in regions throughout BC and Canada.

Table: Regional cumulative effects management and co-governance model

Element of Cumulative Effects Management	Recommended Governance Approach	Comments
Establishing strategic level direction		
Multi-jurisdictional cooperation agreement for Regional Impact Assessment *Key outcome: Federal, provincial and Indigenous governments in a region sign an agreement to cooperate in a Regional Impact Assessment and establish a Regional Assessment Commission to oversee assessments*	Who: Federal, provincial and Indigenous governments What: Negotiate agreement on how each jurisdiction in a region will discharge its respective decision-making authority in a cooperative manner through Regional Impact Assessment. At minimum a cooperation agreement should: i) *Set out agreement by the various jurisdictions in a region to cooperate in a Regional Impact Assessment process consisting of the basic elements described in this table.* A goal of the cooperation agreement would be to include relevant and interested jurisdictions in a framework for collaboration. It is anticipated that the region would generally cover a broad area defined by its ecological characteristics, which may include the territories of multiple Indigenous nations (e.g. the Skeena watershed, the Peace region) but where possible would be co-extensive with Indigenous tribal territories and legal orders (e.g., Haida Gwaii, Secwepemculecw). Any detailed determination of the spatial boundaries of a Regional Impact Assessment would be left to the Conduct of Assessment Agreement, described below. ii) *Establish a regional body to collaboratively oversee Regional Impact Assessments, consisting of members nominated by the federal Impact Assessment Commission, provincial and Indigenous governments ("Regional Assessment Commission").* The Regional Assessment Commission would be intended to lead and serve as a balanced facilitator for Regional Impact Assessment, ensuring that federal, provincial and Indigenous legal requirements are met, and incorporating the views of the various jurisdictions through their appointees without representing any government. The cooperation agreement should also set out each jurisdiction's anticipated implementation mechanisms, i.e. what each jurisdiction plans to do with the outcomes of Regional Impact Assessments under their own authority (e.g. spatially apply the management objectives in a binding land use plan, etc.). This would help ensure the outcomes are implemented.	Where a Regional Assessment Commission is created, or an appropriate co-management body already exists to take on that role (e.g. through northern claims agreements), federal and provincial legislation should provide that it fills the responsibilities and roles of the proposed federal Impact Assessment Commission and relevant provincial assessment bodies (e.g., BC Environmental Assessment Office) as they relate to Regional and Strategic Impact Assessment. We envision that the Regional Assessment Commission would also be given roles beyond facilitating a Regional Impact Assessment, depending on the circumstances, for example to conduct project-specific impact assessments in the region and/or oversee monitoring going forward. Authorized representatives of all Indigenous nations in a region should to be involved in the multi-jurisdictional negotiation of the cooperation agreement, and the resulting Regional Assessment Commission should reflect best practices in structuring collaboration between levels of government (see models discussed above). For example, there should be at least an equal number of Indigenous-nominated members as Crown members (shared between provincial and federal representatives), and where there is more than one Indigenous nation in the region each should have a seat, with details to be determined by the collaboration agreement. It is possible for the federal, provincial and Indigenous governments to collaboratively perform many of the functions ascribed to the Regional Assessment Commission without formally establishing such a body. For example, this could occur through an agreement to conduct parallel assessments, followed by dialogue to reconcile the outcomes of the parties' respective assessments. However, for illustrative purposes, here we have explored an approach involving a formal body. The rest of this table proceeds on the assumption that a cooperation agreement, including a Regional Assessment Commission, has been reached among all relevant jurisdictions. However, in the absence of cooperation from a provincial government, a Regional Impact Assessment including a Regional Assessment Commission can and should still proceed based on an agreement between the federal government and Indigenous nations, although the scope of potential outcomes from the assessment may be somewhat circumscribed.

Element of Cumulative Effects Management	Recommended Governance Approach	Comments
Planning Phase: Agreement setting out process and scope of Regional Impact Assessment *Key outcome: Federal, provincial and Indigenous governments in a region sign a Conduct of Assessment Agreement for a Regional Impact Assessment*	1. Who: Regional Assessment Commission What: Develops a draft Conduct of Assessment Agreement based on (a) engagement with Indigenous peoples, and (b) input from other relevant jurisdictions, stakeholders, the public and experts. At a minimum the draft Conduct of Assessment Agreement should: i) set out the spatial and temporal boundaries of the Regional Impact Assessment; ii) identify the rights and values that need to be protected, and the measurable attributes of those rights or values ("valued components") to be addressed in the Regional Impact Assessment; iii) establish the process for conducting the Regional Impact Assessment, including identifying studies to be conducted and who is responsible for doing so, as well as setting out further opportunities for public and stakeholder participation; and iv) set out a framework for how the Assessment Team will be selected for the study phase. 2. Who: Federal, provincial and Indigenous governments, facilitated by Regional Assessment Commission What: Government-to-government discussion to agree upon a final Conduct of Assessment Agreement (based on the draft agreement). The Regional Assessment Commission facilitates such discussions and is empowered to mediate resolution of disagreements among the various jurisdictions. Where complete agreement cannot be reached, the Regional Assessment Commission may make process decisions to move forward with the Regional Impact Assessment.	In addition to engagement with Indigenous governments, the process for developing the draft Conduct of Assessment Agreement should reflect best practices in meaningful engagement of (a) Indigenous title and knowledge holders and Indigenous community members and (b) stakeholders and the public (see models discussed above). This process should allow for identification of values and valued components at local as well as regional/territorial scales. The Expert Panel recommended two committees, namely: (1) a "project committee" consisting of various orders of government, community groups, non-governmental organizations and so on; and (2) a "government expert committee" consisting of relevant experts identified by federal, provincial and Indigenous governments.[291] These committees could be part of the input contemplated above. However, Indigenous peoples' constitutionally-protected title and rights (including treaty rights) will have unique implications for determining values and valued components, thus requiring a distinct engagement process involving Indigenous peoples during the planning phase to identify these values and valued components. This need would not be fully addressed through the project committee model proposed by the Expert Panel. An alternative approach would be for the Regional Assessment Commission's draft Conduct of Assessment Agreement to be finalized by default, unless one or more of the jurisdictions objected, in which case a dispute resolution process would be triggered and facilitated by the Regional Assessment Commission. Note that, through its submissions to the federal assessment reform process, West Coast Environmental Law has recommended an independent tribunal with binding dispute resolution powers in assessments generally.[292] Such a tribunal would be appropriate here to arbitrate disputes about the Conduct of Assessment Agreement that cannot be resolved by facilitated agreement.

Element of Cumulative Effects Management	Recommended Governance Approach	Comments
Study Phase: Regional Impact Assessment and Report *Key outcome: Regional Assessment Commission produces a Regional Impact Assessment report*	1. Who: Assessment Team consisting of relevant experts appointed by the Regional Assessment Commission What: Conducts a series of studies and analysis including: gathering baseline data on valued components; identifying existing and foreseeable sources of impacts on valued components; developing scenarios of "possible futures" regarding pace and scale of development and how this will impact valued components; developing low risk targets and related management objectives for valued components, using a precautionary approach based on best available science and Indigenous knowledge. 2. Who: Regional Assessment Commission What: Reviews the work of the Assessment Team, including (a) engagement with Indigenous peoples, and (b) input from other relevant jurisdictions, stakeholders, the public and experts. Where necessary, Regional Assessment Commission sends issues raised through engagement and input back to the Assessment Team for further analysis. 3. Who: Regional Assessment Commission What: Produces a Regional Impact Assessment report based on the work of the Assessment Team and related engagement and input. At a minimum the Regional Impact Assessment report should include: i) Conclusions regarding the condition of valued components and existing and foreseeable sources of impacts; ii) Identification of a scenario that is anticipated to generate maximum mutually reinforcing benefits for sustaining valued components of the environment and human well-being over time, while avoiding trade-offs such as crossing ecological thresholds; and iii) Identification of measurable management objectives and recommendations for their binding application at a regional and territorial level by the various jurisdictions.	Regional Assessment Commission's role in overseeing assessment team should be structured so that, through its involvement in setting the terms of reference and selecting experts, the results of the assessment team's work are independent and seen as widely credible by all actors. "Experts" should be understood broadly to involve all necessary forms of technical expertise, including social and economic as well as ecological and Indigenous knowledge. The Regional Assessment Commission may give the Assessment Team leeway to determine the sequencing and process for studies and analysis based on expertise of team members, with the caveat that the information must be available to Indigenous peoples, the public and stakeholders in a manner that allows for meaningful engagement and input.

