Effective Inter-Agency Collaboration:

Regional Implementation of British Columbia's Cumulative Effects Framework

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Executive Summary

Purpose

The Government of British Columbia is beginning the process of launching the Cumulative Effects Framework. The Cumulative Effects Framework uses assessments of the condition of "values" (e.g. things that government has an objective to protect, which could range from broad-based values such as water quality to specific values such as habitat for grizzly bears) to inform cumulative effects management. Cumulative effects management is operationalized by regional management committees developing recommendations that proactively suggest management and mitigation actions that can be taken by individual decision-makers, by regional organizations and/or by the provincial government. The strategic value of the Cumulative Effects Framework is to provide a identify and proactively address risks to critical values, which will allow values to be protected and enhanced while also providing greater certainty for economic development.

The Cumulative Effects Framework is beginning early implementation, having launched an Interim Policy document in January 2017, with three provincial value assessments to follow later in the year. The implementation of the project is being led by the Ministry of Forests, Lands and Natural Resource Operations, but regional management committees directly involves the collaboration of natural resource management and science subject matter experts and regional managers from an additional five ministries, as well as requirements to involve First Nations, natural resource industry firms and other entities. Once the initial value assessments are released, government agencies and key stakeholders involved in natural resource management can begin planning management strategies that address the risks identified in the assessments. However, there is a concern that poor collaboration in natural resource management may pose an impediment to the success of regional cumulative effects management.

Collaboration is not the only factor contributing towards success for the Cumulative Effects Framework, but it is a precondition of successful implementation. Collaboration is critical because the legal powers and rights impacted by management recommendations impact all six natural resource ministries and a wide range of other stakeholders, including First Nations, industry and the public. This report investigated best practices in inter-agency collaboration in

natural resource management, explored gaps in government's current capacities for inter-agency and makes recommendations on how gaps can be addressed.

Research Approach

The study used literature drawing on the fields of public administration, organizational psychology and natural resource management to develop a conceptual framework of best practices and attempt to express those best practices in the form of institutional capabilities. Based on these institutional capabilities, a questionnaire was developed and sent to a wide subset of key current mid-level regional natural resource leaders involved in the implementation of the Cumulative Effects Framework. The questionnaire assessed both past inter-agency collaboration and participants view of the current institutional capabilities for collaboration. The gaps in capabilities identified in the questionnaire were then triangulated with the best practices identified in the literature to propose recommendations.

Results

The participants validated the institutional capabilities, and identified areas of both strength and weakness in B.C.'s current capabilities to collaborate. In total, 17 out of an estimated 50 potential participants responded to the survey. While this response rate was lower than expected, responses were consistent enough as to provide clear direction on the views of regional managers towards the institutional capabilities. In general, participants rated B.C.'s current institutional capabilities as being strongly in place – particularly around areas of leadership and team functioning. The most critical gaps identified were with maintaining adequate resourcing, inter-agency accountability, and how to include external stakeholders in the process, particularly First Nations. Both participants and the literature identified measures that may address these gaps.

Conclusions

This study identified a set of best practices and institutional capabilities that can be used as a benchmark for whether natural resource management initiatives are organized to foster effective inter-agency collaboration. The capabilities were used to identify gaps in British Columbia's ability to foster effective inter-agency collaboration. While the overall framework for collaboration is strong, especially with regards to internal government work and the leadership

from a regional and provincial level, there are real gaps in some of the capabilities required for successful collaboration – particularly around fostering stronger accountability, determining how to best

Responding to these gaps requires realigning governance structures, tools and human resources towards some inherent challenges of the inter-agency context for cumulative effects management. This in turn requires facing down politically-complex questions – in particular, the inclusion of First Nations in cumulative effects management. The emergent collaborative natural resource management requires teams with the skills to successfully translate knowledge, manage complex collaborative processes and engage in a politically-sensitive manner with stakeholders and First Nations.

Recommendations

The following are general recommendations flowing from the literature review and survey of natural resource management leaders and are meant to help the client consider next steps.

Recommendation #1: Develop a Strategy to Include First Nations and other External Groups in Regional Cumulative Effects Framework Implementation

- Include groups with a stake in decisions and engage on a smaller scale for success

Recommendation #2: Strengthen Resourcing of Regional Cumulative Effects Teams

- Pre-empt conflicts over resourcing by creating core teams of facilitators and experts

Recommendation #3: Develop a Regional Implementation Toolkit

- Ensure regional teams have the structure, tools, staff, skills and training to succeed

Recommendation #4: Expand the role of the Forest Practices Board to Evaluate the Implementation of the Cumulative Effects Framework

- Address the short-to-medium term accountability gap with trusted process oversight

1.0 Introduction

1.1 Problem

The Cumulative Effects Framework is a sophisticated approach to integrating assessments of cumulative effects – the status of past, present and future impacts on the land – into natural resource management decisions. The Cumulative Effects Framework assesses the condition of "values" (e.g. things that government has an objective to protect, which could range from broad-based values such as water quality to specific values such as habitat for grizzly bears). The cumulative effects assessment then informs cumulative effects management, which integrates the risks to conditions identified in the assessment into the permitting process for specific projects. Cumulative effects management is enhanced by regional management committees developing recommendations that proactively suggest management and mitigation actions that can be taken by individual decision-makers, by regional organizations and/or by the provincial government.

The Cumulative Effects Framework is beginning early implementation, having launched an Interim Policy document in January 2017, with three provincial value assessments to follow later in 2017. More value assessments and accompanying regional management committee recommendations are expected to follow over the next five years and continuing to be updated into the future. The implementation of the project is being led by the Ministry of Forests, Lands and Natural Resource Operations, but regional management committees directly involves the collaboration of natural resource management and science subject matter experts and regional managers from an additional five ministries, as well as requirements to involve First Nations, natural resource industry firms and other entities. Though there are other factors relevant to the success of the project (such as central resourcing for provincial value assessments, policy work and proposed legislative changes), collaboration between the participants is critical to the successful implementation of the Cumulative Effects Framework.

Senior and mid-level leaders in the British Columbia government's natural resource sector ministries have expressed a concern that regional inter-agency collaboration in the natural resources sector has not always been effectively carried out in the past. The Cumulative Effects Framework is a high profile inter-agency project that is a critical enabler for government's

broader strategy to integrate natural resource management in British Columbia. This report was developed to investigate whether there are gaps in the capabilities for collaboration in the institutional context in which the Cumulative Effects Framework is being implemented, and if so, to propose potential solutions. These findings may then be used to address issues with the Cumulative Effects Framework and, where appropriate, generalized to address broader collaboration issues in the natural resource sector ministries.

1.2 Research Question and Project Objectives

The core question of this project was "how can we foster effective regional-level inter-agency collaboration in stewardship decisions in British Columbia during the implementation of the Cumulative Effects Framework?" The purpose of this question is to pinpoint issues in inter-agency collaboration and identify potential solutions

Following from this core question are three sub-questions:

- What are the elements of governance and processes that are required to overcome differences in organizational culture and mitigate potential individual conflicts; in an inter-agency and/or resource stewardship context?
- What is the appropriate institutional/governance model for effective inter-agency collaboration within the implementation of the Cumulative Effects Framework?
- What should be the role of First Nations and citizens, if any, within the regional inter-agency governance of cumulative effects?

The objective of the project is to assess the present state of Natural Resource Sector (NRS) inter-agency collaboration at a regional scale relative to best practices in the literature and provide recommendations on how regional inter-agency collaboration can best be fostered within the implementation of the B.C. Government's Cumulative Effects Framework.

Due to the project's inter-agency nature, the Cumulative Effects Framework derives its direction primarily from the Natural Resources Board (NR Board), which includes all six NRS ministries – the Ministry of Forests, Lands and Natural Resource Operations (FLNRO); Ministry of Energy and Mines (MEM); Ministry of Aboriginal Relations and Reconciliation (MARR); Ministry of

Agriculture (AGRI); Ministry of Natural Gas Development (MNGD); and, Ministry of Environment (MoE). FLNRO is leading the initiative, but the remaining NRS agencies are also engaged in most aspects of the project.

1.3 Project Client

The client of the project is Jennifer Psyllakis, formerly the manager responsible for the Cumulative Effects Framework, which is led by the Resource Stewardship Division of the Ministry of Forests, Lands and Natural Resource Operations (FLNRO). As manager of the Cumulative Effects Framework, the client's role was to coordinate the various aspects of the project – scientific and geospatial analysis, policy development, systems/business integration and change management. She continues to work closely with the Cumulative Effects Framework as the Director of the Fish and Wildlife Branch.

At the conceptualization stage of this project, the graduate student researcher was a policy analyst for the Natural Resource Sector Transformation Secretariat, a shared NRS secretariat for regulatory and systems transformation, and served as a member of the cross-government Cumulative Effects Policy Team, supporting the development of the Cumulative Effects Framework. Though the researcher is no longer an employee of the Transformation Secretariat, he remains employed by the Government of British Columbia and continues to work in inter-agency policy and projects with the natural resource sector ministries as a senior advisor for Regulatory Reform BC.

2.0 Background

2.1 The Evolution of Integrated Natural Resource Management in B.C.

Conflicts over natural resource development were a central theme in the last half-century of British Columbia's history. It began with the birth of environmentalism in the 1950s and 1960s, which transitioned into a mature, powerful force in B.C. politics through the famous "War in the Woods" of the 1980s and 90s; the resurgence of indigenous rights and land title claims from *Calder vs. British Columbia* in 1971 establishing the possibility of indigenous title to demonstrating in 2014 with *Williams vs. British Columbia* that indigenous title could be established through the courts; and amidst all of these conflicts, a more competitive global economy with cheaper commodity prices that have reduced the size and influence of British Columbia's traditional extractive resource economy (Wilson, 1998).

Throughout this past half-century, the B.C. government has responded in many different ways to the challenges posed by pressures from the public, First Nations and industry, with varying degrees of success. These efforts range from establishing a Ministry of Environment, engaging in land-use planning to establish parks and protected areas, investing in conservation and ecological science; and more recently, looking at how these various approaches can be better integrated into effective interdisciplinary or "integrated" natural resource management (Wilson, 1998).

Parallel to the changes in politics and front-line governance of the environment, there has been an evolution in scientific understandings of how human beings, particularly through resource extraction, impact the natural environment – from a conservation approach that focused on specific species often for only their sentimental value; towards a holistic, ecosystems-based approach that emphasizes human reliance on complete, resilient natural systems. Ecosystems-based science advanced far in recent decades by leveraging new technology– Geographic Information Systems, Remote Sensing and powerful statistical tools to better assess the values that ecosystems provide and understand how humans can better steward these resources.

Despite a recent period in which landscape-level environmental planning has been de-emphasized, the overall trend in environmental management is towards holistic consideration of

cumulative effects and greater inclusion of different stakeholders. In the 1990s, the BC NDP government introduced a variety of consensus based participatory land-use planning initiatives that attempted to find consensus between scientists, industry, environmentalists, First Nations and local residents on the direction that natural resource management should take at a regional level (Jackson & Curry, 2004). These land-use plans were then placed into legal objectives, which included area-based restrictions and additional regulatory requirements for forestry, mining and other resource extraction activities. In the mid-2000s, the BC Liberal government began to end the practice of consensus-based participatory land-use planning and gradually shifted back towards a technocratic, transactional approach to making decisions about resource stewardship on a project-by-project basis. However, parallel to this shift, a set of court decisions around First Nations rights and environmental decision making (in particular, *Haida Nation vs. British Columbia* in 2004 and *West Moberly vs. British Columbia* in 2011) stressed the need for government to manage cumulative effects in order to meet environmental protection objectives and legal obligations to First Nations. Under the Cumulative Effects Framework, which has been in development since 2010, government will conduct province-wide value assessments that will both inform transactional resource decisions and strategic-level resource management, and apply the findings and principles consistently across all six NRS ministries.

2.2 The Cumulative Effects Framework

Cumulative effects are defined as "changes to environmental, social and economic values caused by the combined effect of past, present and proposed activities and natural disturbance events on the land-base" (Government of British Columbia 2014). The concept of cumulative effects began to gain strong credence in public policy beginning in the 1990s, when the federal Environmental Assessment Act expanded its scope to include cumulative effects in federal major projects assessments. In 2012, the Government of British Columbia announced a "Cumulative Effects Framework", by which natural resource managers would be directed to consider the cumulative effect of all decisions on a common land base. Policies, procedures and geospatial information tools are being developed to assist resource managers in being more effective and efficient in their use of cumulative in decision-making – and also to make the process more efficient for proponents, First Nations and other B.C. residents. All of these tools are bulwarked by the Cumulative Effects Values Assessment project, which intends to map the baseline state and

trends of all key values in British Columbia by 2021. A Cumulative Effects Framework Interim Policy was released internally in February 2017 that re-confirms governments intention to adopt the entirety of the Cumulative Effects Framework, including development regional management recommendations.

The Cumulative Effects Framework straddles the divide between science-based policy and policy-driven science. Cumulative Effects Framework "values" are based on legal policy objectives established by government, and are therefore underpinned by much more flexible and utilitarian considerations than a purely science-based measure would require. These legal objectives include both province-wide objectives such as the 11 values legislated in the *Forest and Range Practices Act* (Biodiversity, Cultural Heritage, Fish/Riparian, Forage & Associated Plant Communities, Recreation, Resource Features, Soils, Timber, Visual Quality, Water and Wildlife), and land-use planning objectives for specific locations in the province that are established through orders under the *Government Actions Regulation* or orders under the *Environment and Land Use Committee Act*. Government also can make decisions based on an interpretation of the requirement to protect the constitutional or treaty rights of First Nations. However, legal policy objectives (established within land use plans, legislation and through constitutional obligations to First Nations) tend to be based on difficult to measure values. To address this challenge, regional-level assessment of cumulative effects will provide a baseline of scientific indicators that can be rolled up into an assessment of the condition of the value at a relatively small-scale – the landscape or watershed management unit (Government of B.C., 2014).

Cumulative effects assessments are most useful if that they can be converted by regional management committees into a set of management recommendations – on the same detailed scale of a landscape or watershed management unit – to provide advice to resource managers on how to interpret cumulative effects when authorizing a specific process, work with resource companies and individuals to monitor and mitigate threats to key ecological values; and also enable solutions-orientated planning for critical resource values (Government of B.C., 2014). Critically, this management recommendation process is not meant to be completely binding on decision makers, but to provide a common set of advice to guide their decisions. However, the

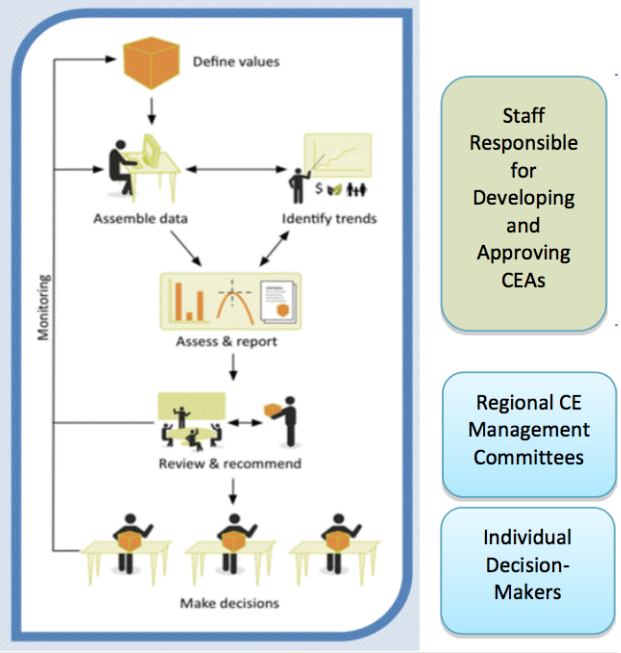

Figure 2.1: The Cumulative Effects Framework Source: Government of British Columbia. (2017). Cumulative Effects Framework Interim Policy.

management recommendations will also include suggestions to government on how legally binding land use plans and resource objectives can be improved in other forums. The management recommendations may also be used to support co-management planning with First Nations, in the areas of the province where co-management agreements are active. The relationship between values definition, values assessment, management review and recommendations and decision-making is demonstrated in Figure 2.1.