Element of Cumulative Effects Management	Recommended Governance Approach	Comments
Decision Phase: Multi-jurisdictional agreement for implementing outcomes of Regional Impact Assessment *Key outcomes:* *1. Federal, provincial and Indigenous governments sign an implementation agreement(s) to operationalize Regional Impact Assessment outcomes;* *2. Federal (and potentially provincial) legislation provides for binding application of aspects of Regional Impact Assessment report to certain Crown decisions*	Who: Federal, provincial and Indigenous governments What: Guided by the multi-jurisdictional cooperation agreement, negotiate government-to-government agreement(s) on implementing the outcomes of the Regional Impact Assessment report. The agreement(s) set out a road map for how each jurisdiction will specifically implement the outcomes (e.g. management objectives) within its own authority, in addition to any implementation of Regional Impact Assessment outcomes required by legislation (see adjacent "outcome"). Types of decisions or tools through which the outcomes of a Regional Impact Assessment could be applied (by legislation or agreement, depending on the context) include: · land use plans (including legally binding measurable management objectives); · project-level assessment; · tenuring and regulatory permitting; · policy development; and · funding allocation.	The binding application of management objectives, desired scenarios, and other outcomes from Regional Impact Assessment should be provided for through existing or new legislative tools at the federal and provincial levels. For example, federal legislation requiring or enabling Regional Impact Assessment could set out how the impacts of a Regional Impact Assessment report must be applied in: federal project-specific impact assessments; federal permitting decisions; federal policies, plans and programs; and federal funding decisions. Legislation could set out that certain outcomes from the Regional Impact Assessment apply automatically to such specified federal decisions, unless a jurisdiction triggers government-to-government negotiation about a particular outcome (and, if necessary, dispute resolution through an independent tribunal that West Coast Environmental Law has recommended for assessments generally).[293] This would ensure that, even if full multi-jurisdictional agreement cannot be reached, the Regional Impact Assessment will still have meaningful, binding application. Implementation mechanisms specific to individual Indigenous nation's territories (e.g., to conduct land use planning informed by regional assessment outcomes) may be the subject of separate government-to-government agreements. Where such legislation sets out how the impacts of a Regional Impact Assessment will be implemented as a matter of course, the multi-jurisdictional agreement would address additional implementation measures and potentially provide clarity on how existing legislative measure will be implemented (e.g., circumstances in which objectives outlined in a Regional Assessment Report can be varied by subsequent more detailed planning).

Element of Cumulative Effects Management	Recommended Governance Approach	Comments
Assessing, making decisions about and regulating activities to ensure objectives are met		
Strategic land use planning	Who: Territorial or regional co-governed body or team What: Spatially applies management objectives in an agreed-to land use plan and formalizes the outcomes in provincial and Indigenous law, consistent with government-to-government agreements with the relevant Indigenous nations.	Co-governed teams for regional or sub-regional land use planning should involve all Indigenous title-holders in the planning area. In some cases planning units may be co-extensive with a single Indigenous nations' territory; in others, more than one nation may be impacted. Strategic land use agreements embodying the outcomes of land use planning should, however, be concluded with each impacted nation with respect to portions of the plan in its territory. Models and discussion in this paper identify legal barriers in BC that must be removed to give land use plans binding effect on provincial decision-making, and sketch a roadmap for other jurisdictions. Ideally, some or even most of the data-gathering and analysis necessary to inform strategic land use planning could occur during a Regional Impact Assessment itself. This is implicitly acknowledged in the report of the Expert Panel, which notes that a Regional Impact Assessment should include mapping of valued components and cumulative impacts, as well as establishment of particular areas for protection based on scenario analysis.[294]
Project Impact Assessment	Who: Territorial or regional co-management body. This may be a body established by collaboration agreement by all relevant jurisdictions for the purpose, or a standing body (as noted above, the Regional Assessment Commission could also be responsible for project-level assessments in the region) What: Responsible for project-level assessments in the context of management objectives and other outcomes from Regional Impact Assessment. The basic steps and processes of a Project Impact Assessment would be similar in many regards to a Regional Impact Assessment.[295]	For further detail on proposals for project-level assessment, see West Coast Environmental Law's submission to the federal environmental assessment reform process (as supplemented and modified by this paper).[296] Generally, legislation should set out how Regional Impact Assessment outcomes provide binding direction to project impact assessments.

Element of Cumulative Effects Management	Recommended Governance Approach	Comments
Tenuring and regulatory permitting	Who: Territorial co-management body; or single jurisdiction (depending on context) What: Makes decisions about activities affecting a defined area, in a manner consistent with management objectives and other outcomes from Regional Impact Assessment (and any project-level assessment).	Co-management bodies may include Indigenous nations and one or both of provincial and federal governments, depending on the context. Such bodies may also be the same or different than bodies conducting project-level assessments or land use planning, depending on the context. See models in paper for examples of how tenure decisions and regulatory permitting may be carried out through a co-governance body. In some cases, it may be acceptable to affected jurisdictions that certain tenure or permitting decisions be made by one jurisdiction (with appropriate consultation) so long as they are legally bound by the management objectives and other relevant outcomes of a Regional Impact Assessment. A supportive federal and provincial legislative framework will also be required to enable the role of co-management bodies in tenuring and permitting decisions, and to ensure compliance with management objectives identified through Regional Impact Assessment and land use planning.
Monitoring and adaptive management		
Monitoring	Who: Monitoring authority (Regional Assessment Commission or distinct regional monitoring trust), in collaboration with Indigenous peoples, proponents and the public. What: Oversees monitoring of effects of human activities experienced within the region, implementation of outcomes from project-level and regional impact assessments, and makes recommendations for improved implementation where needed.	Relevant federal and provincial legislation should require regular monitoring, based on best available scientific and Indigenous knowledge, to gauge effects against predictions, evaluate implementation of assessments and related plans, objectives and policies, as well as provide ongoing analysis of potential risks, opportunities and areas for improvement in order to inform adaptive management and keep regional impact assessments current. As noted above, the Regional Assessment Commission could be structured to oversee and establish guidelines for monitoring related to Regional Impact Assessment outcomes. Alternatively, distinct regional monitoring trusts involving all parties with monitoring responsibilities and capacity might also be established. Monitoring regimes should also reflect the Expert Panel's recommendation that: "…Indigenous groups and local communities be involved in the independent oversight of monitoring and follow-up programs."[297] Existing and new Indigenous Guardian Watchmen programs will have an important role to play in carrying out monitoring activities on the ground and on the water.

Element of Cumulative Effects Management	Recommended Governance Approach	Comments
Updating plans, policies and legislation to reflect outcomes from monitoring	Who: Regional Assessment Commission, and jurisdictions with responsibility for related plans, policies and legislation. What: Regional Assessment Commission assesses monitoring results in order to: i) require management intervention by relevant proponents or jurisdictions, where required; and, ii) periodically update Regional Impact Assessment, and facilitate related amendments to implementation agreements if required. An inclusive, collaborative process for periodic updates to Regional Impact Assessment outcomes should be used, consistent with the recommendations above for the initial Regional Impact Assessment.	Legislative mechanisms are recommended to require that results of monitoring are acted upon, including: (a) by setting out circumstances in which risks identified through monitoring should trigger immediate management intervention, and (b) through mandatory periodic updates to Regional Impact Assessments. With project-level assessments, permitting approvals and other decisions that are required to be consistent with Regional Impact Assessment outcomes, a legislative requirement to update a Regional Impact Assessment at regular intervals will also serve to ensure updates occur in relation to other plans and decisions.
Enforcement	Models and considerations for enhancing collaboration between Indigenous, provincial and federal jurisdictions in enforcement is the subject of a separate, forthcoming paper by West Coast Environmental Law.	The federal expert panel notes: "There is a benefit in designating Indigenous Groups who have the interest and capacity to conduct enforcement activities within their territories."[298] Expanding and replicating programs like the Guardian Watchman Program that involve First Nations directly in monitoring and enforcing the outcomes of planning could have an important role to play in realizing this benefit.

Photo: Pat Moss

6.0 Conclusion

Existing and projected industrial growth in BC and in many other areas of Canada, coupled with climate change, has resulted in a heightened and growing need to manage the cumulative environmental, social and economic outcomes of developments. The federal Expert Panel states that:

> *With near unanimity, participants said that regional IA is needed. They indicated that good regional assessments could resolve broader scale issues such as habitat fragmentation, would help start conversations earlier, and would provide context and background information for matters of interest to the community, such as the assessment of cumulative effects in a region.*[299]

The need to take a more integrated approach to assessing, managing and monitoring cumulative effects raises not just scientific, but important governance and institutional questions. Foremost among these questions, as the federal Expert Panel notes in the context of Canada's adoption of the *United Nations Declaration on the Rights of Indigenous Peoples*, is how to ensure governance structures for assessing and managing cumulative effects build in "[r]ecognition of and support for Indigenous laws and inherent jurisdiction."[300] Also of great importance is ensuring that the process incorporates and reflects the expertise of non-governmental actors, and provides meaningful space for individuals to share their knowledge and passion about the lands and waters they call home.

In the spirit of linking decisions with the "big picture" of healthy ecosystems and human communities, West Coast Environmental Law offers the analysis and recommendations in this paper to demonstrate that there are practical, achievable options for regional cumulative effects management and co-governance.

ENDNOTES

1 Affidavit of Peter Erickson dated 9 January 2014, filed in Federal Court of Appeal file No.A-439-14.

2 See e.g. Randall M. Peterman and Brigitte Dorner, "A widespread decrease in productivity of sockeye salmon (Oncorhynchusnerka) populations in western North America" (2012) 69 Can J Fish Aquat Sci 1255, online: <http://www.nrcresearchpress.com/doi/pdf/10.1139/f2012-063>.

3 See e.g. Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River, *The Uncertain Future of Fraser River Sockeye* (Ottawa: Public Works and Government Services Canada, 2012), online: <http://publications.gc.ca/collections/collection_2012/bcp-pco/CP32-93-2012-1-eng.pdf>.

4 Canadian Council of Ministers of the Environment, *Regional Strategic Environmental Assessment in Canada Principles and Guidance* (Winnipeg: CCME, 2009), online: <http://www.ccme.ca/assets/pdf/rsea_in_canada_principles_and_guidance_1428.pdf> [*R-SEA Principles and Guidance*].

5 Steve Kennett, "From Science-based Thresholds to Regulatory Limits: Implementation Issus for Cumulative Effects Management" (Paper prepared for Environment Canada, Northern Division, March 2006) at 10 ["Kennett"].

6 Forest Practices Board, Board Bulletin, volume 13, "The Need to Manage Cumulative Effects" (February 2013), online: <http://www.fpb.gov.bc.ca/INFORMATION_BULLETIN_013_The_Need_to_Manage_Cumulative_Effects.pdf> [FPB Cumulative Effects Management Bulletin]. See also Forest Practices Board, "Cumulative Effects: From Assessment Towards Management" (March 2011), online: <https://www.bcfpb.ca/wp-content/uploads/2016/04/SR39-Cumulative-Effects.pdf>.

7 Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd, *Cumulative Effects Assessment Practitioners Guide* (Ottawa, ON: Canadian Environmental Assessment Agency, 1999) at 3.

8 *Canadian Environmental Assessment Act 2012*, SC 2012, c. 19, s. 19(1)(a) [*CEAA 2012*].

9 For further discussion on the value of a regional approach, see West Coast Environmental Law Association and Northwest Institute for Bioregional Research, *Regional Strategic Environmental Assessment for Northern British Columbia: The Case and the Opportunity* (May 2016), online: <http://wcel.org/sites/default/files/publications/WCEL_NBCenviroAssess_report_FINAL_0.pdf >.

10 ForestEthics Solutions, Greenpeace and Sierra Club BC, *The Great Bear Rainforest: A Vision Realized* (February 2016), online: <http://www.savethegreatbear.org/images/uploads/RSP_GBRBackgrounderFebruary2016.pdf> ["GBR: A Vision Realized"].

11 See e.g. D. Cardinall et al, *Ecosystem-Based Management Planning Handbook* (Coast Information Team, 2004), online: <http://www.citbc.org/c-ebm-hdbk-fin-22mar04.pdf>.

12 Peter Duinker and Lorne Greig, "Scenario analysis in environmental impact assessment: Improving explorations of the future" (2007) 27 Environmental Impact Assessment Review 206 at 214.

13 See e.g. Robert Gibson, *Specification of sustainability-based environmental assessment decision criteria and implications for determining "significance" in environmental assessment* (Ottawa: Canadian Environmental Assessment Agency Research and Development Monograph Series, 2000).

14 Kennett, *supra* at 7.

15 See text accompanying note 89.

16 Carl Folke, Steve Carpenter, Thomas Elmqvist, Lance Gunderson, CS Holling and Brian Walker, "Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations" (2002) 31Ambio 437 at 440 [Folke et al., "Resilience and Sustainable Development"].

17 *Julian Griggs and Jenna Dunsby,* Discussion Paper: Understanding the Sharing of Decision-Making in BC (December 2014), online: <https://www.sfu.ca/content/dam/sfu/centre-for-dialogue/Watch-and-Discover/SDM/SDM_Understanding%20SDM%20DiscussionPaper.pdf> at pages 22-23.

18 Anna Johnston, "Federal Environmental Assessment Reform Summit: Executive Summary" (August 2016), online: <http://wcel.org/sites/default/files/publications/WCEL_FedEnviroAssess_ExecSum%2Bapp_fnldigital.pdf> at 9 ["EA Reform Summit Executive Summary"].

19 Ryan Plummer, Derek Armitage and Rob de Loë, "Adaptive Comanagement and Its Relationship to Environmental Governance" (2013) 18 Ecology and Society" 21 at 22 [Plummer et al., "Adaptive Comanagement"]; World Resources Institute, *World Resources 2002-2004*,, online <http://pdf.wri.org/wr2002_fullreport.pdf> at viii.

20 Rob de Loë, "From Government to Governance: A State-of-the-Art Review of Environmental Governance" (Paper prepared for Alberta Environment, Environmental Stewardship Environmental Relations, 22 May 2009), online: <http://environment.gov.ab.ca/info/library/8187.pdf> ["de Loë"].

21 *Ibid* at iii.

22 See e.g. Truth and Reconciliation Commission of Canada, *Calls to Action* (2015), online: <http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf>, Call to Action 45.

23 See section 3.1.

24 de Loë, *supra* at v.

25 Plummer et al., "Adaptive Comanagement," *supra* at 22.

26 *Ibid* at 21.

27 Derek Armitage, "Governance and the commons in a multi-level world" (2008) 2 International Journal of the Commons 7 at 7 [Armitage, "Governance"].

28 *Ibid*.

29 FPB Cumulative Effects Management Bulletin, *supra*.

30 Carol Bellringer, *Managing the Cumulative Effects of Natural Resource Development in BC* (May 2015) , online: <https://www.google.ca/search?q=auditor+general+carol+cumultive+effects+report&ie=utf-8&oe=utf-8&gws_rd=cr&ei=D33kWPGaCNm4jAOB2rewBQ>.

31 Government of British Columbia, "Cumulative Effects Framework" (accessed March 2017), online: <http://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/cumulative-effects-framework>.

32 *Friends of the Oldman River Society v Canada (Minister of Transport)*, [1992] 1 SCR 3 at 64 (La Forest J. for the majority).

33 *R v Hydro-Québec*, [1997] 3 SCR 213 at para 116 (La Forest J. for the majority).

34 *Tsilhqot'in Nation v British Columbia*, [2014] 2 SCR 256 at para 88.

35 *Ibid* at para 73.

36 *R v Pamajewon*, [1996] 2 SCR 821 at paras 24 and 27. See also *Campbell v British Columbia (Attorney General)*, 79 BCLR (3d) 122, 2000 BCSC 1123.