In the example in Figure 2, the example map shows value assessments for grizzly bear habitat in the North Cascades – an area under consideration for reintroduction of grizzlies (the population is close to extirpated and grizzlies have high value for local First Nations). These value assessments can be placed in a management review class (Figure 3) based on the condition of the value. A regional management review of these findings would consider if and how government can successfully achieve a proposed policy objective under consideration (reintroduction of grizzlies to the area). From the results of the assessment, the grizzly habitat in the North Cascades is not in a good position to support reintroduction – with most of the area in either a high or moderate risk to the value – but with appropriate management responses such as restricting resource and recreational users from certain areas, the habitat could be restored to a status where the area could support a sustainable grizzly population.

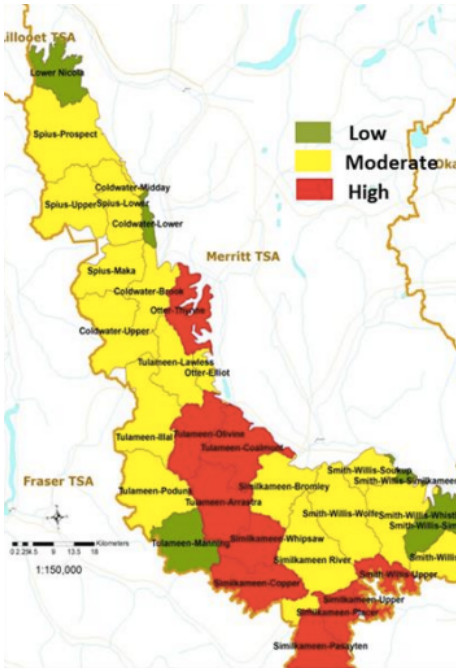

Figure 2.2: Grizzly bear value assessment in the North Cascades
Source: Government of British Columbia. (2014). Merrit TSA Cumulative Effects Operational Trial.

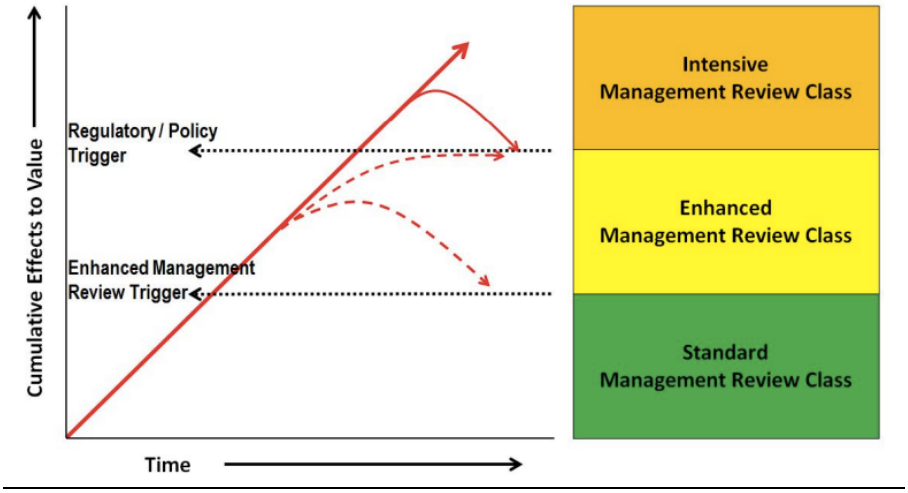

Figure 2.3: Cumulative Effects Management Triggers
Source: Government of British Columbia. (2017). Cumulative Effects Interim Policy.

There are multiple expected benefits of the Cumulative Effects Framework. Government will be able to make decisions about cumulative effects with greater confidence. The state of overall environmental protection of critical species and ecosystems will be more easily measured and quantified across British Columbia. Resource companies can better plan their activities with foreknowledge about the areas of B.C. that are likeliest to require the most additional work. First Nations and government can better plan activities to address First Nations rights and title interests. However, for this to work, a high-level of coordination is required because the external entities and the six natural resource sector ministries operate independently from each other and none has complete control over the others, despite some aspects of interdependence.

2.3 The Inter-Agency Governance Context of Cumulative Effects

In 2010, a large-scale organizational consolidation was enacted with the launch of the Ministry of Forests, Lands and Natural Resource Operations (FLNRO), which consolidated operational accountabilities under a single agency for all authorizations related to water, lands, forestry and wildlife at both a provincial and regional level. The consolidation also included all NRS consultation activities with First Nations and operational-level environmental stewardship compliance, enforcement and monitoring activities. Under the consolidation, all regional FLNRO branches would report to a single Regional Executive Director (RED).

However, though the consolidation enables REDs to exercise control over a much broader set of values, their increased power is still balanced against a regulatory model in which individual statutory decision-making is protected against fettering by senior leaders and spread across a diverse set of statutory decision makers. Excluded from the consolidation were the sub-surface activities (e.g. mining, oil and gas, and geothermal resources) regulated by the Ministry of Energy and Mines and the Ministry of Natural Gas Development, as well as activities (other than water and wildlife) regulated by the Ministry of Environment and Ministry of Agriculture. As well, Ministry of Environment continues to be responsible for strategic-level science, policy and legislation related to water, wildlife and general resource stewardship. The Environmental Assessment Office, operates semi-independently within the Ministry of Environment and conducts assessments of complex industrial-scale projects and already integrates cumulative effects approaches into these assessments. All NRS ministries are expected to collaborate with FLNRO and MoE to incorporate resource stewardship into their decisions, but are not constrained by legislation except where a resource objective has been established by an enactment that pertains to their specific legislative authorities.

There are other agencies and stakeholders who should also be considered in the context of natural resource management – all of which have been consulted to some degree over the course of the development of the Cumulative Effects Framework. These include Fist Nations, the Federal government, local governments, civil society, industry and industry professionals, as well as the public writ large. The relative emphasis of certain groups over other groups (in particular, First Nations and industry over other groups) reflects the legal stake in decision-making accorded to different groups based on constitutional and provincial law and various forms of land tenure.

Due to the constitutional obligation to consult with First Nations, as well as the still-in-progress land claims process in British Columbia, First Nations governments are informed, consulted or actively involved in almost all natural resource management decisions in British Columbia that have potential impacts on First Nations interests. First Nations may be consulted on a provincial basis, through groups such as the First Nations Leadership Council, or consulted on an individual band or treaty group basis. Consultation on the development of cumulative effects management

recommendations is not legally required, but is required in the Interim Policy because recommendations will influence future decision-making about values that intersect with First Nations interests.

The Federal government is also a potential participant – especially on the management side. The Federal government is responsible for a number of areas that are highly relevant to cumulative effects management such as regulating ocean environments, migratory birds, inland fisheries and navigable waters, on-reserve First Nations, inter-provincial pipelines, as well as providing a parallel federal environmental assessment process through the Canadian Environmental Assessment Agency. Local governments are often consulted or involved in natural resource management decisions – in particular around areas where it may impact drinking water for communities. There are also a number of non-profit organizations that represent large bioregional or interest-based communities – for example, the British Columbia Wildlife Federation represents over 50,000 hunters and anglers, and assists government in delivering hunter education and managing conservation efforts.

Finally, the private sector is heavily regulated in the natural resources sector – through both on a company level and the professionals who conduct work for companies and government. Government depends heavily on the concept of "professional reliance" – that some decisions made by regulated professionals can be made with minimal government oversight because of the self-regulatory mechanism of professional body oversight. Of these, the most extensive quasi-governmental role is held by forestry companies who possess vast Tree Farm Licenses over hundreds of thousands of hectares of land. Under the *Forest and Range Practices Act*, these companies have considerable responsibility for environmental planning within their holdings, subject to minimal government oversight. There are also professional associations representing professional foresters, biologists and engineers – together three key professions named in B.C.'s environmental legislation as responsible for the majority of environmental decisions made by government and by regulated natural resource companies.

3.0 Methodology and Methods

3.1 Methodology

The primary goal of the research within this project is to better understand the existing "field of play" for natural resource managers attempting to collaborate with each other. The value of the research would come from recommendations that propose context-appropriate solutions based on concepts identified as promising practices within the literature review.

The general research strategy was to build a conceptual framework based on an inductive review of academic literature on inter-agency governance, organizational psychology and natural resources governance; test and expand the conceptual framework through a deductive quantitative and qualitative review with B.C. government natural resource managers; and finally to take an inductive approach to triangulate the findings and present recommendations.

3.2 Methods and Tasks

The study began with a review of the literature surrounding inter-agency collaboration in the natural resource sector. From there, it appeared that the best path forward would be to develop a conceptual framework of best practices in inter-agency collaboration with an emphasis on the natural resource sector and attempt to express those best practices in form of institutional capabilities.

Once the institutional capabilities had been developed, it was then possible to validate the adequacy of the best practices and investigate the degree to which those institutional capabilities were already in place in the British Columbia context. To that end, a questionnaire was developed and sent to a wide subset of key current mid-level regional natural resource leaders working on projects related to the implementation of the Cumulative Effects Framework. The questionnaire was a qualitative and quantitative survey tool centered on the institutional capabilities as identified in the conceptual framework, while asking several open-ended

questions to allow participants the opportunity to go outside the conceptual framework and challenge its assumptions. Refer to Appendix B for a blank version of the questionnaire.

Finally, the results of the questionnaire were triangulated against the conceptual framework. The objective of the analysis was to validate the results against the conceptual framework and other available sources of information in order to develop a set of recommendations that could be used to improve the plan for implementing regional cumulative effects assessment and management

3.3 Limitations on the Study

Access to regional resource managers' time was limited and had to be tightly structured to maintain support for the research. Regional cumulative effects assessment have only been completed in several pilot project areas of the province and only for some values, so only a limited number of the participants will have engaged with the Cumulative Effects Framework in an inter-agency setting. However, most participants are familiar with the initiative and will have engaged in similar exercises in the past through the 1990s and 2000s land-use planning initiatives. This was part of the advantage of selecting more experienced staff.

However, despite multiple extended deadlines for responses and multiple requests through different channels to solicit responses, only 17 out of an estimated 50 potential participants responded to the survey. While this was a smaller response rate than expected, there was enough consistency in the responses to derive conclusions with a certain degree of confidence. It is also worth considering the possible reasons for managers' reasons for not completing the survey despite it being anonymous – one possible reason is simply busyness for these in-demand professionals, but also the questions do hint at several issues that are politically sensitive in British Columbia – inclusion of First Nations, the public and other stakeholders in resource management; previous land-use planning initiatives; and a potential perception that the report could be used to criticize governments' resource management policies. The conclusions of the report should read in light of this poor response rate – some managers may have chosen to withhold missing perspectives because of greater sensitivity to the politics surrounding this issue.

The focus of the scope of this study was limited to the factors that influence successful collaboration in multi-agency resource stewardship initiatives, in particular, those that deal with cumulative effects assessment and management. That was intended to exclude the more substantive aspects of cumulative effects assessment and management (e.g. scientific data collection methods, legislation and regulatory requirements, indicators, planning processes, or geographic information systems), however, the study found that some degree of discussing how external stakeholders are included in the governance of cumulative effects is so critical to the literature that it cannot be ignored.

Due to the limited political mandate given to the Cumulative Effects Framework, the paper does not closely examine shared/co-management, or other governance forms that constitute a surrender, dilution or devolution of provincial powers to First Nations and/or the public. The research was conducted under the premise that management recommendations will continue to be an inter-agency *provincial* recommendation to *provincial* statutory decision makers. However, the paper did set out to explore how First Nations and the public can be included to some respects within this process. Despite this limitation, the findings of the study indicated that co-management approaches should potentially be further explored, in particular for Fist Nations. However, the research was only able to explore some aspects of these kinds of approaches and does not explore them in depth.

4.0 Literature Review and Conceptual Framework

The primary goal of the project was to develop a strong conceptual framework for the successful collaboration in the implementation of regional natural resource management and provide recommendations that could operationalize the framework to improve natural resource management governance. The literature review was focused on the research done in a public policy context generally, with a specific focus on natural resource management and where possible in referencing to cumulative effects assessment and management frameworks. In line with the methodology, care was taken to identify institutional capabilities for collaboration, rather the details of different case studies.

4.1 Inter-agency Collaboration in B.C.'s Cumulative Effects Framework

Multiple internal and external reports and plans prepared in the past have set the stage for the adoption of a system to manage cumulative effects in British Columbia. The Government of British Columbia has been actively developing the Cumulative Effects Framework since 2012, and the project has been subject to extensive scrutiny. Discussions of inter-agency collaboration have been documented in a number of forums. These documents range from internal reports commissioned by the Ministry of Forests, Lands and Natural Resource Operations, reports from non-governmental organizations, a report from the Auditor General of British Columbia, and an UBC master's thesis on cumulative effects decision-making processes.

<u>Government Reports</u>

The internal Vold Report (Vold and Associates Consulting Ltd, 2012) was the first comprehensive review of current environmental management structures and their deficiencies in addressing cumulative effects commissioned by government. The report focused on the legal challenges to overcome with integrating environmental decision-making in a cumulative effects framework. However, it saw challenges to collaboration in terms of legislative barriers. While legislative barriers are important to consider, they are outside the scope of this study.

The richest sources of information on discussions to-date within government were the pilot projects and public engagements conducted by the Ministry of Forests, Lands and Natural Resource Operations from 2013-2015. The 2013 Skeena Pilot Project Report[1] recommended that regional implementation required defining "roles and responsibilities within and across organizations to deliver CE, including technical staff's role as value stewards, First Nation's role, and statutory decision makers accountabilities for managing cumulative effects" (p. 5). The Skeena pilot team also proposed that industry, First Nations and government might be able to better collaborate on cumulative effects assessment and monitoring through a "trust" that would manage project funds arms-length from government (p. 26). The Skeena team also called for legislation to integrate natural resource decision making (p. 4).

In 2013-14, the second pilot project (Northeast Operational Trial) investigated how cumulative effects could be implemented in the Dawson Creek region – a complex natural resource management context with diverse interests including mining, forestry, oil and gas, recreational and First Nations. Following the trial, the project team conducted interviews with statutory decision makers and external participants (local industry, First Nations and community representatives)[2]. External groups indicated that they felt there was a lack of clarity of how the overall process would work, though they support the overall initiative in principle. The external interviews identified a number of areas where government could collaborate with First Nations, industry and the local community to integrate their interests in to the Cumulative Effects Framework: defining community well-being; defining First Nations interests and traditional ecological knowledge; defining near-term trends for resource development; and defining management actions that could industry and government could deploy to reduce the risk to values. The internal interviews with statutory decision makers re-surfaced the concern previously raised in the Vold Report that the legislative framework was insufficient to enable statutory decision makers to make decisions that respect cumulative effects beyond the scope of their enabling legislation.

[1] Ministry of Forests, Lands and Natural Resource Operations. (2013). *Skeena Region Cumulative Effects Pilot Project Phase 2 Report*. http://bvcentre.ca/files/integrated/NW_CE_Phase2_Report_V9_25June2013.pdf

[2] The summary documents of the internal and external stakeholder consultations on the Northeast Operational Trial are not publically available at this time.

In April 2015, government released a draft Cumulative Effects Policy, which included greater discussion of how cumulative effects assessments would be integrated into governance, and conducted a round of stakeholder engagement. This produced the Phase 2 Stakeholder Engagement Overview Report[3], which surfaced a number of suggestions from a wide range of internal and external stakeholders across British Columbia. Stakeholders raised the proposals to centralize responsibilities for the Framework, potentially with a centralized secretariat and noted existing structures related to forestry analysis and inventorying that could be built upon. There was also common points raised around the need for greater clarity in defining the roles and responsibilities of government agencies, industry, First Nations and other groups, as well as how the process will work moving forward. Stakeholders and staff alike were concerned with whether a government-to-government approach to engagement with First Nations would be the basis of engagement and collaboration. Generally, stakeholders expressed a keen interest in better understanding when and how other opportunities for engagement in Cumulative Effects Assessment reviews and identification of management responses.