37 *Saik'uz First Nation and Stellat'en First Nation v Rio Tinto Alcan Inc,* 2015 BCCA 154 at para 61.

38 See e.g. *Gitxaala Nation v Canada*, 2016 FCA 187.

39 *Lameman v Alberta*, 2012 ABQB 195 at para 7.

40 *Ibid*; *Lameman v Alberta*, 2013 ABCA 148.

41 *Yahey v British Columbia*, 2015 BCSC 1302 at para 2.

42 *Ibid* at para 64.

43 *Ibid* at para 64.

44 *Haida Nation v British Columbia (Minister of Forests)*, 2004 SCC 73 [*Haida*].

45 *Taku River Tlingit First Nation v British Columbia (Project Assessment Director)*, 2004 SCC 74 [*TRTFN*].

46 *Haida*, *supra* at para 27. "The duty to consult arises when a Crown actor has knowledge, real or constructive, of the potential existence of Aboriginal rights or title and contemplates conduct that might adversely affect them. This in turn may lead to a duty to change government plans or policy to accommodate Aboriginal concerns": *TRTFN*, *ibid* at para 25.

47 *Mikisew Cree First Nation* v *Canada (Minister of Canadian Heritage),* [2005] 3 SCR 388.

48 *Rio Tinto Alcan Inc.* v *Carrier Sekani Tribal Council*, 2010 SCC 43 at para 45: "Past wrongs, including previous breaches of the duty to consult, do not suffice" [*Rio Tinto Alcan*].

49 *West Moberly First Nations v British Columbia (Chief Inspector of Mines),* 2011 BCCA 247 at para 117 [*West Moberly*].

50 *Rio Tinto Alcan*, *supra* at para 53.

51 *West Moberly*, *supra* at para 181.

52 Note that this was in the context of a specific operational approval. The courts have said that there is also a duty to consult at higher more strategic levels.

53 *Rio Tinto Alcan*, *supra* at para 54.

54 *West Moberly*, *supra* at para 125.

55 *Taseko Mines Limited* v *Phillips,* 2011 BCSC 1675 at para 65.

56 At para 44 in *Rio Tinto Alcan*, *supra*, the Supreme Court of Canada summarizes court decisions on this point:

> *Thus, the duty to consult extends to "strategic, higher level decisions" that may have an impact on Aboriginal claims and rights (Woodward, at p. 5-41 (emphasis omitted)). Examples include the transfer of tree licences which would have permitted the cutting of old-growth forest* (Haida Nation)*; the approval of a multi-year forest management plan for a large geographic area* (Klahoose First Nation v. Sunshine Coast Forest District (District Manager)*, 2008 BCSC 1642, [2009] 1 C.N.L.R. 110); the establishment of a review process for a major gas pipeline* (Dene Tha' First Nation v. Canada (Minister of Environment)*, 2006 FC 1354, [2007] 1 C.N.L.R. 1, aff'd 2008 FCA 20, 35 C.E.L.R. (3d) 1); and the conduct of a comprehensive inquiry to determine a province's infrastructure and capacity needs for electricity transmission* (An Inquiry into British Columbia's Electricity Transmission Infrastructure & Capacity Needs for the Next 30 Years, Re*, 2009 CarswellBC 3637 (B.C.U.C.)). We leave for another day the question of whether government conduct includes legislative action: see* R. v. Lefthand*, 2007 ABCA 206, 77 Alta. L.R. (4th) 203, at paras. 37-40.*

57 *Haida*, *supra* at para 76.

58 *Ibid* at para 55.

59 Hall J. in *Calder v British Columbia (Attorney General)*, [1973] SCR 313 at page 383, para 125, 34 DLR (3d) 145, on behalf of three dissenting Justices, quoting Marshall C.J. in *Worcester v State of Georgia* (1832), 31 US (6 Pet) 515, 8 L ed 483.

60 Val Napoleon, "Thinking About Indigenous Legal Orders" (2007), online: <http://fngovernance.org/ncfng_research/val_napoleon.pdf> [Indigenous Legal Orders].

61 Hadley Friedland and Val Napoleon, "Indigenous Legal Traditions Core Workshop Materials" (2011).

62 JY Henderson, *First Nations Jurisprudence and Aboriginal Rights: Defining the Just Society* (Saskatchewan: Native Law Centre, 2006) 48.

63 *Ibid.*

64 John Borrows, *Canada's Indigenous Constitution* (Toronto: University of Toronto Press, 2010) at 10.

65 For example, the Gitanyow Hereditary Chiefs.

66 See e.g. *Constitution of the Haida Nation*, online <http://www.haidanation.ca/wp-content/uploads/2017/03/HN-Constitution-Revised-Oct-2014_official-unsigned-copy.pdf>.

67 Cited on "Revitalizing Indigenous Law and Changing the Lawscape of Canada" Brochure. Available on the "Accessing Justice and Reconciliation Project" website at <http://www.indigenousbar.ca/indigenouslaw/projectdocuments/> (Accessed October 28, 2016).

68 See West Coast Environmental Law, "RELAW: Revitalizing Indigenous Law for Land, Air and Water" (2017), online: <http://www.wcel.org/our-work/relaw-revitalizing-indigenous-law-land-air-and-water>.

69 Government of Canada, "Review of Environmental and Regulatory Processes" (2017), online: <https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews.html>.

70 *CEAA 2012*, *supra*, s 19(1)(a).

71 *Ibid*, ss 73-75.

72 *Ibid*, s 4(1).

73 Expert Panel for the Review of Environmental Assessment Processes, *Building Common Ground: A New Vision for Impact Assessment in Canada* (April 2017) at 76 ["Expert Panel Report"].

74 *Strategic Environmental Assessment: the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals, Guidelines for Implementing the Cabinet Directive* (Ottawa: Privy Council Office and the Canadian Environmental Assessment Agency, 2010), online: <http://www.ceaa-acee.gc.ca/Content/B/3/1/B3186435-E3D0-4671-8F23-2042A82D3F8F/Cabinet_Directive_on_Environmental_Assessment_of_Policy_Plan_and_Program_Proposals.pdf>.

75 Jill Harriman Gunn, *Integrating Strategic Environmental Assessment and Cumulative Effects Assessment in Canada* (PhD Thesis, Department of Geography and Planning University of Saskatchewan, 2009) at 93, online <http://ecommons.usask.ca/bitstream/handle/10388/etd-06092009-201800/Harriman_Gunn_Dissertation_Jun_10.pdf>.

76 See e.g. Office of the Auditor General of Canada, "Report 3 – Departmental Progress in Implementing Sustainable Development Strategies in Fall 2015 Reports of the Commissioner of the Environment and Sustainable Development" (Fall 2015), online: <http://www.oag-bvg.gc.ca/internet/docs/parl_cesd_201512_03_e.pdf>.

77 *R-SEA Principles and Guidance*, *supra* at 6.

78 *Ibid* at 7.

79 See e.g. EA Reform Summit Executive Summary, *supra*.

80 See e.g. *Land Act*, RSBC 1996, c 245, s 93.4; *Land Use Objectives Regulation*, BC Reg 357/2005; *Government Actions Regulation*, BC Reg 582/2005, under the *Forest and Range Practices Act*.

81 Earlier plans focused included strategies to achieve these objectives; later plans focused on targets and indicators but with similar intent.

82 See also Jessica Clogg and Deborah Carlson, *Land Use Planning for Nature, Climate and Communities: Taking Stock and Moving Forward* (2013), online: <http://wcel.org/sites/default/files/WCEL_LandUse_report_web.pdf>.

83 I.e., the services that forests provide with respect to climate change mitigation, as carbon storehouses and through ongoing carbon sequestration.

84 See e.g. Government of British Columbia and Gitanyow Hereditary Chiefs, *Gitanyow Huwilp Recognition and Reconciliation Agreement* (2012), online: <http://www.gitanyowchiefs.com/images/uploads/land-use-plans/Gitanyow-R-R-Agreement-2012.pdf>.

85 Prior to the introduction of the *Forest Practices Code Act* in 1995, strategic land use plans that were completed could be adopted as provincial government policy but were not legally binding, with the exception of new land designations like parks established after planning. The *Forest Practices Code* introduced the concept of a 'higher level plan'. Higher level plan was a legal term used by the *Forest Practices Code Act*, rather than a new type of land use plan. Establishment of higher level plans became the primary mechanism for linking strategic land use planning to operational forestry activities, through a *Forest Practices Code Act* requirement that operational plans for forest practices be consistent with higher level plans. Prior to June 15, 1997, entire land use plans could be established as higher level plans by ministerial order (e.g., the Kispiox Land and Resource Management Plan was legalized in this manner). Subsequently, the definition of higher level plan was changed to refer to "an objective for (a) a resource management zone, (b) a landscape unit or a sensitive area, (c) for a recreation site, a recreation trail or an interpretative forest site." Today, although the term 'higher level plan' is no longer used, the basic approach remains constant, and forest and range objectives may be set by government under *Land Act* s 93.4, or the *Government Actions Regulation* to the *Forest and Range Practices Act (FRPA),* which came into effect on January 31, 2004 and replaced the *Forest Practices Code*.

86 *Land Act*, RSBC 1996, c 245, s 93.4; *Land Use Objectives Regulation*, BC Reg 357/2005; *Government Actions Regulation*, BC Reg 582/2005; *Forest and Range Practices Act*, SBC 2002, c 69, ss 1 "objectives set by government", 5, 149.

87 *Forest Planning and Practices Regulation*, BC Reg 14/2004, s 25.1.

88 For example:

- Once a forest stewardship plan (FSP) is approved, licensees can unilaterally create a new designation called a "declared area" which is insulated from compliance with legal objectives that are subsequently established: *Forest Planning and Practices Regulation*, s. 23(1) and 32.1. A declared area means an area identified under section 14 (4) of the *Forest Planning and Practices Regulation*, which reads: "A person who prepares a forest stewardship plan may identify an area as a declared area if, on the date that the area is identified, (a) the area is in a forest development unit in effect, and, (b) all activities and evaluations that are necessary in relation to inclusion of cutblocks and roads in the area have been completed." The activities and evaluations referenced in s. 14(4)(b) are not legally prescribed. Section 23(1) insulates "declared areas," and cutblocks and roads previously shown in a Forest Development Plans (as set out in FRPA s 196(1)) from legal objectives with respect to any *new* FSPs submitted for approval. Section 32 insulates "declared areas" and cutblocks and roads previously shown in a Forest Development Plans (as set out in FRPA s 196(1)) from new legal objectives *with respect to mandatory amendments to already approved FSPs.* But for s 32.1 of the *Forest Planning and Practices Regulation*, the establishment of new legal objectives would trigger mandatory amendments to FSP results and strategies pertaining in these areas as per FRPA s 8.

- FRPA allows delays of up to two years or more before FSPs have to be amended to comply with legal objectives once they are established: FRPA, s 8(1.1).
- Other provisions of the FRPA framework insulate already approved cutting permits from compliance with the outcomes of strategic level planning. In many cases, this can mean up to four years of further unconstrained logging that is inconsistent with the implementation of strategic level plans: FRPA, s.7(1)(a) provides that any part of an FSP that pertains to a cutting permit, road permit, or timber sales licence (if the permit or licence is in effect on the date of the submission of the FSP to the minister) "must be considered to have received the minister's approval." *Forest Planning and Practices Regulation* s. 23(1) also extends this exemption to permits or Timber Sales Licences that are not in effect but that have a term commencing after the FSP is submitted to the minister.

89 The *Mineral Tenure Act*, RSBC 1996, c 292, reads:
14(5) Unless the location is one of the following, a land use designation or objective does not preclude application by a recorded holder for any form of permission, or approval of that permission, required in relation to mining activity by the recorded holder:
(a) an area in which mining is prohibited under the *Environment and Land Use Act*;
(b) a park under the *Park Act* or a regional park under the *Local Government Act*;
(c) a park or ecological reserve under the *Protected Areas of British Columbia Act*;
(d) an ecological reserve under the *Ecological Reserve Act*;
(d.1) an area of Crown land if (i) the area is designated under section 93.1 of the *Land Act*, for a purpose under that section, and (ii) the order under that section making the designation, or an amendment to the order, precludes the application by the recorded holder;
(e) a protected heritage property.
Note, however, that s 22 of the *Mineral Tenure Act* does give the gold commissioner the ability to establish mineral reserves and such reserves cover over 8% of the provincial land base, about half of which are areas that are already under another form of protection designation. (The Gold Commissioner may also establish coal land reserves under section 21 of the *Coal Act*, SBC 2004, c 15).

90 *Environmental Protection and Management Regulation*, BC Reg 200/2010.

91 *Oil and Gas Activities Act*, SBC 2008, c 36, s 25(1); *Environmental Protection and Management Regulation*, *ibid*, ss 4-7.

92 *Oil and Gas Activities Act, ibid,* s 36(2).

93 *Water Sustainability Act*, SBC 2014, c 15, s 43.

94 *Ibid*, ss 76-84.

95 Provincial environmental assessment guidelines note that decision-makers may consider provincial or regional management objectives as additional context, but this is not required. British Columbia Environmental Assessment Office, "Guideline for the Selection of Valued Components and Assessment of Potential Effects" (2013), online: <http://www.eao.gov.bc.ca/pdf/EAO_Valued_Components_Guideline_2013_09_09.pdf> at 27.

96 *Environmental Assessment Act*, SBC 2002. C 43, s 11(2)(b).

97 *Reviewable Projects Regulation*, BC Reg 370/2002; *Regulations Designating Physical Activities*, SOR/2012-147.

98 *Environmental Assessment Act*, s 49. For an assessment of one of the rare examples of this provision being employed, albeit under a former version of the Act, see Environmental Law Centre Society, "Critical Analysis of the Salmon Aquaculture Review: An Interim Report" (1998), online: <http://www.elc.uvic.ca/ca_salmon_aquaculture/>.

99 A discussion of many of these agreements is presented in: Julian Griggs and Jenna Dunsby, *Step by Step: Final Report for the Shared Decision Making in BC Project* (March 2015), online: <https://www.sfu.ca/content/dam/sfu/centre-for-dialogue/Watch-and-Discover/SDM/SDM_Final_Report.pdf> ["SDM in BC"].

100 Government of British Columbia, "Cumulative Effects Framework" (accessed April 2017), online: <http://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/cumulative-effects-framework>.

101 See e.g. the discussion of the Muskwa-Kechika Management Area in Jessica Clogg, George Hoberg and Aran O'Carroll, "Policy and Institutional Analysis for Implementation of the Ecosystem-Based Management Framework" (Coast Information Team, 2004), online: <https://www.for.gov.bc.ca/tasb/slrp/citbc/c-ia-final-06may04.pdf> at v-vii ["Clogg, Hoberg and O'Carroll"].

102 For example, additional Cumulative Effects Framework values ought to be identified with public input and through a nation-to-nation relationship with First Nations. Criteria for assessing values should ensure that data includes Indigenous ecological knowledge. There needs to be space for local knowledge in establishing values, components and indicators, and more work needs to be done on developing criteria in relation to social and economic values.

103 *Community Charter*, SBC 2003, c 26, Schedule (definitions), "land", and *Local Government Act*, RSBC 2015, c 1, Schedule, s 2.

104 GHM Ajax Mining Inc., *Draft Application Information Requirements for the Proposed Ajax Mine Project* (January 2012), online: Environmental Assessment Office <http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_project_ doc_list_362_p_tor.html>.

105 BC courts have found that local governments do have zoning powers with respect to processing of minerals, including gravel, as opposed to extraction activities, and that local governments may prohibit mineral processing activities within a defined zone. See *Squamish (District) v Great Pacific Pumice Inc.*, 2003 BCCA 404.

106 Stk'emlúpsemc te Secwépemc Nation, "Honouring Our Sacred Connection to Pípisell: Stk'emlúpsemc te Secwepemc says Yes to Healthy People and Environment" (March 2017).

107 See e.g. *Time Limit Extension Order in the Matter of Environmental Assessment Act, SBC 2002, c 43 (Act) and an Environmental Assessment of the Ajax Mine Project (Proposed Project)*, March 29, 2017, online: <https://projects.eao.gov.bc.ca/p/ajax-mine/docs>.