In May 2015, the Auditor General of British Columbia released a report on cumulative effects management[4]. The report recommended that clear roles and responsibilities for cumulative effects management should be assigned to each ministry. Government responded to this recommendation by asserting that these roles will continue to be enforced.

Non-Government Reports

From the outset of the development of the cumulative effects framework, non-governmental organizations have expressed a strong desire for greater First Nations and public involvement in the governance of cumulative effects. A West Coast Environmental Law report (Clogg & Carlson, 2013) called for a government to share regional governance of cumulative effects with

[3] Ministry of Forests, Lands and Natural Resource Operations. (2015). *Cumulative Effects Phase 2 Engagement Overview – April 27th 2015* http://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/cumulative-effects/phase_2_engagement_overview_april_27_final.pdf

[4] Auditor General of British Columbia. (2016). Cumulative Effects Management. Web accessed: https://www.bcauditor.com/sites/default/files/publications/reports/OAGBC%20Cumulative%20Effects%20FINAL.pdf

local communities and First Nations – this concept is referred to as "co-management" or "shared decision making" – sometimes attached to a specific proposal, but often as a general statement about governance.

The British Columbia Wildlife Federation and the Fraser Basin Council, two of the most historically important non-governmental organizations involved in resource stewardship, jointly wrote a submission[5] in June of 2016 calling on the provincial government to expand the roles and responsibilities of the Cumulative Effects Policy to include "3rd party oversight and audit function such as a Natural Resource Practices Board, formal government-to-government processes with First Nations, and formal advisory processes for local governments, and other public, private and nonprofit stakeholders".

In 2016, a UBC master's student completed a thesis on decision making for cumulative effects in British Columbia. It should be noted that the UBC study was distinct from this one in that it looked at how decision-making for cumulative effects should be conducted, rather than how collaboration between agencies can be better facilitated. However, just as it is difficult for this paper to discuss collaboration without discussing decision-making, it is difficult to discuss decision-making without discussing collaboration. Participants expressed a belief that greater inclusion of First Nations in CEF would enhance their interests and strengthen relationships between all parties (Vlasschaert, 2016, p. 72). They also called for stable funding and warned that the Framework would not be successful if other ministries (besides FLNRO) failed to share accountability for the project (Vlasschaert, 2016, p. 82, 85)

4.2 Academic Literature

After the initial review of the literature, it was apparent that attempting to pinpoint an ideal model for the governance of inter-agency collaboration in resource stewardship would be ill-advised – the examples in the literature were too diverse and lacked rigour in terms of comparing different overall approaches. However, there were clearly a number of best practices that stood

[5] BC Wildlife Federation and Fraser Basin Council. (2016). *Recommendations on the BC Cumulative Effects Framework.* http://www.bcwf.net/files/BC_CEF-Submission-June27-2016.pdf

out from the literature. Based on this observation, the research continued with an aim of assembling best practices into a conceptual framework that could be expressed in terms of the various institutional capabilities that an organization should have in place to be able to succeed with inter-agency collaborations in natural resource stewardship. The starting point for this conceptual framework was to summarize the concepts of different scholars of inter-agency collaboration, in particular those with a natural resource management and ideally cumulative effects-related focus. The main themes from the literature underpin the conceptual framework.

One of the major areas of attention was governance and accountability, which speaks to organizational structures, senior leadership figures, high-level direction/strategy, and incentive/measurement system (Pollitt, 2003; Lance, Georgiadou, & Bregt, 2009; Morrison & Lane, 2005; Sproule-Jones, 2000; Chilima, Gunn, Noble, & Patrick, 2013). Within the field of public administration and public management, the clearest theoretical frameworks that address the challenge of inter-agency governance are the overlapping theories of "whole of government", "Horizontal Management" or "joined-up government" approaches popular in the United Kingdom, Canada and Australia to linking multiple agencies' services around common outcomes in order to tackle "wicked problems" (Pollitt, 2003; Lance et al., 2009; Morrison & Lane, 2005; Sproule-Jones, 2000).

Other scholars, particularly those writing from natural resources-specific perspective, are focused on the complexity of inter-agency collaboration when managing dynamic ecosystems, relationships with First Nations and the public, and contested views of environmental science (Gray, 2004; Jackson & Curry, 2004; Browne & Bishop, 2011; Jacobs, Garfin, & Lenart, 2005; Freeman, Stern, Mortimer, Blahna, & Cerveny, 2011; Stern & Predmore, 2012; Schultz, Coelho, & Beam, 2014). A major realization was that inter-agency collaboration in natural resource management requires a conceptual framework that is sensitive to "fit, interplay and scale" (Vatn & Vedeld, 2012; Bulkeley, 2005) – that is to say, appropriate to the operation of a regional inter-agency team bumping up against the broader network of actual people who make decisions that impact the functioning of natural systems.

There is also rich existing literature focused on the challenges of ambiguity, uncertainty and multiple-criteria analysis or Structured Decision Making in natural resource decisions (Brugnach, Dewulf, Henriksen, & van der Keur, 2011; Childs, York, White, Schoon, & Bodner, 2013; Gregory, Long, Colligan, Geiger, & Laser, 2012). The United States Forest Service has partnered with researchers at Virginia Tech and Colorado State University on a number of recent studies that examine team functioning within the implementation of complex inter-agency resource stewardship initiatives over the past decade (Freeman et al., 2011; Stern & Predmore, 2012; Schultz et al., 2014).

4.3 Conceptual Framework

A conceptual framework is way of organizing a complex body of ideas into categories and relationships to make the ideas simpler to communicated. In the case of this report, the conceptual framework deployed is "institutional capabilities". The concept of "institutional capabilities" is inspired by but divergent from the term "institutional capacities" used by Kristensen, Noble, & Patrick (2013, p. 364) to describe all of the different aspects of a cumulative effects assessment and management framework – e.g. legislation, policy, geographic information systems, monitoring programs, baseline data, financial resources and governance systems. By contrast, the "institutional capabilities" described in this paper are limited to aspects of organizational design, human resources, collaboration skills, and other non-technical components of a cumulative effects governance regime.

From the initial review of the literature, five major themes emerged that guided the development of the institutional capabilities conceptual framework:

> **Theme #1: Governance and Accountability** – this theme explores the way in which the relationship between different agencies in an inter-agency project can be structured to overcome the inherent challenges that hierarchically structured agencies face in accomplishing work outside of their hierarchical structure.
>
> **Theme #2: Fit, Interplay and Scale** – this theme is specific to cumulative effects management. It explores the concept of how natural systems and human governance

systems relate to each other in the management of natural resources and proposes that natural systems, at least in part, determine which agencies and non-governmental entities should participate in cumulative effects management.

Theme #3: Political and Executive Leadership – this theme explores the importance of senior political/executive leadership and the role of a lead agency in setting direction and supporting the accountability of an inter-agency project.

Theme #4: Team Functioning – this theme explores the functionality of the operational team(s) responsible for implementing an inter-agency project, in terms of team cohesiveness and trust, the abilities of the project team leader to drive results in an interagency context and the resourcing of the team with the right people.

Theme #5: Facilitation Skills – this theme explores the importance of process facilitation and knowledge translation as skills that are particularly important for interagency collaboration and proposes some particular aspects of these skills that are important for troubleshooting challenges specific to interagency collaboration in the resource management context.

The themes are restated into fifteen "institutional capabilities" that could be confirmed with natural resource managers and compared against their understandings of the current field of play for cumulative effects implementation in British Columbia. These fifteen institutional capabilities (shown in Figure 4.1) attempt to crystalize the literature into institutional capabilities that may exist to different degrees within the existing framework for collaboration between B.C. natural resource sector ministries. The rationale for these capabilities is described in further detail in Section 4.4.

Governance and Accountability	Fit, Interplay and Scale	Political and Executive Leadership	Team Functioning	Facilitation
(1) A well-defined governance	(3) Inclusion of all B.C. government	(6) Sponsorship and endorsement from political	(8) Mutual trust between participants	(11) Process facilitation skills

framework	agencies who manage natural systems	leaders and executive		
(2) Accountability mechanisms	(4) Inclusion of all non-B.C. government entities who manage natural systems	(7) A lead agency	(9) A team leader who can manage the inter-agency project activities	(12) Knowledge translation skills
	(5) Operate an appropriate scale to make decisions or recommendations		(10) Resourcing of the money, people and skills needed	
	Team has skills for successful engagement with (13) industry, (14) first nations and (15) the public			

Figure 4.1: Institutional Capabilities ordered by Theme

4.3.1 Theme #1: Governance and Accountability

Defining the Institutional Framework

A solid starting point for inter-agency collaboration is a discussion of creating and defining a framework for governance and accountability. The purpose of creating a governance and accountability framework, regardless of the form of inter-agency collaboration being pursued, is to explicitly adopt common shared outcomes and shift organization towards common outcomes (Pollitt, 2003). The literature uses these intertwined subjects as both focus and jumping off areas into more instrumental aspects of inter-agency collaboration. The overall governance framework is the ultimate constraint on managers' ability to find good program outcomes (Bakvis & Juillet, 2004).

Best practices for the launch of a new collaborative initiative begins through a political direction from on high followed by formal partnership documents that begin to set out rules on process

and responsibilities, the operational implementation of the initiative can begin to be implemented, led by joint operational teams from the middle-management and regional offices (Pollitt, 2003). A smart practice is splitting regional and provincial forums to allow for differentiated policy responses – controversial issues handled centrally, regular operational issues handled regionally at a politically neutral scale (Morrison & Lane, 2005).

At the beginning of an inter-agency project, the governance needs to be mapped out in terms of how decisions will be made and whether the lead agency has power over other agencies. Choices include: relying on Cabinet or Deputy committees to make inter-agency decisions; relying on incentives to drive cooperation from each agency involved; relying purely on information exchange, voluntary action or other forms of less formal cooperation; or choosing to create a purpose-built agency or project group to accomplish the project without needing to worry about existing governance structures (Bakvis & Juillet, 2004). New institutional arrangements (ex: Australian Greenhouse Office) can provide a centralized forum for inter-agency negotiations and single point of access for external stakeholders (Morrison & Lane, 2005). In the case of an early 2000s Federal innovation plan, splintered governance of the project worked well at the policy development phase, but caused serious challenges during the implementation phase (Bakvis & Juillet, 2004). In the case of the Cumulative Effects Framework, though government aggregated many of the former functions involved in managing cumulative effects into the Ministry of Forests, Lands and Natural Resource Operations, there is still a large number of decisions that are the responsibility of other ministries.

In projects where ministries do not have an explicit ability to compel participation by others, managers of horizontal initiatives employ different strategies to populate working groups and maintain commitment – they reach out through network to form "subcoalitions" and "solicit membership"(Sproule-Jones, 2000, p. 101) (Lance et al., 2009, p. 251). If these alliances are successful, agencies can retain their independence, while creating collective enterprises to address common problems.

Accountability Mechanisms

Sproule-Jones (2000, p. 104) frames the intertwined question of governance and accountability as determining "how public servants can be answerable and ministers responsible for the horizontal management of programs, where the contribution of any one organizational unit cannot be disaggregated from the others." Bakvis and Julliet (2004) use the phrase "pulling against gravity" throughout their monograph on challenges with horizontal management to express the difficulties of holding participants accountable to an inter-agency project's or horizontal goals if the accountability and incentive structures are still oriented vertically. The mere existence of a horizontal project and its endorsement from the political leadership or senior executive is not enough to overcome the traditional vertical accountability of the enshrined system of ministerial responsibility. Bakvis and Julliet (2004) highlight the example of breakdowns in collaboration between Natural Resources Canada (NRCAN) and Environment Canada (ENVCAN) on 2000s-era climate change strategies. While these two agencies were expected to collaborate on common climate change goals within the inter-agency project, the fundamental goals of each ministry were in many ways divergent. Collaboration between agencies can face challenges that are difficult to overcome – in this case, the divergence between the fundamental goals for NRCAN to promote natural resource development vs. ENVCAN reduce Canada's carbon footprint).

Horizontally-oriented accountability mechanisms is one way that the "pulling against gravity" effect can be counterbalanced. In absence of strong central agencies providing a supervisory role as described by Bakvis and Julliet (2004), one approach is to create some form of evaluative framework with agreement of the parties. The literature emphasizes constructing the framework for evaluation around common outcomes and reporting, flexibilities provided around service outcomes, performance measures specifically targeting collaborative/collegiate behavior, and allocate reward and recognition for good horizontal management (Morrison & Lane, 2005) (Sproule-Jones, 2000) (Pollitt, 2003) (Schultz et al., 2014). Sproule-Jones (2000, p. 104) describes three approaches to evaluating progress and holding agencies accountable in inter-agency projects that he had reviewed:

1. each agency measures its results separately and government attempts to aggregate results;
2. one agency measures the results on behalf of all; or,

3. a trusted third party is commissioned to evaluate the inter-agency project (Sproule-Jones, 2000, p. 104).

Resourcing is a way in which incentives can be structured to reinforce the accountability framework. Section 4.3.4 discusses resourcing in further detail.

4.3.2 Theme #2: Fit, Interplay and Scale

Fit, Interplay and Scale

There is another set of literature around governance frameworks for inter-agency collaboration that is specific to natural resource management. It speaks to the particular challenges of addressing multiple layers of governance in a complex biophysical world. At the heart of the literature is the observation that a mismatch between institutional arrangements and ecological/biophysical systems will lead to less robust ecological systems (Vatn & Vedeld, 2012).

There are four types of mismatch situations described by Vatn & Vedeld (2012):

1. **Spatial** – size of institution is mismatched to ecosystem
   Example: The Columbia River flows through both Canada and the US.

2. **Temporal** – timing of decisions is too slow, too quick, too short or too long to reflect ecological changes
   Example: Failing to align climate change predictions with planning for forest recovery efforts – on a timescale of 30 years, an entire recovery effort might be lost by failing to take into account climate knowledge.

3. **Threshold behavior** – inability to adjust to extreme shifts in ecosystem dynamics
   Example: If Mines permitting and biodiversity monitoring are disconnected, a permit could be issued for a new mine in an area where the cumulative impact of the mine would reduce the food supply for a species in that area to be so limited that the species is extirpated.

4. **Cascading effects** – inability to prepare for/prevent knock-on effects of failure in one system *Example: reduction of water flows from forest degradation leads to share decrease in key species***.**

It is important to consider the how inter-agency natural resource management projects can avoid mismatches with the ecological systems that they manage. To address the risk of mismatch, Vatn & Vedeld (2012) suggest that the governance of inter-agency collaboration in environmental stewardship and natural resource management should consider "fit", "interplay" and "scale".

Fit is "a matter of the match or congruence between biophysical systems and governance systems" (Vatn & Vedeld, 2012, p. 3). The key question in assessing fit is first determining how the resource management regime under analysis fits within the broader institutional context (property rights, norms around resource use, etc) (Vatn & Vedeld, 2012). A mismatch of organizational boundaries and natural ecological units can be a major point of conflict (Morrison & Lane, 2005). The temptation in response to this mismatch may be to simply rely on a larger scalar unit (i.e. a province instead of a regional district), however, while larger scales may better the totality of the ecosystems within them, if administrative units are not aligned, both external and internal stakeholders have issues with trust in the process (Schultz et al., 2014)

Interplay "is the perception that discrete regimes can interact with one another and that such interactions become both more common and significant as the number of discrete governance systems grows in any given social setting – interplay occurs when the operation of one set of institutional arrangements affects the result of another or others" (Vatn & Vedeld, 2012, p. 4). Natural resource management traditionally divided resources into discrete issues "forests", "water", "parks", "mines", "game species", "endangered species", "rangeland" – causing reactive responses and isolated, siloed institutional arrangements (Morrison & Lane, 2005). This realization is where ecology begins to intersect with governance theory, because a "whole-of-landscape" approach necessitates a "whole of government" approach (Morrison & Lane, 2005, 48). Contemporary natural resource management is slowly reversing these arrangements and trying to better look at the interplay of different values within a larger landscape, however, the

traditional institutions of resource management are tied to long lasting systems that determine economic access to these resources and thus continue to dominate decision making. Rather than anticipate that these systems are going away, a concept of interplay looks to ensure that the interconnections between these issues is made visible.