108 See *Private Managed Forest Land Act,* SBC 2003, c 80, s 21.

109 RSBC 1996, c 473.

110 *The Miscellaneous Amendment Act (No. 2)*, 2006 ("Bill 30"). Section 56 of Bill 30 amended Section 121 of the *Utilities Commission Act*. See Minister Richard Neufeld's speech to the IPPBC AGM (June 7, 2006); Minister Neufeld, Debates of the Legislative Assembly (May 15, 2006 Afternoon Siting), online: <http://www. leg.bc.ca/hansard/38th2nd/H60515p. htm#bill30-3R>.

111 Forestry activities on Provincial Crown lands are subject to provincial legislation such as the *Forest Act,* RSBC 1996, c 157 and the *Forest and Range Practices Act,* SBC 2002, c 69. With respect to oil and gas activities there is a limited exception where the right of entry does not extend to protected heritage property under s. 611 or 614 of the *Local Government Act*, RSBC 2015, c 1. There is a tenure referral process associated with petroleum and natural gas tenures allocated by the provincial government, under which local governments are consulted about tenure applications and may provide feedback, but ultimately local governments have no formal, legal role in tenure decisions.

112 *Water Sustainability Act,* SBC 2014, c 15. The province may also require that local government strategic or operational planning processes be consistent with a water sustainability plan that has been developed (section 81). A local government may also be required to consider water objectives established by regulation under that legislation in its regional growth strategy or official community plan (section 43(5)).

113 SBC 2003, c 26, s 8(3)(j).

114 BC Reg 144/2004.

115 *Local Government Act,* RSBC 2015, c 1, ss 479-481, 488-491.

116 *Ibid.,* ss 484-487.

117 In *Anning v British Columbia (Minister of Energy and Mines)* 2002 BCSC 896, the Court noted that in deciding whether to issue a permit under the *Mines Act* the Chief Inspector *may* consider municipal bylaws such as an Official Community Plan and a zoning bylaw when deciding whether to issue a permit but is not bound to do so.

118 Farrah Ali-Khan and Peter Mulvihill, "Exploring Collaborative Environmental Governance: Perspectives on Bridging and Actor Agency" (2008) 2/6 Geography Compass 1975 at 1975.

119 Folke, C., T. Hahn, P. Olsson, and J. Norberg, "Adaptive governance of social-ecological systems" (2005) 30 Annual Review of Environment and Resources 441 at 444, online: <http://dx.doi.org/10.1146/annurev.energy.30.050504.144511> [Folke et al., "Adaptive Governance"].

120 *Delgamuukw v British Columbia*, [1997] 3 SCR 1010 .

121 Because the terms "co-management" or "shared decision-making" have sometimes used loosely to capture any form of relationship where the Crown or industry purports to "share" some of their asserted decision-making authority with First Nations or local communities, many First Nations prefer terms such as "joint management" or "co-jurisdiction" to refer to collaborative management approaches that are based on respect and recognition of Aboriginal title and decision-making authority ("jurisdiction") and where the goal is for First Nations have at least equal decision-making authority. See e.g. Assembly of First Nations, *Co-management Discussion Paper*, online: <http://www.afn.ca/uploads/files/env/comanagement_paper.pdf>.

122 Folke et al., "Adaptive Governance," *supra* at 448.

123 Royal Commission on Aboriginal Peoples, *Report of the Royal Commission on Aboriginal Peoples, Volume 2 Restructuring the Relationship* (Ottawa: Canada Communications Group –Publishing, 1996) at 640.

124 Armitage, "Governance," *supra* at 8

125 Folke et al., "Adaptive Governance," *supra* at 449.

126 Armitage, "Governance," *supra* at 8.

127 Ryan Plummer and Derek Armitage, "Crossing Boundaries, Crossing Scales: The Evolution of Environment and Resource Co-Management" (2007) 1/4 Geography Compass 834 at 837.

128 Folke et al., "Adaptive Governance," *supra* at 441 and 448.

129 Plummer et al., "Adaptive Comanagement," *supra* at 21.

130 The "Criteria for Success" in this paper are proposed based on a mixture of the experience of lawyers working at West Coast Environmental Law, a review of the relevant literature, and the models presented in the paper. As such, the Criteria for Success may sometimes be broader than the elements of the models discussed in the same section.

131 SC 1998, c 25.

132 With a settled land claim.

133 In addition to the bodies noted below, there are also a number of other co-management boards cover various aspects of renewable resource and wildlife management in the region.

134 Because of its regional nature, the MVLWAB is slightly more complex in its structure, consisting of:
1 Chairperson, nominated by the majority of members
5 members of the Sahtu Land and Water Board;
5 members of the Wek'èezhìi Land and Water Board; and,
5 members of the Gwich'in Land and Water Board
Note: Each of the 3 regional Boards above have the following structure:
2 members nominated by the Tribal Council of the specific First Nation
1 member nominated by the NWT Government
1 member nominated by the Government of Canada
1 Chairperson nominated by the above-listed Board members
4 members appointed pursuant to s. 99(4) of the MVRMA relating to representatives from unsettled regions in the NWT
2 members nominated and appointed by the Tlicho Government;
1 member nominated of the NWT Government
1 member nominated by the Government of Canada

135 Graham White, "Not the Almighty: Evaluating Aboriginal Influence in Northern Land-Claim Boards" (2008) 61 Arctic 71 ["White"] at 72.

136 *The Western Arctic Claim: Inuvialuit Final Agreement, as amended*, online: <http://www.inuvialuitland.com/resources/Inuvialuit_Final_Agreement.pdf>. For the purposes of the discussion in this paper, see in particular articles 11(13), 12(9), 12(56), 14(36), 14(46), 14(51), 14(54)-(55), 14(60), 14(62), 14(64)-(69), 14(74). For a helpful co-management structure chart, see Inuvialuit Regional Corporation, "The Co-Management System as Established in the Inuvialuit Final Agreement," online: <http://irc.inuvialuit.com/sites/default/files/Co-Management%20Structure.pdf>.

137 *Western Arctic (Inuvialuit) Claims Settlement Act*, SC 1984, c 24.

138 *Resource Management Act 1991*, (1991, No. 69) (NZ) [*RMA*].

139 See Horizons Regional Council, "About Our Region and Council" (accessed April 2017), online: <http://www.horizons.govt.nz/about-us/who-what-where/place-and-people/>.

140 *RMA*, *supra*, 36B-36E.

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APPENDIX: A Note on Terminology Used in this Paper

In this paper we have attempted to bring together learnings from best practices and legal research that cross-cuts Indigenous, federal, provincial and local government law in the context of the full cycle of cumulative effects management. Through the research and drafting process we learned that practitioners in different aspects of that cycle sometimes use different terminology, or may use the same or similar terminology to mean different things. To complicate the situation further, legislators or the courts sometimes use words in different ways than practitioners or the literature do.

In this appendix we offer some commentary on the choices of terminology we have made and the factors that influenced these choices.

Terminology Related to Scale

"Regional": Throughout this paper we use "regional" to denote a scale which is above that of an individual project and – depending on the values being assessed, managed and monitored – will likely cross-cut local government, provincial and federal administrative boundaries (e.g., regional districts, timber supply areas, political ridings). Choices will need to be made in the context of regional cumulative effects assessment, management, and monitoring regarding the precise nature of the "regions" in question, balancing a number of factors. It is anticipated that the region would generally cover a broad area defined by its ecological characteristics (e.g., a large watershed)[1], which may include the territories of multiple Indigenous nations (e.g. the Skeena watershed) but where possible would be co-extensive with Indigenous tribal territories and legal orders (e.g., Haida Gwaii, Secwepemculecw). In some cases, past data gathering or planning practices may make existing large administrative units a practical default. We propose that the detailed determination of the spatial boundaries of a Regional Impact Assessment would be left to a Conduct of Assessment Agreement, among all jurisdictions in the region.

"Strategic": Practitioners who work in both the land use planning and environmental assessment/sustainability assessment realms will recognize the slightly different usage of the term "strategic" in these two areas of cumulative effects management. These differences should be clear from the context of usage in the paper and include the following:

- **Strategic land use planning** refers to plans at a regional, sub-regional or landscape level – in other words at a level above operational planning and permitting for the use of particular resources. Strategic land use plans typically identify areas that will be off limits to industrial resource extraction to be designated as protection areas, as well as zones with particular management

objectives that direct resource management and other human uses. Legislation in various Canadian jurisdictions refers to strategic land use plans by different names.

- **Strategic impact assessment** refers to sustainability assessment of plans, policies or programs (as opposed to projects).
- **Strategic regional impact assessment** refers to a regional assessment that is delineated in some fashion, for example to focus only a particular industry or policy in a regional area.
- **"Strategic planning for utilization of the resource"**[2] is the language used by the Supreme Court of Canada in the context of Indigenous consultation, and applied through various court decisions, to refer to decisions about resource use above operational permitting. The courts have applied this concept broadly to encompass all of the above, as well as project-level impact assessment, establishment of the allowable annual cut for forestry, issuance of leases and licences for resource development and five-year operational forestry plans, among other things.

"Territorial": We use "territorial" to refer to the lands and waters over which Indigenous nations exercise title and governance authority according to their own laws, sometimes referred to as their "traditional territory." The question of who is the proper title holder and the scale of the area they have responsibility over will vary according to each Indigenous legal order, and some legal orders will involve multiple levels of decision-making responsibility. In turn, as discussed further below, modern governance approaches may vary from traditional ones, particularly due to the *Indian Act* band and reserve system.

For practical and legal reasons, the "territorial" co-governance functions identified in this paper may best be addressed at the level of broader Indigenous tribal territories where peoples share a common legal order and often common language and culture, and where the scale involved allows for robust strategic land use planning. As a practical matter, however, existing patterns of collaboration and political alliance within a broader tribal nation are likely to affect how co-governance arrangements play out in practical terms.

However territorial co-governance is structured, the involvement and consent of the proper title holders for the territories in question must be addressed at all stages.

Terminology Related to Management Objectives and Thresholds

From the earliest days of environmental assessment in Canada, "the importance of limits and thresholds" has been "a recurring theme in the literature".[3] Indeed, it has been said that: "Measuring cumulative effects has no practical utility unless it is in relation to permissible limits of ecological and social impact."[4]

In the land use planning context, however, terms such as management objectives, targets and indicators are more commonly used to embody similar concepts. Here

we provide background on this terminology and an explanation for the terms we have chosen in this paper.

Objectives and targets: An ecosystem-based approach to land use (and marine spatial) planning and management asks first what needs to be left behind to maintain, and where necessary restore, the integrity of the ecosystem as a whole – the web of life that in turn sustains our communities and economies – then seeks to maintain high levels of human well-being within these limits.[5] If one imagines risk curves for important values and rights, an ecosystem-based management approach aims to manage to low risk, where the likelihood of maintaining that value with in its historical range of variability and abundance is high.

In land use planning parlance in BC, land use plan objectives describe:

> *a desired future state for a particular resource or resource use. They are, however, more specific and concrete than goals. They may be thought of as stepping stones for achieving broader goals. Objectives should be measurable, either directly or indirectly, as a basis for evaluating whether or not they are being achieved over time. In addition, land and resource objectives are spatially specific — they may apply to the whole plan area or to sub-sets of the plan area such as a particular zone or geographic unit.*[6]

Land use plans will typically include indicators or metrics that will be used to measure whether an objective has been met. Well written objectives will also include a measurable target based on the indicators selected. For example an objective might read: "Maintain 100% of class 1 grizzly bear habitat shown in Schedule D". Land use plans may also lay out strategies, or expectations of "how" objectives were to be achieved, but this approach has not been used in BC since the 1990s due to the move to "results-based" management.

Thresholds: The Government of Canada's *Cumulative Effects Assessment Practitioners' Guide* defines a threshold as: "A limit of tolerance of a VEC [Valued Ecosystem Component] to an effect, that if exceeded, results in an adverse response by that VEC." The United States Council on Environmental Quality provides the following guidance in relation to cumulative effects assessment under the *National Environmental Policy Act*:

> *A critical principle states that cumulative effects analysis should be conducted within the context of resource, ecosystem, and human community thresholds-levels of stress beyond which the desired condition degrades. The magnitude and extent of the effect on a resource depends on whether the cumulative effects exceed the capacity of the resource to sustain itself and remain productive. Similarly, the natural ecosystem and the human community have maximum levels of cumulative effects that they can withstand before the desired conditions of ecological functioning and human quality of life deteriorate.*

The US guidance suggests that a threshold may be understood as a natural "tipping point" at which cumulative past and present impacts on an ecosystem or value exceed its capacity to recover or rebound following further disturbances or setback.[7] Other authors speak of thresholds more in terms of social choice decisions involving "tough trade-offs" to define "acceptable" impacts to the ecosystem.[8]

In this sense, there is a fundamental tension between the focus of ecosystem-based planning and management (identifying protected areas networks, management zones and related management objectives to ensure low risk to ecological integrity, then establishing human well-being objectives and allowable resource extraction within those limits) and the way thresholds are sometimes thought of in the context of cumulative effects assessment (what is the maximum level of cumulative effects a value can sustain before it can no longer recover?). One focuses on what should be left behind, the other on how much can be taken.

In practice, seen through these lenses, ecosystem-based management objectives would sit at or below low risk benchmarks on a risk curve for a value, whereas a threshold could sit anywhere on that curve (if it is a social choice decision) or at somewhere near the high risk benchmark if it is understood as "the point of no return". Similarly, if resource management objectives are seen as social choice decisions unconstrained by ecological limits, they too could be anywhere on the risk curve.

Measurable, legally binding management objectives: At the end of the day, what matters is not terminology, but whether clear, binding limits on human activities are set and whether the limits can be expected to sustain important values and rights. In this paper we recommend that low risk, measurable management objectives for values and rights at a regional scale be identified based on best available science and Indigenous knowledge as part of a Regional Impact Assessment process, as input to land use planning and to guide project-level assessment, tenuring and regulatory decision-making. We also recommend that these objectives be given legal effect in Canadian and provincial law so as to ensure they do so.

Terminology Related to Indigenous Peoples

In this paper we have used generally accepted international language (Indigenous peoples, Indigenous nations) rather than some terms commonly in use in Canada (Aboriginal peoples, First Nations, Indians) unless the context required otherwise.

Indigenous peoples: Indigenous peoples are the descendants of the distinct peoples who inhabited and governed their territories – according to their own distinct laws and legal orders, language, culture and beliefs – prior to colonization and settlement[9] of what is today Canada. The UN Declaration on the Rights of Indigenous Peoples ("UNDRIP") specifies, among other things, that Indigenous peoples:

- have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired (Article 26)
- have the right to determine their own identity or membership in accordance with their customs and traditions (Article 33 (1)).

Furthermore, Articles 18 and 19 provide as follows:

- Indigenous peoples have the right to participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decision-making institutions (Article 18)
- States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them (Article 19).

Indigenous nation: In general, a "nation" is a distinct "body of people united by common descent, history, culture, or language, inhabiting a particular state or territory."[10] Article 9 of UNDRIP states: "Indigenous peoples and individuals have the right to belong to an indigenous community or nation." An Indigenous nation may be co-extensive with an Indigenous people, however, an Indigenous people, sharing a common legal order and/or language may also identify distinct communities or nations that are responsible for particular areas within its territory and who may hold decision-making or management responsibilities in that area according to their own laws. We have used the term **Indigenous government**, where applicable, to apply to the institutions through which the authorized representatives of an Indigenous people, nation or community govern their affairs.

A note on other terminology:

Aboriginal peoples: Section 35(2) of the Canadian Constitution defines "aboriginal peoples" as including the Indian, Inuit and Métis peoples of Canada, whose "existing aboriginal and treaty rights" are "recognized and affirmed" by section 35(1) of the Constitution. For the purposes of Canadian constitutional interpretation, in all contexts in which we have used the terms Indigenous peoples or Indigenous nations in this paper, the peoples referred to are also Aboriginal peoples under section 35.