Scale is the "extent at which institutional arrangements are similar and exhibit comparable processes across levels of social organization ranging from the local to the global"- scale is an extension of interplay between vertical levels of organizations (Vatn & Vedeld, 2012, p. 5). There is an expectation for environmental management to be enacted at least in part at a local or regional level (Morrison & Lane, 2005). Chilma et al (2013, p. 81) also point to the value of examining multiple scalar units (e.g. a tributary stream, a river reach, a watershed, or a basin) simultaneously to examine the interplay between different levels of governance – and improve how decisions can be made that impact those values.

External Stakeholders

It follows from a discussion of fit, interplay and scale that traditional inter-agency collaboration excludes certain stakeholders who hold or assert certain rights over aspects of managing different natural resources. Any institutional analysis of resource regimes need to be consider broader governance regimes – including property rights (Vatn & Vedeld, 2012). That includes First Nations, local private property owners, mining, and other resource industry forestry tenure holders, local governments, and to an extent, the people to whom the government has traditionally granted general rights of entry and rights to recreate, hunt, fish and guide tourists. It is recognized that it is critically important to conduct early consultation of key stakeholders to head off controversial issues at the pass (Pollitt, 2003), but there is less agreement of whether or when any or all of these rights-holders should be directly included in resource management planning. Historically, the main non-governmental rights holder that has been involved, or at least closely consulted with, in most natural resource and stewardship planning initiatives has been the forestry industry, and other resource industries.

However, First Nations are increasingly asserting themselves into natural resource decision making forums. The Supreme Court decisions on *Delgamuuk, Haida* and *Tsilqotin* have all strengthened First Nations claims to various rights, including title to large swathes of land in British Columbia. While only a handful of land claims have been resolved through modern treaties (e.g. Nisga'a, Maa'nulth, Tsawaasan, and Sliammon) or in part through the courts (Tsilqotin), the eventual resolution of these claims is no longer uncertain. As land claims continue be resolved, First Nations lands will fall into three categories of governance – the first two of which elevate First Nations to holding significant power of natural resource decision making (Jackson & Curry, 2004, p. 39):

1. Under First Nations direct environmental governance (core territories)
2. Under concurrent jurisdiction/co-management with the provincial government
3. Under provincial jurisdiction but with First Nations rights of hunting, fishing, and other traditional practices.[6]

Involving the public and non-profit organizations in cumulative effects management is also discussed in the literature. Despite not having as extensive rights as industry and First Nations, there is also a potential role for the public and non-profit organizations that goes beyond being consulted and includes possibilities of partnership with government. In the study by Chilma et al (2013, p. 81), one participant notably pointed out that regional cumulative effects projects are constrained in their implementation by their resources – decisions about targeting a particular watershed or species for recovery require the engagement and investment of the public, non-profit sector and private industry in order to be tackled. General "goodwill" of both institutions and individuals towards the Grand River Watershed projects was seen as critical by participants of the project – goodwill drove productive efforts towards volunteer "citizen science" data collection and support for non-profit recovery projects.

[6] It is critical to note that despite the fact that the majority of land claims remain unresolved, First Nations have been extremely successful in asserting those claims in the context of ongoing decisions. This is in large measure driven by resource industries' need for ongoing business certainty – sophisticated resource companies are increasingly circumventing government and directly establishing collaborative resource management forums with First Nations. An excellent example of this is the Ktuxana First Nations – Teck Coal Ltd partnership to manage cumulative effects in the Elk Valley to which the B.C. Government was belatedly added (a report on the partnership's joint Environmental Management committee can be found here: http://www.teck.com/media/Appendix-B_Elk-Valley-EMC-Report.pdf).

4.3.3 Theme #3: Political and Executive Leadership

Political and Executive Leadership

Another major theme of the literature is the role played by senior political and bureaucratic leadership in setting a strong foundation for an inter-agency project. As noted previously, best practices for the launch of a new inter-agency governance system include political-level or top civil servants, ideally with one top political leader (i.e. Minister or Premier), setting common outcomes and defining an unambiguous policy direction and need (Stern & Predmore, 2012; Pollitt, 2003). Ideally, political and executive champions can serve as catalysts that drive forward the inter-agency intiative against the headwinds of bureaucratic inertia (Bavkis and Julliet, 2004, p. 26).

Political will can both expand and constrain the effectiveness of cumulative effects governance arrangements – the most valuable function of political support in the study of the Grand River Watershed by Chilma et al (2013, p. 81) was the ability set strategic objectives that force institutions to be flexible and willing to toss out the detritus of past data structures and policies. Project teams need to consider how political will is protected and nurtured over the life of the project. Jacobs et al. (2005) point to the credibility of science for maintaining political will over time. However, almost all academics studying the topic place the involvement of external stakeholders at the centre of discussions of maintaining political will. These stakeholders have separate relationships with the political level of government that can create serious risk for a project that can only be addressed by proactively involving them (Pollitt, 2003).

Central Agencies and Line Ministries

Initiatives need to consider the appropriate balance of shared leadership between regional and provincial offices. Provincial offices can support regional offices with a clear mandate that enables regions to scope responses and develop partnerships (Morrison & Lane, 2005) 50-51. That needs to include direction about the flexibility regional offices will have and the degree of standardization expected from the provincial centre. This reflects back to the idea of operating on

an appropriate geographic scale and also retaining the ability to have interplay between governance that operates in different scales.

Some scholars stress the benefits of a central agency intervening (Lance et al., 2009) (Herman Bakvis & Juillet, 2004) and using their relative power to provide a challenge function, set new ground rules and breaks the old patterns of accountability and incentives. Bakvis and Juillet (2004, p. 63) go as far as to suggest that central agencies should be involved in every phase of a horizontal project and raise concerns about the ability of a lead line ministry to hold other ministries accountable. Unfortunately, British Columbia lacks the strong central agencies found in the federal government– central agencies typically do not participate in agency planning, except Treasury Board, which in British Columbia generally restricts its involvement to budgetary planning. On the other hand, Chilma et al (2013, 82) and Bakvis and Juillet (2004) suggest it does not matter as much that one agency is in charge of all the issues, but suggested that there should be a clear lead agency at least at every level of governance (regional, provincial, federal). From the perspective of the research, the lead agency is clearly the Ministry of Forests, Lands and Natural Resource Operations, which fits its general role as largest natural resource management agency and also as the secretariat for the Natural Resources Board of Deputy Ministers and the Cabinet Environmental and Land Use Committee.

4.3.4 Theme #4: Team Functioning

Functioning of Teams

It can be difficult to ensure that operational staff participating in inter-agency projects are able to collaborate effectively – even when the changes for good collaboration are clearly identified. The reason for this that most inter-agency teams go through highs and lows of collaboration – for example, the research and data collection stage of projects generally contain periods of individual driven work versus the scoping and objective setting phases, which tend to be highly collaborative (Freeman et al., 2011). Therefore, the teams have less time to go through the traditional stages of team development in an organic timescale – creating good conditions of team functioning needs to be intentional and facilitated.

The organizational psychology model of input-process-outcome model has focused studies of team functioning traditionally on "antecedent" features of teams – the individuals involved, the objectives and goals of the team, and the political, economic and organizational context, however, increasingly research points to "emergent factors" such as empowerment and inter/intra-team trust (Freeman et al., 2011; Stern & Predmore, 2012, 31).

Literature on the functioning of inter-agency teams takes on different modes of analysis – focusing on the structure of the team, conditions within the team, the role of the team leader, and the manner in which teams are resourced. A serious challenge with inter-agency collaboration is that the team members are not part of the same organizational unit, so the barriers to learning effective collaboration and building trust are even higher than with normal hierarchically situated teams. Sproule-Jones (2000, 98-100) describes four potential approaches to fostering a more productive form of "interdependence" between agency teams in inter-agency settings:

1. Create personal trust among partners, for example, using tactics as simple as hosting a joint Christmas party and inviting all the teams participating in the project;
2. Restructure the process of interaction from transactional ("reciprocal") tasks into joint ("sequential or pooled groupings") tasks to produce a sense of singular action;
3. Allocate discretionary funds that support the project; and,
4. Re-prioritize the agenda and re-time implementation tasks to align the different teams' work.

Other examples of approaches to building trusting, well-functioning teams include:

- Joint training and development of staff (Pollitt, 2003),
- Co-location of staff (Morrison & Lane, 2005),
- Standardized protocols, processes and systems across multiple ministries (Morrison & Lane, 2005),
- Promote inter-agency work as desirable career development. (Morrison & Lane, 2005)
- Investment in a culture of regular and personal communication (including informal communication) (Morrison & Lane, 2005)
- Promote "whole of government" values into the organizational culture,

- Greater info sharing and cooperative knowledge management, alignment of top-down policies with bottom up issues (Morrison & Lane, 2005)

Project Leadership

Finally, the literature speaks extensively about leadership on a operational-project-level – for example, (Pollitt, 2003, 44) notes that a best practice for the beginning of the appoint "a senior and trusted process manager whose job it is to creatively manage relations between the principal participants, so as to maximize productive interactions". Leaders of inter-agency initiatives are expected to have "strategic and consultative skills, cooperative planning and implementation, and the joint production of goods" and be expert in collaboration, negotiation and bargaining (Sproule-Jones, 2000 p. 103, 106). On top of that, these leaders should generally be empowering (Stern & Predmore, 2012). Freeman et al. (2011, 610-611) found that in a study of US Forest Service inter-agency projects, empowering leaders created more satisfaction and better results than leaders who favoured directive approaches. Illustrating the different demands on inter-agency leaders, Sproule-Jones (2000, 102), describes the cycle of work for leaders of successful inter-agency projects as following this pattern:

1. Consulting
2. Planning
3. Monitoring
4. Consulting (again)
5. Revising

Leadership is often intertwined with the topic of facilitation, which is described in more detail below. The literature, strangely enough, does not speak to the difference between leaders as facilitators and facilitators as a separate role. Increasingly, the B.C. Government and others use the latter approach, rather than assume that organizational leaders need to be responsible for managing all interactions within a project. For that reason, the survey asked two questions – one about whether they felt the project had a clear formal lead and whether the project had staff with skills facilitating the work of the project. Those roles may be the same on a smaller team, but for

a project of the scale of the Cumulative Effects Framework, it needs to be assumed that formal leadership and project facilitation may be split between different people.

Resourcing

Finally, the role of resourcing cannot be understated. Previously, financial incentives have been discussed as tools for incentivizing inter-agency collaboration. By the same logic, failure to provide adequate resourcing is a disincentive to collaboration. Horizontal initiatives tend to underestimate costs, however, horizontal projects will generally involve greater transaction costs in coordinating between different agencies and may therefore cost more than attempting to accomplish the same task unilaterally (Bakvis and Juillet, 2004). A major risk to inter-agency projects is that they can become "talkfests", discussing issues beyond their scope and not accomplishing their core objectives (Bakvis and Juillet, 2004, p. 48-49). While strong facilitation and project management can reduce this impact, any inter-agency project will have greater transactions costs than a comparable single-agency project; transaction costs will generally increase relative on the number of participants. Time, money and external forces will always place pressure on resources of inter-agency projects and provide opportunities for tension between participants (Freeman et al., 2011). Placing common budgetary resources in a dedicated project fund is one approach through which inter-agency organizations can lock-in dedicated resources (Pollitt, 2003). Other resourcing threats are non-financial. Turnover of team members is a risk, as is competing inter-agency and line agency projects – which may draw on the same subject matter experts for the different concurrent projects (Stern & Predmore, 2012; Bakvis and Juillet, 2004).

4.3.5 Theme #5: Facilitation Skills

Process Facilitation

The theme of facilitation has been hinted at but not fully discussed in the previous themes. Inter-agency projects require leaders who have strong consultative and process facilitation skills. However, facilitation is different than facilitative leadership – facilitation is the specific ability

used to manage a collaborative group processes and activities, whereas facilitative leadership is the ability apply the aspects of a facilitated process to other aspects of management (for example, applying adult education techniques to mentor employees in developing new competencies).

Facilitation is also not the exclusive domain of formal leaders – but part of an overall staff development strategy in the context of ever more collaborative work. It is critical that regardless of whether the primary facilitator is the project leader or another team member, that the overall process is tightly facilitated. The skills for cross-cutting work need to be developed across the overall staff complement – with thought put towards recruitment, training, and performance evaluation – with new skills at the forefront: consensus building, analysis, drive, integrity and courage (Pollitt, 2003; Morrison & Lane, 2005). Freeman et al (2011, 613) recommended that the US Forest Service aim future selection of leaders at the middle management level towards staff who demonstrate strong skills in leading collaborative teams through an empowering approach. There is a similar observable cultural shift within the B.C. Government, which now emphasizes similar competencies for Strategic Leaders (the senior-mid-level manager classification of most of the study participants)[7].

Facilitating the participation of external stakeholders is particularly complex and extreme care should be taken to thinking about how best to engage external stakeholders, especially the general public. In the 1990s, B.C.'s land use planning framework allowed members of the public and representative organizations to participate in "consensus-driven" community tables on regional land use plans. However, while the overall initiative may be seen as at least a partial success (Jackson & Curry, 2004), the view of the engagement process is still seen as generally negative in many communities that participated in the regional tables. The reasons for these negative feelings are manifold: uneven social and economic power of forestry companies and community members participating at the same table; participants who dominated conversations and directly contributed to a hostile environment; and the weakness of consensus discussions to properly address differences of opinion and actual tradeoffs (Booth & Halseth, 2011). Community participants in B.C.'s 1990s land-use planning projects reported "nervous

[7] "List of Competencies in the BC Public Service" http://www2.gov.bc.ca/gov/content/careers-myhr/all-employees/career-development/competencies-in-the-bc-public-service/list

breakdowns" and being scared to even "walk down their communities streets" after participating in the public engagement (Booth & Halseth, 2011, p. 905). This negative view of the process was one of the factors that contributed to the end of political support for continued regional land use planning over the past decade.

Another risk that has been discussed in the organizational psychology literature is the idea that participants frame the narrative of their role in a collaborative initiative as oppositional to other parties (Gray, 2004). Facilitators can attempt to reframe the issue onto common ground – but their success is not guaranteed. If groups have a strongly held identity attached to their framing of the issue, it can be difficult to dislodge, especially if the identity is formed in opposition to other participants. This is a challenge with any collaborative venture – some participants may stubbornly refuse to compromise and see their interests best served by standing their ground. Facilitators of process that face challenges with framing need to consider how they can break down the stereotypes and oppositional thinking that participants hold towards each other, and foster collaboration through interest-based negotiations – starting with mutual gains before working back towards more controversial topics (Gray, 2004, p. 168). Conversely, Bakvis and Julliet (2004, p. 62-63) challenge the notion that horizontality should be premised on convergence towards a singular goal - this can be harmful in terms of creating tensions about ownership of the issues rather than collaboration towards meeting divergent but interrelated agency goals.

Knowledge Facilitation

A subtype of facilitation discussed in the literature specific to resource management and cumulative effects management is knowledge translation, which is the facilitation of translating different sources of knowledge between scientists of different disciplines and non-scientists. The literature discusses knowledge translation barriers as something that can be overcome both through specific individuals with science integrator/translator skills sets, and through structure, by bringing teams together as interdisciplinary (integrated work) rather than multidisciplinary (collected work) teams. Science integrators/translators are people who can think and work across disciplines, with enough knowledge to maintain credibility within multiple scientific

communities and also simplify concepts for decision makers – knowledge translators can assist teams with facilitation and communication tasks (Jacobs et al., 2005). If teams don't know how to facilitate good conversations that bridge the concepts and ontologies of the disciplines at the table, they may end of working in a "multi-disciplinary fashion instead of an inter-disciplinary fashion". In these cases, a project manager can coordinate and collate the work, but there is no opportunity for deeper collaboration (Freeman et al., 2011).