Indian: The *Indian Act*, s. 2(1) defines an Indian as "a person who pursuant to this Act is registered as an Indian or is entitled to be registered as an Indian."

Band: The *Indian Act*, s. 2(1) defines *band* as a body of Indians
(a) for whose use and benefit in common, lands, the legal title to which is vested in Her Majesty, have been set apart before, on or after September 4, 1951,
(b) for whose use and benefit in common, moneys are held by Her Majesty, or

(c) declared by the Governor in Council to be a band for the purposes of this Act;

First Nation: In Canada the term First Nation may be used by an Indigenous people in the same manner as we have used Indigenous nation above, or it may be used to refer to an *Indian Act* band.

Tribal nation: The term is used in this paper co-extensively with the term Indigenous people to refer to a people sharing a common legal order, language, culture etc. at level beyond the *Indian Act* band.

Terminology Related to Collaborative Governance

Co-management: As noted in the body of the paper, the 1997 Royal Commission on Aboriginal Peoples defined co-management:

> *to mean institutional arrangements whereby governments and Aboriginal entities (and some times other parties) enter into formal agreements specifying their respective rights, powers and obligations with reference to the management and allocation of resources in a particular of… lands and waters.*[11]

At its best, co-management is a partnership where Indigenous peoples have at least equal control over land and resource decisions, such decisions are based on both Indigenous knowledge and western scientific knowledge, and both Indigenous and Canadian law is upheld.

Our research suggests that the level of decision-making responsibility held by Indigenous peoples through "co-management" arrangements in Canada varies widely;[12] however, common characteristics of many existing models include:

- One or more co-management boards with at least equal representation of First Nations and the Crown
- Use of consensus-based decision-making
- A commitment, not always fulfilled in practice, to incorporate Indigenous knowledge and local resource users in decision-making
- Process or legal requirements that give the co-management body fairly significant control over decisions, even if the Crown retains final authority on paper.

However, the term co-management is sometimes used loosely to capture any relationship where the Crown or industry purports to "share" some of their asserted decision-making authority with Indigenous nations or local communities. Indigenous participants involved in co-management arrangements have sometimes expressed concern that actors from the Crown and industry "are using the term to mean the same as a joint venture, partnership, or other weaker management forms which really only focus on conventional economic development."[13] In this sense, some distinguish between "pure" co-management, "which involves the real sharing

of decision-making power" and "weak" co-management which "may involve some minimal level of … participation in government management of a resource".[14]

Co-governance: Because of concerns about co-option of the term "co-management", some Indigenous peoples, lawyers and scholars instead use the terms "co-jurisdiction" or "co-governance" to refer to collaborative management approaches where Indigenous peoples have at least equal decision-making authority, decisions are based on both Indigenous knowledge and western scientific knowledge, and both Indigenous and Canadian law is upheld.[15] Few existing co-management models achieve this goal, with the Haida Gwaii Management Council described in section 4.5 of this paper being an important exception.

A further distinction is that the term co-governance is intended to encompass not just consensus-seeking collaborative management boards with Indigenous and Crown representation but also parallel decision-making processes where the parties may undertake their own planning or assessment, then negotiate to reconcile the outcomes.

Because it is so commonly used in the literature, we have used co-management as an overarching term throughout the research and analysis sections of the paper, but the term co-governance in our recommendations. We do so to embody our hope and recommendation that new legal approaches be implemented that better enable the Crown and Indigenous peoples to "paddle together" to care for the environment and human well-being, informed by robust public and stakeholder participation.

Notes to Appendix

1 Some factors that may be relevant in defining regions on an ecological basis include: "geology, physiography, vegetation, land use, climate, hydrology, terrestrial and aquatic fauna, and soils." See Omernik, J. M. 2004 Perspectives on the Nature and Definition of Ecological Regions. 34 Environmental Management Suppl. 1, S27–S38 at S33. Guidance for managers of marine ecosystem areas developed by the US National Oceanic and Atmospheric Administration, for example, suggest considering geographic ranges of managed and endangered species, managed habitat ranges, including geological substrates if relevant, watershed boundaries, estuarine areas, oceanographic and environmental phenomena, as well as existing management or administration boundaries. M.C. Holliday and A.B. Gautam (eds.) Developing Regional Marine Ecosystem Approaches to Management (Washington: US Dept. of Commerce, 2005).

2 *Haida Nation v BC (Ministry of Forests)*, 2004 SCC 75.

3 Steven A. Kennett, *Towards a new Paradigm for Cumulative Effects Management* (Calgary: University of Calgary CIRL Occasional Paper #8, 1999) at 37.

4 William E. Rees, "A role for Environmental Assessment in Achieving Sustainable Development" (1988) 8 Environmental Impact Assessment Review 273 at 285.

5 See e.g. Dan Cardinall et al., *Ecosystem-Based Management Planning Handbook* (Coast Information Team, 2004), online: <https://www.for.gov.bc.ca/tasb/slrp/citbc/c-ebm-hdbk-fin-22mar04.pdf>.

6 Government of British Columbia, *Writing Resource Objectives and Strategies* (Victoria: Ministry of Sustainable Resource Management, 2004), online: <https://www.for.gov.bc.ca/tasb/slrp/policies-guides/writing_resource_objectives.pdf>.

7 See also for example, L. H. Gunderson "Ecological resilience – in theory and in application" (2000) 31 Annu. Rev. Ecol. Syst. 425-439.

8 See e.g. Oswald Dias & Bran Chinery, "Addressing Cumulative Effects in Alberta: The Role of Integrated Resource Management Planning" in Alan J. Kennedy, ed. *Cumulative Effects Assessment in Canada: from Concept to Practice* (Calgary: Alberta Association of Professional Biologists, 1994) at 311 and 314.

9 United Nations Permanent Forum on Indigenous Issues, *Who are Indigenous Peoples?* online: <http://www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf>.

10 Oxford English Dictionary on-line.

11 Royal Commission on Aboriginal Peoples, *Report of the Royal Commission on Aboriginal Peoples, Volume 2 Restructuring the Relationship* (Ottawa: Canada Communications Group –Publishing, 1996) at 640.

12 A number of researchers have developed frameworks with categories that attempt to capture the extent to which the Parties share power and responsibilities in relation to management. This "co-management spectrum" or "levels of authority transfer" includes (from weak to strong): informing (Crown or industry provides information; one–way flow of information; sometimes after decision has already been made), consultation (opportunity for input, but Crown has no obligation to heed it), co-operation (community starts to have some input on management and use of local knowledge), communication (two way exchange of information; concerns begin to be incorporated into management); advisory committee (joint action; beginning of partnership in decision-making); management boards (in its strongest form, joint decision-making institutionalized); partnership/community control (nation or community control over decision-making/Crown or industry in an advisory role to First Nation): summarized from: J. Shuter, S. Kant and P. Smith, *A multi-level typology for the classification and comparative evaluation of Aboriginal co-management agreements in the forest sector* (Toronto: Sustainable Forest Management Network, 2005) at 11; F. Berkes, "Co-management: bridging the two solitudes," 22(2-3) Northern Perspectives 18-20; S. Sen and J.R. Nielson, "Fisheries co-management: a comparative analysis" 20(5) Marine Policy: 405-418. It should be noted that while useful in general terms, these frameworks do not use the term "consultation" in the same manner as the Canadian courts have done in articulating the Crown's constitutional duty to consult and accommodate or adequately distinguish the governmental role of Indigenous nations as compared to other potential participants.

13 Fiona Chambers, *From Co-Management to Co-Jurisdiction of Forest Resources: A Practitioners Workshop* (Calgary: Sustainable Forest Management Network, 1999) at 2.

14 S. Hawkes, "The Gwaii Haanas Agreement: From Conflict to Cooperation," (1996) 23(2) Environments 87 at 87.

15 See e.g. Title and Rights Alliance Declaration from Participating Nations (October 2003), online: <www.titleandrightsalliance.org>; Anna Johnston, "West Coast Environmental Law Submission on Next Generation Environmental Assessment" (December 2016), online: <http://wcel.org/sites/default/files/publications/wcel-submissions-to-ea-panel-final-16-12-23.pdf>.

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