Regardless of whether knowledge translation is done by one individual or by virtue of the organization of the team, it has great benefits. Freeman et al (2011, 603) report an exercise in one project where different stewardship subject matter experts were asked to produce an one-sided proposal of just what their species of interest needed – so that while it might not be possible to achieve, it would "daylight" all the competing interests in a way that the different players at the table would be able to understand as a starting point for effective collaborative management. In the study by Freeman et al (2011, 606-8), the focus was on regional projects balancing environmental values with recreational access – in these situations, teams that were better set up on interdisciplinary lines reported greater ease in engaging with the public. Scientific information also needs to be able to packaged into the limited "decision space" of executive and political decision makers – as an example, though a response to the over-allocation of the Colorado River could be to reduce allocation to the seven basin state, this is not political possible, at least not to the degree that scientific water management would advise (Jacobs et al., 2005, p. 9, 12).

Knowledge translation illustrates the role that First Nations play not just as rights holder and decision maker, but also in the ability to contribute traditional knowledge that can often fill in gaps in scientific knowledge, due to timescales for oral history that date back thousands of years instead of the single century of Western scientific monitoring in British Columbia. For example, as Gregory et al (2006, 727-728) describes in the case of a B.C. hydroelectric project, where professional reports on fish response to higher water flows had unacceptably large confidence margins, local First Nations elders were able to "fill in the gaps" with traditional knowledge. Recognizing and effectively translating this traditional knowledge is not just about inclusion of

First Nations, but benefiting from knowledge that is different but brings value to decision making processes.

Another approach that may aid facilitators in both process facilitation and knowledge translation is to draw on some of the concepts from Structured Decision Making. Structured Decision Making is a framework for integrating different interests in a science-based decision-support framework that is popular among natural resource professionals. The objective of structured decision making is not to make the decision, but to put the necessary information into the hands of the decision makers so that they understand all the trade-offs involved and have the opportunity to innovate(Gregory et al., 2012, p. 42). One of the main motivators for adopting structured decision making is to create a common language and framework to bridge the scientific world and the political/policy and administration world (Gregory et al., 2012, p. 42). Generally, that is approached by first having a dialogue about values that are important to different stakeholders and then introducing the scientific data (Jacobs et al., 2005, p. 10). The data can then be reviewed in light of the objectives of the different stakeholders, rather than having the focus be the different (interests-driven) interpretations of the data by stakeholders.

4.4 Institutional Capabilities

During the development of the questionnaire survey instrument, each of the high-level themes of the conceptual framework was reframed with several statements each that probe whether or not institutional capabilities related to those themes were in place. The institutional capabilities were based on the themes found in the literature and the feedback of the supervisor and the project client. Framing each theme in terms of institutional capabilities was aimed to depoliticize and depersonalize the concepts in each question with the aim of making it easier for participants to engage with the themes. In the questionnaire, participants were first asked how important a capability was to the success (or failure) of projects they worked on in the past and then they were asked the degree to which they thought that capability was currently in place. The final step was to summarize the themes discussed above into a set of fifteen capabilities, which are listed below along with a short rationale (participants were presented with both present and past tense versions of the statement, depending on the context of the question).

1. *A governance framework that makes it clear how decisions would be made and how issues could be elevated to be addressed*
   Rationale: While the literature provides different options on exactly how governance frameworks should be structured, it emphasizes the importance of clarity on governance and decision-making processes.

2. *Accountability mechanisms that ensure that all of the required participants in the process contributed to the success of the framework.*
   Rationale: While scholars differ on how accountability mechanisms should be structured, there is consensus that additional inter-agency accountability mechanisms must be in place that overcome the inherent challenges of working horizontally across silos when accountability is only exerted within each individual vertical silo.

3. *Relative to the area of project (ex: watershed, region, etc), the inter-agency team is inclusive of ALL internal B.C. government and agencies responsible for governance and implementation of project deliverables.*
   Rationale: This capability question speaks to the issues of fit, interplay and scale within the internal B.C. government context.

4. *Relative to the area of project (ex: watershed, region, etc), the inter-agency teams is inclusive ALL of the external organizations with an interest in the governance of the project (ex: Federal, local government, FNs, NGOs, etc).*
   Rationale: This capability question speaks to the issues of fit, interplay and scale within the context of non-B.C. government organizations. This question was asked separately from capability #3 because it perceived that internal organizations are generally welcome in inter-agency deliberations, whereas external organizations involvement carries political risks.

5. *Relative to the issue being tackled (ex: water quality in a particular watershed), the inter-agency teams operates at an appropriate scale (i.e. not too small, not too big) to make meaningful recommendations.*

Rationale: This capability question speaks further to the issue of scale and interplay between natural systems and government intervention.

6. *Sponsorship/endorsement of the project from senior executive/political level*
   Rationale: The literature speaks extensively on the importance of senior executive and political level support for inter-agency projects.

7. *A lead agency with accountability for facilitating/managing the process.*
   Rationale: The literature discusses a clear lead agency as a key factor for good governance of inter-agency projects.

8. *The inter-agency team functions with mutual trust and cooperation among participants.*
   Rationale: Probing whether participants held feelings of trust and cooperation speak to a number of factors in the general functioning of teams discussed in the literature.

9. *The inter-agency team is properly resourced (people and financially).*
   Rationale: This speaks to the importance of the initiative being properly resourced that was emphasized in the literature, emphasizing that resourcing is not just about financial resources but the availability of staff to participate in the initiative.

10. *Someone who served as the formal lead for the initiative (past projects) OR staff in your region with a clear defined role to provide leadership and/or resourcing to the project and bring the right people to the table (current initiative).*
    Rationale: This speaks to the important role of a clear project leader for the inter-agency project discussed in the literature.

11. *The inter-agency team is effectively facilitated.*
    Rationale: This capability speaks to the need for skill in effective process facilitation.

12. *The inter-agency team includes members who were able to translate/transfer/communicate collaboration outcomes to "end users".*

Rationale: This capability speaks to the need for effective knowledge facilitation.

13. *The inter-agency team has appropriate training, tools and channels available to manage First Nations engagement.*

    Rationale: Given that First Nations engagement is clearly identified as a critical need in the literature, but relatively absent from the overall Framework implementation to-date, this question was added to investigate whether the status of regions capacity to engage with First Nations, if they are more included in cumulative effects work in the future.

14. *The inter-agency team has appropriate tools and channels available to manage public engagement processes.*

    Rationale: Given that public engagement is clearly identified as a critical need in the literature, but relatively absent from the overall Framework implementation to-date, this question was added to investigate whether the status of regions capacity to engage with the public, if they are more included in cumulative effects work in the future.

15. *The inter-agency team has appropriate training, tools and channels available to engage with natural resource companies and industry associations, as required.*

    Rationale: Though staff were assumed to be familiar with engaging with natural resource companies and industry associations generally, this question was added to ensure this assumption is correct and used as a benchmark against capabilities vis-à-vis First Nations and the public.

5.0 Questionnaire Findings

5.1 Overall Results

The survey ran for one month from November 15th to December 15th 2016. The government client contacted 31 natural resource managers who were part of the Cumulative Effects Leadership and the researcher contacted an additional 8 former and current natural resource managers. Participants were asked to forward information on the study to other potential participants, but there is minimal evidence that this occurred. In total, there were 17 responses received, which was lower than expected.

The response represented a strong cross-section of natural resource ministry leadership. More than two thirds of the respondents had more than five years of experience with natural resource management and with extensive inter-agency collaboration. As expected, given that these fields dominate the natural resource sector, three quarters of the respondents identified as a forester or biologist. It was interesting to note that the planning and public/business administration professions trailed closely behind, as these professions are generally underrepresented in the natural resource sector (relative to other sectors of government). While these professions do not provide direct training in natural resource management, they do generally spend more time training students in skills related to managing collaborative and multi-stakeholder initiatives, which may explain the relatively high representation of these professions in this group.

Participants were asked to rate their own experience and their views on the overall effectiveness of inter-agency collaborations that they have participated in the past in. As Figure 5.1 demonstrates, the overall view of inter-agency collaboration among the participants is generally positive with significant room for improvement. Over two-thirds of participants expressed that past inter-agency collaboration initiatives they were involved with only achieved partial success.

How would you rate the overall effectiveness of inter-agency collaboration initiatives in which you participated?

Response	Chart	Percentage	Count
Very successful - all outcomes were achieved		0.0%	0
Successful - most outcomes were achieved.		31.2%	5
Partial/complete- a bare minimum number of outcomes were achieved.		68.8%	11
Insufficient - an insufficient outcome was achieved (or not)		0.0%	0
Negative - the collaboration initiative actually made things worse, not better.		0.0%	0
		Total Responses	16

Figure 5.1: Participants rating of effectiveness of past inter-agency collaboration initiatives.

Overall, the questionnaire was successful in validating the conceptual framework. More than 80% of participants rated each capability as important or very important for the success of past projects that they worked on, with the exception of capabilities related to the involvement of external stakeholders, on which participants were split close to 50/50 on the value of involving external stakeholders. Given that participants' open ended responses focused so heavily on First Nations and the literature speaks so extensively about external involvement, it does not appear to make sense to discount those capabilities.

The plan for the design of the survey was that participants' views of past projects could be used to first validate and then weight the importance of different capabilities. However, the only significant differentiation between capabilities was in regards to external involvement, which bear continued inclusion, given the relative importance these capabilities held in the rest of the survey. While the responses related to past projects validates the conceptual framework, the relative difference of responses is not clear enough to warrant weighting the responses regarding gaps in the current institutional capability.

The Figure 5.2 and 5.3 summarize the participants' views on the degree to which each institutional capability is currently in place in relation to the Cumulative Effects Framework. In the table, each capability was assigned a score according to the summation of the degree to which all participants thought that it is currently in place and assigned a priority for further discussion and analysis. The colour-coding groups the responses into three categories based on their scores: green = "performing well", yellow = "room for improvement", and red = "critical gap". Along with the additional unstructured feedback from participants in 5.2-5.6, the rankings are used prioritize further discussion and analysis.

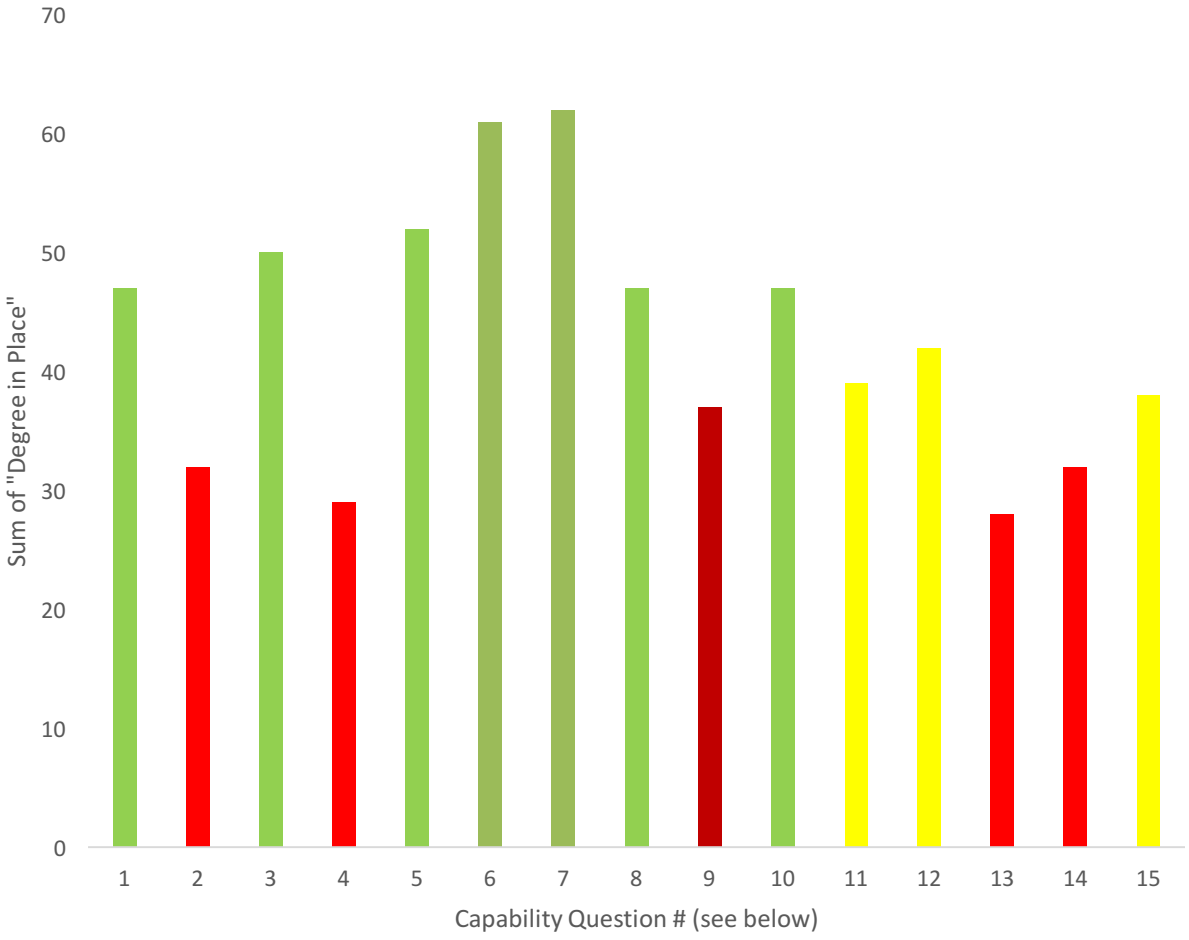

Figure 5.2: Sum of Participants Rating of Current State Institutional Capabilities – see figure 5.3 on the following page for question descriptions and relative ranking of each capability.

Institutional Capability Question #	Capability	Survey Ranking #	Priority
7	A lead agency with accountability for facilitating/managing the process.	1	Performing Well
6	Sponsorship/endorsement of the project from senior executive/political level	2	Performing Well
5	Relative to the issue being tackled (ex: water quality in a particular watershed), the inter-agency teams operated at an appropriate scale (i.e. not too small, not too big) to make meaningful recommendations.	3	Performing Well
3	Relative to the area of project (ex: watershed, region, etc), the inter-agency team was inclusive of ALL internal B.C. government and agencies responsible for governance and implementation of project deliverables.	4	Performing Well
1	A clear governance framework that made it clear how decisions would be made and how issues could be elevated to be addressed	5	Performing Well
8	The inter-agency team functions with mutual trust and cooperation among participants.	6	Performing Well
10	Staff in your region with a clear defined role to provide leadership and/or resourcing to the project and bring the right people to the table	7	Performing Well
12	The inter-agency team included members who were able to translate/transfer/communicate collaboration outcomes to "end users".	8	Room for Improvement
11	The inter-agency team was effectively facilitated.	9	Room for Improvement
15	The inter-agency team had appropriate training, tools and channels available to engage with natural resource companies and industry associations, as required.	10	Room for Improvement
9	The inter-agency team is properly resourced (people and financially).	11	Critical Gap
2	Accountability mechanisms that ensured that all of the required participants in the process contributed to the success of the framework.	12	Critical Gap
14	The inter-agency team had appropriate tools and channels available to manage public engagement processes.	13	Critical Gap
4	Relative to the area of project (ex: watershed, region, etc), the inter-agency teams was inclusive ALL of the external organizations with an interest in the governance of the project (ex: Federal, local government, FNs, NGOs, etc).	14	Critical Gap
13	The inter-agency team had appropriate training, tools and chancels available to manage First Nations engagement.	15	Critical Gap

Figure 5.3: Table of Rankings of Current State Institutional Capabilities

Appendix A contains the full results of the questionnaire.

5.2 Theme #1: Governance and Accountability

On the capabilities questionnaire, participants were evenly split on whether the governance framework is sufficiently clear. A number of participants expressed a lack of clarity on what the "team" for cumulative effects actually was, who was in charge, and what accountability mechanisms would be brought to bear. One noted "*There isn't one inter-agency team. Some are formed and some are still unclear. Need clarity on what regional inter-agency teams are required and how provincial level staff are involved*."

A majority (75%) of participants felt accountability mechanisms were lacking, the remainder were neutral (25%). The open-ended responses from participants raised further issues related to accountability issues in previous projects with concerns that these concerns might end up repeating themselves in the Cumulative Effects Framework. These concerns included: the wrong participants at the table, lack of commitment, competing mandates between ministries and regional offices. One participant noted that their experience of accountability in past inter-agency collaborative projects was that "*the lack of authority structures governing working group development, and the lack of executive oversight and director level accountability allows groups to flounder, and lack of production continues when projects face challenges."*

5.3 Theme #2: Fit, Interplay and Scale

Fit, interplay and scale were recognized as important, but participants felt that for the most part, the B.C. government agency context was well aligned to natural ecosystem spatial units. In fact, the Cumulative Effects Framework is designed to fit specifically to landscape units, which are based on biophysical units of measure.

The major issue raised both in the results and the comments was the exclusion of non-B.C. government agencies, in particular, First Nations, from direct involvement as a partner (rather than as a consulted stakeholder). Two participants proposed that First Nations should be treated as another government agency for the purpose of the project.

Capabilities for engaging external participants was seen as some of the most critical components of past successes. A majority of participants felt that all of these capabilities were lacking to-date in the Cumulative Effects project, with capabilities for engaging with First Nations most lacking, then the public and finally with capabilities for engaging with the resource industry as the strongest.

Open ended responses from participants focused exclusively on First Nations, emphasizing a need to engage First Nations on a government to government basis, while also highlighting risks to the process posed by the difficulties of engaging effectively with First Nations. Two comments specifically referenced the work of the Ministry of Aboriginal Relations and Reconciliation – a critical participant in the Framework– expressing frustration that negotiators were seen as creating inconsistent one-off agreements, but also that Strategic Engagement Agreements could be a vehicle for implementing cumulative effects.

5.4 Theme #3: Political and Executive Leadership

Political and executive leadership, as well as individual project leadership were rated as extremely important capabilities based on the past experiences of participants. However, these capabilities were seen to be in place in the Cumulative Effects Project.

A minority of participants raised concerns with sponsorship/leadership from senior executive and the political level (23.5%). A common theme through the comment responses was the need for executive and leadership to make sure that inter-agency working groups were receiving continuous adequate direction and clear communication over the course of implementation.

5.5 Theme #4: Team Functioning

Participants felt that both team's functioning with mutual trust and being resourced properly were critical factors in previous projects. Survey results on the degree to which this was felt to be in place were clustered towards the feeling that these factors are only partially in place.

This topic had one of the highest number of responses to the comment questions with 6 out of 17 participants responding. Participants raised challenges from the past of projects with a lack of commitment and resources as the major theme – particularly the demands on key subject matter experts spread over multiple simultaneous projects. Rather than tracing challenges in functioning and resources to individuals, responses tended to ascribe these challenges to different cultures and attitudes of the individual agencies – which may also speak to the value of knowledge facilitation. However, participants stated that this seemed that this seems to be improving.

5.6Theme #5: Facilitation Skills

Both process facilitation and knowledge translation were seen as critical components of past and present projects. A majority of participants felt that neither was fully in place, pointing in particular to a gap with the ability to translate the results of the process to "end user" decision-makers and a concern that ministry or disciplinary concerns would sabotage the process.

6.0 Discussion

6.1 Assessing the Natural Resource Sector's Institutional Capabilities

At this stage, it useful to return to the original research questions. The driving research question of this study is to investigate the factors that would create effective inter-agency collaboration in the context of the regional implementation of B.C.'s Cumulative Effects Framework. The sub-questions that underpinned the original research question were:

1. What are the elements of governance and processes that are required to overcome differences in organizational culture and mitigate potential individual conflicts; in particular, as appropriate for an inter-agency and/or resource stewardship context?
2. What is the appropriate institutional/governance model for effective inter-agency collaboration within the implementation of the Cumulative Effects Framework?
3. What should be the role of First Nations and citizens, if any, within the regional inter-agency governance of cumulative effects?

The literature did not provide a singular answer as to whether there is a particular institutional/governance model that should be used as a template. Clearly defining the overall governance framework is crucial to successful inter-agency collaboration (Pollitt, 2003). Less clear is whether there is an ideal model for any circumstance. Instead, there are number of institutional capabilities that emerge from the conceptual framework as best practices for governance and process. Rather than continue to focus on a specific ideal state – it made more sense to structure the remainder of the study on validating whether these institutional capabilities were important and identifying gaps within the current plan for cumulative effects regional implementation.

The final question speaks to the complex subject of defining the role of First Nations and citizens within regional inter-agency governance of cumulative effects. The conceptual framework confirmed the critical importance of First Nations and public inclusion as an institutional capability, especially with regards to First Nations, which was identified as the number one gap in the current state. It is clear from the literature that completely excluding these groups from

participation is not an option, particularly for First Nations, who have legal rights to be allowed varying degrees of participation in cumulative effects decisions. The question instead is whether consultation or some deeper form of inclusion is the path forward.

6.2 Performing Well

Overall, inter-agency collaboration between natural resource agencies in British Columbia is performing better than expected and there are many aspects of the current inter-agency regime for cumulative effects that should be celebrated.

Capabilities that are performing well include FLNRO's overall leadership of the Cumulative Effects Framework initiative (by FLNRO, political and executive leadership and individual project leaders), trust and cooperation among the main participants, the fit, interplay and scale between B.C.'s administrative regions and its biophysical systems, and the overall governance of the Framework.

Within these capabilities, the most prominent risk derives from continued political support – while political support for the project may have been overall strong, the literature emphasizes the high risks from potential fluctuations in political and senior executive sponsorship over the long-term. The project will need to continue to link back, re-clarify and ideally, re-affirm the sponsorship from senior levels of government on a regular basis.

6.3 Room for Improvement

Capabilities with room for improvement included the implementation of governance frameworks at a regional level, facilitation of the implementation process, translation of knowledge to end users, the skills to engage with industry and the overall resourcing of the initiative.

The overall governance of the project scored well, but participants were unclear how regional teams will work. In the case of the Cumulative Effects Framework, direction on the governance and process for regional Cumulative Effects Framework implementation are found in the official

Cumulative Effects Policy and further elaborated in draft guidance for regional inter-agency management committees (IAMCs). The IAMCs are a long-standing, though unevenly followed forum for inter-agency planning at the middle management level. Regional offices are provided with the flexibility to integrate the roles into the most appropriate forums in their region, which may not necessarily be the IAMC. There is also a Cumulative Effects Provincial Leadership Team with both regional and headquarters senior middle management directing overall strategy and implementation of the Cumulative Effects Framework. Yet despite all of this work to-date, if participants are expressing concern with how regional implementation will work, it indicates that the governance of the project at a regional level should be managed more tightly.

The confusion around governance links directly to facilitation of the overall process. Participants were divided on whether facilitation skills are in good shape. This may indicate a regional divide, where some regions have staff with strong facilitator skills and other do not. Given the outstanding questions about how regional teams will work, more clarity on process facilitation and training for regional staff is potentially needed. This need is even more pressing in terms of skills required if greater knowledge translation is required, a need that will increase the more external participants are included in the process. While capabilities to engage with First Nations and the public are seen as a critical capability gaps, the ability to engage with industry is in better shape – this is large part due to familiarity and the common disciplinary languages used by natural resource professionals in government and industry.

6.4 Critical Gap: Accountability and Resourcing

Critical gaps in the current state were identified by participants in terms of accountability for resourcing and how best First Nations and the public could be engaged. Overall resourcing and how ministries would be held accountable for ensuring they fully participated is a serious challenge. The participants (senior mid-level managers deeply involved in resourcing regional resource management) expressed a concern about competing demands, especially for sought after specialists. Preventing a resourcing gap requires continued clarity on the relative priority of the project and potentially would benefit from dedicated resources being secured that can anchor the project even if priorities change. There is a real fear from participants that the project is seen

as "FLNRO's" instead of "B.C.'s" Cumulative Effects Framework and some other agencies will not participate fully or consistently over the course of implementation.

It is striking to note the disconnect in British Columbia given the importance that many authors (Bakvis & Juillet, 2004; Pollitt, 2003) put on the role of an authoritative central agency such as the federal Privy Council Office creating the conditions for accountability in inter-agency collaboration through performance measurement and by providing or withholding funding. In British Columbia, there is no equivalent to the Privy Council Office, and Treasury Board does not serve in the kind of evaluative or proactive role as seen federally or in other provinces. In fact, performance measurement and program evaluation in general is seldom practiced in British Columbia.

How outcomes are measured and which outcomes are selected is critical. Common outcomes should be selected that drive implementation (Morrison & Lane, 2005; Sproule-Jones, 2000; Pollitt, 2003; Schultz et al., 2014). Fortunately, in the case of the Cumulative Effects Framework, a set of common long-term outcomes has already been selected – the cumulative effects value assessments themselves – that can serve as a baseline for the measuring success of the project as a framework for protecting these values. However, there is an issue of time-scales – the information within the value assessment may lack currency and do not reveal enough about the processes and management responses. Evaluation can be used to provide an audit function on governments process and drive continuous improvement of the Cumulative Effects Framework.

Assuming a lack of central agency accountability, Sproule-Jones (2000, p. 104) suggests three ways agencies structure themselves to try to overcome the challenges for accountability in inter-agency collaboration – have one agency measure on behalf of all, measure independently and collate, or commission a trusted third party to evaluate all the agencies. While Sproule-Jones (2000) raises limitations with all three of these approaches, the third option provides a strong measure of external accountability and may be most appropriate for British Columbia. In fact, using a third party to evaluate progress was a consistent item of feedback received throughout the pilot projects, the engagement on CEF, and the BCWF/FBC proposals. This could be accomplished by building on the success of the Forest Practices Board, which audits forest

planning and practices, by expanding it to become a Natural Resource Practices Board. Such a body could expand beyond the values identified in the Forest and Range Practices Act to the broader set of provincial and regional values identified through the Cumulative Effects Framework. The Forest Practices Board is a highly respected third party and as long as the values are common outcomes adopted by all parties, this may provide a strong measure of accountability.

6.5 Critical Gap: Engaging with First Nations and the Public

Finding the Path Forward

The largest gaps in institutional capability that were identified were the inclusion of and abilities to facilitate engagement with external groups – in particular, First Nations and the public. The most critical issue to address is the question of what inclusion means for each group and then from there, determine what is needed to strengthen the ability to succeed with that engagement. Before launching further into this discussion, it is important to state that this is by no means a repudiation of the previous work that has been done to consult with both First Nations and other external groups over the past four years. The question is ultimately whether consultation is enough or whether more active collaboration and/or inclusion in decision-making is required.

It is assumed that each group requires a highly differentiated response – First Nations were the topic of highest concern because they require a government-to-government relationship rooted in the constitutional rights of First Nations, whereas there is greater flexibility in how the public is engaged because their legal standing is generally less significant in most resource management decisions. However, from a more conceptual perspective in relation to the institutional capabilities discussed in this paper, the considerations are similar for each - how can the concerns and needs of each group (which may differ sharply from the economic development objectives of government and industry) be addressed through collaboration in regional cumulative effects management while avoiding the political and process-related pitfalls.

The Cumulative Effects Framework has been developed in a politically sensitive manner that avoids much of the politicization that previous land use planning initiatives in British Columbia have faced. The primary way that it has accomplished this is by making the "science" of cumulative effects assessment the starting point, and relying on historical policy decisions as the basis for selecting values. This is distinct from many other cumulative effects projects described in the literature, where values selection required extensive consultation and negotiation with stakeholders. However, moving into the work of not only assessing, but actually managing for cumulative effects, this approach carries risks. Gregory et al. (2006, 721-731) describe six pitfalls of trying to drive policy directly from science without considering political and socio-economic factors: unclear objectives, irrelevant and/or missing values, failing to identify alternative management options, exclusion of relevant information about consequences, incomplete or incorrect understandings of uncertainty, and avoiding discussions of tradeoffs.

Potential Solutions

One potential approach to integrating the interests of external stakeholders that has been discussed in many of the internal discussions of long-term cumulative effects implementation is the inclusion of a "cumulative effects assessment of socio-economic factors"[8]. Consideration of these factors is discussed as a way of bringing in the interests of local communities in resource decisions in a data-driven way that fits with the other cumulative effects assessment, and also may sidestep some of the challenges of engaging directly with external stakeholders. However, it is worth warning that including socio-economic data – such as the Statistics Canada Census data, may inhibit as much as support reaching good outcomes. One key "socio-economic factor" that is often discussed is rural unemployment.

As a hypothetical example (that should be familiar to B.C. resource managers), an oil and gas company wants to conduct exploration activities, which will employ two dozen people – but

[8] However, these discussions are primarily documented in internal documents dating back to 2014 to present-day. Project-focused socio-economic assessments have been conducted for decades in the context of large industrial-scale projects subject to the *Environmental Assessment Act.* As discussed in North East Operational Trial, statutory decision makers continue to struggle to find opportunities to integrate socio-economic indicators into smaller scale decisions and it is challenging to identify opportunities for their use when considering cumulative effects across a larger-scale spatial area.

mostly from other communities – in an area that has already been heavily impacted by logging and mining in recent years. The area also includes a large number of hunters and First Nations who claim the land as their traditional territory to hunt and practice other traditional activities on the land. So the question becomes – how can some socio-economic factors be chosen and placed against other factors that are more difficult to quantify – ability to hunt in an area, traditional spiritual practices, or existing seasonal employment from tourism. The risk is that any socio-economic indicators that can be easily quantified will likely be too simplistic to capture the complexity of how natural resource management decisions impact communities. Cumulative effects assessment can afford a veneer of scientific neutrality – but cumulative effects management is inherently political. Even if the management decisions are only producing recommendations, they are still defining a benchmark for a responsible resource decision – and that implicates them in trade-offs that the final decision maker will make. Resource management trade-offs are political by nature and require political discussions and processes to sort out which option is preferable in the context in which it is being considered; these trade-offs cannot be easily reduced to an algorithm.

The great temptation in natural resource decision making is to avoid conflict-prone discussions of "trade-offs" or "winners and losers", but falling into this trap is a major risk to cumulative effects management. Trade-offs are an unavoidable aspect of natural resource management and avoiding discussion of trade-offs means avoiding ways of creatively finding more win-win solutions. Once groups start to explore each other's perspectives and understand the consequences of one-sided decisions, they are more likely to innovate. Worse still is trying to frame decisions as merely "science" – unfortunately, science is contested and unless it is transparent and provides a window for participants to take part, "science-based" natural resource management can face serious resistance from stakeholders (Gregory et al., 2006, p. 731-3).

The opposite extreme from using socio-economic indicators would be to restructure the governance of cumulative effects management to provide equal or equal-ish seats at the table for external stakeholders – these approaches are generally termed co-management, shared management or collaborative governance. However, as Booth & Halseth (2011) observed, consensus can easily break down into conflict, something which is especially true when the

participants hold longstanding frames that identify them in opposition to other parties (Gray, 2004). In British Columbia, this is a major risk and even with experienced staff to facilitate these discussions, consensus is a challenging goal to set. It may be better to retain the clarity of provincial government responsibility for managing cumulative effects.

One approach that may aid facilitators may be to take an interests-based approach of starting with areas of agreement and building towards more complex and controversial topics. This can be far more effective at the regional scale, where trade-offs are not abstracted narratives, but represent tangible changes to the local environment. The smallest landscape unit scale of assessments might be the best place to start. Facilitators could conceivably work through a region – landscape unit by landscape unit, cumulative assessment value by value. It would be more time-consuming than speaking in generalities, but far more likely to lead to engagement and buy-in. Conversely, more controversial issues can be brought up to a provincial level to minimize the threat of controversy derailing regional-scale collaboration (Morrison & Lane, 2005).It also is important to be realistic – a clear management direction for every landscape unit in the province that includes support from all external stakeholders is unlikely to ever be achieved. However, every landscape unit for which the province can provide certainty over how it needs to be managed is a major win for all parties – government, industry, First Nations and the general public.

7.0 Conclusion

The Cumulative Effects Framework is shifting from the initial pilot phase into the implementation phase, wherein planning for regional management recommendations will increasingly become the focus of work. The promise of cumulative effects management is that it can increase certainty for all parties about requirements for operating in a particular place in British Columbia with respect to the condition of different environmental values. The theory is that economic development will be facilitated by greater certainty about the various environmental protection conditions that will be attached to potential developments. If successful, government can better protect species and ecosystems, while potentially improving economic development in rural British Columbia. Effective inter-agency collaboration is necessary for its success.

The validated set of institutional capabilities can be used as a benchmark for having the right features in place to foster effective inter-agency collaboration. The bill of health for inter-agency collaboration in the context of cumulative effects management are generally trending in the right direction, but there remain some critical gaps in institutional capability. Despite strong endorsement of the leadership, direction and overall functioning driving inter-agency collaboration, participants expressed strong concerns about the clarity of how process would unfold at a regional level and how external groups would be engaged, particularly First Nations.

This project set out under the assumption that some of these questions may be too politically difficult to be fully explored within the context of this research. However, the major conclusion of this report is that these outstanding questions need to be faced head-on if the promise of a Cumulative Effects Framework is to be realized. These challenges are complex and difficult to solve in their entirety, but they can and must be overcome to achieve a fully functioning governance regime for the Cumulative Effects Framework.

8.0 Recommendations

Though this report continues to assert that there is no single correct way to design a governance framework for cumulative effects management, it is possible to point out best practices that may fill the most critical gaps in the provincial government's institutional capabilities. Overall, the recommendations that follow together propose a more systematized approach to implementing the Cumulative Effects Framework in every region of B.C. with an emphasis on resourcing, clarifying the process, and finding solutions to integrating external stakeholders into the process, in particular, First Nations. The following are general recommendations flowing from the literature review and survey of natural resource management leaders and are meant to help the client consider next steps.

Recommendation #1: Develop a Strategy to Include First Nations and other External Groups in Regional Cumulative Effects Framework Implementation

No issue emerged as clearly from this project as the need to engage First Nations, and to a lesser extent, other external stakeholders. Based on the questionnaire results, the literature and the understanding of B.C.'s legal framework – the usefulness, robustness and political legitimacy of a cumulative effects assessment and management framework will hinge on First Nations involvement. Engaging First Nations on a government-to-government basis should not be considered a matter of preference, but of obligation. First Nations governments operate on a regional, often a sub-regional scale – so while it can be difficult to engage with them collectively on provincial-wide matters, the more local the issue, the more straightforward the engagement. At the same time, participants expressed great concern about how this topic is approached – one participant wrote "I would prefer we learn to walk before we run."

It is recommended that the province develop a strategy that uses some format of regional cumulative effects assessment and management forums to discuss whether regional values need to be assessed and how management decisions should be made on a spatial basis. Whether these forums are conducted with all stakeholders participating simultaneously, or through consultation with each external stakeholders at a time, they should provide the opportunity to review

assessments and consider the potential management actions that are needed in their region (monitoring, permit restrictions/relaxations, restoration, etc).

As noted in the discussion, there are potential solutions available that may assist in smoothing out the complex process of engaging with external stakeholders. Cumulative effects management decisions can be made at a landscape unit-by-landscape unit basis. This might be the ideal scale on which to engage First Nations, who can relate traditional ecological knowledge from oral histories about the area to the long-term management of the landscape and help pinpoint sites important for continuing traditional practices. Interests-based negotiation tactics can be useful approaches to breaking deadlocks in collaborative forums (not just with external stakeholders). In general, facilitators should be thinking about how they can build buy-in by focusing on areas of mutual gains first and then working towards resolving (if possible) more contentious issues. It should also be noted that regional management recommendations are not intended to be binding – therefore if there is significant divergence of views, it may be possible for a management recommendation to note a dissenting perspective from the approved recommendation. Though it is useful to take a negotiation lens to collaborating with external stakeholders, it is important to recognize the risks of treating these discussions as ones of equal power. Consensus-based processes have a negative history in regional natural resource management in British Columbia, and consensus-based processes are more likely to leave all participants unhappy than to achieve a win-win-win solution.

As with other collaboration with First Nations, it is important to consider how to make efficient use of First Nations and specialized government staff time. If there are opportunities to align collaborations with First Nations with other collaborative/consultation resource management activities, these opportunities should be pursued.

Recommendation #2: Strengthen Resourcing of Regional Cumulative Effects Teams

Despite the literature's discussion of how multi-agency teams can work, it is clear that accountability is easiest to organize when there is a degree of vertical accountability (i.e. core members of the team reporting through the same reporting structure) in order to counteract the

"pulling against gravity" effect that inter-agency teams can experience. For that reason, it is recommended that each region have dedicated project teams that can directly control project resources and be responsible for ensuring regional management activities are continuously undertaken. Even if not all of the stakeholders might not be within their control, the core resources of regional projects should be guaranteed rather than a source of continual re-negotiation between agencies.

Each project team should have permanent staff in terms of a regional cumulative effects project leader, who can provide consistent focus around the project, serve as knowledge translator and facilitator and direct the efforts of other team members. Based on the volume of work, it may be necessary for additional staff to share the roles of facilitators and knowledge translators. Ideally, team members can be provided on a semi-permanent basis to the regional team. Consider using shared Victoria staff to assist in facilitator roles, especially as the initial sets of management decisions come out – even though there may be experienced facilitators in each region, an outside facilitator may have more success in leading difficult discussions.

First Nations and other forms of external engagement can be extremely complex because of the challenges of navigating long-standing historical grievances and the need for a higher degree of cultural competency. It is critical to ensure that appropriately trained and experienced staff are available to manage this relationship. Depending on the extent of the engagements being considered, it may be worth assigning dedicated First Nations advisors to work full-time on Cumulative Effects Framework-related consultations.

Achieving these resourcing goals will require a mixture of training, hiring staff with specialized skills and long-term staff development. Regional teams should consider addressing these goals in MyPerformance goals-setting and divisional budget planning on an annual basis.

Recommendation #3: Develop a Regional Implementation Toolkit

There are serious concerns with the lack of clarity of how the Cumulative Effects Policy will be implemented regionally. It is recommended that government clarify the operationalization of the

Cumulative Effects Framework by establishing a step-by-step, repeatable process that can be taught and reused in every region. Regions can modify the process to fit their needs, but from the same starting point.

Consider building a "regional implementation toolkit' containing a common template for governance, training for facilitators and knowledge translators, and facilitators agendas for each type of workshop, documents and other work required to implement regional cumulative effects assessment and management planning. Staff who will be facilitating Cumulative Effects Framework-related sessions should attend mandatory training. Currently, there is no formal training for facilitating complex multi-stakeholder initiatives offered within the B.C. government. It is recommended that training be developed specifically for this initiative or, at a minimum, for facilitation in the context of natural resource management generally.

Recommendation #4: Expand the role of the Forest Practices Board to Evaluate the Implementation of the Cumulative Effects Framework

There is a serious need to strengthen accountability in the Cumulative Effects Framework. The implementation of the Framework itself may resolve some of these issues – as the long-term monitoring and reporting on the condition of cumulative effects values is a strong long-term accountability mechanism. However, the timescales to see changes to the condition of values and to identify issues in the management processes are problematic for providing accountability and continuous improvement on a year-on-year basis. The final recommendation is to consider expanding the scope of the Forest Practices Board to encompass all natural resource management practices related to the Cumulative Effects Framework – e.g. a "Natural Resource Practices Board".

The Forest Practices Board is an experienced, existing, and trusted organization that already evaluates forestry planning and practices on a landscape level. The outcomes and processes of forestry planning overlap almost completely with cumulative effects assessment and management, and the science, professions and values under consideration are virtually identical. In fact, the Cumulative Effects Framework will also apply to forestry, so the values selected have

been chosen to avoid duplication with the values reflected in the Forest and Range Practices Act. The Forest Practices Board fulfills a similar role as the Auditor General in taking a natural resource professional lens to forestry management practices in the same way that the Auditor General reviews financial and administrative performance. External stakeholders staff have previously proposed the extension of the board's mandate to cover all natural resource management. This move would respond to the desire of external and internal stakeholders to have a long-term accountability measure built into the Framework.

There may be concerns about the expansion of this role as adding a new layer of regulation for non-forestry resource industries, in particular, mining and oil and gas development. However, this change could be sharply limited to government's role as regulator. If that is the case, then the change would not directly impact other industries.

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Appendix A: Summary of Questionnaire Results

How many years of experience do you have in natural resource management?

Response	Chart	Percentage	Count
Less than 3 years		5.9%	1
3-5 years		5.9%	1
5-10 years		17.6%	3
10+ years		70.6%	12
	Total Responses		17

How many years of your experience was gained in a regional setting (for this purpose, regional includes district, region and area-level positions as well as headquarters-based jobs that require extensive involvement in regional projects)?

Response	Chart	Percentage	Count
Less than 3 years		29.4%	5
3-5 years		11.8%	2
5-10 years		5.9%	1
10+ years		52.9%	9
	Total Responses		17

What is your professional/educational background (check all that apply)?

Response	Chart	Percentage	Count
Forester		23.5%	4
Biologist/Natural Scientist		47.1%	8
Engineer		5.9%	1
Public or Business Administrator		17.6%	3
Planner		23.5%	4
Other		5.9%	1
	Total Responses		17

What is your professional/educational background (check all that apply)? (Other)

#	Response
1.	

How many years of your experience involved extensive collaboration with other government agencies?

Response	Chart	Percentage	Count
Less than 3 years		17.6%	3
3-5 years		17.6%	3
5-10 years		23.5%	4
10+ years		41.2%	7
	Total Responses		17

How would you characterize your experience with inter-agency collaboration?

Response	Chart	Percentage	Count
Excellent - my experience was extremely positive, I wouldn't change anything.		0.0%	0
Good - my experience was overall positive with room to improve.		47.1%	8
Moderate - I don't have strong feelings either way.		11.8%	2

Somewhat poor - I didn't feel my experience was very positive, but there were some good outcomes.		35.3%	6
Extremely poor - I had a very negative experience and was unhappy with how the collaboration(s) I was part of were handled.		5.9%	1
		Total Responses	17

How would you rate the overall effectiveness of inter-agency collaboration initiatives in which you participated?

Response	Chart	Percentage	Count
Very successful - all outcomes were achieved		0.0%	0
Successful - most outcomes were achieved.		31.2%	5
Partial/complete- a bare minimum number of outcomes were achieved.		68.8%	11
Insufficient - an insufficient outcome was achieved (or not)		0.0%	0
Negative - the collaboration initiative actually made things worse, not better.		0.0%	0
	Total Responses		16

Please rate the importance of the presence (or lack) of the following factors in achieving successful (or unsuccessful) outcomes within inter-agency resource management initiatives in which you have participated in the past.

	Most Important	Somewhat important	Neutral/No Opinion	Somewhat Important	Least Important	Total Responses
Sponsorship/endorsement of the project from senior executive/political level	10 (58.8%)	7 (41.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	17
A clear governance framework that made it clear how decisions would be made and how issues could be elevated to be addressed	11 (64.7%)	3 (17.6%)	1 (5.9%)	2 (11.8%)	0 (0.0%)	17
A lead agency with accountability for facilitating/managing the process.	8 (47.1%)	7 (41.2%)	1 (5.9%)	1 (5.9%)	0 (0.0%)	17
Someone who served as the formal lead for the initiative.	12 (70.6%)	4 (23.5%)	1 (5.9%)	0 (0.0%)	0 (0.0%)	17
Accountability mechanisms that ensured that all of the required participants in the process contributed to the success of the framework.	9 (52.9%)	3 (17.6%)	3 (17.6%)	1 (5.9%)	1 (5.9%)	17
Relative to the area of project (ex: watershed, region, etc), the inter-agency team was inclusive of ALL internal BC government and agencies responsible for governance	3 (17.6%)	8 (47.1%)	3 (17.6%)	3 (17.6%)	0 (0.0%)	17

and implementation of project deliverables.						
Relative to the area of project (ex: watershed, region, etc), the inter-agency teams was inclusive ALL of the external organizations with an interest in the governance of the project (ex: Federal, local government, FNs, NGOs, etc).	0 (0.0%)	7 (41.2%)	4 (23.5%)	4 (23.5%)	2 (11.8%)	17
Relative to the issue being tackled (ex: water quality in a particular watershed), the inter-agency teams operated at an appropriate scale (i.e. not too small, not too big) to make meaningful recommendations.	4 (23.5%)	9 (52.9%)	3 (17.6%)	1 (5.9%)	0 (0.0%)	17
The inter-agency team functioned with mutual trust and cooperation among participants.	10 (58.8%)	6 (35.3%)	1 (5.9%)	0 (0.0%)	0 (0.0%)	17
The inter-agency team was properly resourced (people and financially).	9 (52.9%)	6 (35.3%)	1 (5.9%)	1 (5.9%)	0 (0.0%)	17
The inter-agency team included members who were able to translate/transfer/communicate collaboration outcomes to "end users".	5 (29.4%)	9 (52.9%)	2 (11.8%)	1 (5.9%)	0 (0.0%)	17
The inter-agency team was effectively facilitated.	7 (41.2%)	9 (52.9%)	1 (5.9%)	0 (0.0%)	0 (0.0%)	17
The inter-agency team had appropriate training, tools and chancels available to manage First Nations engagement.	4 (23.5%)	6 (35.3%)	7 (41.2%)	0 (0.0%)	0 (0.0%)	17
The inter-agency team had appropriate tools and channels available to manage public engagement processes.	2 (11.8%)	8 (47.1%)	5 (29.4%)	2 (11.8%)	0 (0.0%)	17
The inter-agency team had appropriate training, tools and channels available to engage with natural resource companies and industry associations , as required.	1 (5.9%)	8 (47.1%)	7 (41.2%)	1 (5.9%)	0 (0.0%)	17

(Optional) What were the worst frustrations/pain points that you faced in your past experience with inter-agency natural resource management teams?

The 12 response(s) to this question can be found in the appendix.

In the context of the long-term implementation of British Columbia's Cumulative Effects Framework (whether you are directly involved in developing the framework or not), please rate (1-5 with "5" as completely in place) the degree to which you believe the following factor is currently in place.

	1	2	3	4	5	Total Responses
Sponsorship/endorsement of the project from senior executive/political level	0 (0.0%)	4 (23.5%)	2 (11.8%)	8 (47.1%)	3 (17.6%)	17
A clear governance framework that makes it clear how decisions can be made and how issues can be elevated to be addressed	4 (23.5%)	3 (17.6%)	5 (29.4%)	3 (17.6%)	2 (11.8%)	17
A lead agency with accountability for facilitating/managing the processes.	1 (5.9%)	0 (0.0%)	7 (41.2%)	5 (29.4%)	4 (23.5%)	17
Someone who serves as the formal lead for the initiative.	2 (11.8%)	0 (0.0%)	4 (23.5%)	9 (52.9%)	2 (11.8%)	17
Accountability mechanisms that ensure that all of the required participants in the process contribute to the success of the framework.	4 (25.0%)	8 (50.0%)	4 (25.0%)	0 (0.0%)	0 (0.0%)	16
The inter-agency teams are inclusive of ALL internal BC government and agencies responsible for governance and implementation of project deliverables.	2 (12.5%)	3 (18.8%)	4 (25.0%)	5 (31.2%)	2 (12.5%)	16
The inter-agency teams are inclusive ALL of the external organizations with an interest in the governance of the project (ex: Federal, local government, FNs, NGOs, etc).	8 (50.0%)	4 (25.0%)	3 (18.8%)	1 (6.2%)	0 (0.0%)	16
The inter-agency teams participating in the cumulative effects framework are operating at an appropriate scale (i.e. not too small, not too big) to make meaningful recommendations.	1 (6.2%)	1 (6.2%)	8 (50.0%)	5 (31.2%)	1 (6.2%)	16
he inter-agency teams function with mutual trust and cooperation among participants.	2 (12.5%)	2 (12.5%)	7 (43.8%)	5 (31.2%)	0 (0.0%)	16
Staff in your region with a clear defined role to provide leadership and/or resourcing to the project and bring the right people to the table	2 (12.5%)	5 (31.2%)	2 (12.5%)	6 (37.5%)	1 (6.2%)	16
The inter-agency team is properly resourced (people and financially).	3 (18.8%)	6 (37.5%)	6 (37.5%)	1 (6.2%)	0 (0.0%)	16

The inter-agency team includes members who are able to translate/transfer/communicate collaboration outcomes to "end users".	1 (6.2%)	9 (56.2%)	2 (12.5%)	3 (18.8%)	1 (6.2%)	16
The inter-agency team is effectively facilitated.	3 (20.0%)	3 (20.0%)	6 (40.0%)	3 (20.0%)	0 (0.0%)	15
The inter-agency team has appropriate training, tools and chancels available to manage First Nations engagement.	7 (46.7%)	4 (26.7%)	3 (20.0%)	1 (6.7%)	0 (0.0%)	15
The inter-agency team has appropriate tools and channels available to manage public engagement processes.	4 (26.7%)	6 (40.0%)	4 (26.7%)	1 (6.7%)	0 (0.0%)	15
The inter-agency team has appropriate training, tools and channels available to engage with natural resource companies and industry associations, as required.	2 (13.3%)	6 (40.0%)	4 (26.7%)	3 (20.0%)	0 (0.0%)	15

(Optional) Are there any other key factors that are currently not in place to support the success of the cumulative effects framework within your region?

The 8 response(s) to this question can be found in the appendix.

(Optional) What words of wisdom would you offer the inter-agency regional teams (including your own) responsible for implementing the cumulative effects framework and other collaborative projects in the NRS?

The 8 response(s) to this question can be found in the appendix.

Open Ended Questions

(Optional) What were the worst frustrations/pain points that you faced in your past experience with inter-agency natural resource management teams? |

#	Response
1.	1. Poor facilitation and/or process management 2. Revolving agency representatives bringing different direction/ perspectives
2.	1. Inappropriate level of participants (i.e. to high up to provide appropriate information or not high up enough to make decisions and effect change for implementing outcomes) 2. Lack of commitment (e.g. too busy, not a priority, cultural differences)
3.	Inter-agency should include First Nations as governments; however, the Province of BC is not positioned well to effectively address issues in a G2G manner...
4.	Lack of resourcing. People's time spread too thin.
5.	poor leadership, lack of clear direction; differing mandates to complete work; poor governance
6.	Lack of consistency in business delivery between regions. Each region does things slightly differently with no clear business reasons to account for the differences. These differences seem to have arisen largely due to a weak top-down management structure within the NRS. Regional offices are left to do their own thing, leading to a divergence in business practices and an unwillingness to change.
7.	The challenge with many inter-agency teams is that the same subject matter experts are required to be on a significant number of them, therefore working from the corner of their desk. The initiatives that I've seen succeed tend to be the ones where all agencies on the

	team understand where the priority lies and agree to it. i.e. if it's a top provincial priority all treat it as such and if it isn't, people are honest about that and do not put all their resources into it. Instead of having varying levels of priority across organizations, frustrating those that are trying to move things forward.
8.	Most often, the members would be completely positional, according to their own ministry's mandate, culture, and perceptions - with no consideration for the corporate good. They often had a very low understanding of the other organizations, but had pre-formed opinions that influenced their willingness to be collaborative.
9.	The last 3 questions are difficult because they expand significantly the scope of the IAMCs. I would prefer we learn to walk before we run, and those last three are long term objectives.
10.	MARR Negotiators. Cards close to their chest, and a desire for every situation they are in to be treated as special. in general the degree of special circumstance applied by mid level management and low level executive frustrates the consistency of initiatives, and inhibits the ability of staff to follow direction. directors should restrain themselves from believing they are special, and instead suck it up and work with in the bounds of policy, or formally apply for exemptions rather than hoping that because they are far from Victoria no one will notice. The lack of authority structures governing working group development, and the lack of executive oversight and director level accountability allows groups to flounder, and lack of production continue when projects face challenges.
11.	Competing mandates, lack of a corporate approach - this has been steadily improving over time though
12.	lack of clear leadership and accountability providing active and authoritative direction. Inconsistent resourcing and communications to manage expectations.

(Optional) Are there any other key factors that are currently not in place to support the success of the cumulative effects framework within your region? |

#	Response
1.	There isn't one inter-agency team. Some are formed and some are still unclear. Need clarity on what regional inter-agency teams are required and how provincial level staff are involved. Need clarity on what CE implementation pieces are a regional responsibility and of those which ones are immediate needs and which ones can wait.
2.	Strategic Engagement Agreements with FN that lay the ground work of a terms of reference that facilitates implementation of CE
3.	ADM down to director level support for the work - the work needs to fall in staff's annual workplans for support to be given.
4.	There remains significant disagreement between government and First Nations on the desired outcomes of a cumulative effects framework. Government's approach is taking too long and does not clearly define how CE objectives will be achieved and how individual decisions will be informed by CE assessments.
5.	The CEF leads need more resources and "champions" in the regions.
6.	Inter-agency support, understanding, and willingness to participate. In general, I think that the other agencies are looking to FLNRO for implementation and just expect it to happen, with nothing required on their part to achieve success.
7.	unclear on key performance indicators and who is accountable for the implementation of the

	framework, and its integration into operations
8.	NA

(Optional) What words of wisdom would you offer the inter-agency regional teams (including your own) responsible for implementing the cumulative effects framework and other collaborative projects in the NRS? |

#	Response
1.	Don't know what teams we will have. I will say that for the management level, I would recommend that they not wait for provincial guidance to form and begin discussions on how the agencies can work together at a regional level to address cumulative effects. That they define their own role and move forward.
2.	Have clear, strong executive support and sponsorship. Clear decision making that is articulated to the entire team. Ensure all the players know their role and responsibility and time commitment for the project. Have a good project plan that provides the team members with an idea of when & how much they may be involved - just at the beginning, all the way through etc. Allow them to balance other priorities where possible. Frame the project from high level concepts thru to implementation. Always, always ask the question of how can this be implemented as the team works thru the policy questions. Implementation is not just a final phase. It must be considered all along or it is tooo late at the end. Oh and that is not just what new computer system maybe needed to support the new framework. Sorry not directly involved in the cumulative effects so no specific advise for that project.
3.	Hang in there Kitty!
4.	Approaches to cumulative effects assessments should be developed collaboratively with First Nations.
5.	It would be most helpful if FLNRO as an entire organization could have a agreed upon level of priority and support for the CEF. It still feels like we aren't sure on where we want to be as a province. The individuals working on the CEF are doing a great job but they need support from others.
6.	rapidly add new values to address perceived inadequacies, and move quickly to developing the management directions at the regional level
7.	You need to recognize that other ministries outside of FLNRO are not constrained to raising the issues they may have through the FLNRO regional process
8.	clear purpose and direction, frequent communication, adequate resourcing and keep expectations reasonable.

Appendix B: Questionnaire Text

Purpose and Scope of the Study

You have been invited to participate in a survey as part of the research project: "Enhancing Regional Inter-agency Collaboration and the Management of Cumulative Effects in British Columbia". You were invited to participate in the study because of your current or former role in the management of BC's natural resources at a regional level (for this purpose, regional includes district, region and area-level positions as well as headquarters-based jobs that require extensive involvement in regional projects).

The survey is a combination of multiple choice and (optional) short open-ended questions; and should take approximately 15-20 minutes to complete. The survey is conducted using FluidSurveys, a Canadian-based survey tool previously approved for BC government use by the Office of the Chief Information Officer.

The purpose of this research is to explore the factors that either support or undermine effective inter-agency collaboration. The scope is regional level natural resource management planning and decisions related to cumulative effects/resource stewardship. Identification of these factors will be used to inform current and future major BC government projects, in particular, the Cumulative Effects Framework. The scope is regional level natural resource management planning and decisions related to cumulative effects/resource stewardship. The results of the research will be provided in the form of recommendations intended to support the implementation of the Cumulative Effects Framework and may provide a baseline to measure against in the future. The potential benefits of your participation in this research include efforts to address deficiencies in collaboration between NRS agencies that may affect your work. Dylan Sherlock, Senior Advisor, Regulatory Reform Branch (previously Senior Policy Analyst with the Ministry of Forests, Lands and Natural Resource Operations) and a University of Victoria graduate student, is conducting this research in order to fulfill the final requirement of the Masters of Public Administration. Dylan can be reached at 250-885-5381 or Dylan.Sherlock@gov.bc.ca. The BC government client-supervisor is Jennifer Psyllakis, Manager, Resource Management Objectives Branch. The academic supervisor is Herman Bakvis, an expert in inter-governmental relations and horizontal management at the University of Victoria. If you have concerns regarding the study, Dr. Bakvis can be reached at 250-721-8065.

Privacy Protection and Consent

If you consent to voluntarily participate in this research, your participation will include completion of a brief (15-20 minute) online survey/questionnaire. To protect your full anonymity and confidentiality of the data, no personal or demographic information will be collected through this survey tool. These measures aim to avoid collecting unnecessary data, respect your personal privacy and allow you to express your opinions freely without fear of repercussion.

There are no known or anticipated risks to you by participating in this research. Anonymous results will be summarized and shared within natural resource sector ministries involved in resource stewardship issues. However, raw data from this study will be disposed of after submission of the final recommendations to the client.

Individuals that may be contacted regarding this study include:

Dylan Sherlock, Researcher, Dylan.Sherlock@gov.bc.ca
Herman Bakvis, Academic Supervisor, hbavkis@uvic.ca
Jennifer Psyllakis, BC Government Client, Jennifer.Psyllakis@gov.bc.ca

In addition, you can verify the ethics approval for this study's methodology or raise any concerns you might have by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

As the results are anonymous, once the survey has been fully submitted it will be logistically impossible to remove your results from the data set and study. By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study, and that you have had the opportunity to have your questions answered by the researchers.
You are invited to print a copy of this notice for your personal reference.

How many years of experience do you have in natural resource management?
Less than 3 years
3-5 years
5-10 years
10+ years

How many years of your experience was gained in a regional setting (for this purpose, regional includes district, region and area-level positions as well as headquarters-based jobs that require extensive involvement in regional projects)?
Less than 3 years
3-5 years
5-10 years
10+ years

What is your professional/educational background (check all that apply)?
Forester
Biologist/Natural Scientist
Engineer
Public or Business Administrator
Planner
Other

How many years of your experience involved extensive collaboration with other government agencies?
Less than 3 years
3-5 years
5-10 years
10+ years

How would you characterize your experience with inter-agency collaboration?

Excellent - my experience was extremely positive, I wouldn't change anything.
Good - my experience was overall positive with room to improve.
Moderate - I don't have strong feelings either way.
Somewhat poor - I didn't feel my experience was very positive, but there were some good outcomes.
Extremely poor - I had a very negative experience and was unhappy with how the collaboration(s) I was part of were handled.

How would you rate the overall effectiveness of inter-agency collaboration initiatives in which you participated?

Very successful - all outcomes were achieved
Successful - most outcomes were achieved.
Partial/complete- a bare minimum number of outcomes were achieved.
Insufficient - an insufficient outcome was achieved (or not)
Negative - the collaboration initiative actually made things worse, not better.

Please rate the importance of the presence (or lack) of the following factors in achieving successful (or unsuccessful) outcomes within inter-agency resource management initiatives in which you have participated in the past.

	Most Important	Somewhat important	Neutral/No Opinion	Somewhat Important	Least Important
Sponsorship/endorsement of the project from senior executive/political level					
A clear governance framework that made it clear how decisions would be made and how issues could be elevated to be addressed					
A lead agency with accountability for facilitating/managing the process.					
Someone who served as the formal lead for the initiative.					
Accountability mechanisms that ensured that all of the required participants in the process contributed to the success of the framework.					
Relative to the area of project (ex: watershed, region, etc), the inter-agency					

	Most Important	Somewhat important	Neutral/No Opinion	Somewhat Important	Least Important
team was inclusive of ALL internal BC government and agencies responsible for governance and implementation of project deliverables.					
Relative to the area of project (ex: watershed, region, etc), the inter-agency teams was inclusive ALL of the external organizations with an interest in the governance of the project (ex: Federal, local government, FNs, NGOs, etc).					
Relative to the issue being tackled (ex: water quality in a particular watershed), the inter-agency teams operated at an appropriate scale (i.e. not too small, not too big) to make meaningful recommendations.					
The inter-agency team functioned with mutual trust and cooperation among participants.					
The inter-agency team was properly resourced (people and financially).					
The inter-agency team included members who were able to translate/transfer/communicate collaboration outcomes to "end users".					
The inter-agency team was effectively facilitated.					
The inter-agency team had appropriate training, tools and chancels available to manage First Nations engagement.					
The inter-agency team had appropriate tools and channels available to manage public engagement processes.					
The inter-agency team had appropriate training, tools and channels available to					

	Most Important	Somewhat important	Neutral/No Opinion	Somewhat Important	Least Important
engage with natural resource companies and industry associations , as required.					

(Optional) What were the worst frustrations/pain points that you faced in your past experience with inter-agency natural resource management teams?

In the context of the long-term implementation of British Columbia's Cumulative Effects Framework (whether you are directly involved in developing the framework or not), please rate (1-5 with "5" as completely in place) the degree to which you believe the following factor is currently in place.

Sponsorship/endorsement of the project from senior executive/political level	---12345
A clear governance framework that makes it clear how decisions can be made and how issues can be elevated to be addressed	---12345
A lead agency with accountability for facilitating/managing the processes.	---12345
Someone who serves as the formal lead for the initiative.	---12345
Accountability mechanisms that ensure that all of the required participants in the process contribute to the success of the framework.	---12345
The inter-agency teams are inclusive of ALL internal BC government and agencies responsible for governance and implementation of project deliverables.	---12345
The inter-agency teams are inclusive ALL of the external organizations with an interest in the governance of the project (ex: Federal, local government, FNs, NGOs, etc).	---41352
The inter-agency teams participating in the cumulative effects framework are operating at an appropriate scale (i.e. not too small, not too big) to make meaningful recommendations.	---12345
he inter-agency teams function with mutual trust and cooperation among participants.	---12345
Staff in your region with a clear defined role to provide leadership and/or resourcing to the project and bring the right people to the table	---12345
The inter-agency team is properly resourced (people and financially).	---12345
The inter-agency team includes members who are able to translate/transfer/communicate collaboration outcomes to "end users".	---12345
The inter-agency team is effectively facilitated.	---12345
The inter-agency team has appropriate training, tools and chancels available to manage First Nations engagement.	---12345
The inter-agency team has appropriate tools and channels available to manage public engagement processes.	---12345

The inter-agency team has appropriate training, tools and channels available to engage with natural resource companies and industry associations, as required.	---12345

(Optional) Are there any other key factors that are currently not in place to support the success of the cumulative effects framework within your region? (Text Response)

(Optional) What words of wisdom would you offer the inter-agency regional teams (including your own) responsible for implementing the cumulative effects framework and other collaborative projects in the NRS? (Text Response)

Thank you for completing this survey!